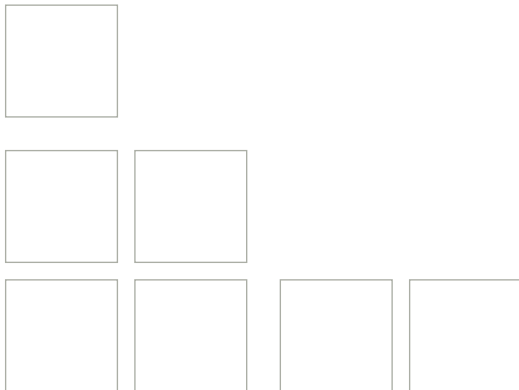




MOELLER 

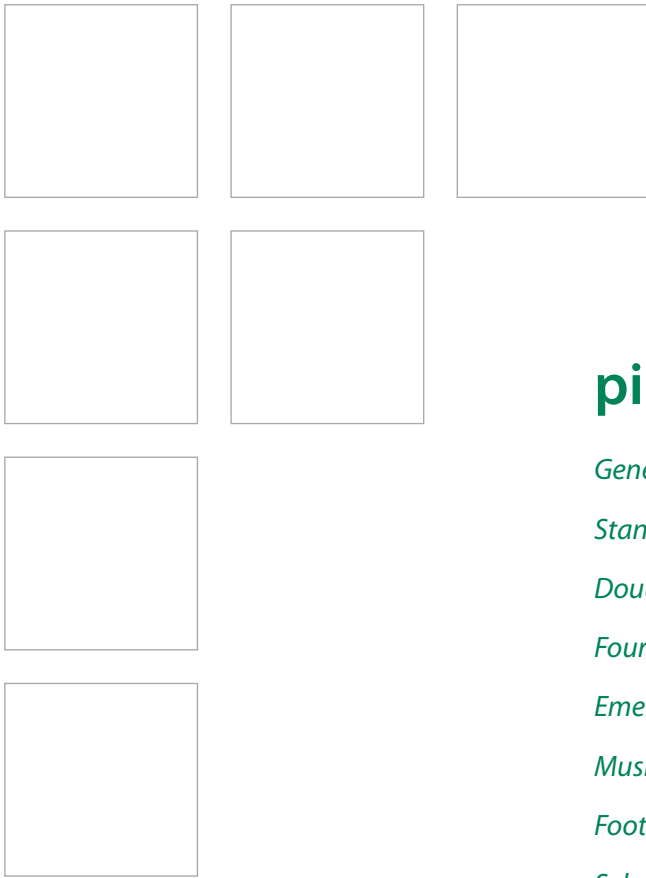


Turn On with Moeller

pilot devices
stack lights



For Immediate Delivery call KMParts.com at (866) 595-9616

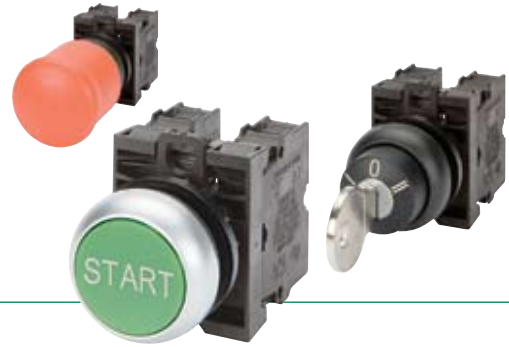


pilot devices

<i>General Information</i>	A2
<i>Standard Pushbuttons</i>	A6
<i>Double Pushbuttons</i>	A22
<i>Four Button Actuators</i>	A24
<i>Emergency-Stop Actuators</i>	A26
<i>Mushroom Head Pushbuttons</i>	A30
<i>Foot and Palm Switches</i>	A34
<i>Selector Switches</i>	A38
<i>Keyed Selector Switches</i>	A48
<i>Joystick Actuators</i>	A52
<i>Potentiometers</i>	A54
<i>Extended Actuators (through-the-door operation)</i>	A54
<i>Acoustic Indicators</i>	A55
<i>Indicator Lights</i>	A56
<i>Master Key System</i>	A59
<i>Accessories</i>	A68
<i>Enclosures</i>	A78
<i>Technical Data</i>	A81
<i>Dimensions</i>	A84

A Titan pilot devices

industrial-grade control and signaling



Pilot Devices



Moeller's RMQ-Titan pilot devices successfully combine rugged performance with aesthetic appeal. This 22mm line offers a broad combination of operator styles, but are designed with common back-of-panel components to keep inventories down. Many unique features combine to make RMQ pilot devices the smart choice for users who require a handsome machine interface and many options at an economical price.

Extensive range for many applications



The breadth of the RMQ-Titan line is impressive. In addition to a wide array of traditional standard operators, Moeller offers special buttons for special applications. Two and four-operator pushbuttons are available that save valuable real estate on small panels. A four-position joystick and potentiometer also offer application flexibility, while direct-wire pilot lights and an audible alarm module eliminate purchase and stocking of contact blocks and mounting latches.

Most Titan actuators can be fitted to our LS Limit Switch bodies, which serve as a compact enclosure with two built-in contacts. To round out the line, most operators are also available with a gold color front ring for added aesthetic appeal.

Convenient and secure installation

The entire line mounts in a standard 22mm notched hole, which is the best as-



assurance against device rotation during installation and long term use. The anti-rotation tab and central nut mounting on each operator allow easy installation, even when the front and back of the panel are not accessible simultaneously. Once installed, all back-of-panel components can be modified while leaving the operator in place.

Titan contact blocks provide secure connections with screw terminals for standard applications or cage clamps for high vibration environments.

The meaning of "rugged"

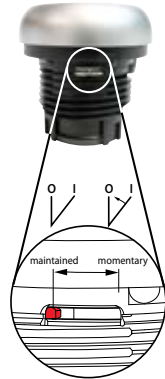
Most RMQ-Titan standard pushbuttons and contact blocks have a mechanical lifespan exceeding five million operations. That's equivalent to performing one ON/OFF cycle every minute for over 9.5 years! Electrical life ratings reach 1.6 million operations (@230V/0.5A). All contact blocks carry Pilot Duty Ratings of A600/P300 (10A @600VAC and 1A @250VDC).

- > Heavy duty pilot devices
- > Broad selection for many applications
- > "Convertible" buttons reduce inventory
- > High environmental ratings



“Convertible” buttons reduce inventories

Unique to Moeller’s RMQ-Titan line is the ability to convert a button’s functionality in the field. Maintained pushbuttons can easily be converted to momentary at the flick of a switch. Selector switches can be converted from momentary to maintained with the removal of a simple insert. The key removal position of keyed selector switches can also be modified in the field with a simple “Coding Adapter.”



This flexibility adds a tremendous advantage over dedicated-function devices from other manufacturers. Inventories are reduced and functionality is increased.

Highest environmental ratings

All front elements have a minimum IP66 environmental rating, protecting them against heavy seas, sprayed water, oil and dirt. Many standard operators have more stringent IP67 and IP69K ratings, protecting them from submersion and high pressure, high temperature wash down environments found in food processing applications.

Foot and palm switches



Part of the RMQ-Titan line includes type “FAK” foot and palm switches. These oversized operators measure almost four inches across and are perfectly suited for applications requiring repetitive or non-traditional methods of machine control (momentary only). They

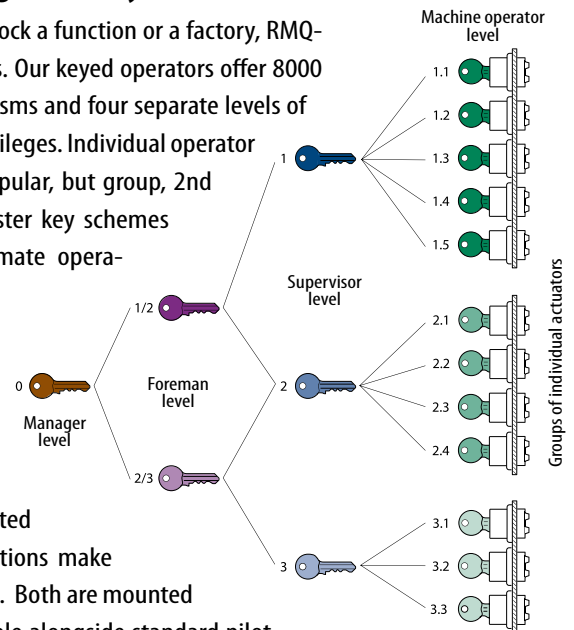
In addition, virtually all actuators can be ordered with ATEX approval labels for use in dangerous explosive dust areas like mills, metal grinding, woodworking, cement works, the aluminium industry, the pharmaceutical industry and many others.

The choice for high security locations

Whether you need to lock a function or a factory, RMQ-Titan has what it takes. Our keyed operators offer 8000 different lock mechanisms and four separate levels of supervisory access privileges. Individual operator control is the most popular, but group, 2nd level and general master key schemes are available for ultimate operational control.

Communicate!

Moeller’s Titan line also includes interfaces for the information age. Panel mounted USB and RJ45 connections make communication a snap. Both are mounted in a 22mm notched hole alongside standard pilot devices. A cover is included that protects the sockets to IP65.



are also ideal for commercial applications such as handicapped entrances.

FAK switches are also available in an Emergency Stop configuration with a special yellow and black base and maintained operation.



A

Pilot Devices

Pilot Devices Overview

Pilot Device	Description	Actuator Type	Pages
Standard Pushbuttons			
	Flush Non-illuminated	Momentary	A6 – A7
		Maintained or Momentary	A8 – A9
	Extended Non-illuminated	Momentary	A10 – A11
		Maintained or Momentary	A12 – A13
	Flush Illuminated	Momentary	A14 – A15
		Maintained or Momentary	A16 – A17
	Extended Illuminated	Momentary	A18 – A19
		Maintained or Momentary	A20 – A21

Bling ring



A gold colored front ring is also available for most pilot devices. See your Moeller representative.

Multi-button Operators





Illuminated
(center light only)

Momentary A22 – A23



Non-illuminated Momentary A24 – A25

Pilot Device	Description	Actuator Type	Pages
Emergency Stop Actuators			
	Non-illuminated	Pull-to-Release	A26 – A27
		Turn-to-Release	A26 – A27
		Keyed Release	A26 – A27
	Illuminated	Pull-to-Release	A28 – A29
		Turn-to-Release	A28 – A29

Emergency-Stop with Miniature Enclosure



Non-Illuminated Pull-to-Release A79

Turn-to-Release A79

Mushroom Head Actuators



Momentary A30 – A31

Non-illuminated

Maintained or Momentary A32 – A33

FAK Foot & Palm Switches



Standard use
Illuminated
(optional
indicating light)

Momentary A34 – A35



Emergency Stop
Illuminated
(optional
indicating light)

Maintained A36 – A37

Pilot Devices Overview


Pilot Device	Description	Actuator Type	Pages
Selector Switches			
	Rotary or Thumb grip Non-illuminated	2-position	A38 – A39
		3-position	A42 – A43
		4-position	A46 – A47
	Thumb grip Illuminated	2-position	A40 – A41
		3-position	A44 – A45
	Keyed Non-illuminated	2-position	A48 – A49
		3-position	A50 – A51
Specialty Operators			
	Joystick Operator Non-illuminated	2-way	A52 – A53
		4-way	A52 – A53
	Potentiometer Non-illuminated	–	A54
	Extended Reset Actuator Flush or Extended	Momentary	A54

Pilot Device	Description	Actuator Type	Pages
Indicators			
	Acoustic module	–	A55
	USB / RJ45 Bulkhead interfaces	–	A55
	Indicating Light Illuminated	–	A56 – A57
	Compact Indicating Light Illuminated	–	A58
Master Key System			
	2-position	–	A60
	3-position	–	A61
	Emergency Stop	–	A62
Accessories and Enclosures			
		–	A68 – A78

Standard pushbutton assembly; non-illuminated, flush, momentary ①

Contact Blocks		Titanium Color		Black		Titanium Color Guard Ring	
							
NO	NC	Momentary		Momentary		Momentary	
		Catalog Number	Price	Catalog Number	Price	Catalog Number	Price
Actuator & plate only		M22-D-◆-★	22	M22S-D-◆-★	22	M22-DG-◆-★	32
1	0	M22-D-◆-★/K10	42	M22S-D-◆-★/K10	42	M22-DG-◆-★/K10	52
0	1	M22-D-◆-★/K01	42	M22S-D-◆-★/K01	42	M22-DG-◆-★/K01	52
2	0	M22-D-◆-★/K20	56	M22S-D-◆-★/K20	56	M22-DG-◆-★/K20	66
0	2	M22-D-◆-★/K02	56	M22S-D-◆-★/K02	56	M22-DG-◆-★/K02	66
1	1	M22-D-◆-★/K11	56	M22S-D-◆-★/K11	56	M22-DG-◆-★/K11	66
3	0	M22-D-◆-★/K30	70	M22S-D-◆-★/K30	70	M22-DG-◆-★/K30	80
0	3	M22-D-◆-★/K03	70	M22S-D-◆-★/K03	70	M22-DG-◆-★/K03	80
2	1	M22-D-◆-★/K21	70	M22S-D-◆-★/K21	70	M22-DG-◆-★/K21	80
1	2	M22-D-◆-★/K12	70	M22S-D-◆-★/K12	70	M22-DG-◆-★/K12	80

Order an Assembly

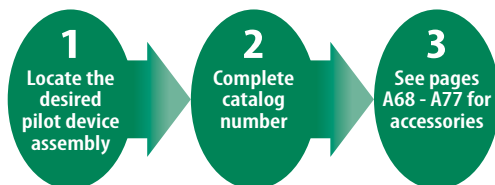
 See page A81 for ATEX information

⊖ = positively driven contact

Catalog Number Codes

M22	-	D	-	◆	-	★	/	K10
Front Ring Color		Device Type		Plate Color		Plate Inscription ②③		Contact Blocks ④
M22 Titanium M22S Black - Gold		D Flush, Non-Illuminated, Momentary actuator DG Flush, Non-Illuminated, Momentary actuator, with guard ring		S Black ● W White ○ R Red ● G Green ● Y Yellow ● B Blue ●		(leave blank for no inscription) <i>Price Adder for Inscriptions: \$2</i> GB0 STOP GB1 START GB3 UP GB4 DOWN GB5 OFF GB6 ON GB14 RESET GB15 FORWARD GB16 REVERSE X0 ⊖ X1 ⊕ X4 ⊕ X5 ⊖ X6 ⊕ X7 ⊕ ⊖ ⊕ ⊖ X8 ⊖ ⊕ ⊖ ⊕		(max for this device: 6) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ <i>Order additional contact blocks separately on next page</i>
<p>Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery - see your Moeller representative.</p> <p style="text-align: center;">See next page for stocked combinations</p>								

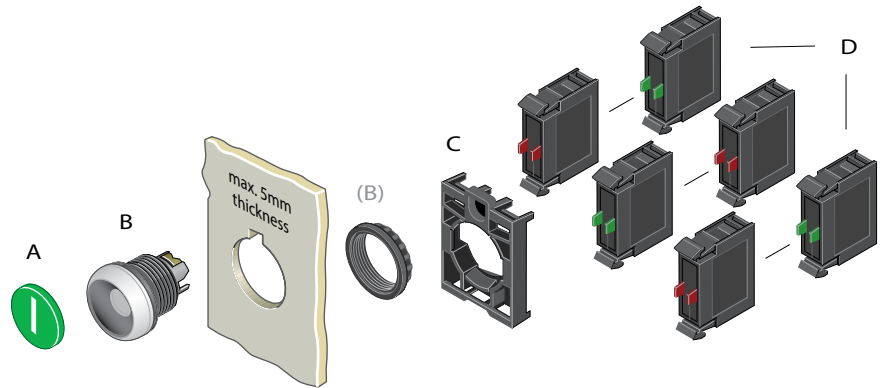
Ordering Instructions by Complete Assembly



- Complete assemblies are only partially assembled in preparation for panel installation.
- Any combination of plate color and inscription are available; stocked combinations appear on next page; see pages A72 - A73 for other options.
- Additional languages available; see pages A72 - A73.
- Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.



Order by Components



Standard pushbutton components; non-illuminated, flush, momentary

Component	Plate Color	Plate Inscription 1 2	Catalog Number	Price
A Plate				
	Black ●	(without inscription)	M22-XD-S	4.40
	White ○		M22-XD-W	4.40
	Red ●		M22-XD-R	4.40
	Green ●		M22-XD-G	4.40
	Yellow ●		M22-XD-Y	4.40
	Blue ●		M22-XD-B	4.40
	Red ●	STOP	M22-XD-R-GB0	6.80
	Black ●	STOP	M22-XD-S-GB0	6.80
	Green ●	START	M22-XD-G-GB1	6.80
	Black ●	START	M22-XD-S-GB1	6.80
	Black ●	UP	M22-XD-S-GB3	6.80
	Black ●	DOWN	M22-XD-S-GB4	6.80
	Red ●	OFF	M22-XD-R-GB5	6.80
	Black ●	OFF	M22-XD-S-GB5	6.80
	Green ●	ON	M22-XD-G-GB6	6.80
	Black ●	ON	M22-XD-S-GB6	6.80
	Blue ●	RESET	M22-XD-B-GB14	6.80
	Black ●	FORWARD	M22-XD-S-GB15	6.80
	Black ●	REVERSE	M22-XD-S-GB16	6.80
	Red ●	⊕	M22-XD-R-X0	6.80
	Black ●	⊕	M22-XD-S-X0	6.80
	Green ●	Ⓜ	M22-XD-G-X1	6.80
	Black ●	Ⓜ	M22-XD-S-X1	6.80
	Black ●	⊕	M22-XD-S-X4	6.80
	Black ●	⊖	M22-XD-S-X5	6.80
	Blue ●	Ⓜ	M22-XD-B-X6	6.80
	Black ●	Ⓜ	M22-XD-S-X7	6.80
	Black ●	Ⓜ	M22-XD-S-X8	6.80

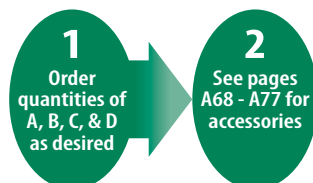


Component	Color	Description	Catalog Number	Price
B Actuator				
	Titanium	Momentary operation	M22-D-X	15
	Black		M22S-D-X	15
	Titanium	with guard ring	M22-DG-X	25
C Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
D Contact Blocks – front mounted 3				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14



⊖ = positively driven contact

Ordering Instructions by Components

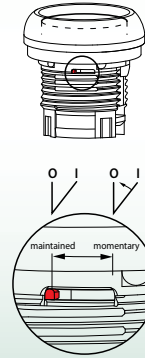


- 1 Any combination of plate color and inscription are available; stocked combinations appear on this page; see pages A72 – A73 for other options.
- 2 Additional languages available; see pages A72 – A73.
- 3 Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

Standard pushbutton assembly; non-illuminated, flush, maintained or momentary ①

Contact Blocks		Titanium Color		Black	
					
NO	NC	Maintained or Momentary		Maintained or Momentary	
		Catalog Number	Price	Catalog Number	Price
Actuator & plate only		M22-DR-◆-★	35	M22S-DR-◆-★	35
1	0	M22-DR-◆-★/K10	55	M22S-DR-◆-★/K10	55
0	1	M22-DR-◆-★/K01	55	M22S-DR-◆-★/K01	55
2	0	M22-DR-◆-★/K20	69	M22S-DR-◆-★/K20	69
0	2	M22-DR-◆-★/K02	69	M22S-DR-◆-★/K02	69
1	1	M22-DR-◆-★/K11	69	M22S-DR-◆-★/K11	69
3	0	M22-DR-◆-★/K30	83	M22S-DR-◆-★/K30	83
0	3	M22-DR-◆-★/K03	83	M22S-DR-◆-★/K03	83
2	1	M22-DR-◆-★/K21	83	M22S-DR-◆-★/K21	83
1	2	M22-DR-◆-★/K12	83	M22S-DR-◆-★/K12	83

This Moeller pilot device features a selectable function switch that enables the device to be set to either maintained or momentary operation.



⊖ = positively driven contact

Order an Assembly

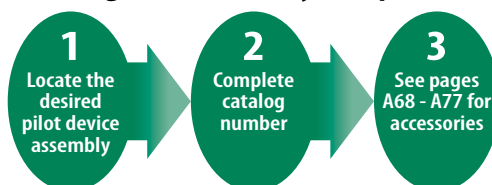


See page A81 for ATEX information

Catalog Number Codes

M22	DR	◆	★	/	K10
Front Ring Color	Device Type	Plate Color	Plate Inscription ②③		Contact Blocks ④
M22 Titanium M22S Black — Gold	DR Flush, Non-Illuminated, Maintained or Momentary actuator	S Black ● W White ○ R Red ● G Green ● Y Yellow ● B Blue ●	(leave blank for no inscription) <i>Price Adder for Inscriptions: \$2</i> GB0 STOP GB1 START GB3 UP GB4 DOWN GB5 OFF GB6 ON GB14 RESET GB15 FORWARD GB16 REVERSE X0 ⊖ X1 ⊕ X4 ⊕ X5 ⊖ X6 ⊕ X7 ⊕ ⊖ ⊕ ⊖ X8 ⊖ ⊕ ⊖ ⊕		(max for this device: 6) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ <i>Order additional contact blocks separately on next page</i>
Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery - see your Moeller representative.					
See next page for stocked combinations					

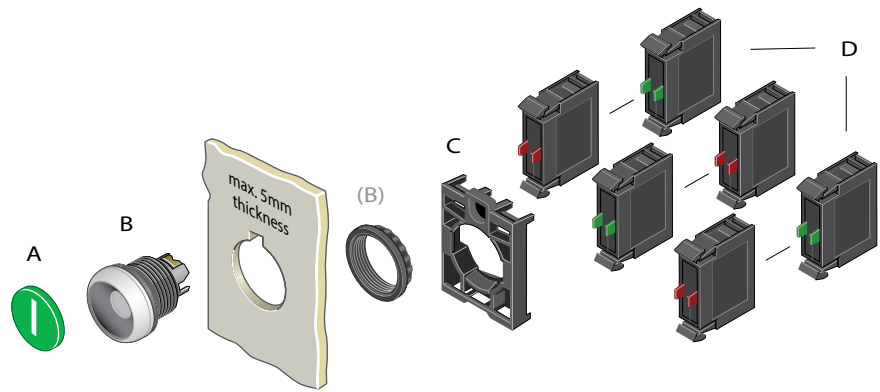
Ordering Instructions by Complete Assembly



- Complete assemblies are only partially assembled in preparation for panel installation.
- Any combination of plate color and inscription are available; stocked combinations appear on next page; see pages A72 - A73 for other options.
- Additional languages available; see pages A72 - A73.
- Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.



Order by Components



Standard pushbutton components; non-illuminated, flush, maintained or momentary

Component	Plate Color	Plate Inscription 1 2	Catalog Number	Price
A Plate				
	Black ●	(without inscription)	M22-XD-S	4.40
	White ○		M22-XD-W	4.40
	Red ●		M22-XD-R	4.40
	Green ●		M22-XD-G	4.40
	Yellow ●		M22-XD-Y	4.40
	Blue ●		M22-XD-B	4.40
	Red ●	STOP	M22-XD-R-GB0	6.80
	Black ●	STOP	M22-XD-S-GB0	6.80
	Green ●	START	M22-XD-G-GB1	6.80
	Black ●	START	M22-XD-S-GB1	6.80
	Black ●	UP	M22-XD-S-GB3	6.80
	Black ●	DOWN	M22-XD-S-GB4	6.80
	Red ●	OFF	M22-XD-R-GB5	6.80
	Black ●	OFF	M22-XD-S-GB5	6.80
	Green ●	ON	M22-XD-G-GB6	6.80
	Black ●	ON	M22-XD-S-GB6	6.80
	Blue ●	RESET	M22-XD-B-GB14	6.80
	Black ●	FORWARD	M22-XD-S-GB15	6.80
	Black ●	REVERSE	M22-XD-S-GB16	6.80
	Red ●	⊕	M22-XD-R-X0	6.80
	Black ●	⊕	M22-XD-S-X0	6.80
	Green ●	Ⓜ	M22-XD-G-X1	6.80
	Black ●	Ⓜ	M22-XD-S-X1	6.80
	Black ●	⊕	M22-XD-S-X4	6.80
	Black ●	⊖	M22-XD-S-X5	6.80
	Blue ●	Ⓜ	M22-XD-B-X6	6.80
	Black ●	Ⓜ	M22-XD-S-X7	6.80
	Black ●	Ⓜ	M22-XD-S-X8	6.80

Component	Color	Description	Catalog Number	Price
B Actuator				
	Titanium	Maintained or Momentary 3	M22-DR-X	28
	Black		M22S-DR-X	28
C Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
D Contact Blocks – front mounted 4				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14

⊖ = positively driven contact

Ordering Instructions by Components




- 1 Any combination of plate color and inscription are available: stocked combinations appear on this page; see pages A72 – A73 for other options.
- 2 Additional languages available; see pages A72 – A73.
- 3 This Moeller pilot device features a selectable function switch that enables the device to be set to either maintained or momentary operation - see previous page.
- 4 Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

Standard pushbutton assembly; non-illuminated, extended, momentary ①

Contact Blocks		Titanium Color		Black		Titanium Color Guard Ring	
							
NO	⊖	Momentary		Momentary		Momentary	
		Catalog Number	Price	Catalog Number	Price	Catalog Number	Price
Actuator & plate only		M22-DH-◆-★	26	M22S-DH-◆-★	26	M22-DGH-◆-★	36
1	0	M22-DH-◆-★/K10	46	M22S-DH-◆-★/K10	46	M22-DGH-◆-★/K10	56
0	1	M22-DH-◆-★/K01	46	M22S-DH-◆-★/K01	46	M22-DGH-◆-★/K01	56
2	0	M22-DH-◆-★/K20	60	M22S-DH-◆-★/K20	60	M22-DGH-◆-★/K20	70
0	2	M22-DH-◆-★/K02	60	M22S-DH-◆-★/K02	60	M22-DGH-◆-★/K02	70
1	1	M22-DH-◆-★/K11	60	M22S-DH-◆-★/K11	60	M22-DGH-◆-★/K11	70
3	0	M22-DH-◆-★/K30	74	M22S-DH-◆-★/K30	74	M22-DGH-◆-★/K30	84
0	3	M22-DH-◆-★/K03	74	M22S-DH-◆-★/K03	74	M22-DGH-◆-★/K03	84
2	1	M22-DH-◆-★/K21	74	M22S-DH-◆-★/K21	74	M22-DGH-◆-★/K21	84
1	2	M22-DH-◆-★/K12	74	M22S-DH-◆-★/K12	74	M22-DGH-◆-★/K12	84

Order an Assembly

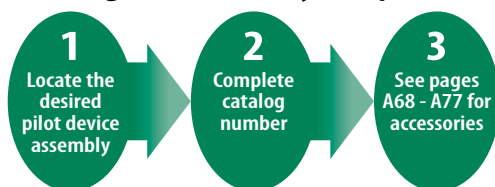
 See page A81 for ATEX information

⊖ = positively driven contact

Catalog Number Codes

M22	–	DH	–	◆	–	★	/	K10
Front Ring Color		Device Type		Plate Color		Plate Inscription ②③		Contact Blocks ④
M22 Titanium M22S Black – Gold		DH Extended, Non-Illuminated, Momentary actuator DGH Extended, Non-Illuminated, Momentary actuator, with guard ring		S Black ● W White ○ R Red ● G Green ● Y Yellow ● B Blue ●		(leave blank for no inscription) <i>Price Adder for Inscriptions: \$2</i> GB0 STOP GB1 START GB3 UP GB4 DOWN GB5 OFF GB6 ON GB14 RESET GB15 FORWARD GB16 REVERSE X0 ⊖ X1 ⊕ X4 ⊕ X5 ⊖ X6 ⊖ X7 ⊕ ⊖ ⊕ ⊖ X8 ⊖ ⊕ ⊖ ⊕		(max for this device: 6) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ <i>Order additional contact blocks separately on next page</i>
<p>Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery – see your Moeller representative.</p> <p style="text-align: center;">See next page for stocked combinations</p>								

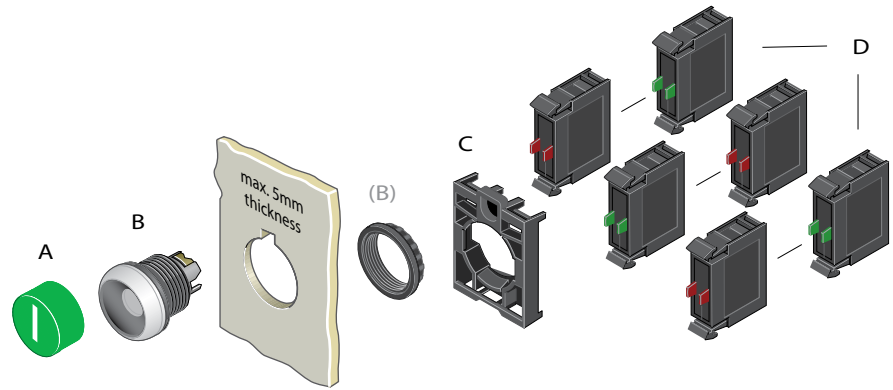
Ordering Instructions by Complete Assembly



- Complete assemblies are only partially assembled in preparation for panel installation.
- Any combination of plate color and inscription are available; stocked combinations appear on next page; see pages A72 – A73 for other options.
- Additional languages available; see pages A72 – A73.
- Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.



Order by Components



Standard pushbutton components; non-illuminated, extended, momentary

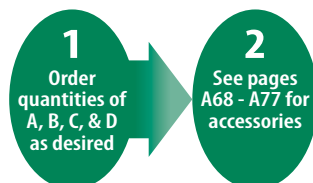
Component	Plate Color	Plate Inscription 1 2	Catalog Number	Price
A Plate				
	Black ●	(without inscription)	M22-XDH-S	8.60
	White ○		M22-XDH-W	8.60
	Red ●		M22-XDH-R	8.60
	Green ●		M22-XDH-G	8.60
	Yellow ●		M22-XDH-Y	8.60
	Blue ●		M22-XDH-B	8.60
	Red ●	STOP	M22-XDH-R-GB0	11.00
	Black ●	STOP	M22-XDH-S-GB0	11.00
	Green ●	START	M22-XDH-G-GB1	11.00
	Black ●	START	M22-XDH-S-GB1	11.00
	Black ●	UP	M22-XDH-S-GB3	11.00
	Black ●	DOWN	M22-XDH-S-GB4	11.00
	Red ●	OFF	M22-XDH-R-GB5	11.00
	Black ●	OFF	M22-XDH-S-GB5	11.00
	Green ●	ON	M22-XDH-G-GB6	11.00
	Black ●	ON	M22-XDH-S-GB6	11.00
	Blue ●	RESET	M22-XDH-B-GB14	11.00
	Black ●	FORWARD	M22-XDH-S-GB15	11.00
	Black ●	REVERSE	M22-XDH-S-GB16	11.00
	Red ●	⊕	M22-XDH-R-X0	11.00
	Black ●	⊕	M22-XDH-S-X0	11.00
	Green ●	⓪	M22-XDH-G-X1	11.00
	Black ●	⓪	M22-XDH-S-X1	11.00
	Black ●	⊕	M22-XDH-S-X4	11.00
	Black ●	⊖	M22-XDH-S-X5	11.00
	Blue ●	Ⓜ	M22-XDH-B-X6	11.00
	Black ●	⓪	M22-XDH-S-X7	11.00
	Black ●	⓪	M22-XDH-S-X8	11.00

Component	Color	Description	Catalog Number	Price
B Actuator				
	Titanium	Momentary operation	M22-D-X	15
	Black		M22S-D-X	15
	Titanium	with guard ring	M22-DG-X	25
C Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
D Contact Blocks – front mounted 3				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14



⊖ = positively driven contact

Ordering Instructions by Components

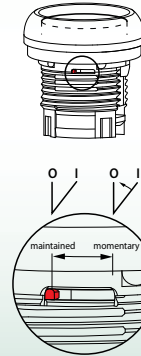


- ① Any combination of plate color and inscription are available; stocked combinations appear on this page; see pages A72 – A73 for other options.
- ② Additional languages available; see pages A72 – A73.
- ③ Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

Standard pushbutton assembly; non-illuminated, extended, maintained or momentary ①

		Titanium Color		Black	
Contact Blocks					
NO	NC	Maintained or Momentary		Maintained or Momentary	
		Catalog Number	Price	Catalog Number	Price
Actuator & plate only		M22-DRH-◆-★	39	M22S-DRH-◆-★	39
1	0	M22-DRH-◆-★/K10	59	M22S-DRH-◆-★/K10	59
0	1	M22-DRH-◆-★/K01	59	M22S-DRH-◆-★/K01	59
2	0	M22-DRH-◆-★/K20	73	M22S-DRH-◆-★/K20	73
0	2	M22-DRH-◆-★/K02	73	M22S-DRH-◆-★/K02	73
1	1	M22-DRH-◆-★/K11	73	M22S-DRH-◆-★/K11	73
3	0	M22-DRH-◆-★/K30	87	M22S-DRH-◆-★/K30	87
0	3	M22-DRH-◆-★/K03	87	M22S-DRH-◆-★/K03	87
2	1	M22-DRH-◆-★/K21	87	M22S-DRH-◆-★/K21	87
1	2	M22-DRH-◆-★/K12	87	M22S-DRH-◆-★/K12	87

This Moeller pilot device features a selectable function switch that enables the device to be set to either maintained or momentary operation.



⊖ = positively driven contact

Order an Assembly

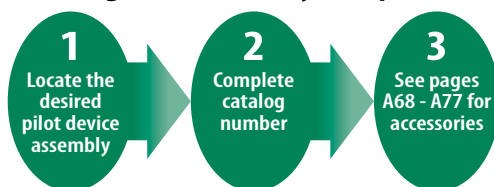


See page A81 for ATEX information

Catalog Number Codes

M22	–	DRH	–	◆	–	★	/	K10
Front Ring Color		Device Type		Plate Color		Plate Inscription ②③		Contact Blocks ④
M22 Titanium M22S Black – Gold		DRH Extended, Non-Illuminated, Maintained or Momentary actuator		S Black ● W White ○ R Red ● G Green ● Y Yellow ● B Blue ●		(leave blank for no inscription) <i>Price Adder for Inscriptions: \$2</i> GB0 STOP GB1 START GB3 UP GB4 DOWN GB5 OFF GB6 ON GB14 RESET GB15 FORWARD GB16 REVERSE X0 ⊖ X1 ⊕ X4 ⊕ X5 ⊖ X6 ⊖ X7 ⊕ ⊖ ⊕ ⊖ X8 ⊖ ⊕ ⊖ ⊕		(max for this device: 6) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ <i>Order additional contact blocks separately on next page</i>
<p>Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery – see your Moeller representative.</p> <p>See next page for stocked combinations</p>								

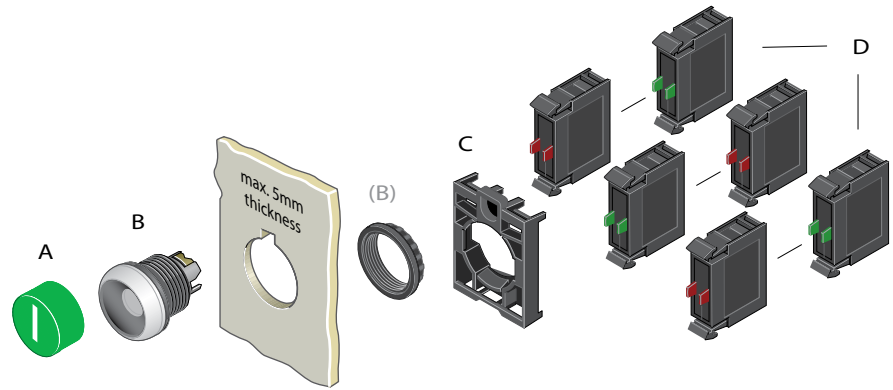
Ordering Instructions by Complete Assembly



- Complete assemblies are only partially assembled in preparation for panel installation.
- Any combination of plate color and inscription are available; stocked combinations appear on next page; see pages A72 – A73 for other options.
- Additional languages available; see pages A72 – A73.
- Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.



Order by Components



Standard pushbutton components; non-illuminated, extended, maintained or momentary

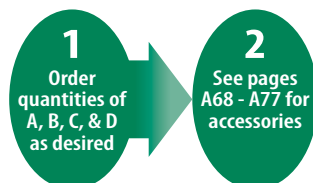
Component	Plate Color	Plate Inscription 1 2	Catalog Number	Price
A Plate				
	Black ●	(without inscription)	M22-XDH-S	8.60
	White ○		M22-XDH-W	8.60
	Red ●		M22-XDH-R	8.60
	Green ●		M22-XDH-G	8.60
	Yellow ●		M22-XDH-Y	8.60
	Blue ●		M22-XDH-B	8.60
	Red ●	STOP	M22-XDH-R-GB0	11.00
	Black ●	STOP	M22-XDH-S-GB0	11.00
	Green ●	START	M22-XDH-G-GB1	11.00
	Black ●	START	M22-XDH-S-GB1	11.00
	Black ●	UP	M22-XDH-S-GB3	11.00
	Black ●	DOWN	M22-XDH-S-GB4	11.00
	Red ●	OFF	M22-XDH-R-GB5	11.00
	Black ●	OFF	M22-XDH-S-GB5	11.00
	Green ●	ON	M22-XDH-G-GB6	11.00
	Black ●	ON	M22-XDH-S-GB6	11.00
	Blue ●	RESET	M22-XDH-B-GB14	11.00
	Black ●	FORWARD	M22-XDH-S-GB15	11.00
	Black ●	REVERSE	M22-XDH-S-GB16	11.00
	Red ●	⊕	M22-XDH-R-X0	11.00
	Black ●	⊕	M22-XDH-S-X0	11.00
	Green ●	Ⓛ	M22-XDH-G-X1	11.00
	Black ●	Ⓛ	M22-XDH-S-X1	11.00
	Black ●	⊕	M22-XDH-S-X4	11.00
	Black ●	⊖	M22-XDH-S-X5	11.00
	Blue ●	Ⓡ	M22-XDH-B-X6	11.00
	Black ●	Ⓛ	M22-XDH-S-X7	11.00
	Black ●	Ⓛ	M22-XDH-S-X8	11.00

Component	Color	Description	Catalog Number	Price
B Actuator				
	Titanium	Maintained or Momentary 3	M22-DR-X	28
	Black		M22S-DR-X	28
C Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
D Contact Blocks – front mounted 4				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14

⊖ = positively driven contact

Ordering Instructions by Components



- 1 Any combination of plate color and inscription are available: stocked combinations appear on this page; see pages A72 – A73 for other options.
- 2 Additional languages available; see pages A72 – A73.
- 3 This Moeller pilot device features a selectable function switch that enables the device to be set to either maintained or momentary operation - see previous page.
- 4 Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.


A

Pilot Devices

Standard pushbuttons assembly; illuminated, flush, momentary operation ①

Contact Blocks		Titanium Color		Black		Titanium Color Guard Ring	
							
NO	NC	Momentary		Momentary		Momentary	
		Catalog Number	Price	Catalog Number	Price	Catalog Number	Price
Actuator & lens only		M22-DL-◆-★	30	M22S-DL-◆-★	30	M22-DGL-◆-★	41
1	0	M22-DL-◆-★/K10/▲	76	M22S-DL-◆-★/K10/▲	76	M22-DGL-◆-★/K10/▲	87
0	1	M22-DL-◆-★/K01/▲	76	M22S-DL-◆-★/K01/▲	76	M22-DGL-◆-★/K01/▲	87
2	0	M22-DL-◆-★/K20/▲	90	M22S-DL-◆-★/K20/▲	90	M22-DGL-◆-★/K20/▲	101
0	2	M22-DL-◆-★/K02/▲	90	M22S-DL-◆-★/K02/▲	90	M22-DGL-◆-★/K02/▲	101
1	1	M22-DL-◆-★/K11/▲	90	M22S-DL-◆-★/K11/▲	90	M22-DGL-◆-★/K11/▲	101
3	0	M22-DL-◆-★/K30/▲	104	M22S-DL-◆-★/K30/▲	104	M22-DGL-◆-★/K30/▲	115
0	3	M22-DL-◆-★/K03/▲	104	M22S-DL-◆-★/K03/▲	104	M22-DGL-◆-★/K03/▲	115
2	1	M22-DL-◆-★/K21/▲	104	M22S-DL-◆-★/K21/▲	104	M22-DGL-◆-★/K21/▲	115
1	2	M22-DL-◆-★/K12/▲	104	M22S-DL-◆-★/K12/▲	104	M22-DGL-◆-★/K12/▲	115

Order an Assembly

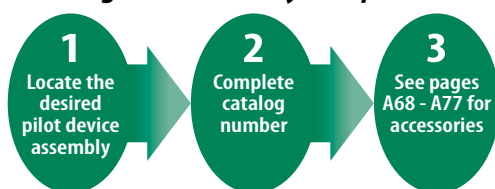
 See page A81 for ATEX information

⊖ = positively driven contact

Catalog Number Codes

M22	-	DL	-	◆	-	★	/	K10	/	▲
Front Ring Color		Device Type		Lens Color		Lens Inscription ②③		Contact Blocks ④		LED Element ⑤⑥
M22 Titanium M22S Black - Gold		DL Flush, Illuminated, Momentary actuator DGL Flush, Illuminated, Momentary actuator with guard ring		W White R Red G Green Y Yellow B Blue		(leave blank for no inscription) <i>Price Adder for Inscriptions: \$2</i> GB0 STOP GB1 START GB3 UP GB4 DOWN GB5 OFF GB6 ON GB14 RESET GB15 FORWARD GB16 REVERSE X0 ⊖ X1 ⊕ X4 ⊕ X5 ⊖ X6 ⊕ X7 ⊕ ⊖ ⊕ ⊖ X8 ⊖ ⊕ ⊖ ⊕		(max for this device: 4) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ <i>Order additional contact blocks separately on next page</i>		12 – 30 V AC/DC: W White or Yellow R Red G Green B Blue 85 – 264 V AC 50/60Hz: <i>Price Adder: \$12</i> 230-W White or Yellow 230-R Red 230-G Green 230-B Blue 207 – 264 V AC 50/60Hz: <i>Price Adder: \$12</i> 230H-W White or Yellow 230H-R Red 230H-G Green 230H-B Blue
See next page for stocked combinations										

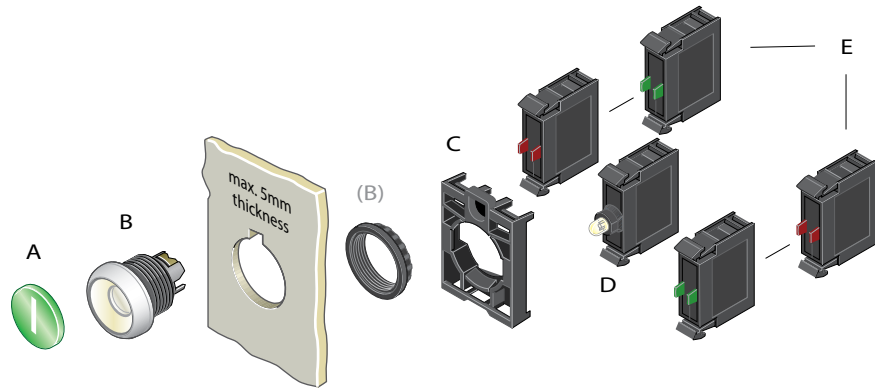
Ordering Instructions by Complete Assembly



- Complete assemblies are only partially assembled in preparation for panel installation.
- Any combination of lens color and inscription are available; stocked combinations appear on next page; see pages A72 – A73 for other options.
- Additional languages available; see pages A72 – A73.
- Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.
- Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- Select the same color LED element as your lens color; for yellow lens, choose a white LED.



Order by Components



Standard pushbutton components; illuminated, flush, momentary operation

Component	Lens Color	Lens Inscription 1 2	Catalog Number	Price
A Lens				
	White	(without inscription)	M22-XDL-W	4.40
	Red		M22-XDL-R	4.40
	Green		M22-XDL-G	4.40
	Yellow		M22-XDL-Y	4.40
	Blue		M22-XDL-B	4.40
	Red	STOP	M22-XDL-R-GB0	6.80
	White	STOP	M22-XDL-W-GB0	6.80
	Green	START	M22-XDL-G-GB1	6.80
	White	START	M22-XDL-W-GB1	6.80
	White	UP	M22-XDL-W-GB3	6.80
	White	DOWN	M22-XDL-W-GB4	6.80
	Red	OFF	M22-XDL-R-GB5	6.80
	White	OFF	M22-XDL-W-GB5	6.80
	Green	ON	M22-XDL-G-GB6	6.80
	White	ON	M22-XDL-W-GB6	6.80
	Blue	RESET	M22-XDL-B-GB14	6.80
	White	FORWARD	M22-XDL-W-GB15	6.80
	White	REVERSE	M22-XDL-W-GB16	6.80
	Red	⊙	M22-XDL-R-X0	6.80
	White	⊙	M22-XDL-W-X0	6.80
	Green	①	M22-XDL-G-X1	6.80
	White	①	M22-XDL-W-X1	6.80
	White	+	M22-XDL-W-X4	6.80
	White	-	M22-XDL-W-X5	6.80
	Blue	Ⓜ	M22-XDL-B-X6	6.80
	White	①	M22-XDL-W-X7	6.80
	White	Ⓜ	M22-XDL-W-X8	6.80

Component	Color	Description	Catalog Number	Price
B Actuator				
	Titanium	Momentary operation	M22-DL-X	23
	Black		M22S-DL-X	23
	Titanium	with guard ring	M22-DGL-X	34
C Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6
D LED Elements – front mounted 3 4				
	White	12 – 30 V AC/DC 8 – 15 mA	M22-LED-W	26
	Red		M22-LED-R	26
	Green		M22-LED-G	26
	Blue		M22-LED-B	26
	White	85 – 264 V AC, 50/60 Hz 5 – 15 mA	M22-LED230-W	38
	Red		M22-LED230-R	38
	Green		M22-LED230-G	38
	Blue		M22-LED230-B	38
	White	207 – 264 V AC, 50/60 Hz 12 – 15 mA	M22-LED230H-W	38
	Red		M22-LED230H-R	38
	Green		M22-LED230H-G	38
	Blue		M22-LED230H-B	38

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
E Contact Blocks – front mounted 5				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14



⊖ = positively driven contact

Ordering Instructions by Components

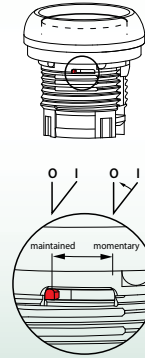


- 1 Any combination of lens color and inscription are available; stocked combinations appear on this page; see pages A72 – A73 for other options.
- 2 Additional languages available; see pages A72 – A73.
- 3 Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- 4 Select the same color LED element as your lens color; for yellow lens, choose a white LED.
- 5 Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

Standard pushbutton assembly; illuminated, flush, maintained or momentary ①

Contact Blocks		Titanium Color		Black	
					
NO	⊖	Maintained or Momentary		Maintained or Momentary	
		Catalog Number	Price	Catalog Number	Price
Actuator & lens only		M22-DRL-◆-★	44	M22S-DRL-◆-★	44
1	0	M22-DRL-◆-★/K10/▲	90	M22S-DRL-◆-★/K10/▲	90
0	1	M22-DRL-◆-★/K01/▲	90	M22S-DRL-◆-★/K01/▲	90
2	0	M22-DRL-◆-★/K20/▲	104	M22S-DRL-◆-★/K20/▲	104
0	2	M22-DRL-◆-★/K02/▲	104	M22S-DRL-◆-★/K02/▲	104
1	1	M22-DRL-◆-★/K11/▲	104	M22S-DRL-◆-★/K11/▲	104
3	0	M22-DRL-◆-★/K30/▲	118	M22S-DRL-◆-★/K30/▲	118
0	3	M22-DRL-◆-★/K03/▲	118	M22S-DRL-◆-★/K03/▲	118
2	1	M22-DRL-◆-★/K21/▲	118	M22S-DRL-◆-★/K21/▲	118
1	2	M22-DRL-◆-★/K12/▲	118	M22S-DRL-◆-★/K12/▲	118

This Moeller pilot device features a selectable function switch that enables the device to be set to either maintained or momentary operation.



⊖ = positively driven contact

Order an Assembly

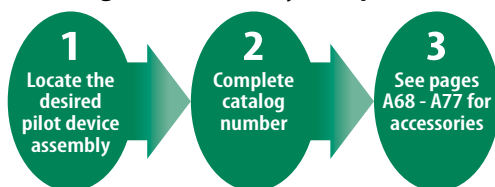


See page A81 for ATEX information

Catalog Number Codes

M22	-	DRL	-	◆	-	★	/	K10	/	▲
Front Ring Color		Device Type		Lens Color		Lens Inscription ②③		Contact Blocks ④		LED Element ⑤⑥
M22 Titanium M22S Black - Gold		DRL Flush, Illuminated, Maintained or Momentary actuator		W White R Red G Green Y Yellow B Blue		(leave blank for no inscription) Price Adder for Inscriptions: \$2 GB0 STOP GB1 START GB3 UP GB4 DOWN GB5 OFF GB6 ON GB14 RESET GB15 FORWARD GB16 REVERSE X0 ⊖ X1 ⊕ X4 ⊕ X5 ⊖ X6 ⊕ X7 ⊕ ⊖ ⊕ ⊖ X8 ⊖ ⊕ ⊖ ⊕		(max for this device: 4) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ <i>Order additional contact blocks separately on next page</i>		12 – 30 V AC/DC: W White or Yellow R Red G Green B Blue 85 – 264 V AC 50/60Hz: Price Adder: \$12 230-W White or Yellow 230-R Red 230-G Green 230-B Blue 207 – 264 V AC 50/60Hz: Price Adder: \$12 230H-W White or Yellow 230H-R Red 230H-G Green 230H-B Blue
Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery - see your Moeller representative.										
See next page for stocked combinations										

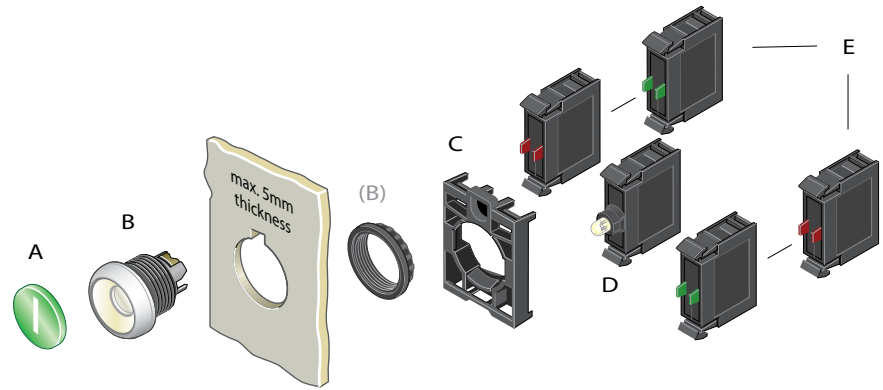
Ordering Instructions by Complete Assembly



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- Select the same color LED element as your lens color; for yellow lens, choose a white LED.



Order by Components



Standard pushbutton components; illuminated, flush, maintained or momentary

Component	Lens Color	Lens Inscription 1 2	Catalog Number	Price
A Lens				
	White	(without inscription)	M22-XDL-W	4.40
	Red		M22-XDL-R	4.40
	Green		M22-XDL-G	4.40
	Yellow		M22-XDL-Y	4.40
	Blue		M22-XDL-B	4.40
	Red	STOP	M22-XDL-R-GB0	6.80
	White	STOP	M22-XDL-W-GB0	6.80
	Green	START	M22-XDL-G-GB1	6.80
	White	START	M22-XDL-W-GB1	6.80
	White	UP	M22-XDL-W-GB3	6.80
	White	DOWN	M22-XDL-W-GB4	6.80
	Red	OFF	M22-XDL-R-GB5	6.80
	White	OFF	M22-XDL-W-GB5	6.80
	Green	ON	M22-XDL-G-GB6	6.80
	White	ON	M22-XDL-W-GB6	6.80
	Blue	RESET	M22-XDL-B-GB14	6.80
	White	FORWARD	M22-XDL-W-GB15	6.80
	White	REVERSE	M22-XDL-W-GB16	6.80
	Red	⊕	M22-XDL-R-X0	6.80
	White	⊕	M22-XDL-W-X0	6.80
	Green	Ⓜ	M22-XDL-G-X1	6.80
	White	Ⓜ	M22-XDL-W-X1	6.80
	White	+	M22-XDL-W-X4	6.80
	White	-	M22-XDL-W-X5	6.80
	Blue	Ⓜ	M22-XDL-B-X6	6.80
	White	Ⓜ	M22-XDL-W-X7	6.80
	White	Ⓜ	M22-XDL-W-X8	6.80

Component	Color	Description	Catalog Number	Price
B Actuator				
	Titanium	Maintained or Momentary 3	M22-DRL-X	37
	Black		M22S-DRL-X	37
C Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6
D LED Elements – front mounted 4 5				
	White	12 – 30 V AC/DC 8 – 15 mA	M22-LED-W	26
	Red		M22-LED-R	26
	Green		M22-LED-G	26
	Blue		M22-LED-B	26
	White	85 – 264 V AC, 50/60 Hz 5 – 15 mA	M22-LED230-W	38
	Red		M22-LED230-R	38
	Green		M22-LED230-G	38
	Blue		M22-LED230-B	38
	White	207 – 264 V AC, 50/60 Hz 12 – 15 mA	M22-LED230H-W	38
	Red		M22-LED230H-R	38
	Green		M22-LED230H-G	38
	Blue		M22-LED230H-B	38

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
E Contact Blocks – front mounted 6				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊕	M22-K01	14

1 Any combination of lens color and inscription are available; stocked combinations appear on this page; see pages A72 – A73 for other options.

⊕ = positively driven contact

Ordering Instructions by Components




- 2 Additional languages available; see pages A72 – A73.
- 3 This Moeller pilot device features a selectable function switch that enables the device to be set to either maintained or momentary operation - see previous page.
- 4 Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- 5 Select the same color LED element as your lens color; for yellow lens, choose a white LED.
- 6 Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

Standard pushbutton assembly; illuminated, extended, momentary ①

Contact Blocks		Titanium Color		Black		Titanium Color Guard Ring	
							
NO	NC	Momentary		Momentary		Momentary	
		Catalog Number	Price	Catalog Number	Price	Catalog Number	Price
Actuator & lens only		M22-DLH-◆-★	34	M22S-DLH-◆-★	34	M22-DGLH-◆-★	45
1	0	M22-DLH-◆-★/K10/▲	80	M22S-DLH-◆-★/K10/▲	80	M22-DGLH-◆-★/K10/▲	91
0	1	M22-DLH-◆-★/K01/▲	80	M22S-DLH-◆-★/K01/▲	80	M22-DGLH-◆-★/K01/▲	91
2	0	M22-DLH-◆-★/K20/▲	94	M22S-DLH-◆-★/K20/▲	94	M22-DGLH-◆-★/K20/▲	105
0	2	M22-DLH-◆-★/K02/▲	94	M22S-DLH-◆-★/K02/▲	94	M22-DGLH-◆-★/K02/▲	105
1	1	M22-DLH-◆-★/K11/▲	94	M22S-DLH-◆-★/K11/▲	94	M22-DGLH-◆-★/K11/▲	105
3	0	M22-DLH-◆-★/K30/▲	108	M22S-DLH-◆-★/K30/▲	108	M22-DGLH-◆-★/K30/▲	119
0	3	M22-DLH-◆-★/K03/▲	108	M22S-DLH-◆-★/K03/▲	108	M22-DGLH-◆-★/K03/▲	119
2	1	M22-DLH-◆-★/K21/▲	108	M22S-DLH-◆-★/K21/▲	108	M22-DGLH-◆-★/K21/▲	119
1	2	M22-DLH-◆-★/K12/▲	108	M22S-DLH-◆-★/K12/▲	108	M22-DGLH-◆-★/K12/▲	119

Order an Assembly

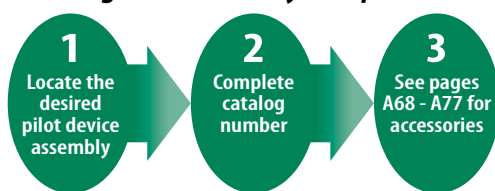
 See page A81 for ATEX information

⊖ = positively driven contact

Catalog Number Codes

M22	-	DLH	-	◆	-	★	/	K10	/	▲
Front Ring Color		Device Type		Lens Color		Lens Inscription ②③		Contact Blocks ④		LED Element ⑤⑥
M22 Titanium M22S Black - Gold		DLH Extended, Illuminated, Momentary actuator DGLH Extended, Illuminated, Momentary actuator with guard ring		W White R Red G Green Y Yellow B Blue		(leave blank for no inscription) <i>Price Adder for Inscriptions: \$2</i> GB0 STOP GB1 START GB3 UP GB4 DOWN GB5 OFF GB6 ON GB14 RESET GB15 FORWARD GB16 REVERSE X0 ⊖ X1 ⊕ X4 ⊕ X5 ⊖ X6 ⊕ X7 ⊕ ⊖ ⊕ ⊖ X8 ⊖ ⊕ ⊖ ⊕		(max for this device: 4) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ <i>Order additional contact blocks separately on next page</i>		12 – 30 V AC/DC: W White or Yellow R Red G Green B Blue 85 – 264 V AC 50/60Hz: <i>Price Adder: \$12</i> 230-W White or Yellow 230-R Red 230-G Green 230-B Blue 207 – 264 V AC 50/60Hz: <i>Price Adder: \$12</i> 230H-W White or Yellow 230H-R Red 230H-G Green 230H-B Blue
See next page for stocked combinations										

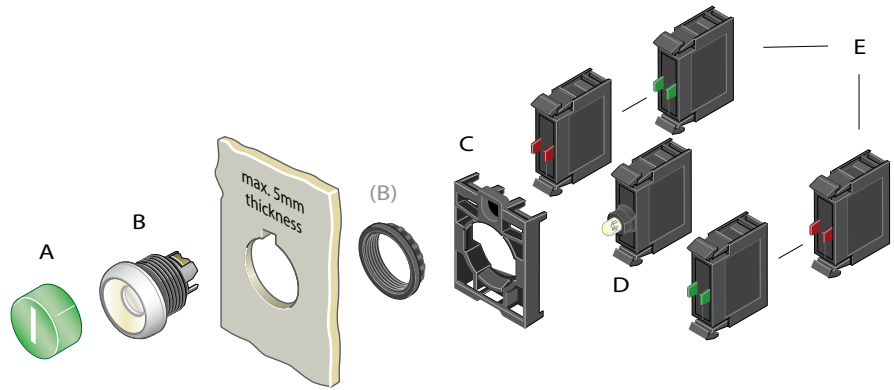
Ordering Instructions by Complete Assembly



- Complete assemblies are only partially assembled in preparation for panel installation.
- Any combination of lens color and inscription are available; stocked combinations appear on next page; see pages A72 – A73 for other options.
- Additional languages available; see pages A72 – A73.
- Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.
- Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- Select the same color LED element as your lens color; for yellow lens, choose a white LED.



Order by Components



Standard pushbutton components; illuminated, extended, momentary

Component	Lens Color	Lens Inscription 1 2	Catalog Number	Price
A Lens				
	White	(without inscription)	M22-XDLH-W	8.60
	Red		M22-XDLH-R	8.60
	Green		M22-XDLH-G	8.60
	Yellow		M22-XDLH-Y	8.60
	Blue		M22-XDLH-B	8.60
	Red	STOP	M22-XDLH-R-GB0	11.00
	White	STOP	M22-XDLH-W-GB0	11.00
	Green	START	M22-XDLH-G-GB1	11.00
	White	START	M22-XDLH-W-GB1	11.00
	White	UP	M22-XDLH-W-GB3	11.00
	White	DOWN	M22-XDLH-W-GB4	11.00
	Red	OFF	M22-XDLH-R-GB5	11.00
	White	OFF	M22-XDLH-W-GB5	11.00
	Green	ON	M22-XDLH-G-GB6	11.00
	White	ON	M22-XDLH-W-GB6	11.00
	Blue	RESET	M22-XDLH-B-GB14	11.00
	White	FORWARD	M22-XDLH-W-GB15	11.00
	White	REVERSE	M22-XDLH-W-GB16	11.00
	Red	⊙	M22-XDLH-R-X0	11.00
	White	⊙	M22-XDLH-W-X0	11.00
	Green	①	M22-XDLH-G-X1	11.00
	White	①	M22-XDLH-W-X1	11.00
	White	+	M22-XDLH-W-X4	11.00
	White	-	M22-XDLH-W-X5	11.00
	Blue	Ⓜ	M22-XDLH-B-X6	11.00
	White	①	M22-XDLH-W-X7	11.00
	White	Ⓜ	M22-XDLH-W-X8	11.00

Component	Color	Description	Catalog Number	Price
B Actuator				
	Titanium	Momentary operation	M22-DL-X	23
	Black		M22S-DL-X	23
	Titanium	with guard ring	M22-DGL-X	34
C Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6
D LED Elements – front mounted 3 4				
	White	12 – 30V AC/DC 8 – 15 mA	M22-LED-W	26
	Red		M22-LED-R	26
	Green		M22-LED-G	26
	Blue		M22-LED-B	26
	White	85 – 264 V AC, 50/60 Hz 5 – 15 mA	M22-LED230-W	38
	Red		M22-LED230-R	38
	Green		M22-LED230-G	38
	Blue		M22-LED230-B	38
	White	207 – 264 V AC, 50/60 Hz 12 – 15 mA	M22-LED230H-W	38
	Red		M22-LED230H-R	38
	Green		M22-LED230H-G	38
	Blue		M22-LED230H-B	38

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
E Contact Blocks – front mounted 5				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊕	M22-K01	14



⊕ = positively driven contact

Ordering Instructions by Components

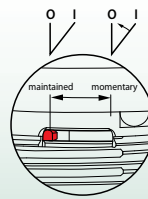
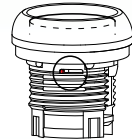


- 1 Any combination of lens color and inscription are available; stocked combinations appear on this page; see pages A72 – A73 for other options.
- 2 Additional languages available; see pages A72 – A73.
- 3 Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- 4 Select the same color LED element as your lens color; for yellow lens, choose a white LED.
- 5 Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

Standard pushbutton assembly; illuminated, extended, maintained or momentary ①


		Titanium Color		Black	
Contact Blocks					
NO	⊖	Maintained or Momentary		Maintained or Momentary	
		Catalog Number	Price	Catalog Number	Price
Actuator & lens only		M22-DRLH-◆-★	48	M22S-DRLH-◆-★	48
1	0	M22-DRLH-◆-★/K10/▲	94	M22S-DRLH-◆-★/K10/▲	94
0	1	M22-DRLH-◆-★/K01/▲	94	M22S-DRLH-◆-★/K01/▲	94
2	0	M22-DRLH-◆-★/K20/▲	108	M22S-DRLH-◆-★/K20/▲	108
0	2	M22-DRLH-◆-★/K02/▲	108	M22S-DRLH-◆-★/K02/▲	108
1	1	M22-DRLH-◆-★/K11/▲	108	M22S-DRLH-◆-★/K11/▲	108
3	0	M22-DRLH-◆-★/K30/▲	122	M22S-DRLH-◆-★/K30/▲	122
0	3	M22-DRLH-◆-★/K03/▲	122	M22S-DRLH-◆-★/K03/▲	122
2	1	M22-DRLH-◆-★/K21/▲	122	M22S-DRLH-◆-★/K21/▲	122
1	2	M22-DRLH-◆-★/K12/▲	122	M22S-DRLH-◆-★/K12/▲	122

This Moeller pilot device features a selectable function switch that enables the device to be set to either maintained or momentary operation.




















⊖ = positively driven contact

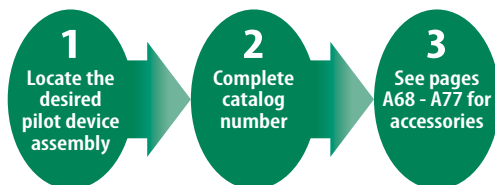
Order an Assembly

 See page A81 for ATEX information

Catalog Number Codes

M22	-	DRLH	-	◆	-	★	/	K10	/	▲
Front Ring Color		Device Type		Lens Color		Lens Inscription ②③		Contact Blocks ④		LED Element ⑤⑥
M22 Titanium M22S Black - Gold		DRLH Extended, Illuminated, Main-tained or Momentary actuator		W White  R Red  G Green  Y Yellow  B Blue 		Price Adder for Inscriptions: \$2 GB0 STOP GB1 START GB3 UP GB4 DOWN GB5 OFF GB6 ON GB14 RESET GB15 FORWARD GB16 REVERSE X0 ⊖ X1 ⊕ X4 ⊕ X5 ⊖ X6 ⊕ X7 ⊕ ⊖ ⊕ ⊖ X8 ⊖ ⊕ ⊖ ⊕		(max for this device: 4) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ Order additional contact blocks separately on next page		12 – 30 V AC/DC: W White or Yellow  R Red  G Green  B Blue  85 – 264 V AC 50/60Hz: Price Adder: \$12 230-W White or Yellow  230-R Red  230-G Green  230-B Blue  207 – 264 V AC 50/60Hz: Price Adder: \$12 230H-W White or Yellow  230H-R Red  230H-G Green  230H-B Blue 
Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery - see your Moeller representative.										
See next page for stocked combinations										

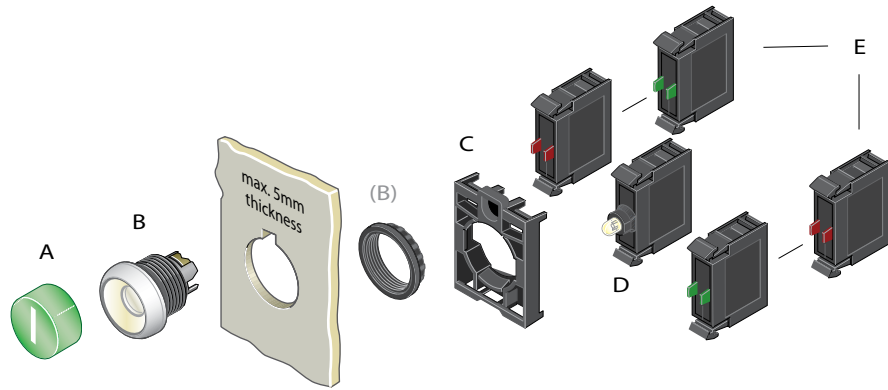
Ordering Instructions by Complete Assembly



- Complete assemblies are only partially assembled in preparation for panel installation.
- Any combination of lens color and inscription are available; stocked combinations appear on next page; see pages A72 – A73 for other options.
- Additional languages available; see pages A72 – A73.
- Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.
- Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- Select the same color LED element as your lens color; for yellow lens, choose a white LED.



Order by Components



Standard pushbutton components; illuminated, extended, maintained or momentary

Component	Lens Color	Lens Inscription 1 2	Catalog Number	Price
A Lens				
	White	(without inscription)	M22-XDLH-W	8.60
	Red		M22-XDLH-R	8.60
	Green		M22-XDLH-G	8.60
	Yellow		M22-XDLH-Y	8.60
	Blue		M22-XDLH-B	8.60
	Red	STOP	M22-XDLH-R-GB0	11.00
	White	STOP	M22-XDLH-W-GB0	11.00
	Green	START	M22-XDLH-G-GB1	11.00
	White	START	M22-XDLH-W-GB1	11.00
	White	UP	M22-XDLH-W-GB3	11.00
	White	DOWN	M22-XDLH-W-GB4	11.00
	Red	OFF	M22-XDLH-R-GB5	11.00
	White	OFF	M22-XDLH-W-GB5	11.00
	Green	ON	M22-XDLH-G-GB6	11.00
	White	ON	M22-XDLH-W-GB6	11.00
	Blue	RESET	M22-XDLH-B-GB14	11.00
	White	FORWARD	M22-XDLH-W-GB15	11.00
	White	REVERSE	M22-XDLH-W-GB16	11.00
	Red	⊙	M22-XDLH-R-X0	11.00
	White	⊙	M22-XDLH-W-X0	11.00
	Green	①	M22-XDLH-G-X1	11.00
	White	①	M22-XDLH-W-X1	11.00
	White	⊕	M22-XDLH-W-X4	11.00
	White	⊖	M22-XDLH-W-X5	11.00
	Blue	Ⓜ	M22-XDLH-B-X6	11.00
	White	①	M22-XDLH-W-X7	11.00
	White	Ⓜ	M22-XDLH-W-X8	11.00



1 Any combination of lens color and inscription are available; stocked combinations appear on this page; see pages A72 – A73 for other options.

Ordering Instructions by Components





Component	Color	Description	Catalog Number	Price
B Actuator				
	Titanium	Maintained or Momentary 3	M22-DRL-X	37
	Black		M22S-DRL-X	37
C Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6
D LED Elements – front mounted 4 5				
	White	12 – 30 V AC/DC 8 – 15 mA	M22-LED-W	26
	Red		M22-LED-R	26
	Green		M22-LED-G	26
	Blue		M22-LED-B	26
	White	85 – 264 V AC, 50/60 Hz 5 – 15 mA	M22-LED230-W	38
	Red		M22-LED230-R	38
	Green		M22-LED230-G	38
	Blue		M22-LED230-B	38
	White	207 – 264 V AC, 50/60 Hz 12 – 15 mA	M22-LED230H-W	38
	Red		M22-LED230H-R	38
	Green		M22-LED230H-G	38
	Blue		M22-LED230H-B	38

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
E Contact Blocks – front mounted 6				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊕	M22-K01	14

⊕ = positively driven contact


- 2 Additional languages available; see pages A72 – A73.
- 3 This Moeller pilot device features a selectable function switch that enables the device to be set to either maintained or momentary operation - see previous page.
- 4 Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- 5 Select the same color LED element as your lens color; for yellow lens, choose a white LED.
- 6 Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

A Double pushbutton assembly; with center light, momentary ①

Contact Blocks		Titanium Color		Black	
					
NO	NC	Momentary		Momentary	
		Catalog Number	Price	Catalog Number	Price
Actuator w/ plates only		M22-DDL-◆◆-★/★	46	M22S-DDL-◆◆-★/★	46
2	0	M22-DDL-◆◆-★/★/K20/▲	108	M22S-DDL-◆◆-★/★/K20/▲	108
0	2	M22-DDL-◆◆-★/★/K02/▲	108	M22S-DDL-◆◆-★/★/K02/▲	108
1	1	M22-DDL-◆◆-★/★/K11/▲	108	M22S-DDL-◆◆-★/★/K11/▲	108
3	0	M22-DDL-◆◆-★/★/K30/▲	122	M22S-DDL-◆◆-★/★/K30/▲	122
0	3	M22-DDL-◆◆-★/★/K03/▲	122	M22S-DDL-◆◆-★/★/K03/▲	122
2	1	M22-DDL-◆◆-★/★/K21/▲	122	M22S-DDL-◆◆-★/★/K21/▲	122
1	2	M22-DDL-◆◆-★/★/K12/▲	122	M22S-DDL-◆◆-★/★/K12/▲	122
4	0	M22-DDL-◆◆-★/★/K40/▲	136	M22S-DDL-◆◆-★/★/K40/▲	136
0	4	M22-DDL-◆◆-★/★/K04/▲	136	M22S-DDL-◆◆-★/★/K04/▲	136
3	1	M22-DDL-◆◆-★/★/K31/▲	136	M22S-DDL-◆◆-★/★/K31/▲	136
1	3	M22-DDL-◆◆-★/★/K13/▲	136	M22S-DDL-◆◆-★/★/K13/▲	136
2	2	M22-DDL-◆◆-★/★/K22/▲	136	M22S-DDL-◆◆-★/★/K22/▲	136

⊕ = positively driven contact

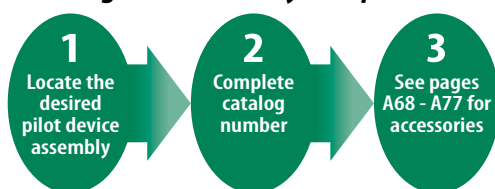
Order an Assembly

 See page A81 for ATEX information

Catalog Number Codes

M22 Front Ring Color	DDL Device Type	◆◆ Plate Colors	★/★ Plate Inscriptions ②③	/ K10 Contact Blocks ④	/ ▲ Center Light LED Element ⑤
M22 Titanium M22S Black — Gold	DDL Double pushbutton, Rounded Buttons and Center Light, Momentary actuator DDL F ⑥ Double pushbutton, Flat Buttons and Center Light, Momentary actuator DDL M ⑥ Double pushbutton, Top button and Center Light Flat, Bottom button Rounded, Momentary actuator	first ◆ is top color, second ◆ is bottom color W White ○ S Black ● G Green ● R Red ● Note: For same color plates on top and bottom, leave second ◆ blank.	(leave blank for no inscriptions) first ★ is top inscription, second ★ is bottom inscription <i>Price Adder for Inscriptions: \$3</i> GB0 STOP GB1 START GB3 UP GB4 DOWN GB5 OFF GB6 ON GB15 FORWARD GB16 REVERSE X0 ⊕ X1 ⊖ X4 ⊕ X5 ⊖ X7 ⊕ ⊖	(max for this device: 4) K20 2NO K02 2NC ⊕ K11 1NO/1NC ⊕ K30 3NO K03 3NC ⊕ K21 2NO/1NC ⊕ K12 1NO/2NC ⊕ K40 4NO K04 4NC ⊕ K31 3NO/1NC ⊕ K13 1NO/3NC ⊕ K22 2NO/2NC ⊕	12 – 30 V AC/DC: W White ⊕ 85 – 264 V AC 50/60Hz: Price Adder: \$12 230-W White ⊕ 207 – 264 V AC 50/60Hz: Price Adder: \$12 230H-W White ⊕
Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery - see your Moeller representative.			See next page for stocked combinations		

Ordering Instructions by Complete Assembly

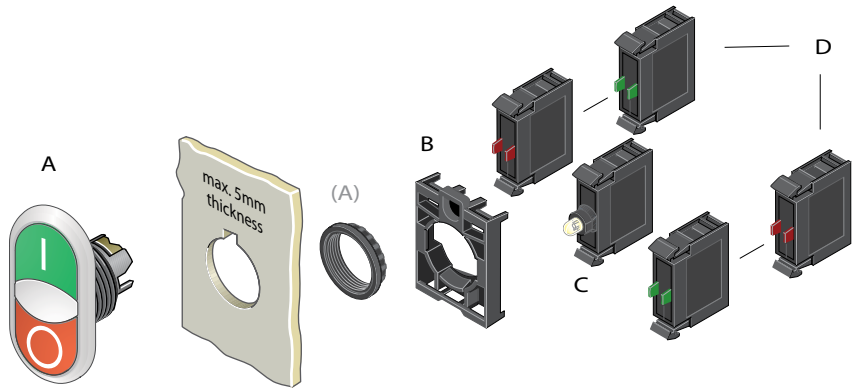


- Complete assemblies are only partially assembled in preparation for panel installation.
- Any combination of plate color and inscription are available: stocked combinations appear on next page; custom text or custom graphics can be engraved on listed colors; see your Moeller representative.
- Additional languages available; please consult your Moeller representative.
- Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.
- Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- These double pushbuttons are specially ordered; see your Moeller representative.



(center light illumination)

Order by Components



Double pushbutton components; with center light, momentary

Component	Plate Colors	Plate Inscription 1 2	Catalog Number	Price
A Actuator with Plates 3				
	Top	White ○	M22-DDL-WS	46
	Bottom	Black ●		
	Top	Green ●	M22-DDL-GR	46
	Bottom	Red ● (without inscription)		
	Top	Black ●	M22-DDL-S	46
	Bottom	Black ●		
	Top	White ○	M22-DDL-W	46
	Bottom	White ○		
	Top	White ○	M22-DDL-WS-X1/X0	49
	Bottom	Black ●		
	Top	Green ●	M22-DDL-GR-X1/X0	49
	Bottom	Red ●		
	Top	White ○	M22-DDL-WS-GB1/GB0	49
	Bottom	Black ●		
Top	Green ●	M22-DDL-GR-GB1/GB0	49	
Bottom	Red ●			
Top	Black ●	M22-DDL-S-X7/X7	49	
Bottom	Black ●			
Top	Black ●	M22-DDL-S-X4/X5	49	
Bottom	Black ●			
	Top	White ○	M22S-DDL-WS	46
	Bottom	Black ●		
	Top	Green ●	M22S-DDL-GR	46
	Bottom	Red ● (without inscription)		
	Top	Black ●	M22S-DDL-S	46
	Bottom	Black ●		
	Top	White ○	M22S-DDL-W	46
	Bottom	White ○		
	Top	White ○	M22S-DDL-WS-X1/X0	49
	Bottom	Black ●		
	Top	Green ●	M22S-DDL-GR-X1/X0	49
	Bottom	Red ●		
	Top	White ○	M22S-DDL-WS-GB1/GB0	49
	Bottom	Black ●		
Top	Green ●	M22S-DDL-GR-GB1/GB0	49	
Bottom	Red ●			
Top	Black ●	M22S-DDL-S-X7/X7	49	
Bottom	Black ●			
Top	Black ●	M22S-DDL-S-X4/X5	49	
Bottom	Black ●			

Component	Color	Description	Catalog Number	Price
B Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6
C LED Elements – front mounted 4				
	White ○	12 – 30 V AC/DC 8 – 15 mA	M22-LED-W	26
	White ○	85 – 264 V AC, 50/60 Hz 5 – 15 mA	M22-LED230-W	38
	White ○	207 – 264 V AC, 50/60 Hz 12 – 15 mA	M22-LED230H-W	38

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
D Contact Blocks – front mounted 5				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14

⊖ = positively driven contact

- 1 Custom text or custom graphics can be engraved on listed colors; see your Moeller representative.
- 2 Additional languages available; please consult your Moeller representative.
- 3 See previous page for other specially ordered double pushbutton actuator options.
- 4 Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- 5 Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.



Ordering Instructions by Components



A

Pilot Devices

Four button operator assembly; non-illuminated, momentary ①

		Titanium Color		Black	
Contact Blocks					
NO	NC	Momentary		Momentary	
		Catalog Number	Price	Catalog Number	Price
Actuator w/ plates only		M22-D4-S-★	149	M22S-D4-S-★	149
4	0	M22-D4-S-★/K40	219	M22S-D4-S-★/K40	219
0	4	M22-D4-S-★/K04	219	M22S-D4-S-★/K04	219
3	1	M22-D4-S-★/K31	219	M22S-D4-S-★/K31	219
1	3	M22-D4-S-★/K13	219	M22S-D4-S-★/K13	219
2	2	M22-D4-S-★/K22	219	M22S-D4-S-★/K22	219
5	0	M22-D4-S-★/K50	233	M22S-D4-S-★/K50	233
0	5	M22-D4-S-★/K05	233	M22S-D4-S-★/K05	233
4	1	M22-D4-S-★/K41	233	M22S-D4-S-★/K41	233
1	4	M22-D4-S-★/K14	233	M22S-D4-S-★/K14	233
3	2	M22-D4-S-★/K32	233	M22S-D4-S-★/K32	233
2	3	M22-D4-S-★/K23	233	M22S-D4-S-★/K23	233

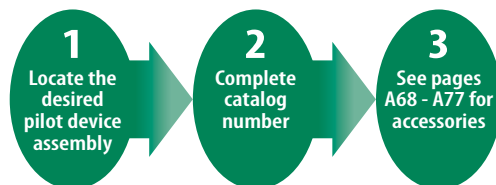
⊖ = positively driven contact

Order an Assembly

Catalog Number Codes

M22	–	D4	–	S	–	★	/	K40
Front Ring Color		Device Type		Plate Colors		Plate Inscriptions		Contact Blocks ②
M22 Titanium M22S Black		D4 Four button, Non-illuminated, Momentary, Unclamped operation D14 Four button, Non-illuminated, Momentary, Clamped operation (only one button will activate at a time) ③		S Black ●		(leave blank for no inscriptions) X7 ① ⊖ ① ⊖		(max for this device: 8) K40 4NO K04 4NC ⊖ K31 3NO/1NC ⊖ K13 1NO/3NC ⊖ K22 2NO/2NC ⊖ K50 5NO K05 5NC ⊖ K41 4NO/1NC ⊖ K14 1NO/4NC ⊖ K32 3NO/2NC ⊖ K23 2NO/3NC ⊖ Order additional contact blocks separately on next page
<p>Available custom colors and inscriptions:</p> <p>White ○ Each button can have custom text or custom graphics engraved on any listed color. To order a custom four button operator, please contact your Moeller representative.</p> <p>Green ● Red ● Yellow ● Blue ● </p>								

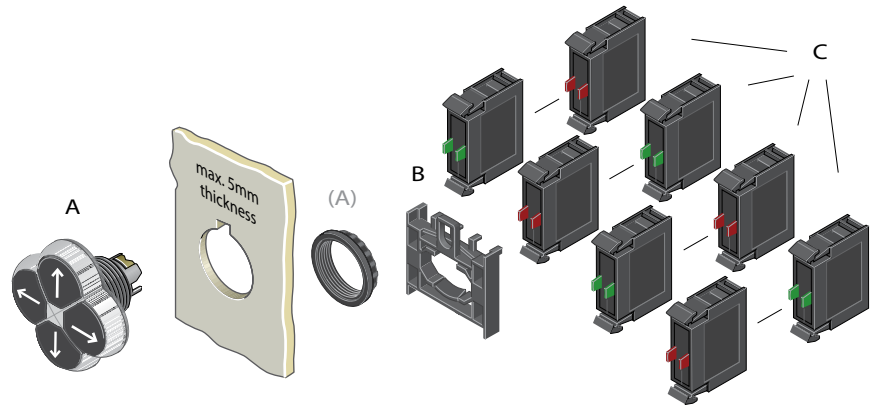
Ordering Instructions by Complete Assembly



- ① Complete assemblies are only partially assembled in preparation for panel installation.
- ② Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.
- ③ This four button actuator is specially ordered; see your Moeller representative.



Order by Components



Four button operator components; non-illuminated, momentary

Component	Plate Colors ①	Inscription ①	Catalog Number	Price
A Actuator with Plates ②				
	Black ●	(without inscription)	M22-D4-S	149
	Black ●	(directional arrows)	M22-D4-S-X7	149
	Black ●	(without inscription)	M22S-D4-S	149
	Black ●	(directional arrows)	M22S-D4-S-X7	149

Component	Description	Catalog Number	Price
B Mounting Adapter			
	Special adapter that can hold up to eight contact blocks. Used exclusively with all four-way operators and two-way joysticks. Mates back of panel components to actuator.	M22-A4	12

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
C Contact Blocks – front mounted ③				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14

⊖ = positively driven contact

Ordering Instructions by Components




- ① Each button can have custom text or custom graphics engraved on any following color: Black ●, White ○, Green ●, Red ●, Yellow ● or Blue ●; to order a custom four button operator, please contact your Moeller representative.
- ② See previous page for other specially ordered four button actuator options.
- ③ Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

Emergency-stop assembly; non-illuminated, keyed and non-keyed ①

Order an Assembly

Contact Blocks		Red		Black	
					
NO	NC	Catalog Number	Price	Catalog Number	Price
Actuator only		M22-PV◆-★	75	M22S-PV◆	75
1	0	M22-PV◆-★/K10	97	M22S-PV◆/K10	97
0	1	M22-PV◆-★/K01	97	M22S-PV◆/K01	97
2	0	M22-PV◆-★/K20	111	M22S-PV◆/K20	111
0	2	M22-PV◆-★/K02	111	M22S-PV◆/K02	111
1	1	M22-PV◆-★/K11	111	M22S-PV◆/K11	111
3	0	M22-PV◆-★/K30	125	M22S-PV◆/K30	125
0	3	M22-PV◆-★/K03	125	M22S-PV◆/K03	125
2	1	M22-PV◆-★/K21	125	M22S-PV◆/K21	125
1	2	M22-PV◆-★/K12	125	M22S-PV◆/K12	125

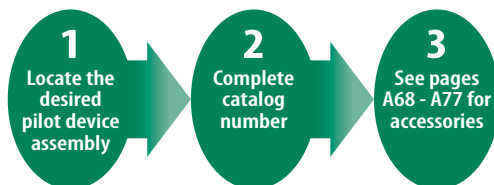
 See page A81 for ATEX information

⊖ = positively driven contact

Catalog Number Codes

M22 Mushroom Head Color	-	PV Device Type	◆ Release Type	-	★ Key Code <i>use only with Keyed release</i>	/	K10 Contact Blocks ②
M22 Red M22S Black		PV Emergency-stop actuator, non-illuminated	(leave blank for Pull-to-release) T Turn-to-release <i>Price Adder for Keyed Release: \$81</i> S Keyed release (<i>only available with red mushroom head</i>)		(leave blank for MS1) MS11 MS12 MS2 MS13 MS3 MS14 MS4 MS15 MS5 MS16 MS6 MS17 MS7 MS18 MS8 MS19 MS9 MS20 MS10 MS20		(max for this device: 6) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ <i>Order additional contact blocks separately on next page</i>
<p>For identical locks and keys, use the same key code. One key is included with actuator; additional keys are available as accessories. A master key system is also available - see pages A59 – A66.</p>							

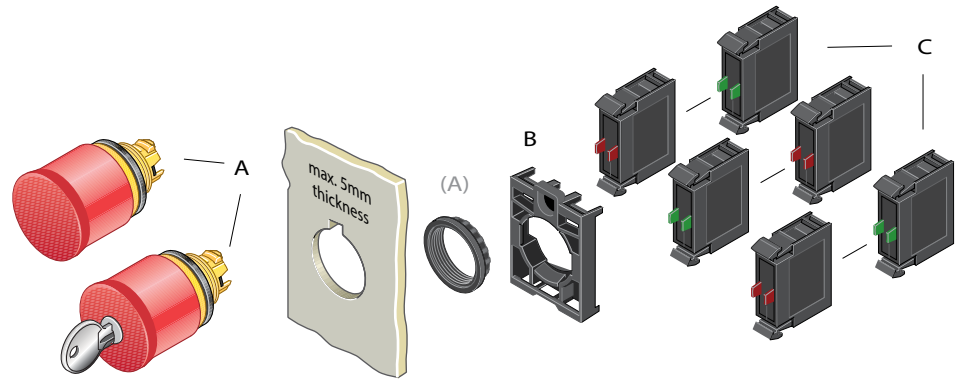
Ordering Instructions by Complete Assembly



- ① Complete assemblies are only partially assembled in preparation for panel installation.
- ② Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.



Order by Components



Emergency-stop components; non-illuminated, keyed and non-keyed

Component	Release Type	Catalog Number	Price
A Actuator			
	Pull-to-release	M22-PV	75
	Turn-to-release	M22-PVT	75
	Pull-to-release	M22S-PV	75
	Turn-to-release	M22S-PVT	75
	Keyed Release	M22-PVS-★	156

Replace ★ in catalog number with desired key code (MS2 – MS20), leave blank for MS1 key code - see previous page. Actuator includes one key.

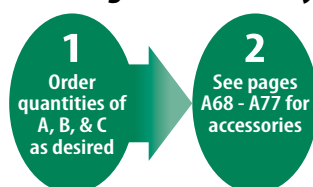
Component	Description	Catalog Number	Price
B Mounting Adapter			
	Mates back of panel components to actuator	M22-A	6

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
C Contact Blocks – front mounted ①				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊕	M22-K01	14

⊕ = positively driven contact



Extra Keys	For Key Code	Catalog Number	Price	For Key Code	Catalog Number	Price
Extra Keys (one key included with actuator)						
	MS1	M22-ES-MS1	24	MS11	M22-ES-MS11	24
	MS2	M22-ES-MS2	24	MS12	M22-ES-MS12	24
	MS3	M22-ES-MS3	24	MS13	M22-ES-MS13	24
	MS4	M22-ES-MS4	24	MS14	M22-ES-MS14	24
	MS5	M22-ES-MS5	24	MS15	M22-ES-MS15	24
	MS6	M22-ES-MS6	24	MS16	M22-ES-MS16	24
	MS7	M22-ES-MS7	24	MS17	M22-ES-MS17	24
	MS8	M22-ES-MS8	24	MS18	M22-ES-MS18	24
	MS9	M22-ES-MS9	24	MS19	M22-ES-MS19	24
	MS10	M22-ES-MS10	24	MS20	M22-ES-MS20	24

Ordering Instructions by Components



① Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

A Emergency-stop assembly; illuminated, non-keyed ①

Contact Blocks		Red		Black	
					
NO	⊖ NC	Catalog Number	Price	Catalog Number	Price
Actuator only		M22-PVL◆	83	M22S-PVL◆	83
1	0	M22-PVL◆/K10/▲	131	M22S-PVL◆/K10/▲	131
0	1	M22-PVL◆/K01/▲	131	M22S-PVL◆/K01/▲	131
2	0	M22-PVL◆/K20/▲	145	M22S-PVL◆/K20/▲	145
0	2	M22-PVL◆/K02/▲	145	M22S-PVL◆/K02/▲	145
1	1	M22-PVL◆/K11/▲	145	M22S-PVL◆/K11/▲	145
3	0	M22-PVL◆/K30/▲	159	M22S-PVL◆/K30/▲	159
0	3	M22-PVL◆/K03/▲	159	M22S-PVL◆/K03/▲	159
2	1	M22-PVL◆/K21/▲	159	M22S-PVL◆/K21/▲	159
1	2	M22-PVL◆/K12/▲	159	M22S-PVL◆/K12/▲	159







⊖ = positively driven contact

Order an Assembly

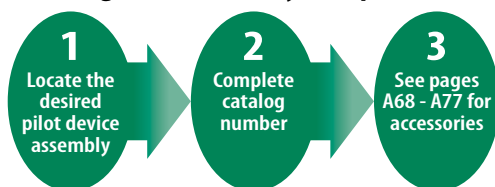


See page A81 for ATEX information

Catalog Number Codes

M22 Mushroom Head Color	-	PVL Device Type	◆ Release Type	/	K10 Contact Blocks ②	/	▲ LED Element ③
M22 Red M22S Black		PVL Emergency-stop actuator, illuminated, non-keyed	(leave blank for Pull-to-release) T Turn-to-release		(max for this device: 4) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ <i>Order additional contact blocks separately on next page</i>		12 – 30 V AC/DC: W White  R Red  85 – 264 V AC 50/60Hz: Price Adder: \$12 230-W White  230-R Red  207 – 264 V AC 50/60Hz: Price Adder: \$12 230H-W White  230H-R Red 

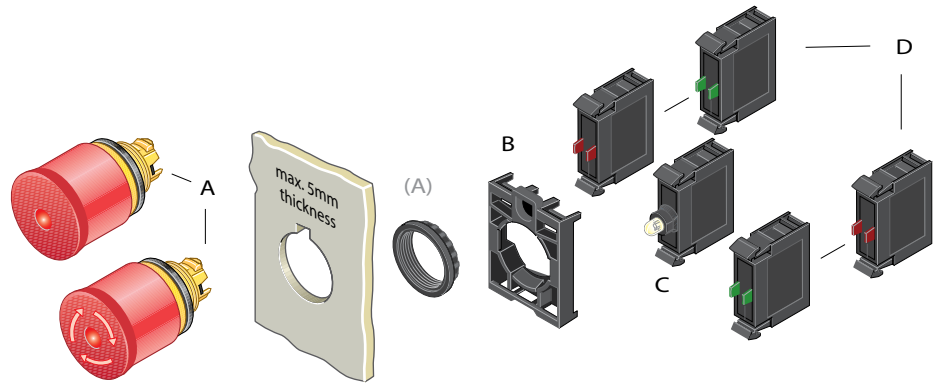
Ordering Instructions by Complete Assembly



- ① Complete assemblies are only partially assembled in preparation for panel installation.
- ② Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.
- ③ Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.



Order by
Components



Emergency-stop components; illuminated, non-keyed

Component	Release Type	Catalog Number	Price
A Actuator			
	Pull-to-release	M22-PVL	83
	Turn-to-release	M22-PVLT	83
	Pull-to-release	M22S-PVL	83
	Turn-to-release	M22S-PVLT	83

Component	Color	Description	Catalog Number	Price
B Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6
C LED Elements – front mounted ①				
	White	12 – 30 V AC/DC 8 – 15 mA	M22-LED-W	26
	Red		M22-LED-R	26
	White	85 – 264 V AC, 50/60 Hz	M22-LED230-W	38
	Red	5 – 15 mA	M22-LED230-R	38
	White	207 – 264 V AC, 50/60 Hz	M22-LED230H-W	38
	Red	12 – 15 mA	M22-LED230H-R	38

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
D Contact Blocks – front mounted ②				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14


⊖ = positively driven contact

Ordering Instructions by Components




- ① Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- ② Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

Mushroom head pushbutton assembly; momentary ①

Contact Blocks		Titanium Color		Black	
			Available colors: Black ● Red ● Green ● Yellow ●		Available colors: Black ● Red ● Green ● Yellow ●
NO	NC	Momentary		Momentary	
		Catalog Number	Price	Catalog Number	Price
Actuator & plate only		M22-DP-◆-★	35	M22S-DP-◆-★	35
1	0	M22-DP-◆-★/K10	55	M22S-DP-◆-★/K10	55
0	1	M22-DP-◆-★/K01	55	M22S-DP-◆-★/K01	55
2	0	M22-DP-◆-★/K20	69	M22S-DP-◆-★/K20	69
0	2	M22-DP-◆-★/K02	69	M22S-DP-◆-★/K02	69
1	1	M22-DP-◆-★/K11	69	M22S-DP-◆-★/K11	69
3	0	M22-DP-◆-★/K30	83	M22S-DP-◆-★/K30	83
0	3	M22-DP-◆-★/K03	83	M22S-DP-◆-★/K03	83
2	1	M22-DP-◆-★/K21	83	M22S-DP-◆-★/K21	83
1	2	M22-DP-◆-★/K12	83	M22S-DP-◆-★/K12	83

Order an Assembly

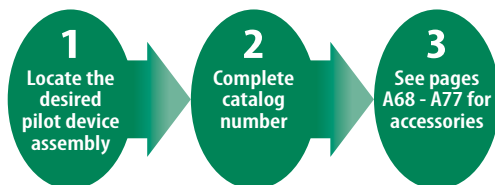
 See page A81 for ATEX information

⊖ = positively driven contact

Catalog Number Codes

M22	–	DP	–	◆	–	★	/	K10
Front Ring Color		Device Type		Mushroom Head and Plate Color		Plate Inscription ②③		Contact Blocks ④
M22 Titanium M22S Black – Gold		DP Mushroom head, Non-Illuminated, Momentary actuator		S Black ● R Red ● G Green ● Y Yellow ● White plate on black mushroom head: W White ○		(leave blank for no inscription) Price Adder for Inscriptions: \$2 GB0 STOP GB1 START GB3 UP GB4 DOWN GB5 OFF GB6 ON GB15 FORWARD GB16 REVERSE X0 ⊖ X1 ⊕ X4 ⊕ X5 ⊖ X7 ⊕ ⊖ ⊕ ⊖ X8 ⊖ ⊕ ⊖ ⊕		(max for this device: 6) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ <i>Order additional contact blocks separately on next page</i>
Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery – see your Moeller representative.								
See next page for stocked combinations								

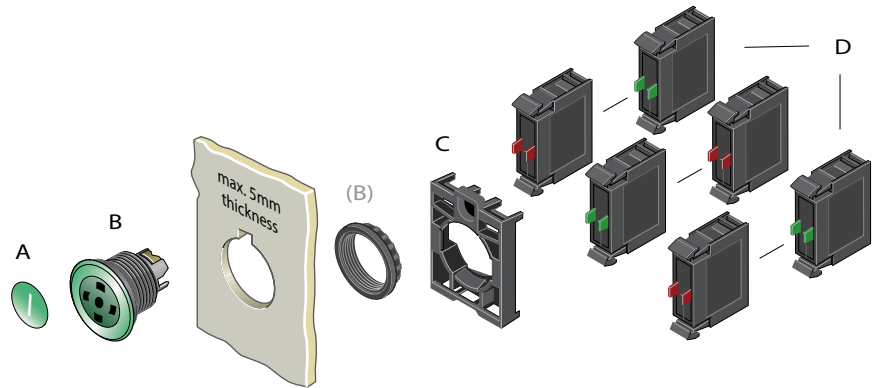
Ordering Instructions by Complete Assembly



- ① Complete assemblies are only partially assembled in preparation for panel installation.
- ② Any combination of plate color and inscription are available; stocked combinations appear on next page; see pages A72 – A73 for other options.
- ③ Additional languages available; see pages A72 – A73.
- ④ Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.



Order by Components



Mushroom head pushbutton components; momentary

Component	Plate Color	Plate Inscription 1 2	Catalog Number	Price
A Plate				
	Black ●	(without inscription)	M22-XDP-S	4.40
	White ○		M22-XDP-W	4.40
	Red ●		M22-XDP-R	4.40
	Green ●		M22-XDP-G	4.40
	Yellow ●		M22-XDP-Y	4.40
	Red ●	STOP	M22-XDP-R-GB0	6.80
	Black ●	STOP	M22-XDP-S-GB0	6.80
	Green ●	START	M22-XDP-G-GB1	6.80
	Black ●	START	M22-XDP-S-GB1	6.80
	Black ●	UP	M22-XDP-S-GB3	6.80
	Black ●	DOWN	M22-XDP-S-GB4	6.80
	Red ●	OFF	M22-XDP-R-GB5	6.80
	Black ●	OFF	M22-XDP-S-GB5	6.80
	Green ●	ON	M22-XDP-G-GB6	6.80
	Black ●	ON	M22-XDP-S-GB6	6.80
	Black ●	FORWARD	M22-XDP-S-GB15	6.80
	Black ●	REVERSE	M22-XDP-S-GB16	6.80
	Red ●	⊕	M22-XDP-R-X0	6.80
	Black ●	⊕	M22-XDP-S-X0	6.80
	Green ●	Ⓜ	M22-XDP-G-X1	6.80
Black ●	Ⓜ	M22-XDP-S-X1	6.80	
Black ●	⊕	M22-XDP-S-X4	6.80	
Black ●	⊖	M22-XDP-S-X5	6.80	
Black ●	Ⓜ	M22-XDP-S-X7	6.80	
Black ●	Ⓜ	M22-XDP-S-X8	6.80	

Component	Mushroom head Color	Description	Catalog Number	Price
B Actuator				
	Black ●	Momentary operation	M22-DP-S-X	28
	Red ●		M22-DP-R-X	28
	Green ●		M22-DP-G-X	28
	Yellow ●		M22-DP-Y-X	28
	Black ●		M22S-DP-S-X	28
	Red ●	M22S-DP-R-X	28	
	Green ●	M22S-DP-G-X	28	
	Yellow ●	M22S-DP-Y-X	28	
	C Mounting Adapter			
	Black	Mates back of panel components to actuator	M22-A	6

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
D Contact Blocks – front mounted 3				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14

⊖ = positively driven contact

Ordering Instructions by Components

1

Order quantities of A, B, C, & D as desired



➔

2

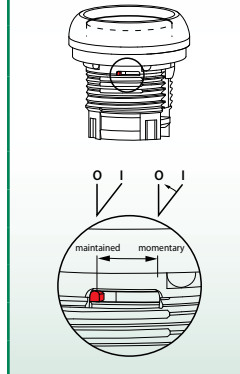
See pages A68 - A77 for accessories

- ① Any combination of plate color and inscription are available; stocked combinations appear on this page; see pages A72 – A73 for other options.
- ② Additional languages available; see pages A72 – A73.
- ③ Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

Mushroom head pushbutton assembly; maintained or momentary ①


Contact Blocks		Titanium Color		Black	
			Available colors: Black ● Red ● Green ● Yellow ●		Available colors: Black ● Red ● Green ● Yellow ●
NO	⊖	Maintained or Momentary		Maintained or Momentary	
		Catalog Number	Price	Catalog Number	Price
Actuator & plate only		M22-DRP-◆-★	48	M22S-DRP-◆-★	48
1	0	M22-DRP-◆-★/K10	68	M22S-DRP-◆-★/K10	68
0	1	M22-DRP-◆-★/K01	68	M22S-DRP-◆-★/K01	68
2	0	M22-DRP-◆-★/K20	82	M22S-DRP-◆-★/K20	82
0	2	M22-DRP-◆-★/K02	82	M22S-DRP-◆-★/K02	82
1	1	M22-DRP-◆-★/K11	82	M22S-DRP-◆-★/K11	82
3	0	M22-DRP-◆-★/K30	96	M22S-DRP-◆-★/K30	96
0	3	M22-DRP-◆-★/K03	96	M22S-DRP-◆-★/K03	96
2	1	M22-DRP-◆-★/K21	96	M22S-DRP-◆-★/K21	96
1	2	M22-DRP-◆-★/K12	96	M22S-DRP-◆-★/K12	96

This Moeller pilot device features a selectable function switch that enables the device to be set to either maintained or momentary operation.



⊖ = positively driven contact

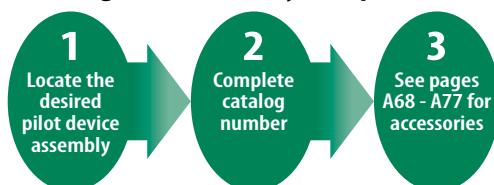
Order an Assembly

 See page A81 for ATEX information

Catalog Number Codes

M22	–	DRP	–	◆	–	★	/	K10
Front Ring Color		Device Type		Mushroom Head and Plate Color		Plate Inscription ②③		Contact Blocks ④
M22 Titanium M22S Black – Gold		DRP Mushroom head, Non-Illuminated, Maintained or Momentary actuator		S Black ● R Red ● G Green ● Y Yellow ● White plate on black mushroom head: W White ○		(leave blank for no inscription) Price Adder for Inscriptions: \$2 GB0 STOP GB1 START GB3 UP GB4 DOWN GB5 OFF GB6 ON GB15 FORWARD GB16 REVERSE X0 ⊖ X1 ⊕ X4 ⊕ X5 ⊖ X7 ⊕ ⊖ ⊕ ⊖ X8 ⊖ ⊕ ⊖ ⊕		(max for this device: 6) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ Order additional contact blocks separately on next page
Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery – see your Moeller representative.								
See next page for stocked combinations								

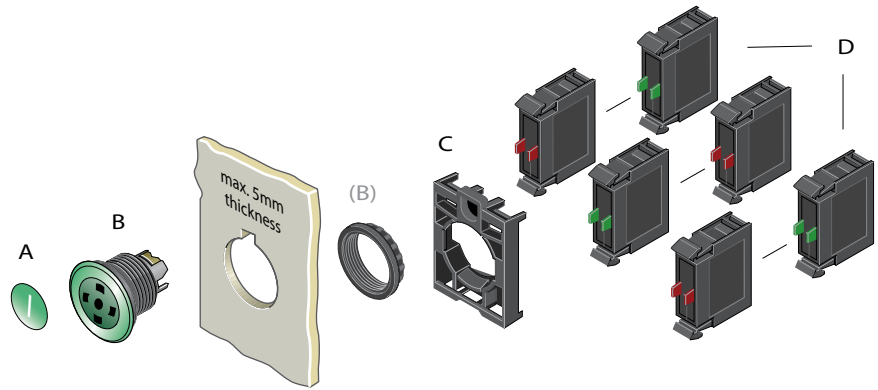
Ordering Instructions by Complete Assembly



- Complete assemblies are only partially assembled in preparation for panel installation.
- Any combination of plate color and inscription are available; stocked combinations appear on next page; see pages A72 – A73 for other options.
- Additional languages available; see pages A72 – A73.
- Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.



Order by Components



Mushroom head pushbutton components; maintained or momentary

Component	Plate Color	Plate Inscription 1 2	Catalog Number	Price
A Plate				
	Black ●	(without inscription)	M22-XDP-S	4.40
	White ○		M22-XDP-W	4.40
	Red ●		M22-XDP-R	4.40
	Green ●		M22-XDP-G	4.40
	Yellow ●		M22-XDP-Y	4.40
	Red ●	STOP	M22-XDP-R-GB0	6.80
	Black ●	STOP	M22-XDP-S-GB0	6.80
	Green ●	START	M22-XDP-G-GB1	6.80
	Black ●	START	M22-XDP-S-GB1	6.80
	Black ●	UP	M22-XDP-S-GB3	6.80
	Black ●	DOWN	M22-XDP-S-GB4	6.80
	Red ●	OFF	M22-XDP-R-GB5	6.80
	Black ●	OFF	M22-XDP-S-GB5	6.80
	Green ●	ON	M22-XDP-G-GB6	6.80
	Black ●	ON	M22-XDP-S-GB6	6.80
	Black ●	FORWARD	M22-XDP-S-GB15	6.80
	Black ●	REVERSE	M22-XDP-S-GB16	6.80
	Red ●	⊕	M22-XDP-R-X0	6.80
	Black ●	⊕	M22-XDP-S-X0	6.80
	Green ●	Ⓜ	M22-XDP-G-X1	6.80
	Black ●	Ⓜ	M22-XDP-S-X1	6.80
	Black ●	⊕	M22-XDP-S-X4	6.80
	Black ●	⊖	M22-XDP-S-X5	6.80
	Black ●	Ⓜ	M22-XDP-S-X7	6.80
	Black ●	Ⓜ	M22-XDP-S-X8	6.80

Component	Mushroom head Color	Description	Catalog Number	Price
B Actuator				
	Black ●	Maintained or Momentary 3	M22-DRP-S-X	41
	Red ●		M22-DRP-R-X	41
	Green ●		M22-DRP-G-X	41
	Yellow ●		M22-DRP-Y-X	41
	Black ●		M22S-DRP-S-X	41
	Red ●		M22S-DRP-R-X	41
	Green ●	M22S-DRP-G-X	41	
	Yellow ●	M22S-DRP-Y-X	41	
C Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
D Contact Blocks – front mounted 4				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14

⊖ = positively driven contact

Ordering Instructions by Components



- 1 Any combination of plate color and inscription are available; stocked combinations appear on this page; see pages A72 – A73 for other options.
- 2 Additional languages available; see pages A72 – A73.
- 3 This Moeller pilot device features a selectable function switch that enables the device to be set to either maintained or momentary operation - see previous page.
- 4 Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.




A
Pilot Devices

Foot and palm switch assembly; for typical applications, momentary operation 1 2

Contact Blocks		Black		Red		Yellow	
							
NO	NC	Momentary		Momentary		Momentary	
		Catalog Number	Price	Catalog Number	Price	Catalog Number	Price
Actuator and base only		FAK-S/I	166	FAK-R/I	166	FAK-Y/I	166
1	0	FAK-S/KC10/I	180	FAK-R/KC10/I	180	FAK-Y/KC10/I	180
0	1	FAK-S/KC01/I	180	FAK-R/KC01/I	180	FAK-Y/KC01/I	180
2	0	FAK-S/KC20/I	194	FAK-R/KC20/I	194	FAK-Y/KC20/I	194
0	2	FAK-S/KC02/I	194	FAK-R/KC02/I	194	FAK-Y/KC02/I	194
1	1	FAK-S/KC11/I	194	FAK-R/KC11/I	194	FAK-Y/KC11/I	194
3	0	FAK-S/KC30/I	208	FAK-R/KC30/I	208	FAK-Y/KC30/I	208
0	3	FAK-S/KC03/I	208	FAK-R/KC03/I	208	FAK-Y/KC03/I	208
2	1	FAK-S/KC21/I	208	FAK-R/KC21/I	208	FAK-Y/KC21/I	208
1	2	FAK-S/KC12/I	208	FAK-R/KC12/I	208	FAK-Y/KC12/I	208

Order an Assembly

 See page A81 for ATEX information

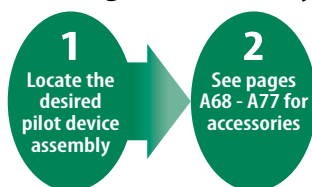


Catalog Number Codes

FAK	-	S	/	KC10	/	I
Device Type		Mushroom Head Color		Contact Blocks ③		Enclosure Top Color
FAK Foot and Palm Switch		S Black (RAL 9004) R Red (RAL 3000) Y Yellow (RAL 1004)		(max for this device: 3) KC10 1NO KC30 3NO KC01 1NC ⊖ KC03 3NC ⊖ KC20 2NO KC21 2NO/1NC ⊖ KC02 2NC ⊖ KC12 1NO/2NC ⊖ KC11 1NO/1NC ⊖		I Gray (RAL 7035)

⊖ = positively driven contact

Ordering Instructions by Complete Assembly

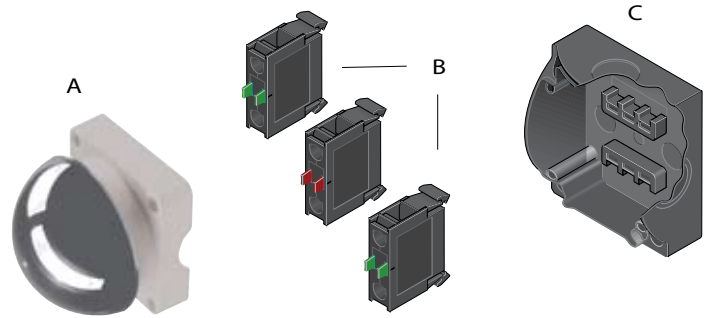


- ① Enclosure base is black (RAL 9005); enclosure top is light gray (RAL 7035)
- ② An optional indicating light is also available; order separately on next page.
- ③ Cage clamp terminals are also available; see accessories on page A68.




(optional
indicating
light)

Order by
Components





Foot and palm switch components; for typical applications, momentary operation


Component	Release Type	Catalog Number	Price
A Actuator			
	momentary	FAK-S	121
	momentary	FAK-R	121
	momentary	FAK-Y	121

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
B Contact Blocks – base mounted ①				
	Screw Terminals	1NO	M22-KC10	14
		1NC ⊖	M22-KC01	14

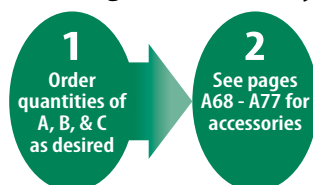
⊖ = positively driven contact

Enclosure Base	Color	Catalog Number	Price
C Enclosure Base			
	Black	FAK-IU	40

Indicating Light	Color	Description	Catalog Number	Price
Indicating Lights - without bulb (optional)				
	White	Can be fitted in M20/M25 knockout in enclosure base For filament and neon bulbs up to 2.4 W Order bulbs on page 58	L-W	36
	Red		L-R	36
	Green		L-G	36
	Yellow		L-Y	36

Cable Gland	Description	Catalog Number	Price
Cable Gland (optional)			
	IP68, IP69K External diameter of cable 6 – 13 mm	V-M20	5


Ordering Instructions by Components




① Cage clamp terminals are also available; see accessories on page A68.



Foot and palm switch assembly; for emergency-stop applications, maintained operation ①②

Contact Blocks		Red	
			
Maintained			
NO	NC	Catalog Number	Price
Actuator and base only		FAK-R/V/IY	242
1	0	FAK-R/V/KC10/IY	256
0	1	FAK-R/V/KC01/IY	256
2	0	FAK-R/V/KC20/IY	270
0	2	FAK-R/V/KC02/IY	270
1	1	FAK-R/V/KC11/IY	270
3	0	FAK-R/V/KC30/IY	284
0	3	FAK-R/V/KC03/IY	284
2	1	FAK-R/V/KC21/IY	284
1	2	FAK-R/V/KC12/IY	284

Order an Assembly

 See page A81 for ATEX information

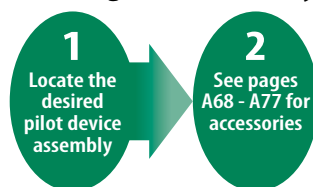


Catalog Number Codes

FAK	-	R	/	V	/	KC10	/	IY
Device Type		Mushroom Head Color		Operation Type		Contact Blocks ③		Enclosure Top Color
FAK Foot and Palm Switch		R Red (RAL 3000)		V Emergency Stop, maintained, pull-to-release		(max for this device: 3) KC10 1NO KC30 3NO KC01 1NC ⊕ KC03 3NC ⊕ KC20 2NO KC21 2NO/1NC ⊕ KC02 2NC ⊕ KC12 1NO/2NC ⊕ KC11 1NO/1NC ⊕		IY Yellow (RAL 1004)

⊕ = positively driven contact

Ordering Instructions by Complete Assembly

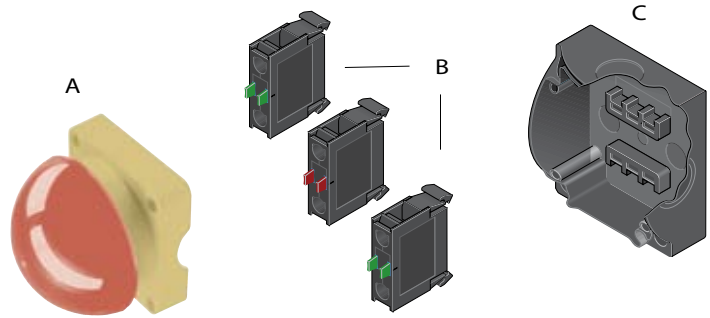


- ① Enclosure base is black (RAL 9005); enclosure top is yellow (RAL 1004); mushroom head is red (RAL 3000)
- ② An optional indicating light is also available; order separately on next page.
- ③ Cage clamp terminals are also available; see accessories on page A68.





(optional
indicating
light)


Order by
Components




Foot and palm switch components; for emergency-stop applications, maintained operation


Component	Release Type	Catalog Number	Price
A Actuator			
	Pull-to-release	FAK-R/V/Y	197

Enclosure Base	Color	Catalog Number	Price
C Enclosure Base			
	Black	FAK-IU	40

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
B Contact Blocks – base mounted 1				
	Screw Terminals	1NO	M22-KC10	14
		1NC ⊖	M22-KC01	14

⊖ = positively driven contact

Indicating Light	Color	Description	Catalog Number	Price
Indicating Lights - without bulb (optional)				
	White	Can be fitted in M20/M25 knockout in enclosure base For filament and neon bulbs up to 2.4 W Order bulbs on page 58	L-W	36
	Red		L-R	36
	Green		L-G	36
	Yellow		L-Y	36

Cable Gland	Description	Catalog Number	Price
Cable Gland (optional)			
	IP68, IP69K External diameter of cable 6 – 13 mm	V-M20	5

Ordering Instructions by Components





1 Cage clamp terminals are also available; see accessories on page A68.

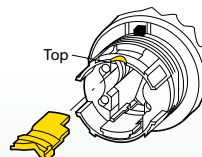
A

Pilot Devices

Two-position selector switch assembly; non-illuminated, momentary or maintained ①

Switching Positions	Number of Contact Blocks	Titanium Color		Black	
					
		Momentary or Maintained		Momentary or Maintained	
		Catalog Number	Price	Catalog Number	Price
 momentary or maintained	Actuator only	M22-W◆-★	42	M22S-W◆-★	42
	1	M22-W◆-★/▲	64	M22S-W◆-★/▲	64
	2	M22-W◆-★/▲	78	M22S-W◆-★/▲	78
	3	M22-W◆-★/▲	92	M22S-W◆-★/▲	92
 maintained, V-position ②	Actuator only	M22-WKV	42	M22S-WKV	42
	1	M22-WKV/▲	64	M22S-WKV/▲	64
	2	M22-WKV/▲	78	M22S-WKV/▲	78
	3	M22-WKV/▲	92	M22S-WKV/▲	92

This Moeller pilot device features a coding adapter that enables the device to be set to either momentary or maintained operation.



Insert for Momentary
Remove for Maintained

⊖ = positively driven contact

Order an Assembly

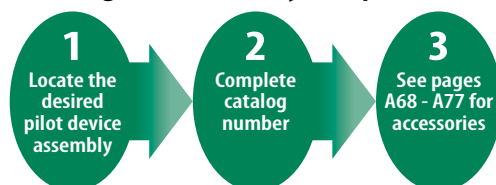


See page A81 for ATEX information

Catalog Number Codes

M22	-	W	◆	-	★	/	▲
Front Ring Color		Device Type	Rotary Button or Thumb Grip		Inscription		Contact Blocks ③
M22 Titanium M22S Black - Gold		W Selector Switch, Momentary or Maintained WKV Selector Switch, maintained, V-position (only available with Thumb grip)	(leave blank for Rotary Button and add \$3 to List Price) K Thumb Grip		(only available with Rotary Button - leave blank for inscription I-0) X92 Rotary Button with inscription II-I X93 Rotary Button with inscription AUTO-HAND		(max for this device: 6) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ <i>Order additional contact blocks separately on next page</i>
<p>Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery - see your Moeller representative.</p>							

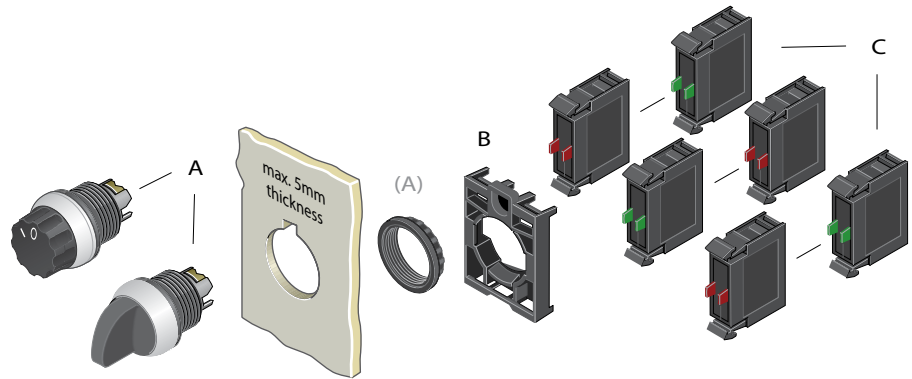
Ordering Instructions by Complete Assembly



- ① Complete assemblies are only partially assembled in preparation for panel installation.
- ② A coding adapter is not supplied for V-position devices.
- ③ Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.



Order by Components



Two-position selector switch components; non-illuminated, momentary or maintained

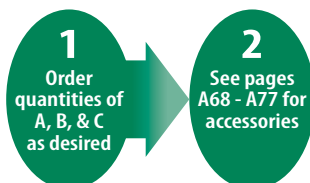
Component	Switching Positions	Inscription	Catalog Number	Price
A Actuator				
	 momentary or maintained ①	(inscription not available) See page A74 for legend plates	M22-WK	42
	 maintained, V-position ②	(inscription not available) See page A74 for legend plates	M22-WKV	42
	 momentary or maintained ①	(inscription not available) See page A74 for legend plates	M22S-WK	42
	 maintained, V-position ②	(inscription not available) See page A74 for legend plates	M22S-WKV	42
	 momentary or maintained ①	I-O	M22-W	45
		II-I	M22-W-X92	45
		AUTO-HAND	M22-W-X91	45
	 momentary or maintained ①	I-O	M22S-W	45
		II-I	M22S-W-X92	45
		AUTO-HAND	M22S-W-X91	45

Component	Description	Catalog Number	Price
B Mounting Adapter			
	Mates back of panel components to actuator	M22-A	6

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
C Contact Blocks – front mounted ③				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊕	M22-K01	14



⊕ = positively driven contact

Ordering Instructions by Components




- ① This Moeller pilot device features a coding adapter that enables the device to be set to either momentary or maintained operation - see previous page.
- ② A coding adapter is not supplied for V-position devices.
- ③ Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

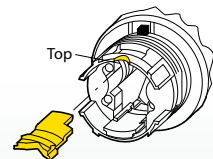
Two-position selector switch assembly; illuminated, with thumb grip, momentary or maintained ①

Switching Positions	Contact Blocks		Titanium Color		Black	
			Momentary or Maintained		Momentary or Maintained	
	NO	NC	Catalog Number	Price	Catalog Number	Price
Standard: 	Actuator only		M22-WLK★-◆	51	M22S-WLK★-◆	51
	1	0	M22-WLK★-◆/K10/▲	99	M22S-WLK★-◆/K10/▲	99
	0	1	M22-WLK★-◆/K01/▲	99	M22S-WLK★-◆/K01/▲	99
	2	0	M22-WLK★-◆/K20/▲	113	M22S-WLK★-◆/K20/▲	113
V-position: 	0	2	M22-WLK★-◆/K02/▲	113	M22S-WLK★-◆/K02/▲	113
	1	1	M22-WLK★-◆/K11/▲	113	M22S-WLK★-◆/K11/▲	113
	3	0	M22-WLK★-◆/K30/▲	127	M22S-WLK★-◆/K30/▲	127
	0	3	M22-WLK★-◆/K03/▲	127	M22S-WLK★-◆/K03/▲	127
	2	1	M22-WLK★-◆/K21/▲	127	M22S-WLK★-◆/K21/▲	127
	1	2	M22-WLK★-◆/K12/▲	127	M22S-WLK★-◆/K12/▲	127

This Moeller pilot device features a coding adapter that enables the device to be set to either momentary or maintained operation.

Order an Assembly

 See page A81 for ATEX information



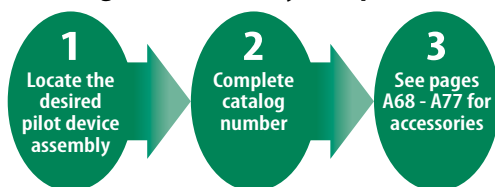
Insert for Momentary
Remove for Maintained

⊖ = positively driven contact

Catalog Number Codes

M22	-	WLK	★	-	◆	/	K10	/	▲
Front Ring Color		Device Type	Standard Position or V-position		Thumb Grip Color		Contact Blocks ③		LED Element ④ ⑤
M22 Titanium M22S Black - Gold		WLK Selector switch, Illuminated, Thumb grip, two-position, Momentary or Maintained	(leave blank for Standard Position) V V-position		W White R Red G Green Y Yellow B Blue		(max for this device: 4) K10 1NO K01 1NC ⊖ K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖		12 – 30 V AC/DC: W White or Yellow R Red G Green B Blue 85 – 264 V AC 50/60Hz: Price Adder: \$12 230-W White or Yellow 230-R Red 230-G Green 230-B Blue 207 – 264 V AC 50/60Hz: Price Adder: \$12 230H-W White or Yellow 230H-R Red 230H-G Green 230H-B Blue
<p>Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery - see your Moeller representative.</p> <p>Order additional contact blocks separately on next page</p>									

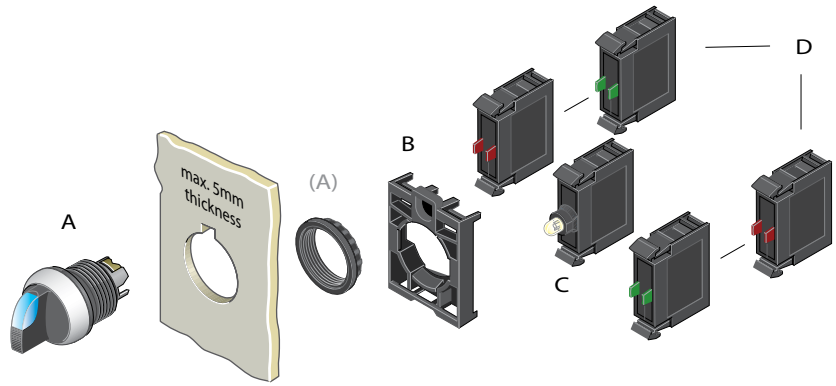
Ordering Instructions by Complete Assembly



- Complete assemblies are only partially assembled in preparation for panel installation.
- A coding adapter is not supplied for V-position devices.
- Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.
- Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- Select the same color LED element as your lens color; for yellow lens, choose a white LED.



Order by Components



Two-position selector switch components; illuminated, with thumb grip, momentary or maintained

Component	Switching Positions	Thumb grip Color	Catalog Number	Price
A Selector Switch				
	 momentary or maintained ①	White	M22-WLK-W	51
		Red	M22-WLK-R	51
		Green	M22-WLK-G	51
		Yellow	M22-WLK-Y	51
		Blue	M22-WLK-B	51
	 maintained, V-position ②	White	M22-WLKV-W	51
		Red	M22-WLKV-R	51
		Green	M22-WLKV-G	51
		Yellow	M22-WLKV-Y	51
		Blue	M22-WLKV-B	51
	 momentary or maintained ①	White	M22S-WLK-W	51
		Red	M22S-WLK-R	51
		Green	M22S-WLK-G	51
		Yellow	M22S-WLK-Y	51
		Blue	M22S-WLK-B	51
	 maintained, V-position ②	White	M22S-WLKV-W	51
		Red	M22S-WLKV-R	51
		Green	M22S-WLKV-G	51
		Yellow	M22S-WLKV-Y	51
		Blue	M22S-WLKV-B	51

Component	Color	Description	Catalog Number	Price
B Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6
C LED Elements – front mounted ③④				
	White	12 – 30V AC/DC 8 – 15 mA	M22-LED-W	26
	Red		M22-LED-R	26
	Green		M22-LED-G	26
	Blue		M22-LED-B	26
	White	85 – 264 V AC, 50/60 Hz 5 – 15 mA	M22-LED230-W	38
	Red		M22-LED230-R	38
	Green		M22-LED230-G	38
	Blue		M22-LED230-B	38
	White	207 – 264 V AC, 50/60 Hz 12 – 15 mA	M22-LED230H-W	38
	Red		M22-LED230H-R	38
	Green		M22-LED230H-G	38
	Blue		M22-LED230H-B	38

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
D Contact Blocks – front mounted ⑤				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14

⊖ = positively driven contact

Ordering Instructions by Components

1

➔

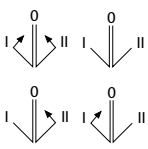
2

Order quantities of A, B, C, & D as desired

See pages A68 - A77 for accessories


- ① This Moeller pilot device features a coding adapter that enables the device to be set to either momentary or maintained operation - see previous page.
- ② A coding adapter is not supplied for V-position devices.
- ③ Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- ④ Select the same color LED element as your lens color; for yellow lens, choose a white LED.
- ⑤ Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

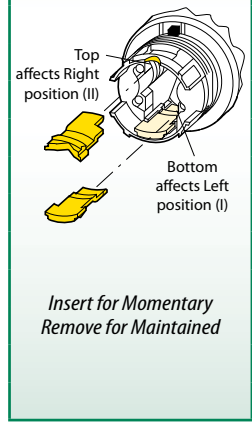
A Three-position selector switch assembly; non-illuminated, momentary or maintained ①

Switching Positions	Contact Blocks		Titanium Color		Black	
			Momentary or Maintained		Momentary or Maintained	
	NO	⊖ NC	Catalog Number	Price	Catalog Number	Price
 <p>Momentary or Maintained</p>	Actuator only		M22-W♦3-★	42	M22S-W♦3-★	42
	2	0	M22-W♦3-★/K20	78	M22S-W♦3-★/K20	78
	0	2	M22-W♦3-★/K02	78	M22S-W♦3-★/K02	78
	1	1	M22-W♦3-★/K11	78	M22S-W♦3-★/K11	78
	3	0	M22-W♦3-★/K30	92	M22S-W♦3-★/K30	92
	0	3	M22-W♦3-★/K03	92	M22S-W♦3-★/K03	92
	2	1	M22-W♦3-★/K21	92	M22S-W♦3-★/K21	92
	1	2	M22-W♦3-★/K12	92	M22S-W♦3-★/K12	92
	4	0	M22-W♦3-★/K40	106	M22S-W♦3-★/K40	106
	0	4	M22-W♦3-★/K04	106	M22S-W♦3-★/K04	106
	3	1	M22-W♦3-★/K31	106	M22S-W♦3-★/K31	106
	1	3	M22-W♦3-★/K13	106	M22S-W♦3-★/K13	106
	2	2	M22-W♦3-★/K22	106	M22S-W♦3-★/K22	106

This Moeller pilot device features coding adapters that enables the device to be set to either momentary or maintained operation.

Order an Assembly

 See page A81 for ATEX information

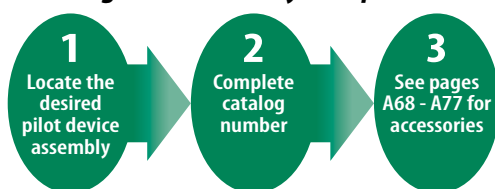


⊖ = positively driven contact

Catalog Number Codes

M22	–	W	◆	3	–	★	/	K20
Front Ring Color		Device Type	Rotary Button or Thumb Grip	Number of Positions		Inscription		Contact Blocks ②③
M22 Titanium M22S Black – Gold		W Selector Switch, Momentary or Maintained	(leave blank for Rotary Button and add \$3 to List Price) K Thumb Grip	3 Three-Position		(only available with Rotary Button - leave blank for inscription I-0-II) X94 Rotary button with inscription AUTO-O-HAND		(max for this device: 6) K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ K40 4NO K04 4NC ⊖ K31 3NO/1NC ⊖ K13 1NO/3NC ⊖ K22 2NO/2NC ⊖ <i>Order additional contact blocks separately on next page</i>

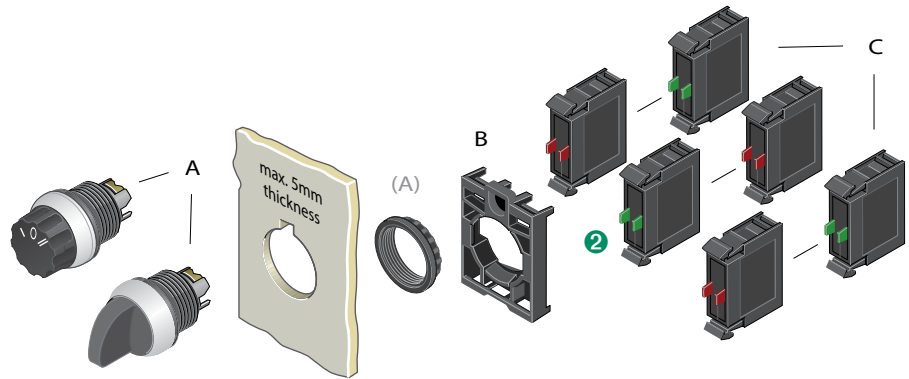
Ordering Instructions by Complete Assembly



- Complete assemblies are only partially assembled in preparation for panel installation.
- A plunger bridge is required to actuate center mounted contact blocks; order plunger bridge (if required) separately on next page.
- Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.



Order by Components



Three-position selector switch components; non-illuminated, momentary or maintained

Component	Switching Positions	Inscription	Catalog Number	Price
A Actuator				
		(inscription not available) See page A74 for legend plates	M22-WK3	42
		(inscription not available) See page A74 for legend plates	M22S-WK3	42
		Momentary or Maintained 1	M22-W3	45
			AUTO-O-HAND M22-W3-X94	45
			I-O-II M22S-W3	45
			AUTO-O-HAND M22S-W3-X94	45

Component	Description	Catalog Number	Price
B Mounting Adapter			
	Mates back of panel components to actuator	M22-A	6

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
C Contact Blocks – front mounted 2 3				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14

⊖ = positively driven contact

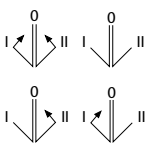
Component	Description	Catalog Number	Price
Plunger Bridge (required to actuate center mounted contact blocks)			
	Used to actuate center mounted contact blocks of a non-illuminated three-position selector switch	M22-XW	2.50

Ordering Instructions by Components




- 1 This Moeller pilot device features coding adapters that enables the device to be set to either momentary or maintained operation - see previous page.
- 2 A plunger bridge is required to actuate center mounted contact blocks.
- 3 Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

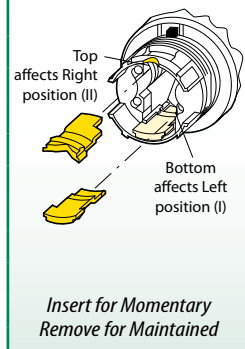
A Three position selector switch assembly; illuminated, with thumb grip, momentary or maintained 1

Switching Positions	Contact Blocks		Titanium Color		Black	
			Momentary or Maintained		Momentary or Maintained	
	NO	NC	Catalog Number	Price	Catalog Number	Price
 <p>Momentary or Maintained</p>	Actuator only		M22-WLK3-◆	51	M22S-WLK3-◆	51
	2	0	M22-WLK3-◆/K20/▲	113	M22S-WLK3-◆/K20/▲	113
	0	2	M22-WLK3-◆/K02/▲	113	M22S-WLK3-◆/K02/▲	113
	1	1	M22-WLK3-◆/K11/▲	113	M22S-WLK3-◆/K11/▲	113
	3	0	M22-WLK3-◆/K30/▲	127	M22S-WLK3-◆/K30/▲	127
	0	3	M22-WLK3-◆/K03/▲	127	M22S-WLK3-◆/K03/▲	127
	2	1	M22-WLK3-◆/K21/▲	127	M22S-WLK3-◆/K21/▲	127
	1	2	M22-WLK3-◆/K12/▲	127	M22S-WLK3-◆/K12/▲	127
	4	0	M22-WLK3-◆/K40/▲	141	M22S-WLK3-◆/K40/▲	141
	0	4	M22-WLK3-◆/K04/▲	141	M22S-WLK3-◆/K04/▲	141
	3	1	M22-WLK3-◆/K31/▲	141	M22S-WLK3-◆/K31/▲	141
	1	3	M22-WLK3-◆/K13/▲	141	M22S-WLK3-◆/K13/▲	141
	2	2	M22-WLK3-◆/K22/▲	141	M22S-WLK3-◆/K22/▲	141

This Moeller pilot device features coding adapters that enables the device to be set to either momentary or maintained operation.





















Order an Assembly

 See page A81 for ATEX information

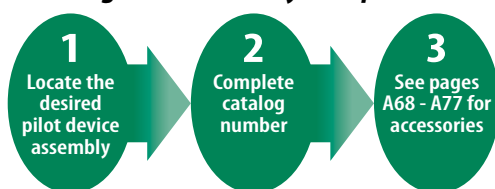


⊖ = positively driven contact

Catalog Number Codes

M22	–	WLK3	–	◆	/	K20	/	▲
Front Ring Color		Device Type		Thumb Grip Color		Contact Blocks ²		LED Element ^{3 4}
M22 Titanium M22S Black – Gold		WLK3 Selector switch, illuminated, thumb grip, three-position, momentary or maintained		W White  R Red  G Green  Y Yellow  B Blue 		(max for this device: 4) K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ K40 4NO K04 4NC ⊖ K31 3NO/1NC ⊖ K13 1NO/3NC ⊖ K22 2NO/2NC ⊖		12 – 30 V AC/DC: W White or  Yellow  R Red  G Green  B Blue  85 – 264 V AC 50/60Hz: Price Adder: \$12 230-W White or  Yellow  230-R Red  230-G Green  230-B Blue  207 – 264 V AC 50/60Hz: Price Adder: \$12 230H-W White or  Yellow  230H-R Red  230H-G Green  230H-B Blue 
<p>Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery – see your Moeller representative.</p>								

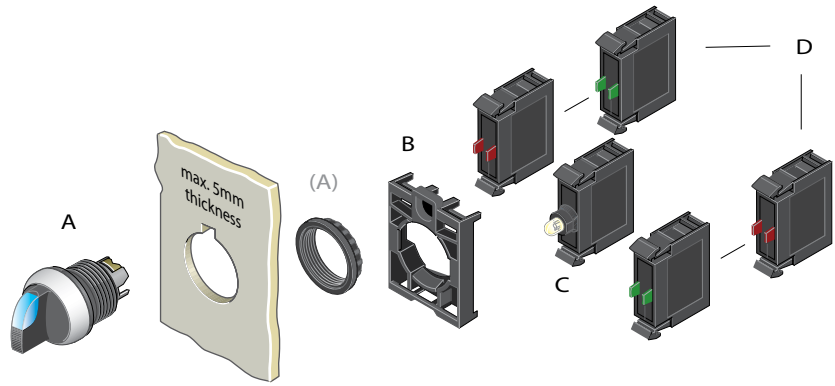
Ordering Instructions by Complete Assembly




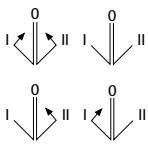












- 1 Complete assemblies are only partially assembled in preparation for panel installation.
- 2 Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.
- 3 Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- 4 Select the same color LED element as your lens color; for yellow lens, choose a white LED.


















Order by Components



Three position selector switch components; illuminated, with thumb grip, momentary or maintained

Component	Switching Positions	Thumb grip Color	Catalog Number	Price
A Selector Switch				
		White 	M22-WLK3-W	51
		Red 	M22-WLK3-R	51
		Green 	M22-WLK3-G	51
		Yellow 	M22-WLK3-Y	51
		Blue 	M22-WLK3-B	51
	 <p>Momentary or Maintained ¹</p>	White 	M22S-WLK3-W	51
		Red 	M22S-WLK3-R	51
		Green 	M22S-WLK3-G	51
		Yellow 	M22S-WLK3-Y	51
		Blue 	M22S-WLK3-B	51

Component	Color	Description	Catalog Number	Price
B Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6
C LED Elements – front mounted ^{2,3}				
	White 	12 – 30V AC/DC 8 – 15 mA	M22-LED-W	26
	Red 		M22-LED-R	26
	Green 		M22-LED-G	26
	Blue 		M22-LED-B	26
	White 	85 – 264 V AC, 50/60 Hz 5 – 15 mA	M22-LED230-W	38
	Red 		M22-LED230-R	38
	Green 		M22-LED230-G	38
	Blue 		M22-LED230-B	38
	White 	207 – 264 V AC, 50/60 Hz 12 – 15 mA	M22-LED230H-W	38
	Red 		M22-LED230H-R	38
	Green 		M22-LED230H-G	38
	Blue 		M22-LED230H-B	38

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
D Contact Blocks – front mounted ⁴				
	Screw Terminals	1N0	M22-K10	14
		1NC \ominus	M22-K01	14

\ominus = positively driven contact


Ordering Instructions by Components



- ¹ This Moeller pilot device features coding adapters that enables the device to be set to either momentary or maintained operation - see previous page.
- ² Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- ³ Select the same color LED element as your lens color; for yellow lens, choose a white LED.
- ⁴ Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

A Four position selector switch assembly; non-illuminated, maintained ①

Order an Assembly

 See page A81 for ATEX information

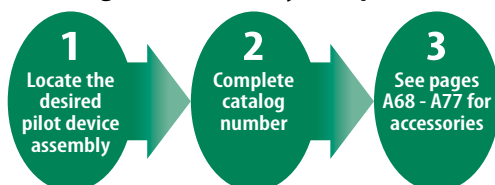
Switching Positions	Contact Blocks		Titanium Color		Black	
			Maintained		Maintained	
	NO	⊖ NC	Catalog Number	Price	Catalog Number	Price
 <p><i>maintained</i></p>	Actuator only		M22-WR◆4	79	M22S-WR◆4	79
	4	0	M22-WR◆4/K40	149	M22S-WR◆4/K40	149
	0	4	M22-WR◆4/K04	149	M22S-WR◆4/K04	149
	3	1	M22-WR◆4/K31	149	M22S-WR◆4/K31	149
	1	3	M22-WR◆4/K13	149	M22S-WR◆4/K13	149
	2	2	M22-WR◆4/K22	149	M22S-WR◆4/K22	149
	5	0	M22-WR◆4/K50	163	M22S-WR◆4/K50	163
	0	5	M22-WR◆4/K05	163	M22S-WR◆4/K05	163
	4	1	M22-WR◆4/K41	163	M22S-WR◆4/K41	163
	1	4	M22-WR◆4/K14	163	M22S-WR◆4/K14	163
	3	2	M22-WR◆4/K32	163	M22S-WR◆4/K32	163
	2	3	M22-WR◆4/K23	163	M22S-WR◆4/K23	163

⊖ = positively driven contact

Catalog Number Codes

M22	–	WR	◆	4	/	K40
Front Ring Color		Device Type	Rotary Button or Thumb Grip	Number of Positions		Contact Blocks ②
M22 Titanium M22S Black – Gold		WR Selector Switch, Maintained	(leave blank for Rotary Button) K Thumb Grip	4 Four Position		(max for this device: 8) K40 4NO K04 4NC ⊖ K31 3NO/1NC ⊖ K13 1NO/3NC ⊖ K22 2NO/2NC ⊖ K50 5NO K05 5NC ⊖ K41 4NO/1NC ⊖ K14 1NO/4NC ⊖ K32 3NO/2NC ⊖ K23 2NO/3NC ⊖
Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery - see your Moeller representative.						Order additional contact blocks separately on next page

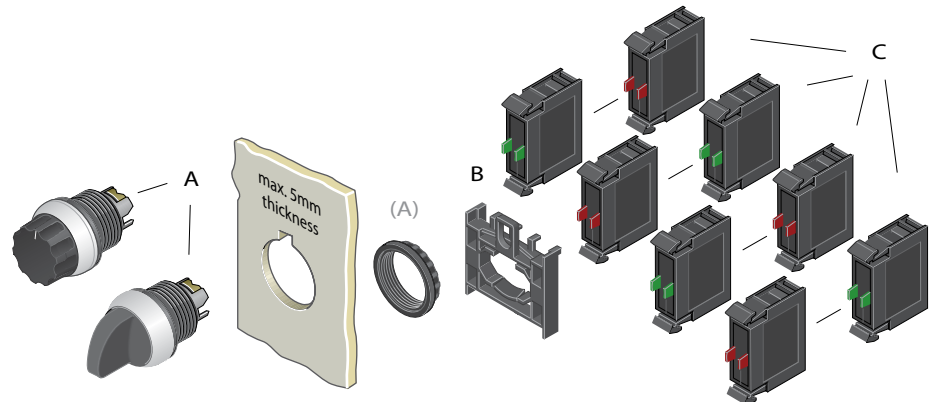
Ordering Instructions by Complete Assembly



- ① Complete assemblies are only partially assembled in preparation for panel installation.
- ② Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.



Order by Components



Four position selector switch components; non-illuminated, maintained

Component	Switching Positions	Catalog Number	Price
A Actuator			
	<p>maintained</p>	M22-WRK4	79
		M22S-WRK4	79
		M22-WR4	79
		M22S-WR4	79

Component	Description	Catalog Number	Price
B Mounting Adapter			
	Special adapter that can hold up to eight contact blocks. Used exclusively with all four-way operators and two-way joysticks. Mates back of panel components to actuator.	M22-A4	12

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
C Contact Blocks – front mounted ①				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14



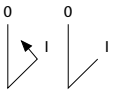
⊖ = positively driven contact

Ordering Instructions by Components




① Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

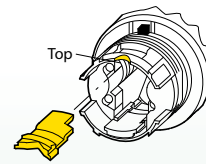
Two-position keyed selector switch assembly; non-illuminated, with individual key, momentary or maintained 1

Switching Positions	Key Withdraw Positions	Titanium Color		Black			
							
		NO	NC	Momentary or Maintained Catalog Number	Price	Momentary or Maintained Catalog Number	Price
 <p>Momentary or Maintained</p>	<p>Standard</p> <p>User selected 2</p>	Actuator only		M22-WS-◆	142	M22S-WS-◆	142
		1	0	M22-WS-◆/K10	164	M22S-WS-◆/K10	164
		0	1	M22-WS-◆/K01	164	M22S-WS-◆/K01	164
		2	0	M22-WS-◆/K20	178	M22S-WS-◆/K20	178
		0	2	M22-WS-◆/K02	178	M22S-WS-◆/K02	178
		1	1	M22-WS-◆/K11	178	M22S-WS-◆/K11	178
		3	0	M22-WS-◆/K30	192	M22S-WS-◆/K30	192
		0	3	M22-WS-◆/K03	192	M22S-WS-◆/K03	192
		2	1	M22-WS-◆/K21	192	M22S-WS-◆/K21	192
		1	2	M22-WS-◆/K12	192	M22S-WS-◆/K12	192

This Moeller pilot device features a coding adapter that enables the device to be set to either momentary or maintained operation.

Order an Assembly

 See page A81 for ATEX information



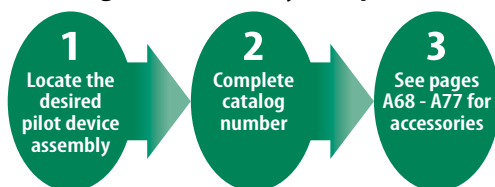
Insert for Momentary
Remove for Maintained

⊖ = positively driven contact

Catalog Number Codes

M22	–	WS	–	◆	/	K20
Front Ring Color		Device Type		Key Code		Contact Blocks 3
M22 Titanium M22S Black – Gold		WS Selector switch, Non-illuminated, Individually keyed, two-position, Momentary or Maintained		(leave blank for MS1)		(max for this device: 6)
Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery - see your Moeller representative.				MS11 MS12 MS2 MS13 MS3 MS14 MS4 MS15 MS5 MS16 MS6 MS17 MS7 MS18 MS8 MS19 MS9 MS20 MS10 MS20		K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ K40 4NO K04 4NC ⊖ K31 3NO/1NC ⊖ K13 1NO/3NC ⊖ K22 2NO/2NC ⊖
<i>Order additional contact blocks separately on next page</i>						
For identical locks and keys, use the same key code. One key is included with selector switch; additional keys are available as accessories. A master key system is also available - see pages A59 – A66.						

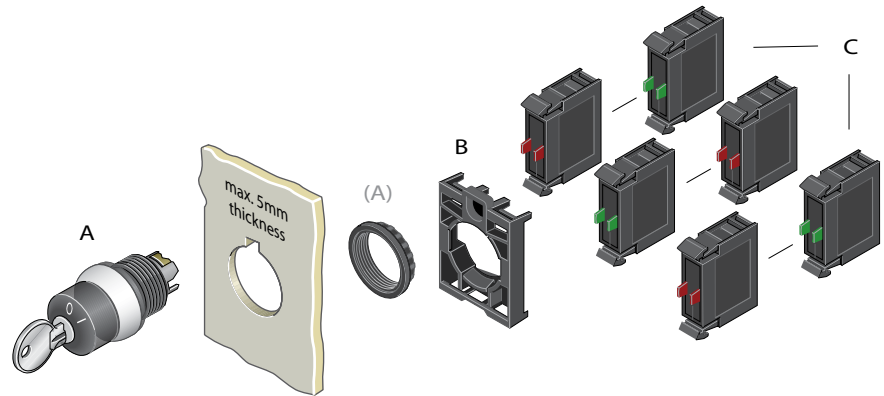
Ordering Instructions by Complete Assembly




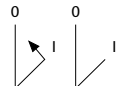


- 1 Complete assemblies are only partially assembled in preparation for panel installation.
- 2 A key withdraw adapter is available that enables this device to be set to user selected key withdraw positions; order separately on next page – see page A77 for configuration options.
- 3 Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.




Order by Components





Two-position keyed selector switch components; non-illuminated, with individual key, momentary or maintained


Component	Switching Positions	Key Withdraw Positions	Catalog Number	Price
A Selector Switch (includes one key)				
		O Standard O I User selected ②	M22-WS-◆	142
		O I User selected ②	M22S-WS-◆	142
Replace ◆ in catalog number with desired key code (MS2 – MS20), leave blank for MS1 key code - see previous page.				

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
C Contact Blocks – front mounted ③				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14

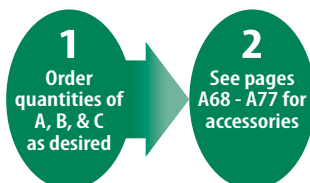
⊖ = positively driven contact

Component	Description	Catalog Number	Price
Key Withdraw Adapters (optional) ②			
	Enables a keyed selector switch to be set to user selected key withdraw positions - see page A77 for details	M22-XC-R	2.50

Component	Description	Catalog Number	Price
B Mounting Adapter			
	Mates back of panel components to actuator	M22-A	6

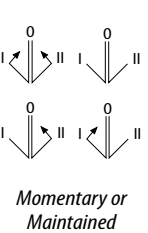

Extra Keys	For Key Code	Catalog Number	Price	For Key Code	Catalog Number	Price
Extra Keys (one key included with selector switch)						
	MS1	M22-ES-MS1	24	MS11	M22-ES-MS11	24
	MS2	M22-ES-MS2	24	MS12	M22-ES-MS12	24
	MS3	M22-ES-MS3	24	MS13	M22-ES-MS13	24
	MS4	M22-ES-MS4	24	MS14	M22-ES-MS14	24
	MS5	M22-ES-MS5	24	MS15	M22-ES-MS15	24
	MS6	M22-ES-MS6	24	MS16	M22-ES-MS16	24
	MS7	M22-ES-MS7	24	MS17	M22-ES-MS17	24
	MS8	M22-ES-MS8	24	MS18	M22-ES-MS18	24
	MS9	M22-ES-MS9	24	MS19	M22-ES-MS19	24
	MS10	M22-ES-MS10	24	MS20	M22-ES-MS20	24

Ordering Instructions by Components




- ① This Moeller pilot device features a coding adapter that enables the device to be set to either momentary or maintained operation - see previous page.
- ② A key withdraw adapter is required to enable this device to be set to certain user selected key withdraw positions – see page A77 for configuration options.
- ③ Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

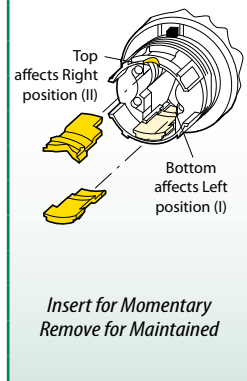
Three-position keyed selector switch assembly; non-illuminated, with individual key, momentary or maintained ①

Switching Positions	Key Withdraw Positions	Contact Blocks	Titanium Color		Black		
			Momentary or Maintained		Momentary or Maintained		
			NO	NC	Catalog Number	Price	Catalog Number
 <p>Momentary or Maintained</p>	 <p>Standard</p> <p>User selected ②</p>	Actuator only		M22-WS3-◆	142	M22S-WS3-◆	142
		2	0	M22-WS3-◆/K20	178	M22S-WS3-◆/K20	178
		0	2	M22-WS3-◆/K02	178	M22S-WS3-◆/K02	178
		1	1	M22-WS3-◆/K11	178	M22S-WS3-◆/K11	178
		3	0	M22-WS3-◆/K30	192	M22S-WS3-◆/K30	192
		0	3	M22-WS3-◆/K03	192	M22S-WS3-◆/K03	192
		2	1	M22-WS3-◆/K21	192	M22S-WS3-◆/K21	192
		1	2	M22-WS3-◆/K12	192	M22S-WS3-◆/K12	192
		4	0	M22-WS3-◆/K40	206	M22S-WS3-◆/K40	206
		0	4	M22-WS3-◆/K04	206	M22S-WS3-◆/K04	206
		3	1	M22-WS3-◆/K31	206	M22S-WS3-◆/K31	206
		1	3	M22-WS3-◆/K13	206	M22S-WS3-◆/K13	206
2	2	M22-WS3-◆/K22	206	M22S-WS3-◆/K22	206		

This Moeller pilot device features coding adapters that enables the device to be set to either momentary or maintained operation.

Order an Assembly

 See page A81 for ATEX information



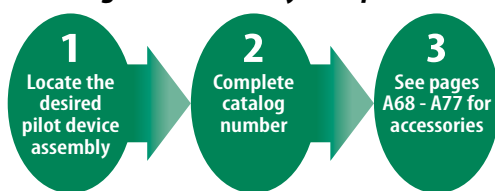
⊖ = positively driven contact

Catalog Number Codes

M22	WS3	◆	/	K20
Front Ring Color	Device Type	Key Code		Contact Blocks ③④
M22 Titanium M22S Black — Gold	WS3 Selector switch, non-illuminated, individually keyed, three-position, momentary or maintained	(leave blank for MS1)		(max for this device: 6)
Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery - see your Moeller representative.		MS11 MS12 MS13 MS14 MS15 MS16 MS17 MS18 MS19 MS20		K20 2NO K02 2NC ⊖ K11 1NO/1NC ⊖ K30 3NO K03 3NC ⊖ K21 2NO/1NC ⊖ K12 1NO/2NC ⊖ K40 4NO K04 4NC ⊖ K31 3NO/1NC ⊖ K13 1NO/3NC ⊖ K22 2NO/2NC ⊖
				Order additional contact blocks separately on next page

For identical locks and keys, use the same key code. One key is included with selector switch; additional keys are available as accessories. A master key system is also available - see pages A59 – A66.

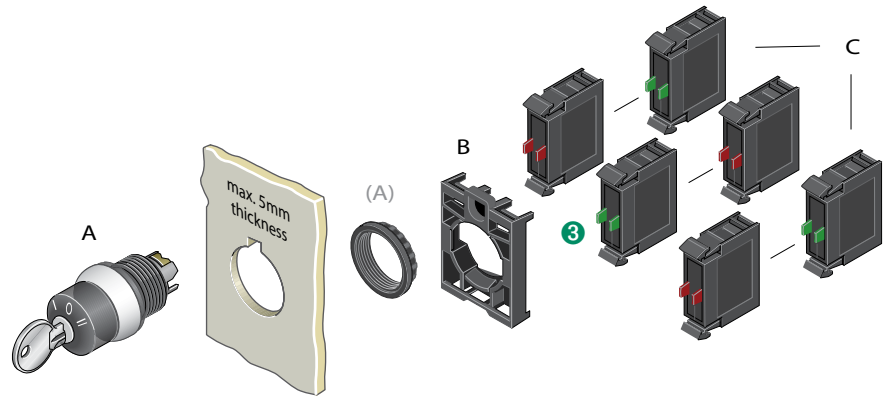
Ordering Instructions by Complete Assembly




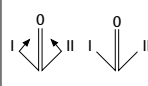

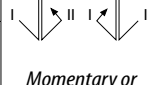
- Complete assemblies are only partially assembled in preparation for panel installation.
- A key withdraw adapter is available that enables this device to be set to user selected key withdraw positions; order separately on next page - see page A77 for configuration options.
- A plunger bridge is required to actuate center mounted contact blocks; order plunger bridge (if required) separately on next page.
- Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.




Order by Components



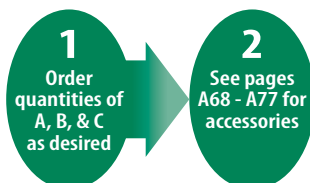
Three-position keyed selector switch components; non-illuminated, with individual key, momentary or maintained


Component	Switching Positions	Key Withdraw Positions	Catalog Number	Price
A Selector Switch (includes one key)				
		I O II Standard 1	M22-WS3-◆	142
		I O II I O II User selected 2	M22S-WS3-◆	142
Replace ◆ in catalog number with desired key code (MS2 – MS20), leave blank for MS1 key code - see previous page.				

Component	Description	Catalog Number	Price
B Mounting Adapter			
	Mates back of panel components to actuator	M22-A	6



- 1 This Moeller pilot device features coding adapters that enables the device to be set to either momentary or maintained operation - see previous page.
- 2 A key withdraw adapter is required to enable this device to be set to certain user selected key withdraw positions – see page A77 for configuration options.


Ordering Instructions by Components



Contact Block	Terminal Type	Contact Type	Catalog Number	Price
C Contact Blocks – front mounted 3 4				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14

⊖ = positively driven contact


Component	Description	Catalog Number	Price
Plunger Bridge (required to actuate center mounted contact blocks)			
	Used to actuate center mounted contact blocks of a non-illuminated three-position selector switch	M22-XW	2.50
Key Withdraw Adapters (optional) 2			
	Enables a keyed selector switch to be set to user selected key withdraw positions - see page A77 for details	M22-XC-R	2.50







Extra Keys	For Key Code	Catalog Number	Price	For Key Code	Catalog Number	Price
Extra Keys (one key included with selector switch)						
	MS1	M22-ES-MS1	24	MS11	M22-ES-MS11	24
	MS2	M22-ES-MS2	24	MS12	M22-ES-MS12	24
	MS3	M22-ES-MS3	24	MS13	M22-ES-MS13	24
	MS4	M22-ES-MS4	24	MS14	M22-ES-MS14	24
	MS5	M22-ES-MS5	24	MS15	M22-ES-MS15	24
	MS6	M22-ES-MS6	24	MS16	M22-ES-MS16	24
	MS7	M22-ES-MS7	24	MS17	M22-ES-MS17	24
	MS8	M22-ES-MS8	24	MS18	M22-ES-MS18	24
	MS9	M22-ES-MS9	24	MS19	M22-ES-MS19	24
	MS10	M22-ES-MS10	24	MS20	M22-ES-MS20	24

- 3 A plunger bridge is required to actuate center mounted contact blocks.
- 4 Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.

Joystick operator assembly; two-way and four-way, momentary and maintained ①

Order an Assembly

 See page A81 for ATEX information

Number of Directions	Switching Positions	Number of Contact Blocks	Titanium Color		Black	
			Catalog Number	Price	Catalog Number	Price
Two-Way horizontal actuator		Actuator only	M22-WJ2H	170	M22S-WJ2H	170
		2	M22-WJ2H/▲	212	M22S-WJ2H/▲	212
		3	M22-WJ2H/▲	226	M22S-WJ2H/▲	226
		4	M22-WJ2H/▲	240	M22S-WJ2H/▲	240
		Actuator only	M22-WRJ2H	170	M22S-WRJ2H	170
		2	M22-WRJ2H/▲	212	M22S-WRJ2H/▲	212
		3	M22-WRJ2H/▲	226	M22S-WRJ2H/▲	226
		4	M22-WRJ2H/▲	240	M22S-WRJ2H/▲	240
Two-Way vertical actuator		Actuator only	M22-WJ2V	170	M22S-WJ2V	170
		2	M22-WJ2V/▲	212	M22S-WJ2V/▲	212
		3	M22-WJ2V/▲	226	M22S-WJ2V/▲	226
		4	M22-WJ2V/▲	240	M22S-WJ2V/▲	240
		Actuator only	M22-WRJ2V	170	M22S-WRJ2V	170
		2	M22-WRJ2V/▲	212	M22S-WRJ2V/▲	212
		3	M22-WRJ2V/▲	226	M22S-WRJ2V/▲	226
		4	M22-WRJ2V/▲	240	M22S-WRJ2V/▲	240
Four-Way actuator		Actuator only	M22-WJ4	170	M22S-WJ4	170
		4	M22-WJ4/▲	240	M22S-WJ4/▲	240
		5	M22-WJ4/▲	254	M22S-WJ4/▲	254
		6	M22-WJ4/▲	268	M22S-WJ4/▲	268
		Actuator only	M22-WRJ4	170	M22S-WRJ4	170
		4	M22-WRJ4/▲	240	M22S-WRJ4/▲	240
		5	M22-WRJ4/▲	254	M22S-WRJ4/▲	254
		6	M22-WRJ4/▲	268	M22S-WRJ4/▲	268

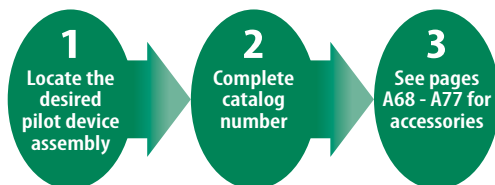
Catalog Number Codes

M22	–	WJ4	/	▲
Front Ring Color		Device Type		Contact Blocks ②
M22 Titanium		WJ2H Joystick, two-way Horizontal, Momentary		(max for this device: 8)
M22S Black		WRJ2H Joystick, two-way Horizontal, Maintained		K20 2NO K40 4NO K50 5NO K60 6NO
– Gold		WJ2V Joystick, two-way Vertical, Momentary		K02 2NC ⊖ K04 4NC ⊖ K05 5NC ⊖ K06 6NC ⊖
Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery - see your Moeller representative.		WRJ2V Joystick, two-way Vertical, Maintained		K11 1NO/1NC ⊖ K31 3NO/1NC ⊖ K41 4NO/1NC ⊖ K51 5NO/1NC ⊖
		WJ4 Joystick, four-way, Momentary		K30 3NO K13 1NO/3NC ⊖ K14 1NO/4NC ⊖ K15 1NO/5NC ⊖
		WRJ4 Joystick, four-way, Maintained		K03 3NC ⊖ K22 2NO/2NC ⊖ K32 3NO/2NC ⊖ K42 4NO/2NC ⊖
				K12 1NO/2NC ⊖ K23 2NO/3NC ⊖ K24 2NO/4NC ⊖ K25 2NO/5NC ⊖
				K21 2NO/1NC ⊖ K33 3NO/3NC ⊖

Order additional contact blocks separately on next page

⊖ = positively driven contact

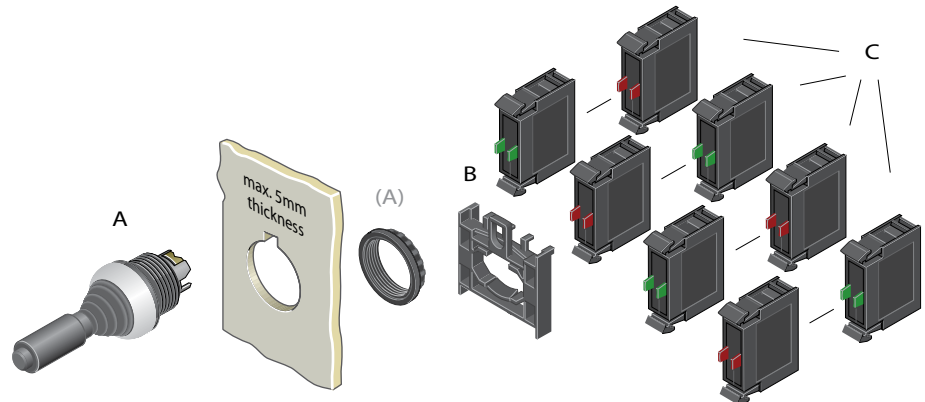
Ordering Instructions by Complete Assembly



- ① Complete assemblies are only partially assembled in preparation for panel installation.
- ② Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.



Order by Components



Joystick operator components; two-way and four-way, momentary and maintained

Component	Number of Directions	Switching Positions	Catalog Number	Price
A Actuator				
	Two-Way horizontal actuator	momentary	M22-WJ2H	170
		maintained	M22-WRJ2H	170
	Two-Way vertical actuator	momentary	M22-WJ2V	170
		maintained	M22-WRJ2V	170
	Four-Way actuator	momentary	M22-WJ4	170
		maintained	M22-WRJ4	170
	Two-Way horizontal actuator	momentary	M22S-WJ2H	170
		maintained	M22S-WRJ2H	170
	Two-Way vertical actuator	momentary	M22S-WJ2V	170
		maintained	M22S-WRJ2V	170
	Four-Way actuator	momentary	M22S-WJ4	170
		maintained	M22S-WRJ4	170

Component	Description	Catalog Number	Price
B Mounting Adapter			
	Special adapter that can hold up to eight contact blocks. Used exclusively with all four-way operators and two-way joysticks. Mates back of panel components to actuator.	M22-A4	12

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
C Contact Blocks – front mounted ①				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14

⊖ = positively driven contact

Legend Plates
See page A76 for joystick actuator legend plates

Ordering Instructions by Components

1

Order quantities of A, B, & C as desired

➔


2

See pages A68 - A77 for accessories

① Cage clamp terminals and late break NC contacts are also available; see accessories on page A68.




Potentiometers 1

Resistance <i>R</i> kΩ	Titanium Color		Black		Titanium Color with Oversized Knob	
	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price
1	M22-R1K	163	M22S-R1K	163	M22-R1K-RH	170
4.7	M22-R4K7	163	M22S-R4K7	163	M22-R4K7-RH	170
10	M22-R10K	163	M22S-R10K	163	M22-R10K-RH	170
47	M22-R47K	163	M22S-R47K	163	M22-R47K-RH	170
100	M22-R100K	163	M22S-R100K	163	M22-R100K-RH	170
470	M22-R470K	163	M22S-R470K	163	M22-R470K-RH	170
1000	M22-R1M	163	M22S-R1M	163	M22-R1M-RH	170

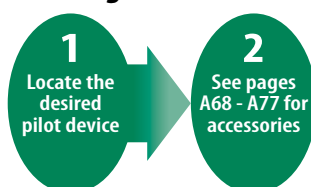
 See page A81 for ATEX information

Special note:
A gold front ring is also available by special order. Allow four to six weeks for delivery - see your Moeller representative.

Extended actuators for through-the-door operation



Accessory	Color	Inscription	For use with...	Catalog Number	Price
Extended Actuator with Button Plate					
	Blue ●	(without inscription)	ZB overload relays ZW7 overload relays	M22-DZ-B	30
	Blue ●	RESET		M22-DZ-B-GB14	32
	Blue ●	Ⓜ		M22-DZ-B-X6	32
	Red ●	(without inscription)		M22-DZ-R	30
	Red ●	Ⓞ		M22-DZ-R-X0	32
	Red ●	STOP		M22-DZ-R-GB0	32
Extended Actuator without Button Plate					
	-	-	ZB overload relays ZW7 overload relays	M22-DZ-X	24
Button Plates for Extended Actuator 2					
	Blue ●	(without inscription)	M22-DZ-X	M22-XD-B	4.40
	Blue ●	RESET		M22-XD-B-GB14	6.80
	Blue ●	Ⓜ		M22-XD-B-X6	6.80
	Red ●	(without inscription)		M22-XD-R	4.40
	Red ●	Ⓞ		M22-XD-R-X0	6.80
	Red ●	STOP		M22-XD-R-GB0	6.80

Ordering Instructions





- 1 Custom inscriptions are available; please consult your Moeller representative.
- 2 Any combination of plate color and inscription are available: stocked combinations appear on this page; see pages A72 – A73 for other options of flush or extended, non-illuminated pushbutton plates.

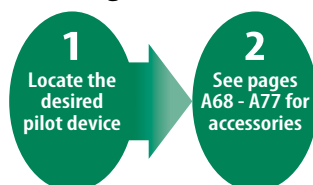
Bulkhead interfaces

Accessory	Description	For use with...	Catalog Number	Price
USB Socket				
	<ul style="list-style-type: none"> Used for USB connection USB 2.0 Type A plug IP65 when closed IP20 when connected 	22 mm mounting hole	M22-USB-SA	117
RJ45 Socket				
	<ul style="list-style-type: none"> Used for RJ45 connection IP65 when closed IP20 when connected 	22 mm mounting hole	M22-RJ45-SA	61

Acoustic Indicators

Component	Description	Catalog Number	Price
Acoustic Indicator			
	Black; without buzzer	M22-AMC	37
Buzzers			
	Continuous tone 18 – 30 V AC/DC	M22-XAM	51
	Pulsed tone 18 – 30 V DC	M22-XAMP	51
















Ordering Instructions




A

Pilot Devices


















Indicator Light assembly; illuminated, flush and extended ①

LED Operational Voltage ②	Lens Color	Flush Mounted		Extended Conical	
		Catalog Number	Price	Catalog Number	Price
Indicating Light Housing and Lens only	White 	M22-L-W-★	19	M22-LH-W	24
	Red 	M22-L-R-★	19	M22-LH-R	24
	Green 	M22-L-G-★	19	M22-LH-G	24
	Yellow 	M22-L-Y-★	19	M22-LH-Y	24
	Blue 	M22-L-B-★	19	M22-LH-B	24
12 – 30 V AC/DC	White 	M22-L-W-★/W	51	M22-LH-W/W	56
	Red 	M22-L-R-★/R	51	M22-LH-R/R	56
	Green 	M22-L-G-★/G	51	M22-LH-G/G	56
	Yellow 	M22-L-Y-★/W	51	M22-LH-Y/W	56
	Blue 	M22-L-B-★/B	51	M22-LH-B/B	56
85 – 264 V AC 50/60Hz	White 	M22-L-W-★/230-W	63	M22-LH-W/230-W	68
	Red 	M22-L-R-★/230-R	63	M22-LH-R/230-R	68
	Green 	M22-L-G-★/230-G	63	M22-LH-G/230-G	68
	Yellow 	M22-L-Y-★/230-W	63	M22-LH-Y/230-W	68
	Blue 	M22-L-B-★/230-B	63	M22-LH-B/230-B	68

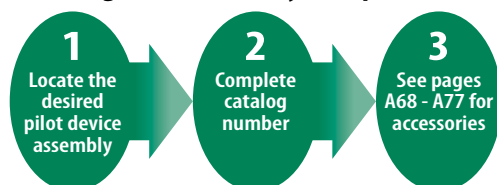
Order an Assembly

 See page A81 for ATEX information

Catalog Number Codes

M22-L Device Type	W Lens Color	★ Lens Inscription ③④	/ W LED Element ②⑤
M22-L Flush, Illuminated, Indicating Light	W White  R Red  G Green  Y Yellow  B Blue 	(leave blank for no inscription) Price Adder for Inscriptions: \$2 GB5 OFF GB6 ON GB8 FAULT GB15 FORWARD GB16 REVERSE	12 – 30 V AC/DC: W White or Yellow  R Red  G Green  B Blue  85 – 264 V AC 50/60Hz: Price Adder: \$12 230-W White or Yellow  230-R Red  230-G Green  230-B Blue  207 – 264 V AC 50/60Hz: Price Adder: \$12 230H-W White or Yellow  230H-R Red  230H-G Green  230H-B Blue 
M22-LH Conical Extended, Illuminated, Indicating Light		Inscription not available with conical extended indicating lights	
See next page for stocked combinations			

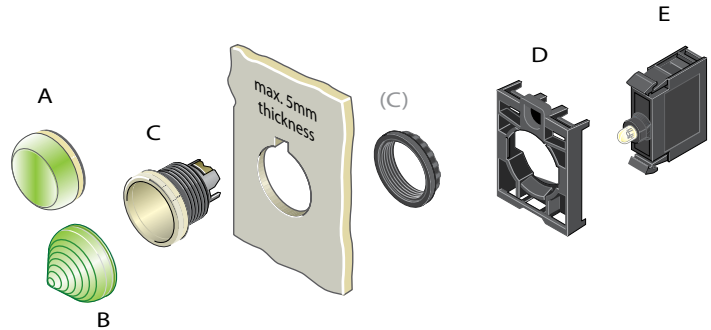
Ordering Instructions by Complete Assembly



- Complete assemblies are only partially assembled in preparation for panel installation.
- Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- Any combination of plate color and inscription are available; stocked combinations appear on next page; see pages A72 – A73 for other options.
- Additional languages available; see pages A72 – A73.
- Select the same color LED element as your lens color; for yellow lens, choose a white LED.



Order by Components



Indicator Light components; illuminated, flush and extended

Component	Lens Color	Lens Inscription 1 2	Catalog Number	Price	
A Lens – flush					
	White	(without inscription)	M22-XL-W	4.40	
	Red		M22-XL-R	4.40	
	Green		M22-XL-G	4.40	
	Yellow		M22-XL-Y	4.40	
	Blue		M22-XL-B	4.40	
	Red	OFF	M22-XL-R-GB5	6.80	
	White	OFF	M22-XL-W-GB5	6.80	
	Green	ON	M22-XL-G-GB6	6.80	
	White	ON	M22-XL-W-GB6	6.80	
	Blue	FAULT	M22-XL-B-GB8	6.80	
	White	FAULT	M22-XL-W-GB8	6.80	
	White	FORWARD	M22-XL-W-GB15	6.80	
	White	REVERSE	M22-XL-W-GB16	6.80	
	B Lens – extended conical				
		White	(inscription not available)	M22-XLH-W	9.50
		Red		M22-XLH-R	9.50
Green		M22-XLH-G		9.50	
Yellow		M22-XLH-Y		9.50	
Blue		M22-XLH-B		9.50	





















Component	Color	Description	Catalog Number	Price
C Indicating Light Housing				
	–	–	M22-L-X	13
D Mounting Adapter				
	Black	Mates back of panel components to actuator	M22-A	6
E LED Elements – front mounted 3 4				
	White	12 – 30 V AC/DC 8 – 15 mA	M22-LED-W	26
	Red		M22-LED-R	26
	Green		M22-LED-G	26
	Blue		M22-LED-B	26
	White	85 – 264 V AC, 50/60 Hz 5 – 15 mA	M22-LED230-W	38
	Red		M22-LED230-R	38
	Green		M22-LED230-G	38
	Blue		M22-LED230-B	38
	White	207 – 264 V AC, 50/60 Hz 12 – 15 mA	M22-LED230H-W	38
	Red		M22-LED230H-R	38
	Green		M22-LED230H-G	38
	Blue		M22-LED230H-B	38

Ordering Instructions by Components
























- 1 Any combination of lens color and inscription are available; stocked combinations appear on this page; see pages A72 – A73 for other options.
- 2 Additional languages available; see pages A72 – A73.
- 3 Cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- 4 Select the same color LED element as your lens color; for yellow lens, choose a white LED.







A Complete compact indicating lights (without bulb)

Compact Indicating Light	Lens Color	Lens Inscription ①②	Catalog Number	Price
Flush				
	White 	(without inscription)	M22-LC-W	39
	Red 		M22-LC-R	39
	Green 		M22-LC-G	39
	Yellow 		M22-LC-Y	39
	Blue 		M22-LC-B	39
	Red 	OFF	M22-LC-R-GB5	41
	White 	OFF	M22-LC-W-GB5	41
	Green 	ON	M22-LC-G-GB6	41
	White 	ON	M22-LC-W-GB6	41
	Blue 	FAULT	M22-LC-B-GB8	41
	White 	FAULT	M22-LC-W-GB8	41
	White 	FORWARD	M22-LC-W-GB15	41
	White 	REVERSE	M22-LC-W-GB16	41
Extended Conical				
	White 	(inscription not available)	M22-LCH-W	44
	Red 		M22-LCH-R	44
	Green 		M22-LCH-G	44
	Yellow 		M22-LCH-Y	44
	Blue 		M22-LCH-B	44

Components for compact indicating lights

Component	Lens Color	Lens Inscription ①②	Catalog Number	Price
Indicating Light				
	(without lens)	(without inscription)	M22-LC-X	33
Lens – flush				
	White 	(without inscription)	M22-XL-W	4.40
	Red 		M22-XL-R	4.40
	Green 		M22-XL-G	4.40
	Yellow 		M22-XL-Y	4.40
	Blue 		M22-XL-B	4.40
	Red 	OFF	M22-XL-R-GB5	6.80
	White 	OFF	M22-XL-W-GB5	6.80
	Green 	ON	M22-XL-G-GB6	6.80
	White 	ON	M22-XL-W-GB6	6.80
	Blue 	FAULT	M22-XL-B-GB8	6.80
	White 	FAULT	M22-XL-W-GB8	6.80
	White 	FORWARD	M22-XL-W-GB15	6.80
	White 	REVERSE	M22-XL-W-GB16	6.80
Lens – extended conical				
	White 	(inscription not available)	M22-XLH-W	9.50
	Red 		M22-XLH-R	9.50
	Green 		M22-XLH-G	9.50
	Yellow 		M22-XLH-Y	9.50
	Blue 		M22-XLH-B	9.50

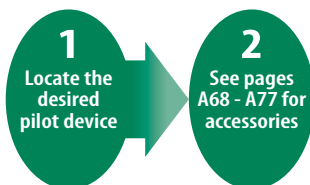
Bulbs for compact indicating lights

Bulb	Color	Operational Voltage	Lifespan (h)	Catalog Number	Price
BA 9 Filament					
	–	110 – 130 V 2.4 W	2000	A22-GL130	4.45
	–	24 V 2.0 W	5000	A22-GL24	4.45
BA 9 Single Chip LED ③					
	White 	18 – 30 V AC/DC 15 mA	100000	A22-LED-W	14
	Red 			A22-LED-R	14
	Green 			A22-LED-G	14
	Yellow 			A22-LED-Y	14

Application Note:

Compact indicating lights are designed for direct wire to the control system. No separate mounting adapter or contact blocks are required.

Ordering Instructions



- ① Any combination of lens color and inscription are available; stocked combinations appear on this page; see pages A72 – A73 for other options.
- ② Additional languages available; see pages A72 – A73.
- ③ Select the same color LED element as your lens color; for blue lens, choose a white LED.

Master key system

multi-level security for plants and systems

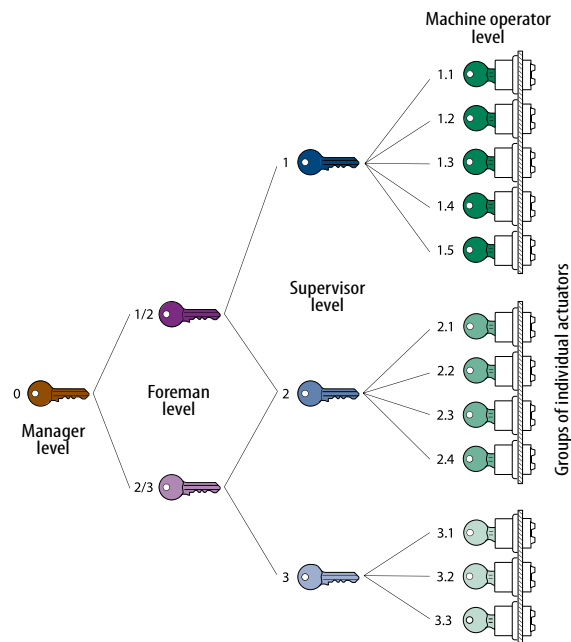


Key-operated Titan pushbuttons are available with a robust master key system that allows four levels of access to pre-determined groups of actuators. This type of operational security is important in applications where supervisors, foremen and managers require increasing levels of oversight and responsibility for process or machine control.

Logical and comprehensive

Our system begins with the keyed actuator itself, where you decide how many devices are in a particular group (refer to the right side of the illustration below). The number of levels of master keys (up to three) is only dependent on how many levels of management are being accommodated. In a full master key system, direct supervisors will have first level master access to a group of actuators, followed by foreman, who might have master access to multiple groups. Finally, the plant manager could have a master key to all actuators in all groups.

- > 8000 different lock mechanisms available
- > Four separate levels of access
- > Grants operational control to supervisors, foremen and managers, while limiting broad access to operating personnel
- > Three popular operators available

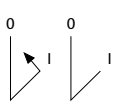





Popular operators for master keyed applications

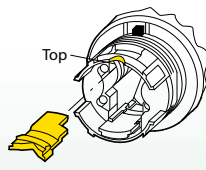
Moeller's master key system is available for two and three position selector switches, as well as, keyed Emergency Stop operators. This selection covers basic machine operation and access control for a variety of applications. Your Moeller representative is always available to help configure a custom master key system for your specific needs.

These devices are for master keyed systems only. If your application only requires an individual operator's key, see pages A48 – A49. Determine your specific key structure before selecting your devices. Drawing a schematic of your specific master key system based on the example on page A59 is strongly recommended. Keep your schematic for reference and for use with subsequent orders.


Two-position keyed selector switches, non-illuminated, with master keys, momentary or maintained

Switching Positions	Key Withdraw Positions	Titanium Color		Black	
		Momentary or Maintained		Momentary or Maintained	
		Catalog Number	Price	Catalog Number	Price
 Momentary or Maintained	 Standard	M22-WS-SA(◆)-▲.★	199	M22S-WS-SA(◆)-▲.★	199
	 User selected 	See Catalog Number Examples on pages A64 – A66 for assistance in designing your master key system.			

This Moeller pilot device adapter features a coding adapter that enables the device to be set to either momentary or maintained operation.



Insert for Momentary
Remove for Maintained

 See page A81 for ATEX information

Catalog Number Codes

See Catalog Number Examples on pages A64 – A66 to help configure your master key system.

M22 Front Ring Color	–	WS-SA Device Type	(◆ Security Certificate Number)	– ▲ Group Number	. ★ Individual Lock Number	
M22 Titanium M22S Black – Gold		WS-SA Selector switch, non-illuminated, master keyed, two-position, momentary or maintained Extra Keys: M22-ES-SA Use this prefix to order extra keys for this device.	Assigned when a new master key system is shipped. If this is a new master key system, replace ◆ with "new". When ordering additional devices for an existing master key system, replace ◆ with the security certificate number assigned to your original order.	The group number will determine which master keys can operate this device. Use the schematic you created to determine the appropriate group number for your device. Start with "1" and progress sequentially for new groups.	The individual lock number will determine which individual keys within the same group can operate this device. Use the schematic you created to determine the appropriate individual lock number for your device. For each new group, start with "1" and progress sequentially for new individual locks.	Your master key system is not complete. See page A63 to configure and order master keys.
For identical locks and keys, use the same group and individual lock numbers with the same Security Certificate. Two keys are included with selector switch; use prefix "M22-ES-SA" to order additional keys.						

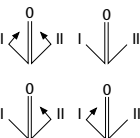
Ordering Instructions

- See Catalog Number Examples on pages A64 – A66.
- These pilot devices are ordered as components. Select a mounting adapter and contact block(s) from page A68.
- Select master keys from page A63.
- See pages A68 – A77 for other accessories.

① A key withdraw adapter is available that enables this device to be set to user selected key withdraw positions; see page A77 to order and for configuration options.

These devices are for master keyed systems only. If your application only requires an individual operator's key, see pages A50 – A51. Determine your specific key structure before selecting your devices. Drawing a schematic of your specific master key system based on the example on page A59 is strongly recommended. Keep your schematic for reference and for use with subsequent orders.


Three-position keyed selector switches, non-illuminated, with master keys, momentary or maintained ①

Switching Positions	Key Withdraw Positions	Titanium Color		Black	
		Momentary or Maintained		Momentary or Maintained	
		Catalog Number	Price	Catalog Number	Price
 Momentary or Maintained	I O II Standard I O II I O II User selected ②	M22-WS3-SA(◆)-▲.★	199	M22S-WS3-SA(◆)-▲.★	199
		See Catalog Number Examples on pages A64 – A66 for assistance in designing your master key system.			

This Moeller pilot device features coding adapters that enables the device to be set to either momentary or maintained operation.

Top affects Right position (II)
Bottom affects Left position (I)

Insert for Momentary (without key withdraw)
Remove for Maintained (with key withdraw)

 See page A81 for ATEX information

Catalog Number Codes

See Catalog Number Examples on pages A64 – A66 to help configure your master key system.

M22 Front Ring Color	WS3-SA Device Type	(Security Certificate Number)	- Group Number	. Individual Lock Number	
M22 Titanium M22S Black – Gold Special note: A gold front ring is also available by special order. Allow four to six weeks for delivery - see your Moeller representative.	WS3-SA Selector switch, non-illuminated, master keyed, three-position, momentary or maintained Extra Keys: M22-ES-SA Use this prefix to order extra keys for this device.	Assigned when a new master key system is shipped. If this is a new master key system, replace ◆ with "new". When ordering additional devices for an existing master key system, replace ◆ with the security certificate number assigned to your original order.	The group number will determine which master keys can operate this device. Use the schematic you created to determine the appropriate group number for your device. Start with "1" and progress sequentially for new groups.	The individual lock number will determine which individual keys within the same group can operate this device. Use the schematic you created to determine the appropriate individual lock number for your device. For each new group, start with "1" and progress sequentially for new individual locks.	Your master key system is not complete. See page A63 to configure and order master keys.
For identical locks and keys, use the same group and individual lock numbers with the same Security Certificate. Two keys are included with selector switch; use prefix "M22-ES-SA" to order additional keys.					


Ordering Instructions


- See Catalog Number Examples on pages A64 – A66.
- These pilot devices are ordered as components. Select a mounting adapter and contact block(s) from page A68.
- Select master keys from page A63.
- See pages A68 – A77 for other accessories.

- ① A plunger bridge is required to actuate center mounted contact blocks; order plunger bridge (if required) separately on page A70.
- ② A key withdraw adapter is available that enables this device to be set to user selected key withdraw positions; see page A77 to order and for configuration options.

These devices are for master keyed systems only. If your application only requires an individual operator's key, see pages A26 – A27. Determine your specific key structure before selecting your devices. Drawing a schematic of your specific master key system based on the example on page A59 is strongly recommended. Keep your schematic for reference and for use with subsequent orders.

Emergency-stop with key release, non-illuminated, with master keys

Red	
	
Catalog Number	Price
M22-PVS-SA(◆)-▲.★	280
See Catalog Number Examples on pages A64 – A66 for assistance in designing your master key system.	

 See page A81 for ATEX information

Catalog Number Codes




See Catalog Number Examples on pages A64 – A66 to help configure your master key system.

M22-PVS-SA	(◆)-	▲	. ★	
Device Type	Security Certificate Number	Group Number	Individual Lock Number	
M22-PVS-SA Emergency-stop actuator, non-illuminated, with master keyed release Extra Keys: M22-ES-SA Use this prefix to order extra keys for this device.	Assigned when a new master key system is shipped. If this is a new master key system, replace ◆ with "new". When ordering additional devices for an existing master key system, replace ◆ with the security certificate number assigned to your original order.	The group number will determine which master keys can operate this device. Use the schematic you created to determine the appropriate group number for your device. Start with "1" and progress sequentially for new groups.	The individual lock number will determine which individual keys within the same group can operate this device. Use the schematic you created to determine the appropriate individual lock number for your device. For each new group, start with "1" and progress sequentially for new individual locks.	Your master key system is not complete. See page A63 to configure and order master keys.
For identical locks and keys, use the same group and individual lock numbers with the same Security Certificate. Two keys are included with actuator; use prefix "M22-ES-SA" to order additional keys.				

Ordering Instructions

- See Catalog Number Examples on pages A64 – A66.
- These pilot devices are ordered as components. Select a mounting adapter and contact block(s) from page A68.
- Select master keys from page A63.
- See pages A68 – A77 for other accessories.

Master keys

Key	Description	Catalog Number	Price
General Master Key			
	This key will operate all individual locks within the system.	M22-ES-SA(◆)-0	59
Multiple Groups Master Key			
	This key will operate all individual locks in each group specified by ▲	M22-ES-SA(◆)-▲/▲	59
Single Group Master Key			
	This key will operate all individual locks in group specified by ▲	M22-ES-SA(◆)-▲	59

Catalog Number Codes

See Catalog Number Examples on pages A64 – A66 to help configure your master key system.

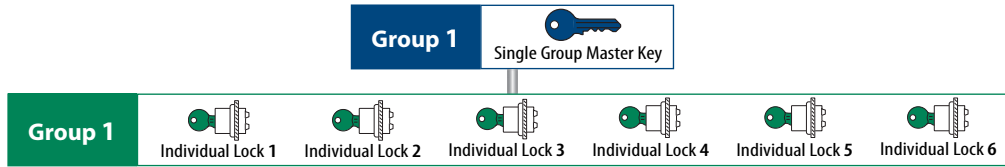
M22-ES-SA Device Type	(◆)-	▲/▲	
	Security Certificate Number	Group Number	
M22-ES-SA Key for master key system	Assigned when a new master key system is shipped. If this is a new master key system, replace ◆ with "new". When ordering additional devices for an existing master key system, replace ◆ with the security certificate number assigned to your original order.	▲ Use the schematic you created to determine the group number for your single group master key. ▲/▲ Use the schematic you created to determine the appropriate group numbers for your multiple groups master key.	See pages A60 – A62 to configure and order devices for a master key system.
For identical master keys, use the same group number(s) with the same Security Certificate.			

Ordering Instructions

- See Catalog Number Examples on pages A64 – A66.
- Select devices for a master key system from pages A60 – A62.
- See pages A68 – A77 for other accessories.

Catalog number example: Two Level Master Key System

Graphic for illustrative purposes only. Individual locks within groups and/or entire groups may be added or removed as needed to match your specific requirements.



Catalog number example when ordering devices with a NEW master key system

Device	Catalog Prefix of Your Device <i>(Ex: 2-pos. switch)</i>	Security Certificate Number	–	Group Number	.	Individual Lock Number	Example of Completed Catalog Number
Group 1, Ind. Lock 1	M22-WS-SA	(NEW)	–	1	.	1	M22-WS-SA(NEW)-1.1
Group 1, Ind. Lock 2	M22-WS-SA	(NEW)	–	1	.	2	M22-WS-SA(NEW)-1.2
Group 1, Ind. Lock 3	M22-WS-SA	(NEW)	–	1	.	3	M22-WS-SA(NEW)-1.3
Group 1, Ind. Lock 4	M22-WS-SA	(NEW)	–	1	.	4	M22-WS-SA(NEW)-1.4
Group 1, Ind. Lock 5	M22-WS-SA	(NEW)	–	1	.	5	M22-WS-SA(NEW)-1.5
Group 1, Ind. Lock 6	M22-WS-SA	(NEW)	–	1	.	6	M22-WS-SA(NEW)-1.6

Certificate number is assigned when a new master key system is shipped. For a new master key system, enter "(NEW)".

The individual lock number will determine which individual keys within the same group can operate this device. Start with "1" and progress sequentially for new individual locks.

Catalog number example when adding or replacing devices to an EXISTING master key system

Device	Catalog Prefix of Your Device <i>(Ex: 2-pos. switch)</i>	Enter Your Security Certificate Number	–	Group Number	.	Individual Lock Number	Example of Completed Catalog Number
Group 1, Ind. Lock 1	M22-WS-SA	<i>Example: (8675309)</i>	–	1	.	1	M22-WS-SA(8675309)-1.1
Group 1, Ind. Lock 2	M22-WS-SA	<i>Example: (8675309)</i>	–	1	.	2	M22-WS-SA(8675309)-1.2
Group 1, Ind. Lock 3	M22-WS-SA	<i>Example: (8675309)</i>	–	1	.	3	M22-WS-SA(8675309)-1.3
Group 1, Ind. Lock 4	M22-WS-SA	<i>Example: (8675309)</i>	–	1	.	4	M22-WS-SA(8675309)-1.4
Group 1, Ind. Lock 5	M22-WS-SA	<i>Example: (8675309)</i>	–	1	.	5	M22-WS-SA(8675309)-1.5
Group 1, Ind. Lock 6	M22-WS-SA	<i>Example: (8675309)</i>	–	1	.	6	M22-WS-SA(8675309)-1.6

Certificate number is assigned when a new master key system is shipped. When ordering additional devices for an existing master key system, enter the security certificate number assigned to your original order.

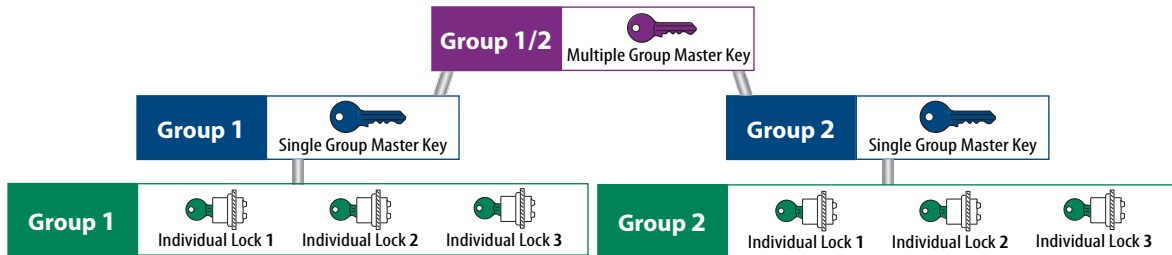
The individual lock number will determine which individual keys within the same group can operate this device. Start with "1" and progress sequentially for new individual locks.

Catalog number examples when ordering master keys or extra individual keys

Key	Catalog Prefix	Security Certificate Number	–	Group Number	.	Individual Lock Number	Example of Completed Catalog Number
Single Group Master Key (Ex: Group 1)	M22-ES-SA	(NEW)	–	1			M22-ES-SA(NEW)-1
Single Group Master Key (Ex: Group 1)	M22-ES-SA	<i>Example: (8675309)</i>	–	1			M22-ES-SA(8675309)-1
Individual Device Key (Ex: Group 1, Ind. lock 1)	M22-ES-SA	(NEW)	–	1	.	1	M22-ES-SA(NEW)-1.1
Individual Device Key (Ex: Group 1, Ind. lock 1)	M22-ES-SA	<i>Example: (8675309)</i>	–	1	.	1	M22-ES-SA(8675309)-1.1

Catalog number example: Three Level Master Key System

Graphic for illustrative purposes only. Individual locks within groups and/or entire groups may be added or removed as needed to match your specific requirements.



A
Pilot Devices

Catalog number example when ordering devices with a NEW master key system

Device	Catalog Prefix of Your Device <i>(Ex: 2-pos. switch)</i>	Security Certificate Number	Group Number	Individual Lock Number	Example of Completed Catalog Number
Group 1, Ind. Lock 1	M22-WS-SA	(NEW)	1	1	M22-WS-SA(NEW)-1.1
Group 1, Ind. Lock 2	M22-WS-SA	(NEW)	1	2	M22-WS-SA(NEW)-1.2
Group 1, Ind. Lock 3	M22-WS-SA	(NEW)	1	3	M22-WS-SA(NEW)-1.3
Group 2, Ind. Lock 1	M22-WS-SA	(NEW)	2	1	M22-WS-SA(NEW)-2.1
Group 2, Ind. Lock 2	M22-WS-SA	(NEW)	2	2	M22-WS-SA(NEW)-2.2
Group 2, Ind. Lock 3	M22-WS-SA	(NEW)	2	3	M22-WS-SA(NEW)-2.3

Certificate number is assigned when a new master key system is shipped. For a new master key system, enter "(NEW)".

The individual lock number will determine which individual keys within the same group can operate this device. Start with "1" and progress sequentially for new individual locks.

Catalog number example when adding or replacing devices to an EXISTING master key system

Device	Catalog Prefix of Your Device <i>(Ex: 2-pos. switch)</i>	Enter Your Security Certificate Number	Group Number	Individual Lock Number	Example of Completed Catalog Number
Group 1, Ind. Lock 1	M22-WS-SA	Example: (8675309)	1	1	M22-WS-SA(8675309)-1.1
Group 1, Ind. Lock 2	M22-WS-SA	Example: (8675309)	1	2	M22-WS-SA(8675309)-1.2
Group 1, Ind. Lock 3	M22-WS-SA	Example: (8675309)	1	3	M22-WS-SA(8675309)-1.3
Group 2, Ind. Lock 1	M22-WS-SA	Example: (8675309)	2	1	M22-WS-SA(8675309)-2.1
Group 2, Ind. Lock 2	M22-WS-SA	Example: (8675309)	2	2	M22-WS-SA(8675309)-2.2
Group 2, Ind. Lock 3	M22-WS-SA	Example: (8675309)	2	3	M22-WS-SA(8675309)-2.3

Certificate number is assigned when a new master key system is shipped. When ordering additional devices for an existing master key system, enter the security certificate number assigned to your original order.

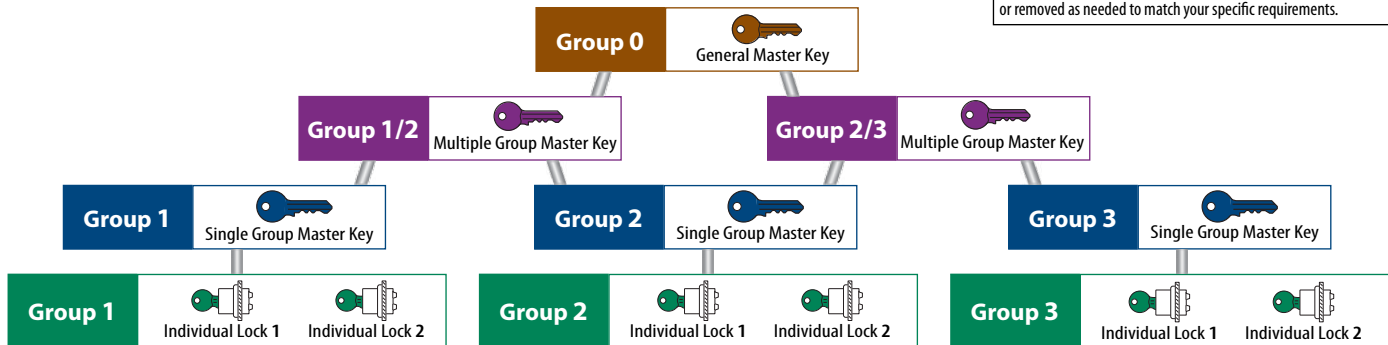
The individual lock number will determine which individual keys within the same group can operate this device. Start with "1" and progress sequentially for new individual locks.

Catalog number examples when ordering master keys or extra individual keys

Key	Catalog Prefix	Security Certificate Number	Group Number	Individual Lock Number	Example of Completed Catalog Number
Multiple Group Master Key (Ex: Groups 1 & 2)	M22-ES-SA	(NEW)	1/2		M22-ES-SA(NEW)-1/2
Multiple Group Master Key (Ex: Groups 1 & 2)	M22-ES-SA	Example: (8675309)	1/2		M22-ES-SA(8675309)-1/2
Single Group Master Key (Ex: Group 1)	M22-ES-SA	(NEW)	1		M22-ES-SA(NEW)-1
Single Group Master Key (Ex: Group 1)	M22-ES-SA	Example: (8675309)	1		M22-ES-SA(8675309)-1
Individual Device Key (Ex: Group 1, Ind. lock 1)	M22-ES-SA	(NEW)	1	1	M22-ES-SA(NEW)-1.1
Individual Device Key (Ex: Group 1, Ind. lock 1)	M22-ES-SA	Example: (8675309)	1	1	M22-ES-SA(8675309)-1.1

Catalog number example: Four Level Master Key System

Graphic for illustrative purposes only. Individual locks within groups and/or entire groups may be added or removed as needed to match your specific requirements.



Catalog number example when ordering devices with a NEW master key system

Device	Catalog Prefix of Your Device <i>(Ex: 2-pos. switch)</i>	Security Certificate Number	Group Number	Individual Lock Number	Example of Completed Catalog Number
Group 1, Ind. Lock 1	M22-WS-SA	(NEW)	1	1	M22-WS-SA(NEW)-1.1
Group 1, Ind. Lock 2	M22-WS-SA	(NEW)	1	2	M22-WS-SA(NEW)-1.2
Group 2, Ind. Lock 1	M22-WS-SA	(NEW)	2	1	M22-WS-SA(NEW)-2.1
Group 2, Ind. Lock 2	M22-WS-SA	(NEW)	2	2	M22-WS-SA(NEW)-2.2
Group 3, Ind. Lock 1	M22-WS-SA	(NEW)	3	1	M22-WS-SA(NEW)-3.1
Group 3, Ind. Lock 2	M22-WS-SA	(NEW)	3	2	M22-WS-SA(NEW)-3.2

Certificate number is assigned when a new master key system is shipped. For a new master key system, enter "(NEW)".

The individual lock number will determine which individual keys within the same group can operate this device. Start with "1" and progress sequentially for new individual locks.

Catalog number example when adding or replacing devices to an EXISTING master key system

Device	Catalog Prefix of Your Device <i>(Ex: 2-pos. switch)</i>	Enter Your Security Certificate Number	Group Number	Individual Lock Number	Example of Completed Catalog Number
Group 1, Ind. Lock 1	M22-WS-SA	<i>Example: (8675309)</i>	1	1	M22-WS-SA(8675309)-1.1
Group 1, Ind. Lock 2	M22-WS-SA	<i>Example: (8675309)</i>	1	2	M22-WS-SA(8675309)-1.2
Group 2, Ind. Lock 1	M22-WS-SA	<i>Example: (8675309)</i>	2	1	M22-WS-SA(8675309)-2.1
Group 2, Ind. Lock 2	M22-WS-SA	<i>Example: (8675309)</i>	2	2	M22-WS-SA(8675309)-2.2
Group 3, Ind. Lock 1	M22-WS-SA	<i>Example: (8675309)</i>	3	1	M22-WS-SA(8675309)-3.1
Group 3, Ind. Lock 2	M22-WS-SA	<i>Example: (8675309)</i>	3	2	M22-WS-SA(8675309)-3.2

Certificate number is assigned when a new master key system is shipped. When ordering additional devices for an existing master key system, enter the security certificate number assigned to your original order.



The individual lock number will determine which individual keys within the same group can operate this device. Start with "1" and progress sequentially for new individual locks.

Catalog number examples when ordering master keys or extra individual keys






Key	Catalog Prefix	Security Certificate Number	Group Number	Individual Lock Number	Example of Completed Catalog Number
General Master Key	M22-ES-SA	(NEW)	0		M22-ES-SA(NEW)-0
General Master Key	M22-ES-SA	<i>Example: (8675309)</i>	0		M22-ES-SA(8675309)-0
Multiple Group Master Key (Ex: Groups 1 & 2)	M22-ES-SA	(NEW)	1/2		M22-ES-SA(NEW)-1/2
Multiple Group Master Key (Ex: Groups 1 & 2)	M22-ES-SA	<i>Example: (8675309)</i>	1/2		M22-ES-SA(8675309)-1/2
Single Group Master Key (Ex: Group 1)	M22-ES-SA	(NEW)	1		M22-ES-SA(NEW)-1
Single Group Master Key (Ex: Group 1)	M22-ES-SA	<i>Example: (8675309)</i>	1		M22-ES-SA(8675309)-1
Individual Device Key (Ex: Group 1, Ind. lock 1)	M22-ES-SA	(NEW)	1	1	M22-ES-SA(NEW)-1.1
Individual Device Key (Ex: Group 1, Ind. lock 1)	M22-ES-SA	<i>Example: (8675309)</i>	1	1	M22-ES-SA(8675309)-1.1

A Pilot Devices

Mounting Adapters

Component	Description	Catalog Number	Price
Mounting Adapters			
	Mates back of panel components to actuator	M22-A	6
	Special adapter that can hold up to eight contact blocks. Used exclusively with all four-way operators and two-way joysticks. Mates back of panel components to actuator.	M22-A4	12







Contact Blocks

Contact Block	Terminal Type	Contact Type	Catalog Number	Price
Screw Terminals – front mounted				
	Screw Terminals	1NO	M22-K10	14
		1NC ⊖	M22-K01	14
		1NC ⊖ late break	M22-K01D	37
Screw Terminals – base mounted				
	Screw Terminals	1NO	M22-KC10	14
		1NC ⊖	M22-KC01	14
Cage Clamp – front mounted				
	Cage Clamp	1NO	M22-CK10	15
		1NC ⊖	M22-CK01	15
		1NC ⊖ late break	M22-CK01D	39
	Cage Clamp	2NO	M22-CK20	28
		2NC ⊖	M22-CK02	28
		1NO, 1NC ⊖	M22-CK11	28
Cage Clamp – base mounted				
	Cage Clamp	1NO	M22-CKC10	15
		1NC ⊖	M22-CKC01	15

⊖ = positively driven contact

① Front or base mounted screw terminal LEDs at 12 V AC/DC operational voltage is also available in White, Red, Green and Blue - see your Moeller representative to order.

LED Elements

LED Element	Color	Description	Catalog Number	Price	
Screw Terminals – front mounted ①					
	White	Screw Terminals 12 – 30 V AC/DC 8 – 15 mA	M22-LED-W	26	
	Red		M22-LED-R	26	
	Green		M22-LED-G	26	
	Blue		M22-LED-B	26	
	White	Screw Terminals 85 – 264 V AC, 50/60 Hz 5 – 15 mA	M22-LED230-W	38	
	Red		M22-LED230-R	38	
	Green		M22-LED230-G	38	
	Blue		M22-LED230-B	38	
	White	Screw Terminals 207 – 264 V AC, 50/60 Hz 12 – 15 mA	M22-LED230H-W	38	
	Red		M22-LED230H-R	38	
	Green		M22-LED230H-G	38	
	Blue		M22-LED230H-B	38	
Screw Terminals – base mounted ①					
	White	Screw Terminals 12 – 30 V AC/DC 8 – 15 mA	M22-LEDC-W	26	
	Red		M22-LEDC-R	26	
	Green		M22-LEDC-G	26	
	Blue		M22-LEDC-B	26	
	White	Screw Terminals 85 – 264 V AC, 50/60 Hz 5 – 15 mA	M22-LEDC230-W	38	
	Red		M22-LEDC230-R	38	
	Green		M22-LEDC230-G	38	
	Blue		M22-LEDC230-B	38	
	White	Screw Terminals 207 – 264 V AC, 50/60 Hz 12 – 15 mA	M22-LEDC230H-W	38	
	Red		M22-LEDC230H-R	38	
	Green		M22-LEDC230H-G	38	
	Blue		M22-LEDC230H-B	38	
Cage Clamp – front mounted					
	White	Cage Clamp 12 – 30 V AC/DC 8 – 15 mA	M22-CLED-W	29	
	Red		M22-CLED-R	29	
	Green		M22-CLED-G	29	
	Blue		M22-CLED-B	29	
	White	Cage Clamp 85 – 264 V AC, 50/60 Hz 5 – 15 mA	M22-CLED230-W	42	
	Red		M22-CLED230-R	42	
	Green		M22-CLED230-G	42	
	Blue		M22-CLED230-B	42	
	Cage Clamp – base mounted				
		White	Cage Clamp 12 – 30 V AC/DC 8 – 15 mA	M22-CLEDC-W	29
		Red		M22-CLEDC-R	29
		Green		M22-CLEDC-G	29
Blue		M22-CLEDC-B		29	
White		Cage Clamp 85 – 264 V AC, 50/60 Hz 5 – 15 mA	M22-CLEDC230-W	42	
Red			M22-CLEDC230-R	42	
Green			M22-CLEDC230-G	42	
Blue			M22-CLEDC230-B	42	
LED Resistor Elements					
		–	For connecting 12 – 30 V LED elements to 42 – 60 V AC/DC	M22-XLED60	26
		–	For connecting 12 – 30 V LED elements to 220 V DC	M22-XLED220	70
LED Test Elements					
	–	For connecting to 12 – 240 V AC/DC	M22-XLED-T	26	
	–	For connecting to 85 – 264 V AC	M22-XLED230-T	38	








Miscellaneous accessories

Accessory	Color	Description	For use with...	Catalog Number	Price
Blanking Plugs					
	RAL 9005 (black)	For closing spare mounting holes	-	M22S-B	8.60
	RAL 7035 (gray)			M22-B	8.60
Actuator Diaphragms					
	Transparent	For use in: • Harsh environments • Food industry	M22(S)-D(R)(L) M22(S)-L(C)	M22-T-D	11
			M22(S)-DDL	M22-T-DD	11
			M22(S)-WS	M22-XWS	24
Sealable Shroud for Emergency-Stop Actuators					
	Transparent	• IP65 • Can be reused after emergency-stop operation	M22(S)-PV	M22-PL-PV	24
Telescopic Clips (not for use with emergency-stop actuators)					
	Black	For mounting depths 115mm – 155mm Use with base mounted contact blocks or LED elements	M22-KC M22-LEDC	M22-TC	26
	Black / Silver	For mounting depths 115mm – 155mm With top-hat rail	EASY MFD	M22-TA	46
	Black	For increasing mounting depths of telescopic clips up to 205mm	M22-TC M22-TA	M22-TCV	8.60
Mounting Rail Adapter					
	White	Top-hat rail for front mounted contact blocks or LED elements Used to mount pushbutton kits onto DIN rail	M22-K M22-LED	M22-IVS	18




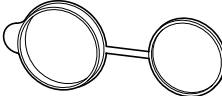
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Pilot Devices







Miscellaneous accessories

Accessory	Color	Description	For use with...	Catalog Number	Price
Plunger Bridge					
	Black	Used to actuate center mounted contact blocks of a non-illuminated three-position selector switch	M22(S)-W...3	M22-XW	2.50
Guard Ring					
	Black	To protect against accidental operation	M22 actuators M22 selector switches	M22-XGWK	27
	RAL 1004 (yellow)	For emergency-stop applications	M22(S)-PV	M22-XGPV	37
	RAL 7032 (gray)	To protect against accidental operation		M22G-XGPV	37
Extra Threaded Ring (one ring is included with pilot device)					
	Black	Used to secure pilot device to panel.	M22 pilot devices	M22-GR	5.20
Adapter Rings					
	Black	Used to fit 22.3 mm devices into 30.5mm holes	M22 pilot devices	M22S-R30	8.60
Tightening Tool					
	Black	Used to tighten or loosen threaded rings. Can be fitted to electric screwdriver.	M22-GR	M22-MS	18
Bulb Extraction Tool					
	Transparent	Used to remove bulb from compact indicating lights	M22-LC	M22-LG	18

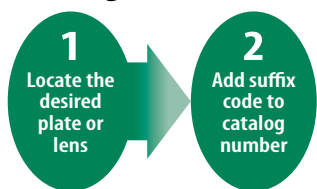
Miscellaneous accessories

Accessory	Description	For use with...	Catalog Number	Price
Connecting Screw				
	For connecting cables to enclosure knockouts	M22-I M22-H	M22-XI	10
Metric Cable Gland				
	IP68, IP69K Cable diameter 6 – 13 mm	M22-I M22-H	V-M20	5
Dust Cover for Contact Block				
	Dust cover for M22-K contact blocks	M22-K	M22-XKDP	3
	Maximum three contacts	22 mm pilot device	M22-ADC	45
	Maximum four contacts		M22-ADC4	45

Inscriptions for button plates and lenses ①


Component	Color	Catalog Number	Price	Suffix Code (★)	Inscription	STOP	START	CLOSE	UP	DOWN	OFF	ON	FAULT	TEST	RESET	FORWARD	REVERSE	RAISE	LOWER	OPEN	ARRÊT	MARCHE	FERME	MONTEE	DESCENTE	ARRÊT	MARCHE	DÉFAUT	
						GB0	GB1	GB2	GB3	GB4	GB5	GB6	GB8	GB9	GB14	GB15	GB16	GB17	GB18	GB32	F0	F1	F2	F3	F4	F5	F6	F8	
Flush Pushbutton Plate, Non-Illuminated																													
	Black ●	M22-XD-S-★	6.80			✓	✓	✓	✓	✓	✓		→		✓	✓	→	→	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	White ○	M22-XD-W-★	6.80				→															→							
	Red ●	M22-XD-R-★	6.80			✓					✓											✓				✓			
	Green ●	M22-XD-G-★	6.80				✓					✓											✓					✓	
	Yellow ●	M22-XD-Y-★	6.80																										
	Blue ●	M22-XD-B-★	6.80													✓													
Extended Pushbutton Plate, Non-Illuminated																													
	Black ●	M22-XDH-S-★	11.00			✓	✓	→	✓	✓	✓		→		✓	✓	→	→	✓	✓	→	✓	✓	✓	✓	✓	✓	✓	
	White ○	M22-XDH-W-★	11.00				→															→							
	Red ●	M22-XDH-R-★	11.00			✓					✓											✓				✓			
	Green ●	M22-XDH-G-★	11.00				✓					✓											✓					✓	
	Yellow ●	M22-XDH-Y-★	11.00																										
	Blue ●	M22-XDH-B-★	11.00													✓													
Flush Pushbutton Lens, Illuminated																													
	White ●	M22-XDL-W-★	6.80			✓	✓	→	✓	✓	✓		→		✓	✓	→	→	✓	✓	→	✓	✓	✓	✓	✓	✓	✓	
	Red ●	M22-XDL-R-★	6.80			✓					✓											✓				✓			
	Green ●	M22-XDL-G-★	6.80				✓					✓											✓				✓		
	Yellow ●	M22-XDL-Y-★	6.80																										
	Blue ●	M22-XDL-B-★	6.80													✓													
Extended Pushbutton Lens, Illuminated																													
	White ●	M22-XDLH-W-★	11.00			✓	✓	→	✓	✓	✓		→		✓	✓	→	→	✓	✓	→	✓	✓	✓	✓	✓	✓	✓	
	Red ●	M22-XDLH-R-★	11.00			✓					✓											✓				✓			
	Green ●	M22-XDLH-G-★	11.00				✓					✓											✓				✓		
	Yellow ●	M22-XDLH-Y-★	11.00																										
	Blue ●	M22-XDLH-B-★	11.00													✓													
Mushroom Head Plate, Non-Illuminated																													
	Black ●	M22-XDP-S-★	6.80			✓	✓	→	✓	✓	✓		→		✓	✓	→	→	✓	✓	→	✓	✓	✓	✓	✓	✓	✓	
	White ○	M22-XDP-W-★	6.80				→															→							
	Red ●	M22-XDP-R-★	6.80			✓					✓											✓				✓			
	Green ●	M22-XDP-G-★	6.80				✓					✓											✓				✓		
	Yellow ●	M22-XDP-Y-★	6.80																										
Flush Indicating Light Lens, Illuminated																													
	White ●	M22-XL-W-★	6.80			→	→	→	→	→	✓	✓	✓	→		✓	✓	→	→	→	→	→	→	→	→	✓	✓	✓	
	Red ●	M22-XL-R-★	6.80			→					✓											→				✓			
	Green ●	M22-XL-G-★	6.80				→					✓										→					✓		
	Yellow ●	M22-XL-Y-★	6.80																										
	Blue ●	M22-XL-B-★	6.80										✓															✓	

Ordering Instructions



- Stocked combinations**
Typically available for immediate delivery.
- Special combinations**
Ordered from factory - allow two to four weeks for delivery.
- (Without Symbol)**
Custom inscribed - allow four to six weeks for delivery.

NEXT



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Custom inscriptions

Custom text or custom graphics can be engraved on any listed color. See your Moeller representative.

Color	Catalog Number	Inscription										Suffix Code (★)																
		F9	F14	F15	F16	F17	F18	F32	X0	X1	X2	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16	X17			
Flush Pushbutton Plate, Non-Illuminated																												
●	M22-XD-S-★	→		✓	✓	→	→	✓	✓	✓	✓	✓	✓		✓	✓	→	→	✓	→	✓	✓	→	→	✓			
○	M22-XD-W-★								→																			
●	M22-XD-R-★							✓																				
●	M22-XD-G-★								✓	→																		
●	M22-XD-Y-★																											
●	M22-XD-B-★		✓											✓														
Extended Pushbutton Plate, Non-Illuminated																												
●	M22-XDH-S-★	→		✓	✓	→	→	✓	✓	→	✓	✓		✓	✓	→	→	→	→	→	→	→	→	→	→			
○	M22-XDH-W-★								→																			
●	M22-XDH-R-★							✓																				
●	M22-XDH-G-★								✓	→																		
●	M22-XDH-Y-★																											
●	M22-XDH-B-★		✓											✓														
Flush Pushbutton Lens, Illuminated																												
○	M22-XDL-W-★	→		✓	✓	→	→	✓	✓	→	✓	✓		✓	✓	→	→	→	→	→	→	→	→	→	→			
●	M22-XDL-R-★							✓																				
●	M22-XDL-G-★								✓	→																		
●	M22-XDL-Y-★																											
●	M22-XDL-B-★		✓											✓														
Extended Pushbutton Lens, Illuminated																												
○	M22-XDLH-W-★	→		✓	✓	→	→	✓	✓	→	✓	✓		✓	✓	→	→	→	→	→	→	→	→	→	→			
●	M22-XDLH-R-★							✓																				
●	M22-XDLH-G-★								✓	→																		
●	M22-XDLH-Y-★																											
●	M22-XDLH-B-★		✓											✓														
Mushroom Head Plate, Non-Illuminated																												
●	M22-XDP-S-★	→		✓	✓	→	→	✓	✓	→	✓	✓		✓	✓	→	→	→	→	→	→	→	→	→	→			
○	M22-XDP-W-★								→																			
●	M22-XDP-R-★							✓																				
●	M22-XDP-G-★								✓	→																		
●	M22-XDP-Y-★																											
Flush Indicating Light Lens, Illuminated																												
○	M22-XL-W-★	→		✓	✓	→	→	→	→	→	→	→		→	→	→	✓	→	→	→	→	→	→	→	→			
●	M22-XL-R-★							→																				
●	M22-XL-G-★								→	→																		
●	M22-XL-Y-★																											
●	M22-XL-B-★																											

Other languages available; contact your Moeller representative.

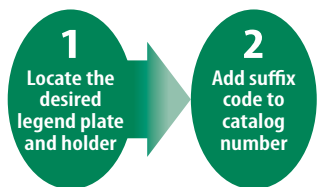
Legend plates and holders

Description	Holder		Holder		Description	Legend Plate	
							
	with Inscribed Legend Plate		without Legend Plate			without Holder	
	Catalog Number	Price	Catalog Number	Price		Catalog Number	Price
Standard holder	M22S-ST-★	6.80	M22S-ST-X	2.00	With inscription	M22-XST-★	3.30
Double pushbutton holder	M22S-STDD-★	6.80	M22S-STDD-X	2.00	Without inscription	M22-XST	1.70

Catalog Number Codes


M22S-ST		★											
Device Type		Legend Plate Inscription ①											
		X (without legend plate)											
			Stocked	Special		Stocked	Special		Stocked	Special			
M22S-ST	Standard holder	GB0	STOP	✓	F0	ARRÊT	✓	X52	<input type="text" value="1"/>	(one)	✓		
M22S-STDD	Double pushbutton holder	GB1	START	✓	F1	MARCHE	✓	X53	<input type="text" value="2"/>	(two)	✓		
M22-XST	Legend plate	GB5	OFF	✓	F5	ARRÊT	✓	X88	<input type="text" value="0"/>	<input type="text" value="I"/>	(2 positions)	✓	
		GB6	ON	✓	F6	MARCHE	✓	X89	<input type="text" value="0"/>	<input type="text" value="I"/>	(V positions)	✓	
		GB7	RUN	✓	F7	EN SERVICE	✓	X93	<input type="text" value="I"/>	<input type="text" value="0"/>	<input type="text" value="II"/>	(3 positions)	✓
		GB8	FAULT	✓	F8	DÉFAUT	✓						
		GB10	OFF ON	✓	F10	ARRÊT MARCHE	✓						
		GB11	MAN. AUTO	✓	F67	DÉFAUT	✓						
		D12	HAND 0 AUTO	✓	F68	SOUS TENSION	✓						
		GB12	MAN. 0 AUTO	✓									

Ordering Instructions




① Stocked combinations are typically available for immediate delivery; special combinations are ordered from factory - allow two to four weeks for delivery; inscriptions not listed will be custom inscribed - allow four to six weeks for delivery.


NEXT





YOUR LOGO HERE


Custom inscriptions
Custom text or custom graphics can be engraved on legend plates. See your Moeller representative.






















Emergency-stop legend plates

Accessory	Description	Language / Inscription	For use with...	Catalog Number	Price
For Emergency-Stop Applications					
	<ul style="list-style-type: none"> Rectangular up to 1 inscription Yellow (RAL 1004) 	(without inscription) ①	M22(S)-PV	M22-XZK	11
		English: Emergency Stop		M22-XZK-GB99	11
	<ul style="list-style-type: none"> Square with 4 inscriptions; can be rotated to select top language Yellow (RAL 1004) 	German: NOT-AUS English: EMERGENCY STOP French: ARRÊT D'URGENCE Italian: EMERGENZA		M22-XYK1	22
		(without inscription) ①		M22-XAK	22
	<ul style="list-style-type: none"> Round up to 4 inscriptions; can be rotated to select top language 90mm diameter Yellow (RAL 1004) 	German: NOT-AUS English: EMERGENCY STOP French: ARRÊT D'URGENCE Italian: EMERGENZA		M22-XAK1	22
		German: NOT-AUS English: EMERGENCY STOP Spanish: EMERGÈNCIA Portuguese: EMERGENCIA		M22-XAK2	22
		(without inscription) ①		M22-XBK1	22
	<ul style="list-style-type: none"> Round with 4 inscriptions; can be rotated to select top language 60mm diameter Yellow (RAL 1004) 	German: NOT-AUS English: EMERGENCY STOP French: ARRÊT D'URGENCE Italian: EMERGENZA		M22-XBK1	22

① Custom text can be engraved on these plates – allow four to six weeks for delivery. See your Moeller representative.



A Four-way and two-way operator legend plates

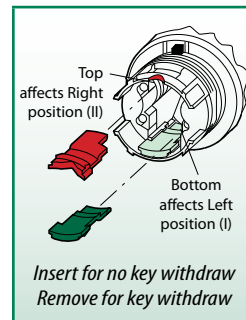
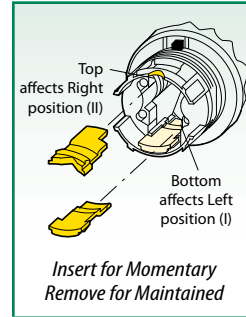
Pilot Devices

Accessory	Description	Inscription	For use with...	Catalog Number	Price
Standard Inscriptions					
	<ul style="list-style-type: none"> • Silver 	(without inscription) ①	M22(S)-WR(K)4 M22(S)-W(R)J M22(S)-D(I)4	M22-XCK	23
	<ul style="list-style-type: none"> • Square with four inscriptions • Silver 	(arrows - four directions)	M22(S)-W(R)J4 M22(S)-D(I)4	M22-XCK1	23
	<ul style="list-style-type: none"> • Square with eight inscriptions • Silver 	0-1-0-2-0-3-0-4	M22(S)-WR(K)4	M22-XCK2	23
	<ul style="list-style-type: none"> • Square with two inscriptions; can be rotated to select horizontal or vertical directions • Silver 	(arrows - two directions)	M22(S)-W(R)J2	M22-XCK3	23

① Custom text can be engraved on these plates – allow four to six weeks for delivery. See your Moeller representative.

Coding Adapters









Adapter	Description	For Use With...	Catalog Number	Price
Maintained to Momentary Operation				
	<ul style="list-style-type: none"> Supplied with standard switches Used to convert Maintained operation to Momentary operation 	M22(S)-WR(L)(K)(3) M22(S)-WRS(3)	M22-XC-Y	2.50
Key Withdraw to Non-Key Withdraw				
	Used to convert Key withdraw position to non-key withdraw position	M22(S)-WRS(3)	M22-XC-R	2.50



The same slots on keyed selector switches are shared between these two different sets of coding adapters. All possible combinations and their effects are detailed in the tables below.































Two-position adapter configurations

(shading indicates standard switch configuration)

Two-Position Adapter Configurations	Switching Positions		
	 maintained	 maintained	 momentary
	Key Withdraw Positions		
	 O I	 O I	 O I
Top Slot (affects right position)	—		
Bottom Slot (not implemented with 2-position switches)	—	—	—




Three-position adapter configurations


(shading indicates standard switch configuration)

Three-Position Adapter Configurations	Switching Positions								
	 maintained	 maintained	 maintained	 maintained	 momentary				
	Key Withdraw Positions								
	 I O II	 I O II	 I O II	 I O II	 I O II	 I O II	 I O II	 I O II	 I O II
Top Slot (affects right position)	—			—				—	
Bottom Slot (affects left position)	—		—			—			

A Enclosures (for use with base mounted elements) ①


Pilot Devices

Enclosure	Number of Pilot Devices	Cable Entry Knockouts		Description	Catalog Number	Price
		Bottom	Sides			
For Emergency-Stop Actuators						
	1	2 x 16 mm	1 x 20 mm 2 x 25/20 mm	<ul style="list-style-type: none"> Yellow enclosure top (RAL 1004) with black enclosure base (RAL 9005) IP67, IP69K 	M22-IY1-PG	49
Standard Use						
	1	2 x 16 mm	1 x 20 mm 2 x 25/20 mm	<ul style="list-style-type: none"> Gray enclosure top (RAL 7035) with black enclosure base (RAL 9005) IP67, IP69K 	M22-I1-PG	44
	2	2 x 20 mm	1 x 20 mm 2 x 25/20 mm		M22-I2-PG	57
	3	2 x 20 mm	2 x 20 mm 2 x 25/20 mm		M22-I3-PG	62
	4	2 x 20 mm	2 x 20 mm 2 x 25/20 mm		M22-I4-PG	79
	6	2 x 20 mm	2 x 20 mm 2 x 25/20 mm		M22-I6-PG	111
	12	2 x 32/25 mm	2 x 20 mm 4 x 32/25 mm	<ul style="list-style-type: none"> Gray enclosure top (RAL 7035) with black enclosure base (RAL 9005) IP55 Includes mounting plate for base mounted elements 	M22-I12	238

 See page A81 for ATEX information

Moeller offers pre-assembled pilot device stations, configured to your unique application. Contact your Moeller representative for details.

Base mounted contact blocks


Contact Block	Terminal Type	Contact Type	Catalog Number	Price
Screw Terminals – base mounted ②				
	Screw Terminals	1NO	M22-KC10	14
		1NC ⊖	M22-KC01	14

⊖ = positively driven contact

Ordering Instructions

- 1) Select desired enclosure.
- 2) Turn to appropriate page(s) to select pilot device(s). Order front-of-panel pilot device(s) by components (a mounting adapter is not needed for base mounted elements).
- 3) Select desired base mounted contact blocks and/or LED elements from this page. Each pilot device can be fitted with up to three contact blocks or two contact blocks with one LED element.
- 4) Turn to page A74 to select optional legend plate(s).

Base mounted LED elements

LED Element	Color	Description	Catalog Number	Price	
Screw Terminals – base mounted ③④					
	White	Screw Terminals 12 – 30 V AC/DC 8 – 15 mA	M22-LEDC-W	26	
	Red		M22-LEDC-R	26	
	Green		M22-LEDC-G	26	
	Blue		M22-LEDC-B	26	
	White	Screw Terminals 85 – 264 V AC, 50/60 Hz 5 – 15 mA	M22-LEDC230-W	38	
			Red	M22-LEDC230-R	38
			Green	M22-LEDC230-G	38
			Blue	M22-LEDC230-B	38
	White	Screw Terminals 207 – 264 V AC, 50/60 Hz 12 – 15 mA	M22-LEDC230H-W	38	
			Red	M22-LEDC230H-R	38
			Green	M22-LEDC230H-G	38
			Blue	M22-LEDC230H-B	38

- ① Legend plates will not fit with vertical enclosure arrangements.
- ② Base mount cage clamp terminals are also available; see accessories on page A68.
- ③ Base mount cage clamp terminals and resistor elements that reduce control voltage to operational range are also available - see page A68.
- ④ Select the same color LED element as your pilot device lens/thumb grip color; for yellow lens/thumb grip, choose a white LED.

Unique to Titan pilot devices is the ability to join an E-Stop actuator to the body of our LS-Titan Limit Switches. In this configuration, the Limit Switch functions as a miniature, corrosion resistant enclosure with two built-in contacts. This has big advantages in applications such as material handling or food processing, where an E-Stop must be located every few feet along the production line.




The assembly is rated to IP66, and serves the same duty as a standard E-Stop enclosure, without the size. A cable gland at the bottom of the housing allows a dry connection. The


positively driven, interlocking opposing contacts are suitable for use in safety circuits. This compact, enclosed E-Stop can be mounted anywhere on the side of the machine and is not affected by hose-down conditions.

Choose either a twist-to-release or pull-to-release enclosed E-Stop from this page. Other Titan pushbuttons and selector switches can also be configured this way. Choose the Limit Switch body and Pushbutton Adaptor from this page, then order the actuator of your choice from the page where they are listed.





E-Stop With Miniature Enclosure

Component	Contact Blocks		Color	Terminal Type	Description	Catalog Number	Price
	NO	NC ⊖					
Limit switch							
	0	2	Yellow	Screw Terminals	–	LS-S02	50
	1	1	Yellow	Screw Terminals	–	LS-S11	50
	2	0	Yellow	Screw Terminals	–	LS-S20	50
Pushbutton adaptor							
	–	–	Black	–	–	M22-LS	5.70
Emergency-stop actuator							
	–	–	Red	–	Pull to Release	M22-PV	75
	–	–	Red	–	Turn to Release	M22-PVT	75




 See page A81 for ATEX information

① Many options are available when selecting a limit switch, including cage clamp terminals, black color, metal housing and early-make / late break contacts.

Flush mounting panels

Mounting Panel	Number of Pilot Devices	Description	Catalog Number	Price
For Emergency-Stop Actuators				
	1	<ul style="list-style-type: none"> Yellow (RAL 1004) IP65 ① 	M22-EY1	42
Standard Use				
	1	<ul style="list-style-type: none"> Gray (RAL 7035) IP65 ① 	M22-E1	38
	2		M22-E2	49
	3		M22-E3	54
	4		M22-E4	69
	5		M22-E5	81
	6	<ul style="list-style-type: none"> Gray (RAL 7035) IP40 ① 	M22-E6	97

Shrouds for mounting panels (optional)

Shroud	Number of Pilot Devices	Description	For Use With ...	Catalog Number	Price
	1	<ul style="list-style-type: none"> Gray (RAL 7035) IP55 ② 	M22-E1	M22-H1	14
	2		M22-E2	M22-H2	27
	3		M22-E3	M22-H3	41
	4	<ul style="list-style-type: none"> Gray (RAL 7035) IP40 ② 	M22-E4	M22-H4	55
	5		M22-E5	M22-H5	67
	6		M22-E6	M22-H6	81
Shroud mounting adapter					
	Up to 5	<ul style="list-style-type: none"> Used to connect shroud to pilot devices on mounting plate Can break apart for use up to 5 mounting holes 	M22-H	M22-XE5	15
Plaster mounts					
	—	Two plaster mounts for plastering shrouds	M22-H	M22-UPE	14

① Valid when properly mounted and in conjunction with corresponding shroud.
② Valid in conjunction with corresponding panel.

ATEX Compliance (explosive atmospheres)

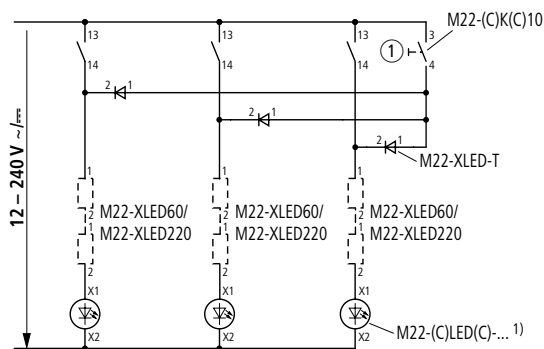
Moeller RMQ-Titan and FAK devices comply with ATEX Directive 94/9 EC (effective 06/2003). The switches are approved for device group II, the application “everything, except for mining” and for category 3 (normal safety). The approval has the test number BVS 06 ATEX E023U, BVS 06 ATEX E024X. The housings, pushbutton actuators, indicator lights, and foot and palm switches etc. have the equipment code II3D IP5X T85°C. In accordance with the regulation applicable to the operator, Directive 1999/92/EC (effective 06/2006), approved

devices with test number BVS 06 ATEX E023U, BVS 06 ATEX E024 may be used in dust-laden areas, Zone 22, Category 3. The devices in surface mounting enclosures with ATEX approval can be used in explosive dust dangerous areas, for example, mills, metal grinding, saw mills, woodworking, cement works, the aluminium industry, the animal foodstuff industry, cereal storage and preparation, agriculture and pharmaceutical industry.

ATEX approved and labeled devices are special ordered; allow four to six weeks for delivery. Contact your Moeller representative for details and to order.

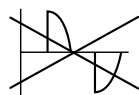
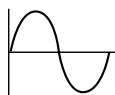
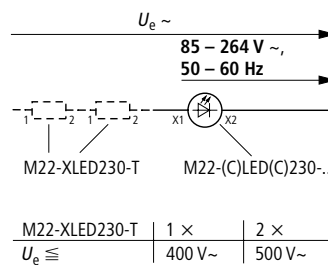
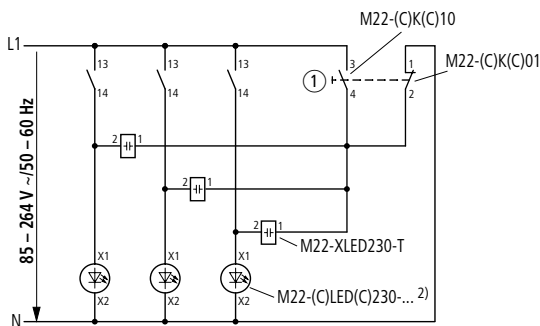
LED test element

M22-XLED-T



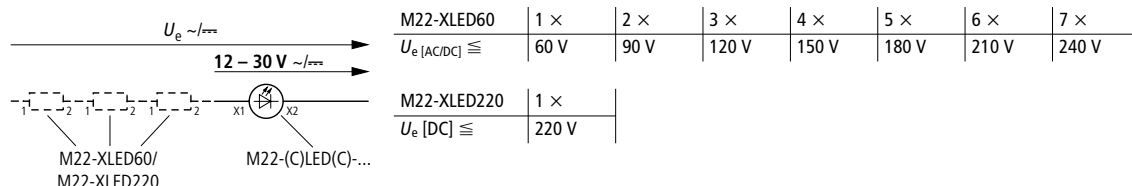
- ① Test button
- 1) Only for 12 ... 30 V elements
- 2) For 85 ... 264 V elements

M22-XLED230-T



LED resistor element

M22-XLED60/M22-XLED220



RMQ-Titan			Contact Blocks	LED Elements ①	Momentary Pushbutton Actuators, Mushroom Actuators	Double Pushbutton Actuators	Selector Switch Actuators
General							
Standards					IEC/EN 60947; VDE 0660		
Lifespan, mechanical	Ops	[x 10 ⁶]	> 5	–	> 5	> 0.2	> 0.1
Operating frequency		[Ops/h]	≤ 3600	–	≤ 3600	≤ 3600	≤ 2000
Actuating force		[n]	≤ 5	–	≤ 5	≤ 5	–
Operating torque (screw terminals)		[Nm]	≤ 0.8	–	–	–	≤ 0.3
Degree of protection, IEC/EN 60529			–	–	IP67, IP69K	IP66	IP66
Climatic proofing ②	Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclical, to IEC 60068-2-30						
Ambient temperature ①							
Open		[°C]	-25 / 70	-25 / 70	-25 / 70	-25 / 70	-25 / 70
Mounting position					As required		
Mechanical shock resistance according to IEC 60068-2-27							
Shock duration 11 ms, half-sinusoidal		[g]	> 30	> 30	> 30	> 30	> 30
Terminal Capacity							
Solid		[mm ²]	0.75 – 2.5	0.75 – 2.5	–	–	–
Stranded		[mm ²]	0.5 – 2.5	0.5 – 2.5	–	–	–
Contacts							
Rated impulse withstand voltage	U_{imp}	[V AC]	6000	6000	–	–	–
Rated insulation voltage	U_i	[V]	500	500	–	–	–
Overvoltage category / pollution degree			III / 3	III / 3	–	–	–
Control circuit reliability							
At 24 V DC / 5 mA	Hf	[fault probability]	< 1 in 10 ⁷ operations	–	–	–	–
At 5 V DC / 1 mA	Hf	[fault probability]	< 5 in 10 ⁶ operations	–	–	–	–
Max. short-circuit protective device							
Fuseless		[Type]	PKZMO-10/FAZ-B6/1	–	–	–	–
Fuse	gG/gL	[A]	10	–	–	–	–
Switching capacity							
Rated operational current							
AC-15							
115 V	I_e	[A]	6	–	–	–	–
230 V	I_e	[A]	6	–	–	–	–
400 V	I_e	[A]	4	–	–	–	–
500 V	I_e	[A]	2	–	–	–	–
DC-13							
24 V	I_e	[A]	3	–	–	–	–
42 V	I_e	[A]	1.7	–	–	–	–
60 V	I_e	[A]	1.2	–	–	–	–
110 V	I_e	[A]	0.8	–	–	–	–
220 V	I_e	[A]	0.3	–	–	–	–
Lifespan, electrical							
AC-15							
230 V / 0.5 A	Ops	[x 10 ⁶]	1.6	–	–	–	–
230 V / 1.0 A	Ops	[x 10 ⁶]	1	–	–	–	–
230 V / 3.0 A	Ops	[x 10 ⁶]	0.7	–	–	–	–
DC-13							
12 V / 2.8 A	Ops	[x 10 ⁶]	1.2	–	–	–	–

① >200 V AC, 60 HZ: -25 / 55 °C

② Indoor and protected outdoor installation

RMQ-Titan	Key Operated Actuators	Indicator Lights, Acoustic Indicators, Potentiometers	Maintained Pushbutton Actuators, Mushroom Actuators	Emergency-Stop Actuators	Four-Way Pushbutton	Joystick	Four-Way Selector Switch Actuators		
General									
Standards IEC/EN 60947; VDE 0660									
Lifespan, mechanical	Ops	[x 10 ⁶]	> 0.1	–	> 1	> 0.1	> 0.2	> 0.1	> 0.1
Operating frequency		[Ops/h]	≤ 100	–	≤ 1800	≤ 600	≤ 3600	≤ 2000	≤ 2000
Actuating force		[n]	–	–	≤ 5	≤ 50	≤ 5	≤ 5	–
Operating torque		[Nm]	≤ 0.5	–	–	–	–	–	≤ 0.3
Degree of protection, IEC/EN 60529			IP66	Lights: IP67, IP69K; Acoustic: IP40; Potentiometers: IP66	IP67, IP69K	IP66, IP69K	IP66	IP66	IP66
Climatic proofing Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclical, to IEC 60068-2-30									
Ambient temperature									
Open		[°C]	-25 / 70	-25 / 70	-25 / 70	-25 / 70	-25 / 70	-25 / 70	-25 / 70
Mounting position As required									
Mechanical shock resistance according to IEC 60068-2-27									
Shock duration 11 ms, half-sinusoidal		[g]	> 30	> 30	> 30	> 50	> 30	> 30	> 30
Terminal Capacity									
Solid		[mm ²]	–	0.5 – 1.5	–	–	–	–	–
Stranded		[mm ²]	–	0.5 – 1.5	–	–	–	–	–
Contacts									
Rated impulse withstand voltage	U_{imp}	[V AC]	–	4000	–	–	–	–	–
Rated insulation voltage	U_i	[V]	–	2500	–	–	–	–	–
Overvoltage category / pollution degree			–	III / 3	–	–	–	–	–

Contact Block Characteristics	Normally Open M22-(C)K(C)10	Normally Closed M22-(C)K(C)01	Normally Closed with Late Break M22-(C)K01D
Contact sequence			
Travel diagram			

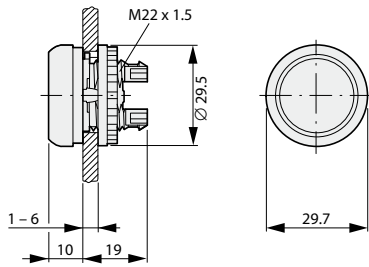
RMQ-Titan FAK	Momentary Foot and Palm Switches (FAK)	Maintained Foot and Palm Switches (FAK)		
General				
Standards IEC/EN 60947; VDE 0660				
Lifespan, mechanical	Ops	[x 10 ⁶]	> 1	> 0.1
Operating frequency		[Ops/h]	≤ 3600	≤ 600
Actuating force		[n]	≤ 40	≤ 60
Degree of protection, IEC/EN 60529			IP67, IP69K	IP67, IP69K
Climatic proofing Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclical, to IEC 60068-2-30				
Ambient temperature				
Open		[°C]	-25 / 40	-25 / 40
Mounting position As required				
Mechanical shock resistance according to IEC 60068-2-27				
Shock duration 11 ms, half-sinusoidal		[g]	> 15	> 15

A

Actuating and indicator elements

Dimensions are in millimeters.
Not intended for manufacturing purposes.

Pilot Devices



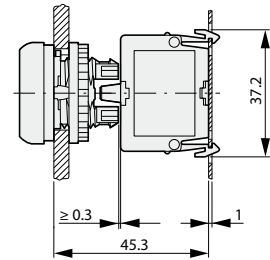
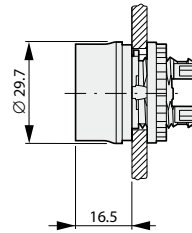
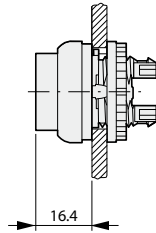
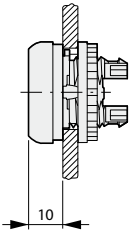
Standard pushbutton actuators

M22-D(L)

M22-D(L)H

M22-DG(L)

M22-D with base mounting



Double pushbuttons

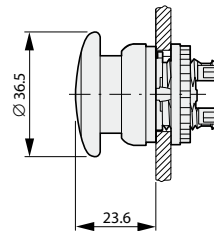
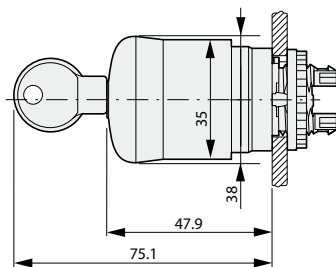
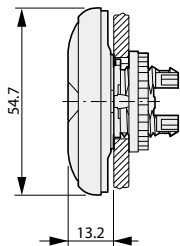
M22-DD

Emergency-stop actuators

M22-PV(L)(S)

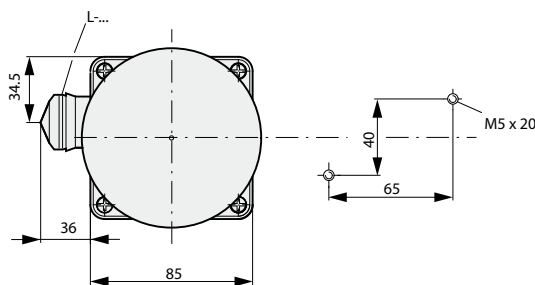
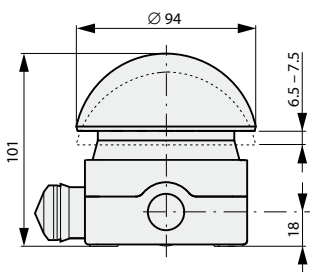
Mushroom head pushbuttons

M22-DP



Foot and palm switches

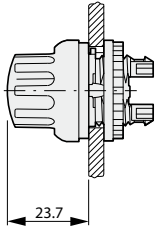
FAK



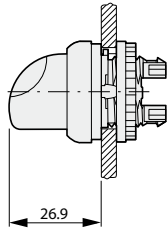
Dimensions are in millimeters.
Not intended for manufacturing purposes.

Selector switch actuators

M22-W

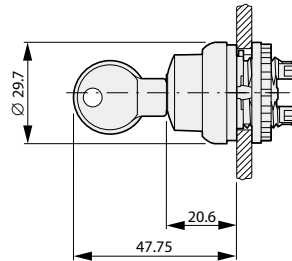


M22-WK



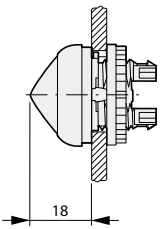
Keyed selector switch actuators

M22-WS

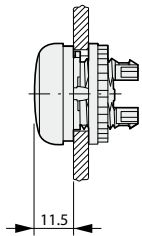


Indicator lights

M22-LH

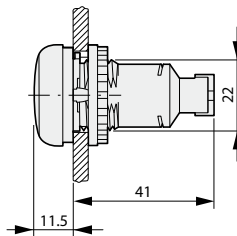


M22-L

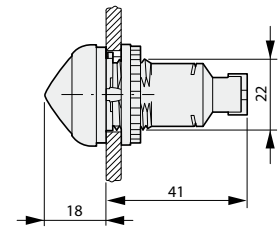


Compact indicator lights, Acoustic indicators

M22-LC; M22-AM

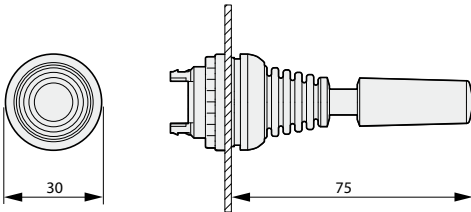


M22-LCH



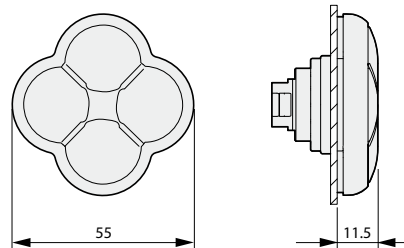
Joystick operators

M22-WJ



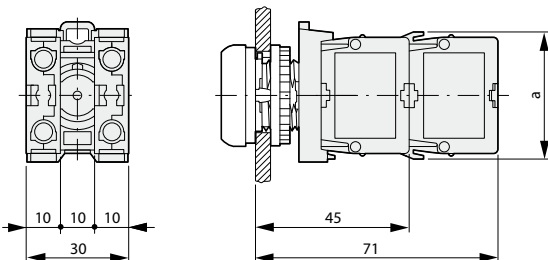
Four button operators

M22-D4



Pushbutton with Contact blocks / LED elements

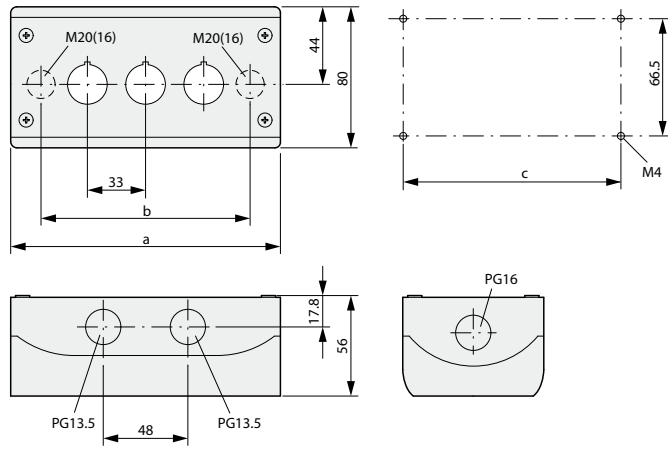
+M22-(C)K; +M22-(C)LED



	M22-K...	M22-CK...	M22-(C)LED...
a	37.2	39	37

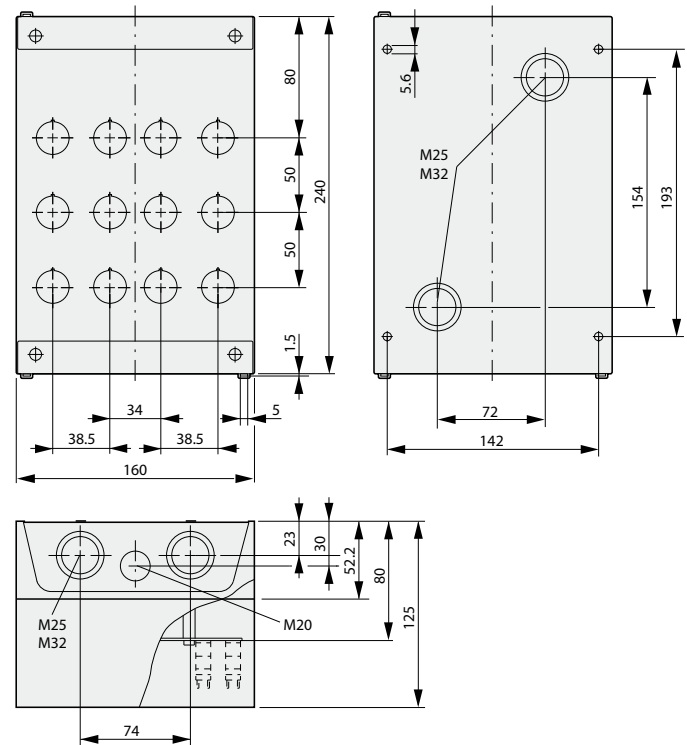
Enclosures

M22-I...-PG



	Mounting Holes	a	b	c	Cable Knockouts		
					bottom	ends	front
M22-I(Y)1-PG	1	72	42.6	58.5	2 x M16	2 x PG16	1 x PG13.5
M22-I2-PG	2	120	85.6	106.5	2 x M20	2 x PG16	2 x PG13.5
M22-I3-PG	3	153	118.6	139.5	2 x M20	2 x PG16	2 x PG13.5
M22-I4-PG	4	186	151.6	172.5	2 x M20	2 x PG16	2 x PG13.5
M22-I6-PG	6	252	217.6	238.5	2 x M20	2 x PG16	2 x PG13.5

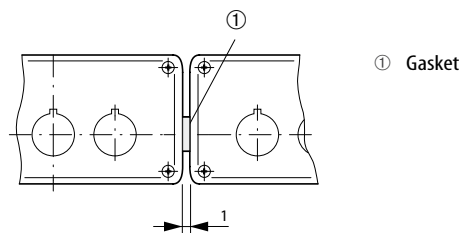
M22-I12



Dimensions are in millimeters.
Not intended for manufacturing purposes.

Multiple enclosures

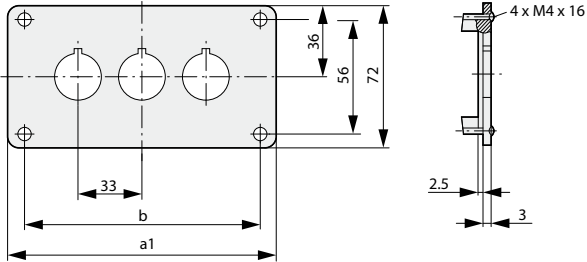
M22-XI



Dimensions are in millimeters.
Not intended for manufacturing purposes.

Flush mounting panels

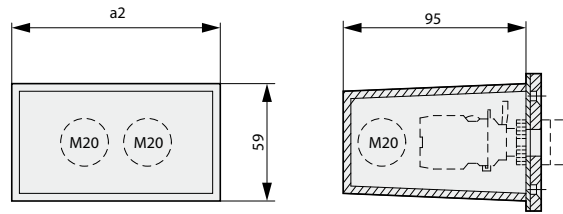
M22-E



	Mounting Holes	a1	b
M22-E(Y)1	1	72	56
M22-E2	2	105	89
M22-E3	3	138	122
M22-E4	4	171	155
M22-E5	5	204	188
M22-E6	6	237	221

Shrouds

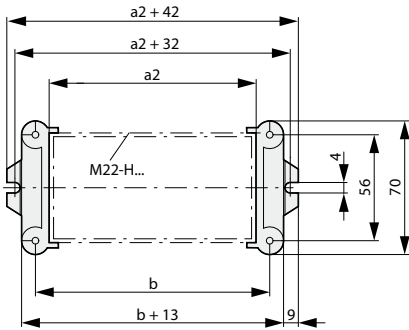
M22-H



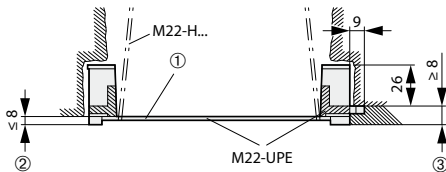
	a2	Cable Knockouts	Style
M22-H1	42	3 x M20	One piece
M22-H2	75	4 x M20	One piece
M22-H3	108	4 x M20	One piece
M22-H4	141	4 x M20	Split
M22-H5	174	5 x M20	Split
M22-H6	207	6 x M20	Split

Plaster keys for shrouds

M22-UPE



a2 refers to shroud dimension
b refers to panel dimension

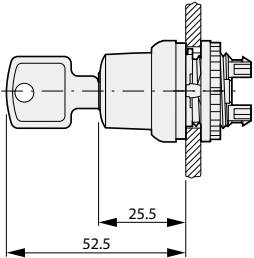


- ① Box for closing off when plastering
- ② Plaster thickness less than 8 mm
- ③ Plaster thickness more than 8 mm

Dimensions are in millimeters.
Not intended for manufacturing purposes.

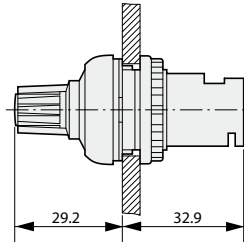
Master key systems

M22-WS-SA



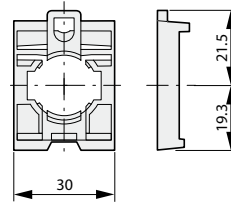
Potentiometers

M22-R...K

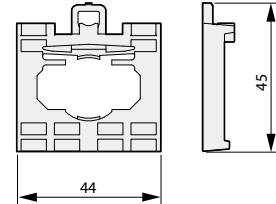


Mounting adapters

M22-A

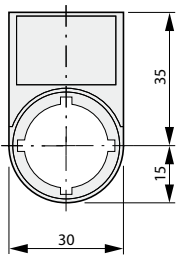


M22-A4

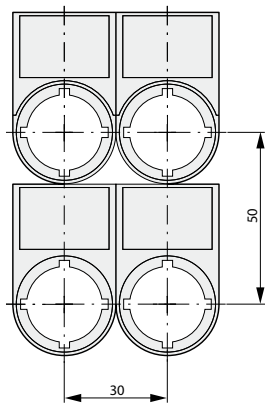


Legend plate holders

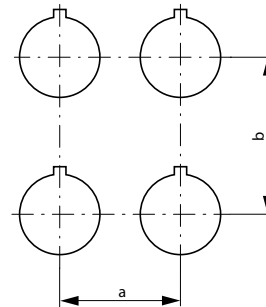
M22-ST



Grid dimension to IEC/EN 60947

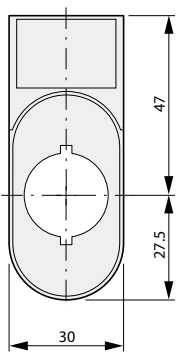


Grid dimension for various combinations

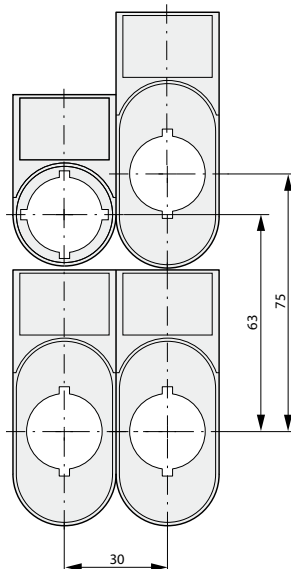


	a ≥	b ≥
M22 (IEC/EN 60947)	30	50
RMQ-Titan min.	30	40
M22-D + M22-T-D	33	40
M22-DP	38	40
M22-PV	38	40
M22-PV + M22-PL-PV	48	56
M22-PV + M22-D	33	40
M22-DDL	30	55
M22-DDL + M22-T-DD	33	58
M22-ST	30	50
M22-STDD	30	75
M22-CK	30	45
M22-CLED	30	45
M22-XAK	90	90
M22-XZK	33	52
M22-XBK	60	60
M22-XYK	50	50
M22-D4	55	55
M22-W4	50	50
M22-WJ	50	50

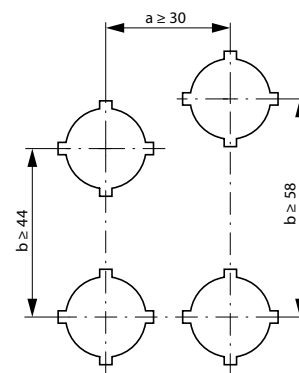
M22-STDD



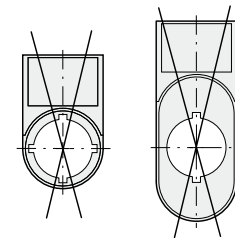
Grid dimension for M22-DD



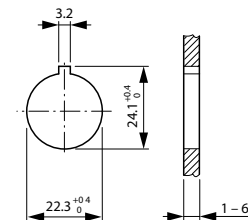
Grid dimension for diaphragm



Pushbutton diaphragm cannot be combined with legend plate holder



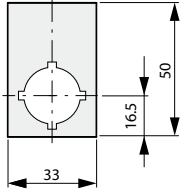
Mounting hole with lug slot



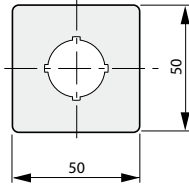
Dimensions are in millimeters.
Not intended for manufacturing purposes.

Emergency-stop legend plates

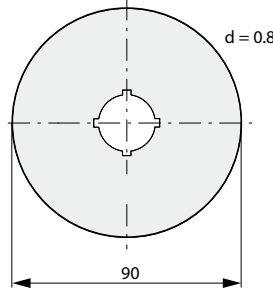
M22-XZK



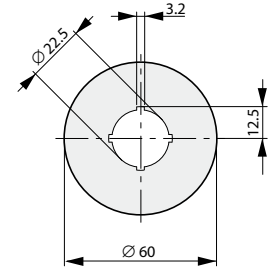
M22-XYK



M22-XAK

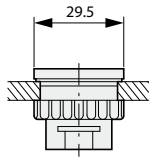


M22-XBK



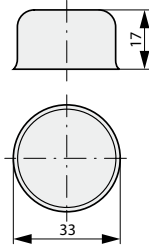
Blanking plug

M22-B

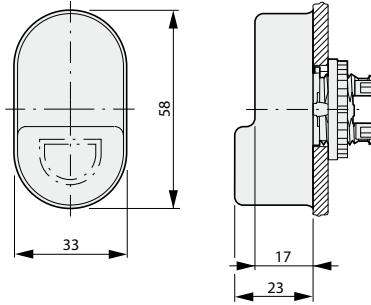


Pushbutton diaphragms

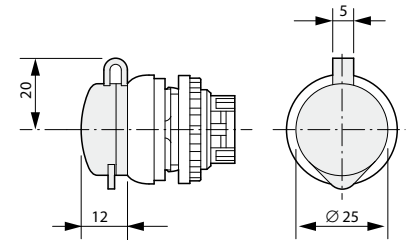
M22-T-D



M22-T-DD

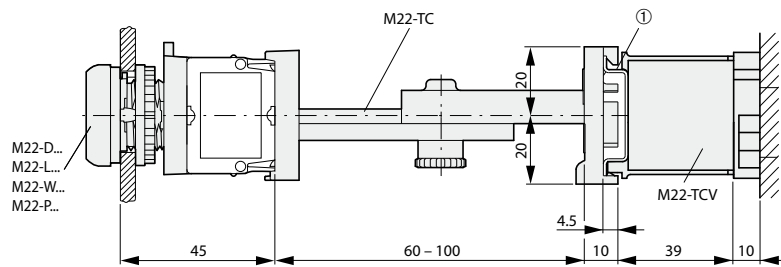


M22-XWS



Telescopic clips

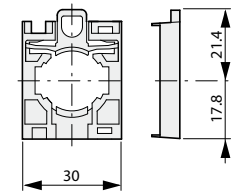
M22-TC + M22-TCV



① Top-hat rail to IEC/EN 60715

Centering adapter

M22-ZA



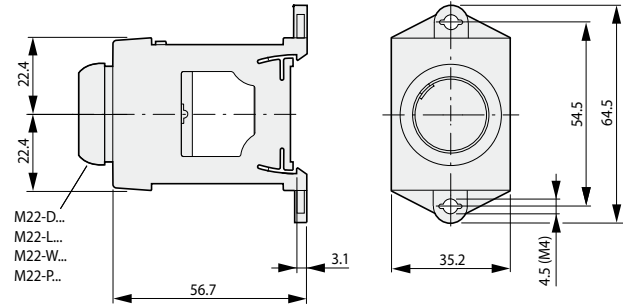
A

Pilot Devices

Mounting rail adapter

M22-IVS

Dimensions are in millimeters.
Not intended for manufacturing purposes.

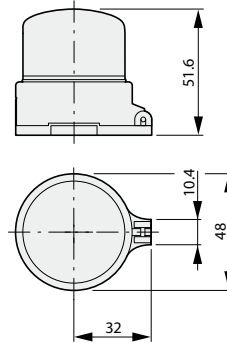
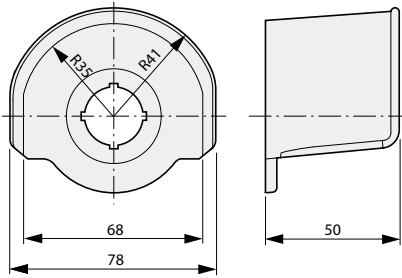


Emergency-stop guard

M22-XGPV

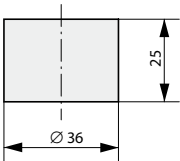
Emergency-stop sealable shroud

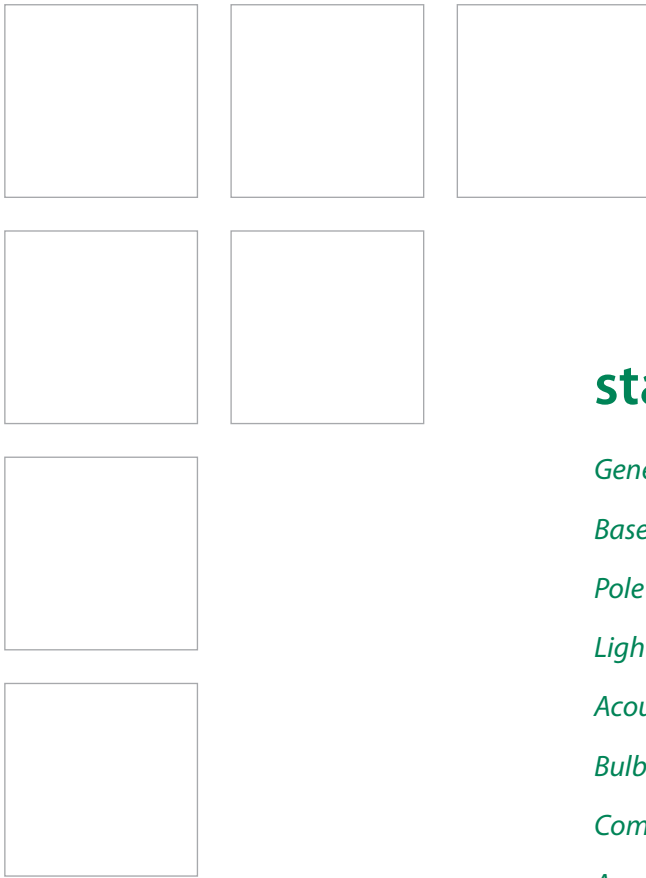
M22-PL-PV



Guard ring

M22-XGWK





stack lights

<i>General Information</i>	B2
<i>Base Modules</i>	B4
<i>Pole Extensions</i>	B4
<i>Light Modules</i>	B5
<i>Acoustic Indicator Modules</i>	B6
<i>Bulbs</i>	B6
<i>Complete Units</i>	B7
<i>Accessories</i>	B7
<i>Technical Data</i>	B8
<i>Dimensions</i>	B9

SL stack lights

reliable status indicators for systems and processes

B

Stack Lights



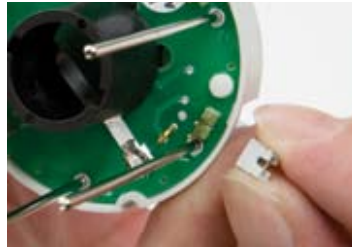
For many applications, warning lights are one of the most important but overlooked elements of a well-designed control system. That's why Moeller SL stack lights are designed from the ground up with great operational features and reliability in mind.

Solid design, solid construction

SL stack lights are designed with tough 60mm Polycarbonate modules that incorporate ribbed Fresnel-type lenses to enhance illumination. Base modules include an integrated terminal block for quick and sure wiring. Each stacking module plugs into the one below with simple bayonet stabs. A quick turn secures the modules in place with no need for tools. Optional gaskets provide environmental protection to IP65.

Stacking convenience

Up to five levels of modules are possible with SL stack lights. Each module can be activated separately, or simultaneous with another... when a light and audible alarm must both trigger at the same time for instance. Each module is designed with a built-in jumper in its base that makes it easy to change positions in the stack without the hassle of rewiring. Simply unplug the jumper from its current position (1 through 5) and plug it into the new position.



- > Up to five levels – can be actuated separately
- > Any combination of continuous light, strobe light, flashing light or audible alarm possible
- > Mounting options provide application flexibility
- > Complete units available

Choice is a good thing

Applications indicating ON/OFF status might require a simple continuous light, which can either be incandescent or long-life LED (up to 100,000 hours). Both bulbs may also be placed in a flashing module for more urgent notification. A strobe module is also available for maximum illumination and visual impact. Finally, an audible alarm module provides a tone of up to 90db for applications where the operator might not always be in sight of the machine or process.



Continuous, flashing and strobe lights can be mixed and matched in any color, and paired with an audible alarm on the same stack for indication of exact machine status in an instant.



Ordering Flexibility

Moeller SL stack lights can be ordered as components to form dozens of different combinations including lens color; steady, flashing or strobe indication; bulb type and voltage range. Complete assemblies are also available in popular configurations.

Approved for worldwide use

SL stack lights are UL/CSA approved and carry the CE mark. Use them with confidence domestically or for export.

Compare these features...

Combine up to five modules in one stack

Five types of illumination:
 Steady incandescent
 Flashing incandescent
 Steady LED
 Flashing LED
 Strobe

Bayonet stabs and a simple twist - assembly with no tools

Optional gaskets provide environmental protection to IP65

Audible alarm module available with up to 90db tone

Order as components or complete assemblies

Five module colors available with Fresnel lenses for maximum illumination

Three module colors available with strobe element

Incandescent bulb voltages
 - 24V
 - 110-130V
 - 200-260V

LED bulb voltages
 - 18-30V AC/DC
 - 110-230V AC

Strobe module voltages
 - 24V AC/DC
 - 110-130V AC
 - 230V AC

Wall mounting or base mounting options provide application flexibility

Four heights of metal or plastic extension poles available from 100mm (3.9") to 800mm (31.5")

Ordering Instructions

STEP 3

- Choose desired filament or multiple LED bulbs



STEP 2

- Select desired light modules
- Select optional acoustic indicator





STEP 1


- Order desired base module (includes cap)
- Order optional pole extension



Base modules





































STEP 1			
Base Module	Description	Catalog Number	Price
	Screw Terminals	SL-B	90
	Cage Clamp	SL-CB	100
	Connection to AS-Interface ¹	SL-B-ASI	660

Pole Extension

STEP 1 (optional)			
Extension	Description	Catalog Number	Price
Stands			
	100 mm, plastic	SL-F100	80
	100 mm, metal	SL-F100M	70
	250 mm, plastic	SL-F250	90
	250 mm, metal	SL-F250M	85
	400 mm, metal	SL-F400	150
	800 mm, metal	SL-F800	210

¹ Maximum of three stacking modules; Only for use with LED bulbs; Maximum power supply 250 mA.



Light modules 1

STEP 2					
Light Module	Color	Operational Voltage	Description	Catalog Number	Price
Continuous					
	Clear 	Refer to bulb operational voltages.	Without bulb	SL-L-W	130
	Red 			SL-L-R	130
	Green 			SL-L-G	130
	Yellow 			SL-L-Y	130
	Blue 			SL-L-B	130
Flashing					
	Clear 	24 V AC/DC (+10% / -15%)	Without bulb f ≈ 1 Hz	SL-BL24-W	220
	Red 			SL-BL24-R	220
	Green 			SL-BL24-G	220
	Yellow 			SL-BL24-Y	220
	Blue 			SL-BL24-B	220
	Clear 	110 – 130 V AC	Without bulb f ≈ 1 Hz	SL-BL130-W	220
	Red 			SL-BL130-R	220
	Green 			SL-BL130-G	220
	Yellow 			SL-BL130-Y	220
	Blue 			SL-BL130-B	220
	Clear 	230 V AC	Without bulb f ≈ 1 Hz	SL-BL230-W	220
	Red 			SL-BL230-R	220
	Green 			SL-BL230-G	220
	Yellow 			SL-BL230-Y	220
	Blue 			SL-BL230-B	220
Strobe					
	Clear 	24 V AC/DC (+10% / -15%) I _{emax} : 190 mA	Without bulb f ≈ 1 Hz	SL-FL24-W	440
	Red 			SL-FL24-R	440
	Yellow 			SL-FL24-Y	440
	Clear 	110 – 130 V AC I _{emax} : 31 mA	With strobe flash tube 1 Ws f ≈ 1 Hz	SL-FL130-W	440
	Red 			SL-FL130-R	440
	Yellow 			SL-FL130-Y	440
	Clear 	230 V AC I _{emax} : 28 mA	Without bulb f ≈ 1 Hz	SL-FL230-W	440
	Red 			SL-FL230-R	440
	Yellow 			SL-FL230-Y	440














1 Maximum five modules per unit.

B
Stack Lights

Acoustic indicator modules ①








STEP 2 (optional)				
Acoustic Module	Operational Voltage	Description	Catalog Number	Price
Continuous Tone				
	12 – 36 V AC/DC 8 – 12 mA	f = 2750 Hz At 60 cm distance 12 V: 77 db 24 V: 83 db 36 V: 90 db	SL-A24	270
	110 – 230 V AC/DC 4 – 8 mA	f = 2750 Hz At 60 cm distance 110 V: 72 db 230 V: 78 db	SL-A110-230	270
Pulsed Tone - 5 Hz				
	12 – 36 V AC/DC 8 – 12 mA	f = 2750 Hz At 60 cm distance 12 V: 61 db 24 V: 66 db 36 V: 77 db	SL-AP24	270
	110 – 230 V AC/DC 4 – 8 mA	f = 2750 Hz At 60 cm distance 110 V: 67 db 230 V: 73 db	SL-AP110-230	270

Bulbs


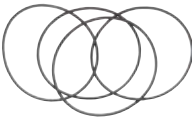
STEP 3						
Bulb	Color	Operational Voltage	Lifespan (h)	Description	Catalog Number	Price
Filament						
	–	24 V	2000	• 5 – 7 W	SL-L24	13
	–	110 – 130 V	5000		SL-L130	13
	–	200 – 260 V	5000		SL-L230	13
Multiple LED						
	White 	18 – 30 V AC/DC 13 – 50 mA	100000	• Integral suppressor circuit up to 1500 V	SL-LED-W	210
	Red 				SL-LED-R	210
	Green 				SL-LED-G	210
	Yellow 				SL-LED-Y	210
	Blue 				SL-LED-B	210
	White 	110 – 230 V AC 9 – 17 mA	100000	–	SL-LED230-W	250
	Red 				SL-LED230-R	250
	Green 				SL-LED230-G	250
	Yellow 				SL-LED230-Y	250
	Blue 				SL-LED230-B	250

① Maximum five modules per unit.

Complete Units

Stack Light Unit	Light Module Colors	Operational Voltage	Description	Catalog Number	Price
	Red  Yellow  Green 	24 V AC/DC	<ul style="list-style-type: none"> • IP54 • Base module with stand and 100 mm tube • Three continuous light modules • Includes filament bulbs 	SL-100-L-RYG/24	600
	Red  Green 	24 V AC/DC	<ul style="list-style-type: none"> • IP54 • Base module with stand and 100 mm tube • Two continuous light modules • Includes filament bulbs 	SL-100-L-RG/24	457

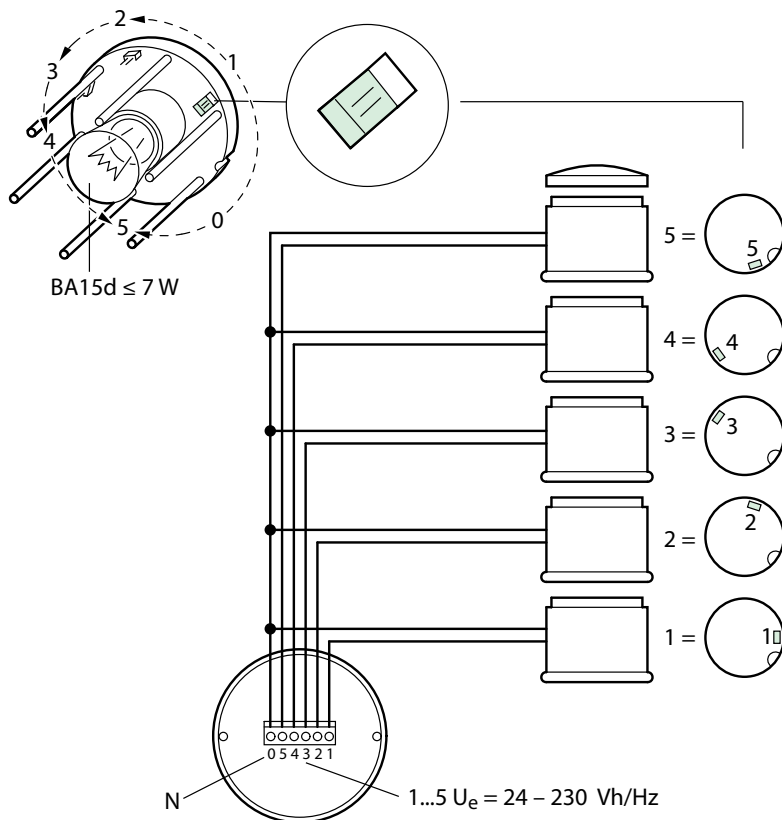
Accessories

Accessory	Description	Catalog Number	Price
Wall Bracket			
	<ul style="list-style-type: none"> • for 90° wall mounting • metal 	SL-FW	65
Gasket Set			
	<ul style="list-style-type: none"> • For increasing degree of protection to IP65 • set of four (for three modules - not for use with acoustic indicators) 	SL-IP65	30

Stack Lights		SL Stack Lights	
General			
Standards	IEC/EN 60947		
Degree of protection, IEC/EN 60529	IP65 with SL-IP65 gasket; IP20 with SL-A acoustic indicator module		
Climatic proofing	Damp heat, constant, to IEC 60068-2-78; Damp heat, cyclical, to IEC 60068-2-30		
Ambient temperature			
Enclosed	[°C]	- 25 / 50	
Mounting position	As required		
Mechanical shock resistance according to IEC 60068-2-27			
Shock duration 11 ms, half-sinusoidal	[g]	> 15	
Terminal Capacity			
Solid	[mm ²]	0.75 – 2.5	
Stranded	[mm ²]	0.5 – 2.5	
Contacts			
Rated impulse withstand voltage	U_{imp}	[V AC]	4000
Rated insulation voltage	U_i	[V]	250
Overvoltage category / pollution degree	III / 3		

ASI Base Module		SL-B-ASI	
General			
Connection of the AS interface line	Screw terminal on the circuit board		
Addressing	Through AS interface line connection		
Maximum total current	[mA]	≤ 250	
Power supply	From AS interface line only		
Ambient temperature	[°C]	-25 / 55	
Status LEDs on the circuit board	Status. Output Q0/function module position 1: green Status. Output Q1/function module position 2: green Status. Output Q2/function module position 3: green AS interface power line: green AS interface error, AS interface master failure: red		
Profile	S-9.A.E		

Jumpers determine wiring sequence



Built-in jumpers are used in stack light modules to determine the wiring position.

The jumper of the bottom-most module should be set to position 1; this is the supplied jumper position for all modules.

When a second module is added on top of the first, the jumper must be moved to position 2.

The jumper of the third module must be moved to position 3, and so on.

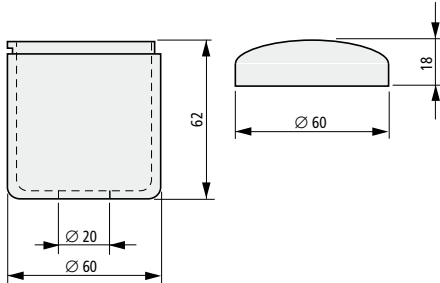
A maximum of five modules may be added to a stack light.



Dimensions are in millimeters.
Not intended for manufacturing purposes.

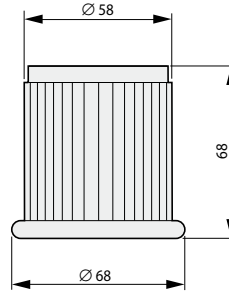
Base Modules

SL-(C)B



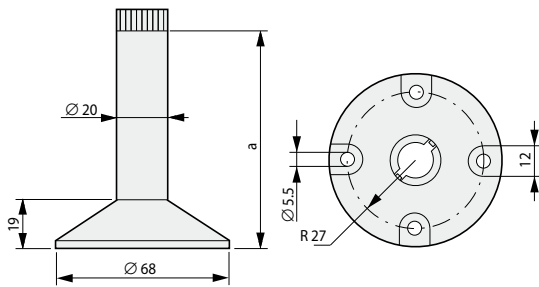
Modules

SL-A; SL-(B)(F)L



Stands

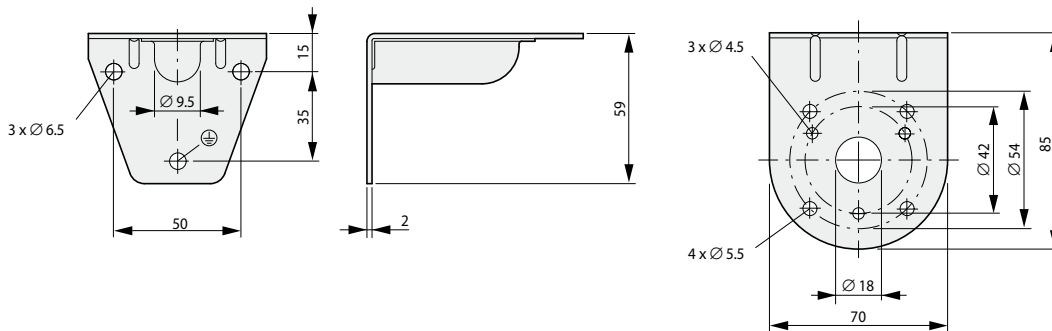
SL-F



	a
SL-F100	85
SL-F250	235
SL-F400	402
SL-F800	802

Wall Bracket

SL-FW



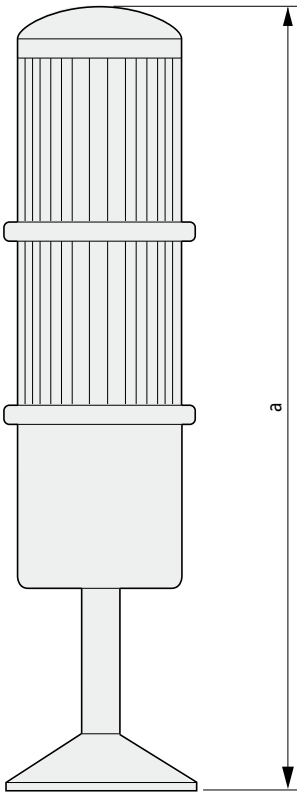
Complete Units

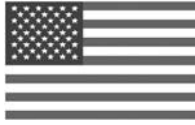
SL-100

Dimensions are in millimeters.
Not intended for manufacturing purposes.

Number of modules	a
1	227
2	289
3	351
4	413
5	475

B
Stack Lights





Note: The following terms are for general information only. All conditions of sales are subject to change and are valid as determined in the latest terms and conditions publication of Moeller Electric Corporation (referred to herein after as "The Company").

1. Acceptance of orders

All orders are subject to final acceptance by an authorized representative of the Company and are subject to the Company's terms and conditions in effect at the time of acceptance. The Company takes exception to any other terms and conditions except for such terms and conditions as the Company may expressly accept in writing.

2. Prices

Prices and discounts as shown in the company's publications are subject to change without notice. In the event of a net price change, the price of equipment on order but unshipped will be the price in effect on the date of shipment. In no case will the amount of a price increase exceed 10% of the price at which the order was accepted, except that, if the delivery is delayed upon instructions from the purchaser, prices shall be those in effect when the instructions are received to proceed with the order. Price reductions shall only apply to unshipped portions of outstanding orders. Any addition or alteration to an outstanding order will be accepted at prices in effect when the addition or alteration is accepted. Applicable taxes are additional.

3. Quotations

All quotations are in accordance with the Company's interpretation of plans and specifications and only material shown on the Company's quotations are included. Written quotations automatically expire thirty (30) days from the date of issue unless sooner terminated by notice. Quotations are subject to all existing or future limitations and regulations issued by any government agency. In the event that a quotation is not accepted in its entirety, the Company reserves the right to decline any parts of the order based on such quotation.

All Accounting, clerical or other errors are subject to correction.

4. Minimum Billing

Orders amounting to less than \$300.00 net will be billed at \$300.00 plus the transportation charge, at a minimum of \$25.00.

5. Terms - Regular

Terms to purchasers of satisfactory credit are: 30 days net from the date of invoice. Cash discounts, when applicable, are indicated on the face of the Company's invoice. To avoid delay in filling orders purchasers without previous experience with the Company should include credit references with the first order, or send a certified check or money order. Any amount owed to the Company becomes due and payable immediately in case of change of ownership of the purchaser, attachment or execution against the purchaser or its representatives, unless the Company otherwise agrees.

6. Payments

Payments should be made to the address indicated on the invoice, or to Moeller Electric Corporation, 4140 World Houston Parkway, No. 100, Houston, TX 77032.

7. Delivery

The Company reserves the right to make delivery in installments, unless otherwise expressly stipulated in the contract for sale; and all such installments when separately invoiced shall be paid for when due per invoice, without regard to subsequent deliveries. Delay in delivery of any installment shall not relieve the purchaser of its obligations to accept remaining deliveries. Shipments delayed to accommodate the purchaser will be invoiced upon completion of fabrication and additional charges for warehousing, trucking and other incidental expenses created by the delay will be at the expense of the purchaser. Delivery is dependent upon prompt receipt of all specifications, final approved prints and any other details essential to the proper execution of the purchaser's order. Claims for shortages or other errors must be reported in writing to the Company within 10 days after receipt of shipment. Failure to do so will constitute a waiver of all claims by the purchaser.

8. Shipping Terms

The method and route of shipment is determined by the Company. All merchandise orders of \$500.00 net or more will be shipped F.O.B. Moeller Electric's warehouse, freight prepaid, best way ground transportation. All engineered equipment orders will be shipped F.O.B. Moeller Electric's loading dock, freight not allowed. When purchaser specifies a method or

routing of shipment other than that selected by the Company, the purchaser will be billed accordingly. No credits will be allowed in lieu of transportation in the case of pickups at the Company's warehouses, branches, or factory. No transportation charges can be deducted from a selling price. Air freight, water freight, heavy lift charges, pier delivery charges, wharfage, marine insurance and the cost of stevedoring are chargeable to the purchaser. These terms include shipments to Alaska, Hawaii, Puerto Rico, and the Virgin Islands.

9. Packing other than standard

If other than standard commercial packing is required the cost of such special packing (determinable only after packing is completed) will be charged to the purchaser. Export packing shall be considered as packing other than standard.

10. Acceptance of orders

The purchaser will be responsible for any applicable export license and all associated costs involved with said license on any export project.

11. Export Control

Equipment and associated materials supplied or licensed under this transaction may be subject to various export laws and regulations. It is the responsibility of the exporter to comply with all such laws and regulations.

12. Responsibility and Title

Title in the equipment shall remain with the Company as security only and until full payment is received. Risk of loss for the equipment shall pass to purchaser upon shipment from F.O.B. point of shipment or date of invoicing, whichever is sooner.

13. Loss or Damage in Transit

The Company does not hold itself responsible for any loss, damage, (obvious or concealed) or pilferage sustained in transit. Claims of such character should be made, by the purchaser, promptly against the transportation company. If the Company is notified of such claims, the Company will offer to lend assistance to secure adjustment. The Company employs experienced packers and cannot be held responsible for breakage that occurs after the Company's securing the "Received in Good Order" receipt from the transportation company.

14. Return of Merchandise

No equipment may be returned unless authorization has been obtained from an authorized representative of the Company. Unauthorized returns of equipment cannot be accepted.

A. To be returned for credit

Only unused equipment of current design may be returned for credit. Where a purchaser returns equipment for reasons of his own, a minimum restocking charge of 20% of billing, plus transportation charges, will be made. Any cost incurred in putting the equipment into saleable condition shall also be deducted from allowed credit. If return of equipment is made necessary by fault of the Company, full credit will be allowed including transportation charges.

B. To be returned for replacement

If the equipment is under guarantee and the return is made necessary because of defect in material and/or workmanship, providing permission is obtained from the Company for its return, the Company will replace the defective goods "no charge", and will assume the transportation charges.

C. Custom-built equipment

Equipment built based upon purchaser specification cannot be returned for credit.

15. Cancellations:

Any order placed with the Company can be canceled by the purchaser provided that: a) the cancellation is agreed to in writing by the Company; and b) the purchaser agrees to compensate the Company for engineering, fabrication, outside sourcing of devices and any other demonstrated expenses incurred or commitments made by the Company up to the date of notice of cancellation and all charges incurred by the Company in respect of the cancellation.

16. Force Majeure

The Company shall not be liable for any delay in the performance of orders or contracts or in the delivery or shipment of equipment or for any loss and/or damages suffered by purchaser by reason of such delay when such delay is directly or indirectly caused by fire, floods, accidents, riots, acts of God, war, invasion, sabotage, terrorism and governmental interference or embargoes, strikes, labor difficulties, shortage of labor, fuel, power, materi-

als or supplies or any other cause beyond the Company's reasonable control. In any event, the Company shall not be liable for special or consequential damages for loss of use. Should such a delay occur, the delivery date shall be extended as may be necessary to compensate for the delay. The Company shall not be liable for any change of dimensions, weights and materials as long as the change is nonessential for the proper performance of the product.

17. Guarantee

The Company guarantees for a period of one (1) year from the date of the Company invoice that equipment furnished under the order will be of merchantable quality, free from defects in material, workmanship and design each as determined, at the date of shipment by the Company by generally recognized, applicable and accepted practices and procedures in the industry including any specifications furnished by the purchaser and agreed to in writing by the Company for incorporation into the equipment. Satisfaction of this guarantee, consistent with other provisions herein, will be limited to the replacement or repair or modification of, or issuance of a credit for, the equipment involved at the Company's option, with the Company to determine the availability of service personnel and purchaser to pay associated service expenses: such guarantee satisfaction available only if: (a) the Company is promptly notified in writing upon discovery of an alleged defect and (b) the company's examination of the subject equipment discloses, to the Company's satisfaction, that any defect has not been caused by misuse, neglect, improper installation, improper operation, improper maintenance, repair or alteration, accident, or unusual deterioration or degradation of the equipment parts, thereof due to physical environment or due to electrical or electromagnetic noise environment. THIS GUARANTEE IS IN LIEU OF ALL OTHER GUARANTEES WHETHER EXPRESSED, IMPLIED OR STATUTORY, INCLUDING IMPLIED GUARANTEES OF MERCHANTABILITY OR FITNESS and thereby excludes certifications or the like for equipment performance, use or design with respect to any standard, regulation or the like (unless and to the extent independently approved in writing by the Company) AND EXTENDS ONLY TO THE CUSTOMER OR PURCHASER PURCHASING FROM THE COMPANY OR AN AUTHORIZED COMPANY DISTRIBUTOR.

18. Limitation of Liability

IN NO EVENT WILL SELLER BE LIABLE FOR INCIDENTAL, INDIRECT OR AS IS CONSEQUENTIAL DAMAGES OF ANY KIND. SELLER'S MAXIMUM CUMULATIVE LIABILITY RELATIVE TO ALL OTHER CLAIMS AND LIABILITIES, INCLUDING THAT WITH RESPECT TO DIRECT DAMAGES AND OBLIGATIONS UNDER ANY INDEMNITY, WHETHER OR NOT INSURED, WILL NOT EXCEED THE COST OF THE PRODUCTS GIVING RISE TO THE CLAIM OR LIABILITY. SELLER DISCLAIMS ALL LIABILITY RELATIVE TO GRATUITOUS INFORMATION OR ASSISTANCE PROVIDED BY, BUT NOT REQUIRED OF SELLER HEREUNDER. ANY ACTION AGAINST SELLER MUST BE BROUGHT WITHIN EIGHTEEN (18) MONTHS AFTER THE CAUSE OF ACTIONS ACCRUES. THESE DISCLAIMERS AND LIMITATIONS OF LIABILITY WILL APPLY REGARDLESS OF ANY OTHER CONTRARY PROVISION OF THE AGREEMENT AND REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, TORT OR OTHERWISE AND FURTHER WILL EXTEND TO THE BENEFIT OF SELLER'S VENDORS, APPOINTED DISTRIBUTORS AND OTHER AUTHORIZED RESELLERS AS THIRD-PARTY BENEFICIARIES. EACH PROVISION IN THE AGREEMENT WHICH PROVIDES FOR A LIMITATION OF LIABILITY, DISCLAIMER OF WARRANTY OR CONDITION OR EXCLUSION OF DAMAGES IS SEVERABLE AND INDEPENDENT OF ANY OTHER PROVISION AND IS TO BE ENFORCED AS SUCH.

19. Penalty Clauses

The Company will not accept any liability for penalty clauses of any kind, written or implied, unless specifically approved in writing by the Company.

20. Nuclear Applications

Unless otherwise agreed to in writing by a duly authorized representative of the Company, equipment sold hereunder are not intended for use in connection with, any nuclear facility or activity. The Company disclaims all liability for any nuclear damage, injury or contamination and purchaser shall indemnify the Company against such liability, whether as a result of breach of contract, warranty, tort (including negligence) or otherwise. The Company shall identify special controls which are manufactured and tested for use in connection with any nuclear installation or activity by the appropriate catalog number. The Company will charge a price addition for control devices sold for nuclear applications. Any questions by purchaser regarding products or pricing should be referred to the Company for clarification.

21. Government Clauses and Contracts

No government contract regulations or clauses will apply to the equipment agreement or act to bind Seller unless specifically agreed to by Seller in writing at Seller's headquarters. Equipment sold or licensed hereunder are not intended to be used, nor should they be used, in any nuclear-related application either as a "Basic Component" under 10 CFR 21 (United States NRC) or otherwise under similar nuclear laws and regulations of this or any other country.

22. Intellectual Property (not applicable to third-party branded products as is)

Seller will defend any suit or proceeding brought against the customer based on a claim that the design or construction of the Products sold or licensed hereunder by Seller infringe any United States or Canadian Patent, Copyright or Mask Work Registration, provided that the customer promptly notifies Seller of any such claim and resulting suit or proceeding, in writing and further provided that, at Seller's expense, (a) the customer gives Seller the sole right to defend or control the defense of the suit or proceeding including settlement, and (b) the customer provides all necessary information and assistance for that defense. Except for any consequential damages, Seller will pay all costs and damages finally awarded or agreed upon by Sell that are directly related to any such claim. In the event of a charge of infringement Seller's obligation under the Agreement will be fulfilled if Seller, at its option and expense, either (i) procures for the customer the right to continue using such Products; (ii) replaces the same with non-infringing Products; (iii) modifies the same so as to make them non-infringing; or (iv) accepts the return of any infringing Products and refunds their purchase price. Notwithstanding the foregoing, Seller will have no liability with respect to any claim of infringement to the extent based on a configuration or modification incorporated in the Products at the request of the customer, on any process application into which the Products are integrated by the customer, or on use of the Products in combination with other equipment or products not supplied by Seller. THIS PARAGRAPH SETS FORTH SELLER'S ENTIRE LIABILITY WITH RESPECT TO INTELLECTUAL PROPERTY AN INFRINGEMENT OF PATENTS BY ANY PRODUCTS (INCLUDING SOFTWARE PROGRAMS, EQUIPMENT OR PRODUCTS THEREOF) OR BY THEIR OPERATION, AND IS IN LIEU OF ALL WARRANTIES OR CONDITIONS RELATION TO INFRINGEMENT OR INTELLECTUAL PROPERTY, EITHER EXPRESS OR IMPLIED.

23. Third Party Branded Products

SELLER MAKES NO REPRESENTATIONS AND DISCLAIMS ALL WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, RELATIVE TO ANY THIRD-PARTY BRANDED EQUIPMENT WHICH MAY BE SOLD BY SELLER HEREUNDER. The only warranty associated with such equipment will be that provided directly by the original manufacturer, if any. Seller assumes no post-sale technical support or warranty repair obligation with respect to such equipment, however, at its discretion, Seller may assist the customer in processing warranties or representations made or provided relative to such equipment, which in all cases will be the responsibility of the original equipment solely for the convenience of the purchaser, and the purchaser must make its own determination as to the accuracy and completeness of such information.

24. Disputes

The parties will attempt in good faith promptly to resolve any dispute arising out of this transaction by negotiations between representatives who have authority to settle the controversy. If unsuccessful, the parties further will attempt in good faith to settle the dispute by non-binding third-party mediation, with fees and expenses of such mediation apportioned equally to each side. Any dispute not so resolved by negotiation or mediation may then be submitted to a court of competent jurisdiction in accordance with the terms of this transaction. These procedures are the exclusive procedures for the resolution of all such disputes between the parties.

25. Governing Law

This transaction and all disputes arising thereunder will be governed by and interpreted in accordance with the internal laws of the state, province or other governmental jurisdiction in which Seller's principal place of business resides, but specifically excluding its conflict of laws provisions and the provisions of the 1980 UN Convention on Contracts for the International Sales of Goods.

26. Assignment

This transaction may not be assigned by either party without the written consent of the other (which consent will not be unreasonably withheld), however, consent will not be required for internal transfers and assignments as between the company and its parent corporations, subsidiaries or affiliates as part of consolidation, merger or other form of corporate reorganization.

27. Language

The parties acknowledge that they have required that this transaction be drawn up in English. Les parties reconnaissent avoir exigé la rédaction en anglais du Contrat. In the event of a conflict between the English and other language versions of this agreement, the English version will prevail.





Note: The following terms are for general information only. All conditions of sales are subject to change and are valid as determined in the latest terms and conditions publication of Moeller Electric Limited (referred to herein after as "The Company").

1. Acceptance of orders:

All orders are subject to final acceptance by an authorized representative of the Company and are subject to the Company's terms and conditions in effect at the time of acceptance. The Company takes exception to any other terms and conditions except for such terms and conditions as the Company may expressly accept in writing.

2. Prices:

Prices and discounts as shown in the company's publications are subject to change without notice. In the event of a net price change, the price of equipment on order but unshipped will be the price in effect on the date of shipment. In no case will the amount of a price increase exceed 10% of the price at which the order was accepted, except that, if the delivery is delayed upon instructions from the purchaser, prices shall be those in effect when the instructions are received to proceed with the order. Price reductions shall only apply to unshipped portions of outstanding orders. Any addition or alteration to an outstanding order will be accepted at prices in effect when the addition or alteration is accepted. Applicable taxes are additional.

3. Quotations:

All quotations are in accordance with the Company's interpretation of plans and specifications and only material shown on the Company's quotations are included. Written quotations automatically expire thirty (30) days from the date of issue unless sooner terminated by notice. Quotations are subject to all existing or future limitations and regulations issued by any government agency. In the event that a quotation is not accepted in its entirety, the Company reserves the right to decline any parts of the order based on such quotation.

All Accounting, clerical or other errors are subject to correction.

4. Minimum Billing:

Orders amounting to less than \$ 300.00 net will be billed at \$ 300.00 plus the transportation charge, at a minimum of \$25.00.

5. Terms - Regular:

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6. Payments:

Payments should be made to the address indicated on the invoice, or to Moeller Electric Ltd, 6175 Kenway Drive, Mississauga, Ontario, L5T 2N3.

7. Delivery:

The Company reserves the right to make delivery in installments, unless otherwise expressly stipulated in the contract for sale; and all such installments when separately invoiced shall be paid for when due per invoice, without regard to subsequent deliveries. Delay in delivery of any installment shall not relieve the purchaser of its obligations to accept remaining deliveries. Shipments delayed to accommodate the purchaser will be invoiced upon completion of fabrication and additional charges for warehousing, trucking and other incidental expenses created by the delay will be at the expense of the purchaser. Delivery is dependent upon prompt receipt of all specifications, final approved prints and any other details essential to the proper execution of the purchaser's order. Claims for shortages or other errors must be reported in writing to the Company within 10 days after receipt of shipment. Failure to do so will constitute a waiver of all claims by the purchaser.

8. Shipping Terms:

The method and route of shipment is determined by the Company. All merchandise orders of \$500.00 net or more will be shipped F.O.B. Moeller Electric's warehouse, freight prepaid, best way ground transportation. All engineered equipment orders will be shipped F.O.B. Moeller Electric's loading dock, freight not allowed. When purchaser specifies a method or routing of shipment other than that selected by the Company, the purchaser will be billed

accordingly. No credits will be allowed in lieu of transportation in the case of pickups at the Company's warehouses, branches, or factory. No transportation charges can be deducted from a selling price. Air freight, water freight, heavy lift charges, pier delivery charges, wharfage, marine insurance and the cost of stevedoring are chargeable to the purchaser.

9. Packing other than standard:

If other than standard commercial packing is required the cost of such special packing (determinable only after packing is completed) will be charged to the purchaser. Export packing shall be considered as packing other than standard.

10. Acceptance of orders:

The purchaser will be responsible for any applicable export license and all associated costs involved with said license on any export project.

11. Export Control

Equipment and associated materials supplied or licensed under this transaction may be subject to various export laws and regulations. It is the responsibility of the purchaser to comply with all such laws and regulations.

12. Responsibility and Title:

Title in the equipment shall remain with the Company as security only and until full payment is received. Risk of loss for the equipment shall pass to purchaser upon shipment from F.O.B. point of shipment or date of invoicing, whichever ever is sooner.

13. Loss or Damage in Transit:

The Company does not hold itself responsible for any loss, damage, (obvious or concealed) or pilferage sustained in transit. Claims of such character should be made, by the purchaser, promptly against the transportation company. If the Company is notified of such claims, the Company will offer to lend assistance to secure adjustment. The Company employs experienced packers and cannot be held responsible for breakage that occurs after the Company's securing the "Received in Good Order" receipt from the transportation company.

14. Return of Merchandise:

No equipment may be returned unless authorization has been obtained from an authorized representative of the Company and if so authorized is subject to the conditions below. Unauthorized returns of equipment cannot be accepted.

A. To be returned for credit:

Only unused equipment of current design may be returned for credit. Where a purchaser returns equipment for reasons of his own, a minimum restocking charge of 20% of billing, plus transportation charges, will be made. Any cost incurred in putting the equipment into saleable condition shall also be deducted from allowed credit. If return of equipment is made necessary by fault of the Company, full credit will be allowed including transportation charges.

B. To be returned for replacement:

If the equipment is under guarantee and the return is made necessary because of defect in material and/or workmanship, the Company will replace the defective goods "no charge", and will assume the transportation charges.

C. Custom-built equipment:

Equipment built based upon purchaser specification cannot be returned for credit.

15. Cancellations:

Any order placed with the Company can be canceled by the purchaser provided that: a) the cancellation is agreed to in writing by the Company; and b) the purchaser agrees to compensate the Company for engineering, fabrication, outside sourcing of devices and any other demonstrated expenses incurred or commitments made by the Company up to the date of notice of cancellation and all charges incurred by the Company in respect of the cancellation.

16. Force Majeure:

The Company shall not be liable for any delay in the performance of orders or contracts or in the delivery or shipment of equipment or for any loss and/or damages suffered by purchaser by reason of such delay when such delay is directly or indirectly caused by fire, floods, accidents, riots, acts of God, war, invasion, sabotage, terrorism and governmental interference or embargoes, strikes, labor difficulties, shortage of labor, fuel, power, materials or supplies or any other cause beyond the Company's reasonable control. In any event, the Company shall not be liable for special or consequential damages for loss of use. Should such a delay occur, the delivery date shall be extended as may be necessary to compensate

for the delay. The Company shall not be liable for any change of dimensions, weights and materials as long as the change is nonessential for the proper performance of the product.

17. Guarantee:

The Company guarantees for a period of one (1) year from the date of the Company invoice that equipment furnished under the order will be of merchantable quality, free from defects in material, workmanship and design each as determined, at the date of shipment by the Company by generally recognized, applicable and accepted practices and procedures in the industry including any specifications furnished by the purchaser and agreed to in writing by the Company for incorporation into the equipment. Satisfaction of this guarantee, consistent with other provisions herein, will be limited to the replacement or repair or modification of, or issuance of a credit for, the equipment involved at the Company's option, with the Company to determine the availability of service personnel and purchaser to pay associated service expenses: such guarantee satisfaction available only if: (a) the Company is promptly notified in writing upon discovery of an alleged defect and (b) the company's examination of the subject equipment discloses, to the Company's satisfaction, that any defect has not been caused by misuse, neglect, improper installation, improper operation, improper maintenance, repair or alteration, accident, or unusual deterioration or degradation of the equipment parts, thereof due to physical environment or due to electrical or electromagnetic noise environment. THIS GUARANTEE IS IN LIEU OF ALL OTHER GUARANTEES WHETHER EXPRESSED, IMPLIED OR STATUTORY, INCLUDING IMPLIED GUARANTEES OF MERCHANTABILITY OR FITNESS and thereby excludes certifications or the like for equipment performance, use or design with respect to any standard, regulation or the like (unless and to the extent independently approved in writing by the Company) AND EXTENDS ONLY TO THE CUSTOMER OR PURCHASER PURCHASING FROM THE COMPANY OR AN AUTHORIZED COMPANY DISTRIBUTOR.

18. Limitation of Liability:

IN NO EVENT WILL SELLER BE LIABLE FOR INCIDENTAL, INDIRECT OR AS IS CONSEQUENTIAL DAMAGES OF ANY KIND. SELLER'S MAXIMUM CUMULATIVE LIABILITY RELATIVE TO ALL OTHER CLAIMS AND LIABILITIES, INCLUDING THAT WITH RESPECT TO DIRECT DAMAGES AND OBLIGATIONS UNDER ANY INDEMNITY, WHETHER OR NOT INSURED, WILL NOT EXCEED THE COST OF THE PRODUCTS GIVING RISE TO THE CLAIM OR LIABILITY. SELLER DISCLAIMS ALL LIABILITY RELATIVE TO GRATUITOUS INFORMATION OR ASSISTANCE PROVIDED BY, BUT NOT REQUIRED OF SELLER HEREUNDER. ANY ACTION AGAINST SELLER MUST BE BROUGHT WITHIN EIGHTEEN (18) MONTHS AFTER THE CAUSE OF ACTIONS ACCRUES. THESE DISCLAIMERS AND LIMITATIONS OF LIABILITY WILL APPLY REGARDLESS OF ANY OTHER CONTRARY PROVISION OF THE AGREEMENT AND REGARDLESS OF THE FORM OF ACTION, WHETHER IN CONTRACT, TORT OR OTHERWISE AND FURTHER WILL EXTEND TO THE BENEFIT OF SELLER'S VENDORS, APPOINTED DISTRIBUTORS AND OTHER AUTHORIZED RESELLERS AS THIRD-PARTY BENEFICIARIES. EACH PROVISION IN THE AGREEMENT WHICH PROVIDES FOR A LIMITATION OF LIABILITY, DISCLAIMER OF WARRANTY OR CONDITION OR EXCLUSION OF DAMAGES IS SEVERABLE AND INDEPENDENT OF ANY OTHER PROVISION AND IS TO BE ENFORCED AS SUCH.

19. Penalty Clauses:

The Company will not accept any liability for penalty clauses of any kind, written or implied, unless specifically approved in writing by the Company.

20. Nuclear Applications:

Unless otherwise agreed to in writing by a duly authorized representative of the Company, equipment sold hereunder are not intended for use in connection with, any nuclear facility or activity. The Company disclaims all liability for any nuclear damage, injury or contamination and purchaser shall indemnify the Company against such liability, whether as a result of breach of contract, warranty, tort (including negligence) or otherwise. Upon authorization by a representative of the Company for sale or use of equipment in a nuclear facility or activity, the Company shall identify special controls which are manufactured and tested for use in connection with any nuclear installation or activity by the appropriate catalog number. The Company will charge a price addition for control devices sold for nuclear applications. Any questions by purchaser regarding products or pricing should be referred to the Company for clarification.

21. Government Clauses and Contracts:

No government contract regulations or clauses will apply to the equipment agreement or act to bind the Company unless specifically agreed to by the Company in writing at the Company's headquarters. Equipment sold or licensed hereunder are not intended to be used, nor should they be used, in any nuclear-related application either as a "Basic Component" under 10 CFR 21 (United States NRC) or otherwise under similar nuclear laws and regulations of this or any other country.

22. Intellectual Property: (not applicable to third-party branded products as is)

Seller will defend any suit or proceeding brought against the customer based on a claim that the design or construction of the Products sold or licensed hereunder by Seller infringe any United States or Canadian Patent, Copyright or Mask Work Registration, provided that the customer promptly notifies Seller of any such claim and resulting suit or proceeding, in writing and further provided that, at Seller's expense, (a) the customer gives Seller the sole right to defend or control the defense of the suit or proceeding including settlement, and (b) the customer provides all necessary information and assistance for that defense. Except for any consequential damages, Seller will pay all costs and damages finally awarded or agreed upon by Seller that are directly related to any such claim. In the event of a claim of infringement Seller's obligation under the Agreement will be fulfilled if Seller, at its option and expense, either (i) procures for the customer the right to continue using such Products; (ii) replaces the same with non-infringing Products; (iii) modifies the same so as to make them non-infringing; or (iv) accepts the return of any infringing Products and refunds their purchase price, Notwithstanding the foregoing, Seller will have no liability with respect to any claim of infringement to the extent based on a configuration or modification incorporated in the Products at the request of the customer, on any process application into which the Products are integrated by the customer, or on use of the Products in combination with other equipment or products not supplied by Seller. THIS PARAGRAPH SETS FORTH SELLER'S ENTIRE LIABILITY WITH RESPECT TO INTELLECTUAL PROPERTY AND INFRINGEMENT OF PATENTS BY ANY PRODUCTS (INCLUDING SOFTWARE PROGRAMS, EQUIPMENT OR PRODUCTS THEREOF) OR BY THEIR OPERATION, AND IS IN LIEU OF ALL WARRANTIES OR CONDITIONS RELATION TO INFRINGEMENT OR INTELLECTUAL PROPERTY, EITHER EXPRESS OR IMPLIED.

23. Third Party Branded Products:

SELLER MAKES NO REPRESENTATIONS AND DISCLAIMS ALL WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, RELATIVE TO ANY THIRD-PARTY BRANDED EQUIPMENT WHICH MAY BE SOLD BY SELLER HEREUNDER. The only warranty associated with such equipment will be that provided directly by the original manufacturer, if any. Seller assumes no post-sale technical support or warranty repair obligation with respect to such equipment, however, at its discretion, Seller may assist the customer in processing warranties or representations made or provided relative to such equipment, which in all cases will be the responsibility of the original equipment solely for the convenience of the purchaser, and the purchaser must make its own determination as to the accuracy and completeness of such information.

24. Disputes:

The parties will attempt in good faith promptly to resolve any dispute arising out of this transaction by negotiations between representatives who have authority to settle the controversy. If unsuccessful, the parties further will attempt in good faith to settle the dispute by non-binding third-party mediation, with fees and expenses of such mediation apportioned equally to each side. Any dispute not so resolved by negotiation or mediation may then be submitted to a court of competent jurisdiction in accordance with the terms of this transaction. These procedures are the exclusive procedures for the resolution of all such disputes between the parties.

25. Governing Law:

This transaction and all disputes arising thereunder will be governed by and interpreted in accordance with the domestic-laws of the Province of Ontario. The provisions of the International Sale of Goods Act, R.S.O. (1990), C.I.10 as amended shall not be applicable to this transaction and are specifically excluded. At the sole discretion of the Company, for the purpose of legal proceedings, this transaction shall be deemed to have been performed in the Province of Ontario and the Courts of the Province of Ontario shall have jurisdiction to entertain any action arising under this transaction. The purchaser hereby attorns to the jurisdiction of the Courts of the Province of Ontario. However, nothing contained herein shall derogate from the right of the Company to proceed in such other jurisdiction as, in its sole discretion, it deems necessary.

26. Assignment:

This transaction may not be assigned by either party without the written consent of the other (which consent will not be unreasonably withheld), however, consent will not be required for internal transfers and assignments as between the company and its parent corporations, subsidiaries or affiliates as part of consolidation, merger or other form of corporate reorganization.

27. Language:

The parties acknowledge that they have required that this transaction be drawn up in English, Les parties reconnaissent avoir exigé la rédaction en anglais du Contrat. In the event of a conflict between the English and other language versions of this agreement, the English version will prevail.





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