

The information furnished is believed to be accurate and reliable. However, E-T-A assumes no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.



Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

Data Sheet
382.073.468
sheet 1 of 37

Replacing data sheet dated 382.073.468 24. Oct. 1997

Technical data

to EN 60 934

Max.voltage rating AC 240V / DC 50 V, AC 415V
Rated insulation voltage AC 415 V
Current rating range 0.1 20A 1 and 2 pole

Current ratings 0.1; 0.2; 0.3; 0.4; 0.5; 0.6; 0.8; 1.0; 1.2;
1.5; 2.0; 2.5; 3.0; 3.5; 4.0; 4.5; 5.0; 6.0;
7.0; 8.0; 10.0; 12.0; 14.0; 15.0; 16.0; 18.0; 20A

Reference ambient temperature -30°C ... +60°C (T60)

Effect of the ambient temperature on the tripping characteristics

Temperature (°C)	-30	-20	-10	-5	+10
Factor	0.80	0.84	0.88	0.90	0.94
Temperature (°C)	+23	+30	+40	+50	+60
Factor	1.0	1.03	1.08	1.14	1.23

Creepage resistance PTI 400
Method of operation S-type
Mode of tripping TO / positively trip free

Typical electrical operational values

Voltage drop in V at 1 I _N	I _N (A)	0.1	0.2	0.3	0.4	0.5	0.6	0.8	1.0	1.2	1.5
V		9.4	4.8	3.6	2.2	2.2	1.8	1.8	0.9	1.0	0.7
I _N (A)	2.0	2.5	3.0	3.5	4.0	4.5	5.0	6.0	7.0	8.0	
V		0.6	0.2	0.18	0.2	0.17	0.2	0.16	0.13	0.12	0.13
I _N (A)	9.0	10.0	12.0	14.0	15.0	16.0	18.0	20.0			
V		0.1	0.13	0.11	0.11	0.12	0.12	0.12	0.11		

Insulation coordination (IEC 664 and 664A)

Rated impulse withstand voltage / Pollution degree
max EN 60 934
4kV / 3 2.5KV / 2

Dielectric strength (IEC 664 and 664A)
operating area (reinforced insulation, sheet 23)
mounting area (sheet 23)
pole / pole (2-pole)

test voltage, AC
max. EN 60 934
4000 V 3000 V
2000 V 1500 V
2000 V 1500 V

Insulation resistance > 100 MΩ (DC 500 V)
Minimum load (main circuit) DC 10 V / 100 mA

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Sheet	Date	Name	Index	AM	Sheet	Date	Name
g	17 866	1-37	26.06.00	K.Go					
h	18 056	32	13.12.00	K.Go					
i	18 338	22	23.07.01	K.Go					

The information furnished is believed to be accurate and reliable. However, E-T-A assumes no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.



Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

Data Sheet
382.073.468
sheet 2 of 37

Operating cycles

Behaviour at rated current (EN 60 934, test sequence C)		mechanical	electrical, 1 I _N
1 pole	50 000		0.1 - 16A, AC 240, cosφ 0.95
			> 16A, AC 240, cosφ 0.95
			0.1 - 10A, DC, L/R= 0 ms
			12 - 16A, DC 28V, L/R = 0 ms
2 pole	50 000		> 16A, DC 28V, L/R = 0 ms
			0.1 - 16A, AC 240, cosφ 0.95
			0.1 - 16A, DC, L/R= 0 ms
2 pole	10 000		> 16A, AC 240, cosφ 0.95
			> 16A, DC, L/R = 0 ms
			0.1 - 16A, AC 415, cosφ 0.95

Behavior at rated switching capacity (40 cycles) (EN 60 934, test sequence D)	AC; 6 I _N power factor 0.6	DC; 4 I _N , time constant 2.5 ms
0.1 ... 20A, 1 pole / AC 240	0.1 ... 10A, 1 pole	DC 50V
0.1 ... 20A, 2 pole / AC 240	0.1 ... 20A, 2 pole	DC 50V
0,1 ... 16A, 2 pole / AC 415	0.1 ... 20A, 1 pole	DC 28V

Rated short-circuit capacity I _{cn} (EN 60 934, test sequence E)	I _N	U _N	I _{cn}
1 and 2 pole	0.1 ... 2A	AC 240 V	10 x I _N
1 pole	2.5 ... 20 A	AC 240 V	200 A
2 pole	2.5 ... 20 A	AC 240 V	300 A
1 and 2 pole	0.1 ... 2A	DC 50V	10 x I _N
1 pole	2.5 ... 10A	DC 50V	50 A
2 pole	2.5 ... 20A	DC 50 V	250 A
1 pole	2.5 ... 20 A	DC 28 V	200 A
2 pole	2.5 ... 20 A	DC 28 V	300 A

Rated conditional short-circuit current I _{nc} (EN 60 934, PC 1 / UL 1077, § 21)	I _N	U _N	I _{nc}
1 and 2 pole	0.1 ... 16 A	AC 240 V	3500A
2 pole	18 ... 20 A	AC 125 V	3500A
1 and 2 pole	0.1 ... 20 A	DC 50 V	200A

The current rating of the back-up fuse to IEC 269 (DIN VDE 0636) shall be four times the current rating of the curcuit breaker, but at least 15A.

Typical mechanical values

Operating force	rocker	push button
ON	15 N	18 N
OFF	5 N	6 N
Operating force with X3120-U		
ON	23 N	29 N
OFF	8 N	9 N

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

The information furnished is believed to be accurate and reliable. However, E-T-A assumes no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.



Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

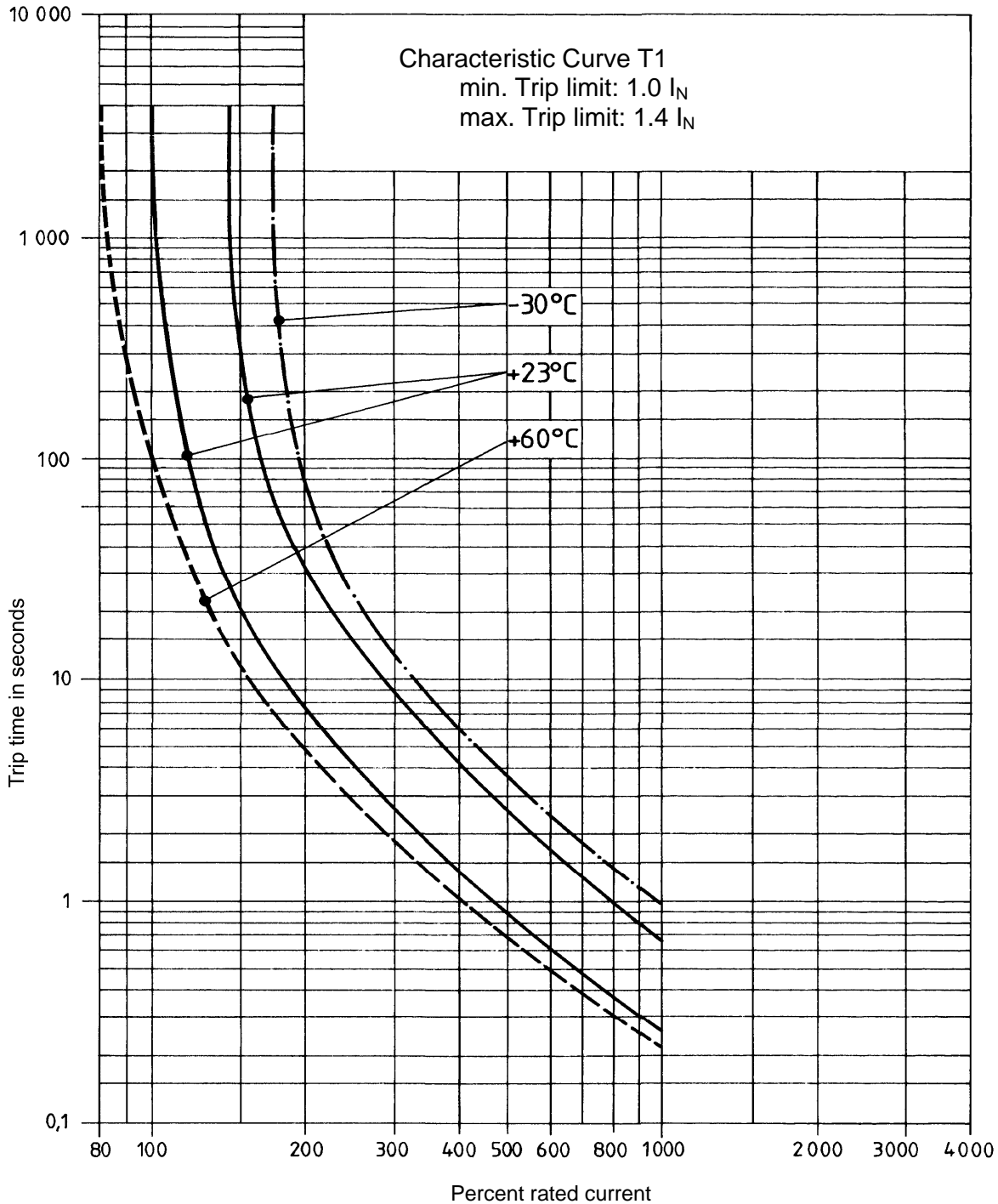
Data Sheet
382.073.468
sheet 3 of 37

Mounting values	200 N max. insertion				
Blade terminals P70	80 N max. insertion 80 N max. withdrawal				
Terminal screws	0.55 N max. tightening torque				
Mass	approx. 27 g 1 pole approx. 31 g 2 pole				
Environmental tests (typical values)					
Vibration (sinusoidal) to DIN IEC 68-2-6, test Fc, 10 frequency cycles / axis					
	± 0.61 mm (10 - 57 Hz), 8g (57 - 500 Hz)				
Shock to DIN IEC 68-2-27, test Ea					
	30 g (11ms)				
Corrosion to DIN IEC 68-2-11, test Ka					
	96 hours at 5% salt mist				
Humidity to DIN IEC 68-2-3, test Ca					
	240 hours at 95% RH, 40°C				
Degree of protection (IEC 529 / DIN 40 050) operating area					
	IP 40 (IP 54 with splash cover)				
terminal area					
	IP 00				
Temperature limits					
	<table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td style="text-align: center;">on duty</td> <td style="text-align: center;">storage</td> </tr> <tr> <td style="text-align: center;">- 30° C ...+ 60° C</td> <td style="text-align: center;">- 40° C ...+ 80° C</td> </tr> </table>	on duty	storage	- 30° C ...+ 60° C	- 40° C ...+ 80° C
on duty	storage				
- 30° C ...+ 60° C	- 40° C ...+ 80° C				
Approval logos					
	see marking instructions				
Note:					
Time / current characteristic curve	see sheets 4 / 5				
Dimensions	see sheet 6				
Rocker / button variants	see sheets 7 / 8				
Flange dimensions	see sheets 9 - 26				
Connection variants and internal connection diagram	see sheet 27				
Installation	see sheet 28				
Order numbering code	see sheets 29 - 37				

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



Type of current: AC / DC
Current rating range: 0.1 - 2A



The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

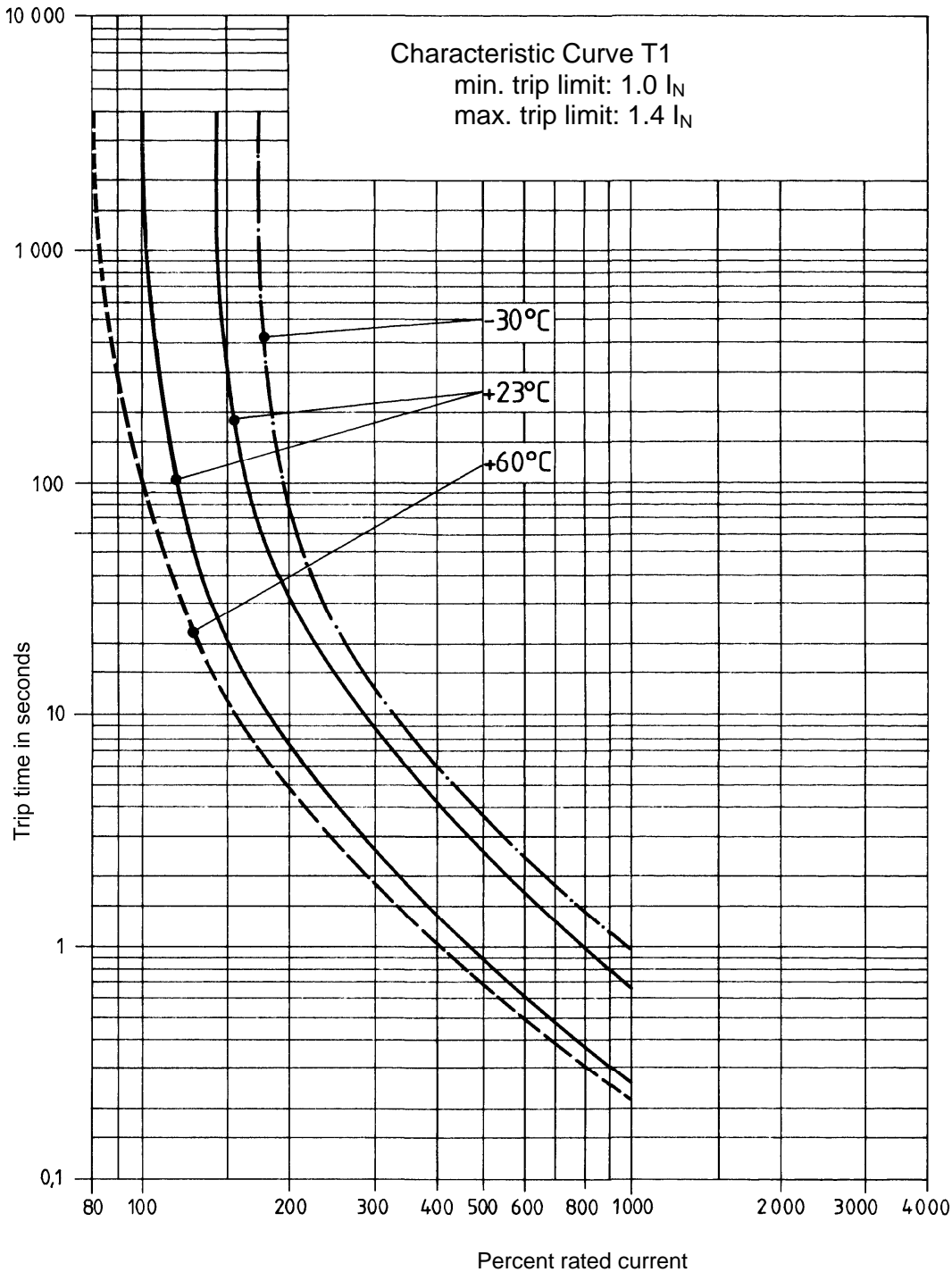


Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

Data Sheet
382.073.468
sheet 5 of 37

The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

Type of current: AC / DC
Current rating range: 2.5 - 20A



The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

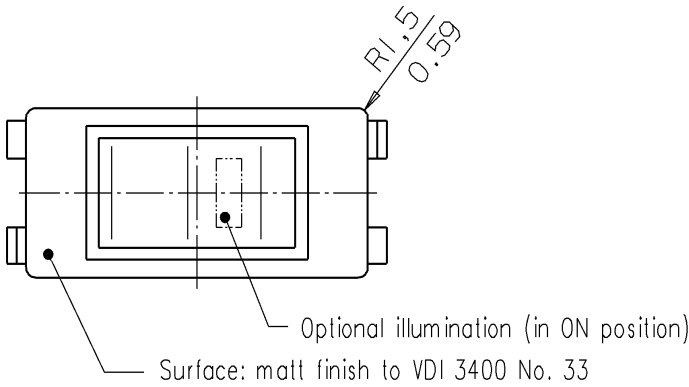
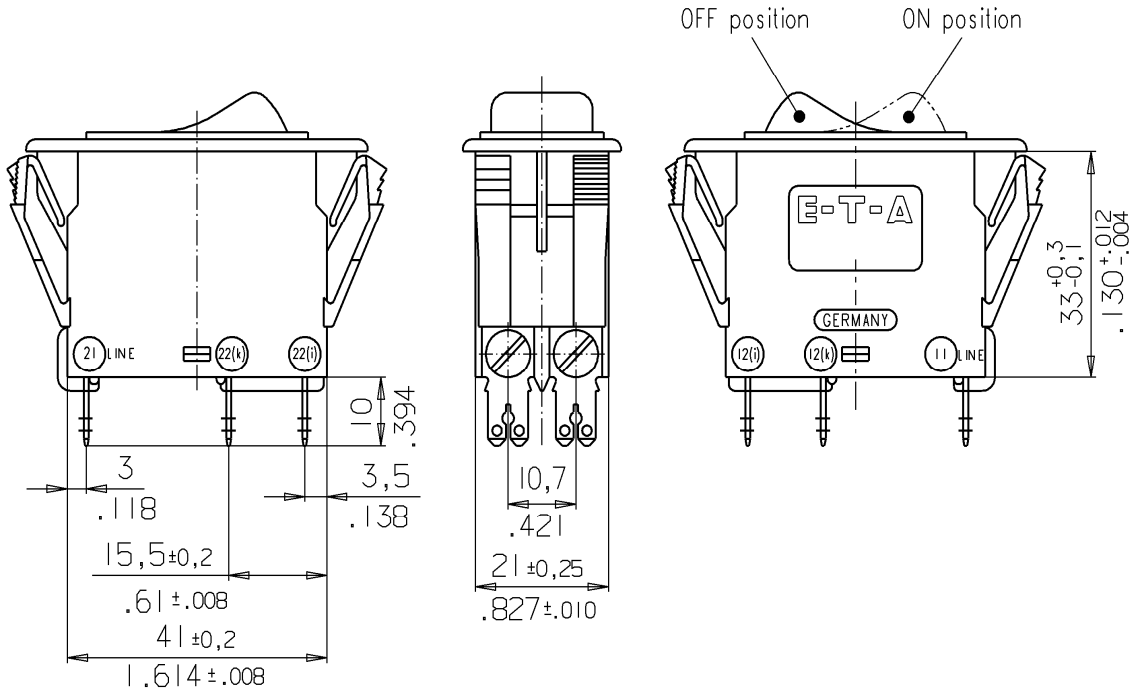


Overcurrent Circuit Breaker
thermal trip
3120-...-T1-..
one and two pole

Data Sheet
382.073.468
sheet 6 of 37

3120-F
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not



Nominal dimensions without direct tolerance indication: ±IT13

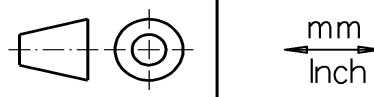
For dimensions of other flange versions see sheets 7-22

This is a metric design and millimeter dimensions take precedence

1:1

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

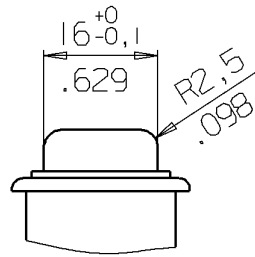
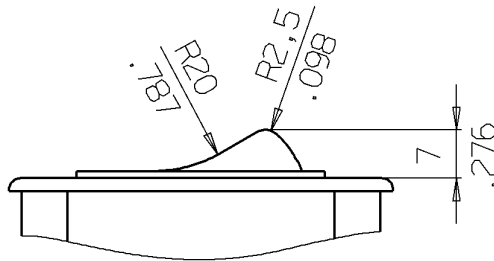
Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



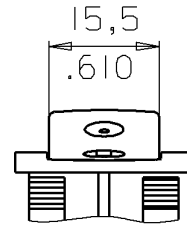
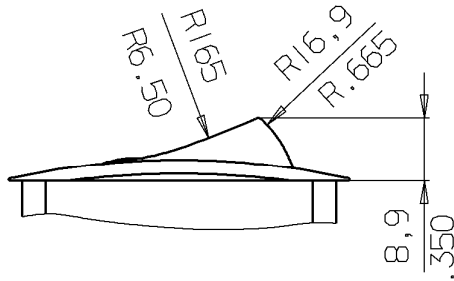
The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

3120-F-W

3120-F-M



3120-F-A

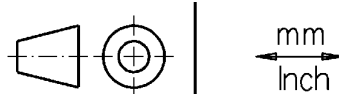


1:1

This is a metric design and millimeter dimensions take precedence

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				





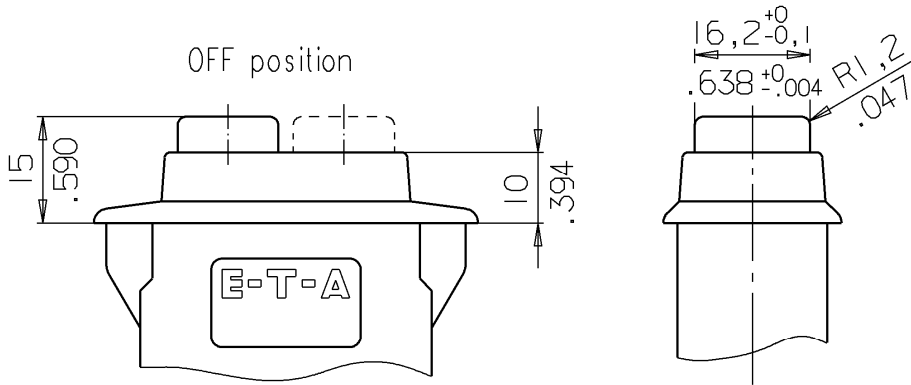
Overcurrent Circuit Breaker
thermal trip
3120-...-T1-...
one and two pole

Data Sheet
382.073.468
sheet 8 of 37

The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not

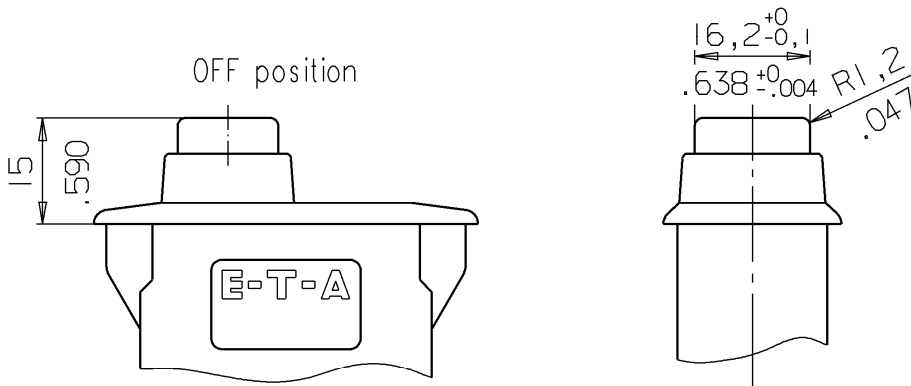
3 1 2 0 - F - - - - - S - - - - -

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27



3 1 2 0 - F - - - - - D - - - - -

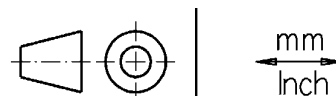
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27



1:1

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				





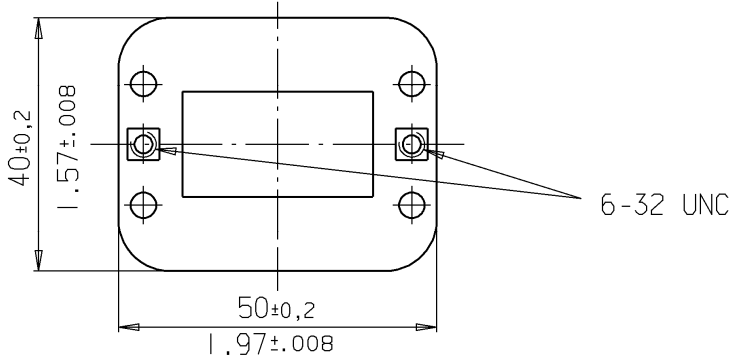
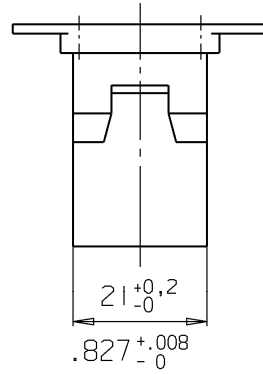
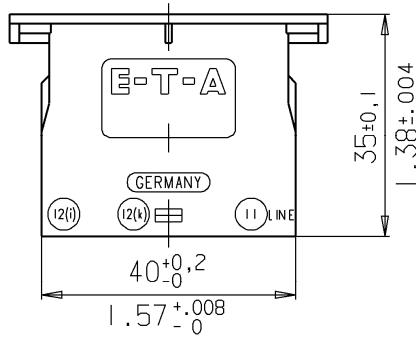
Overcurrent Circuit Breaker
thermal trip
3120-...-T1-..
one and two pole

Data Sheet
382.073.468
sheet 9 of 37

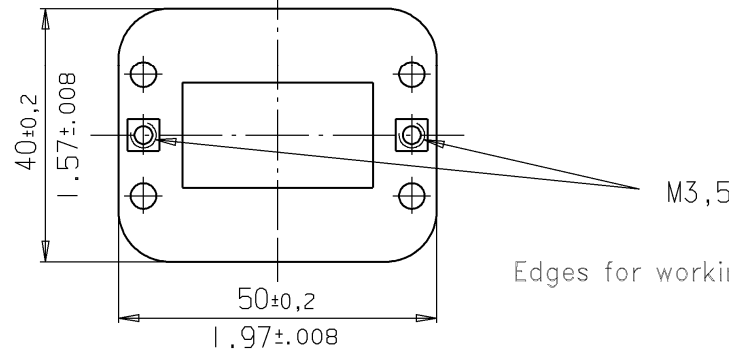
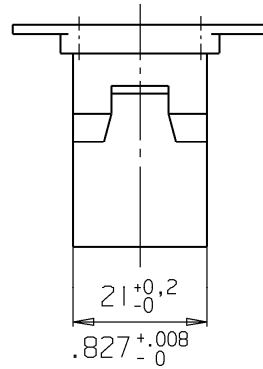
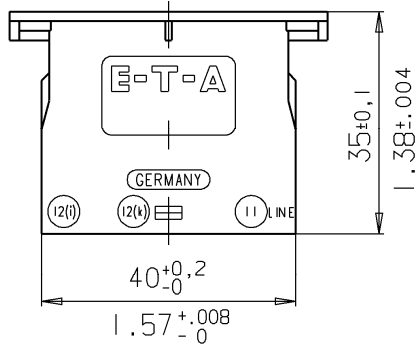
The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

F 1 6
6 7 8 9



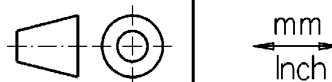
F 1 7
6 7 8 9



This is a metric design and millimeter dimensions take precedence
Nominal dimensions without direct tolerance indication: ± IT 13

1:1

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



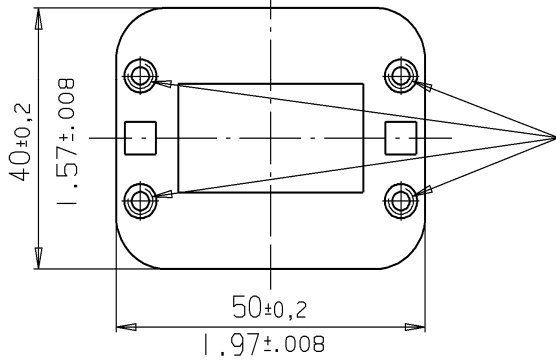
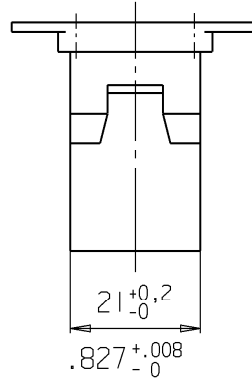
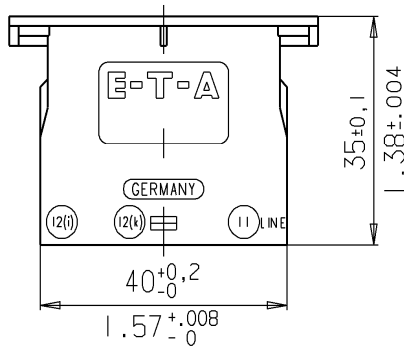
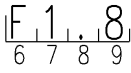


Overcurrent Circuit Breaker
thermal trip
3120-...-T1-..
one and two pole

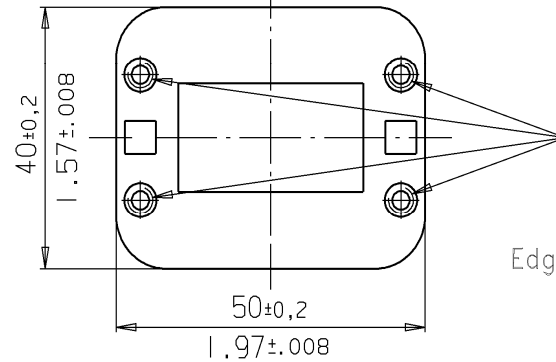
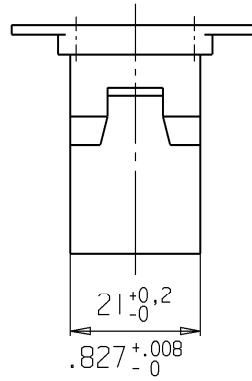
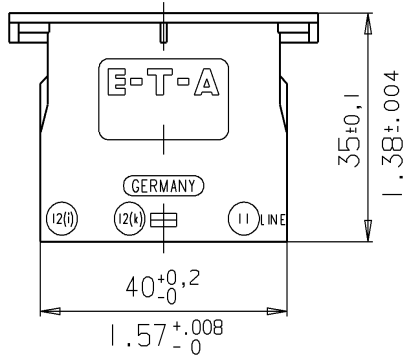
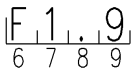
Data Sheet
382.073.468
sheet 10 of 37

The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.



6-32 UNC



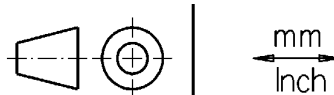
M3,5

Edges for working parts: DIN 6784

This is a metric design and millimeter dimensions take precedence
Nominal dimensions without direct tolerance indication: ± IT 13

1:1

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

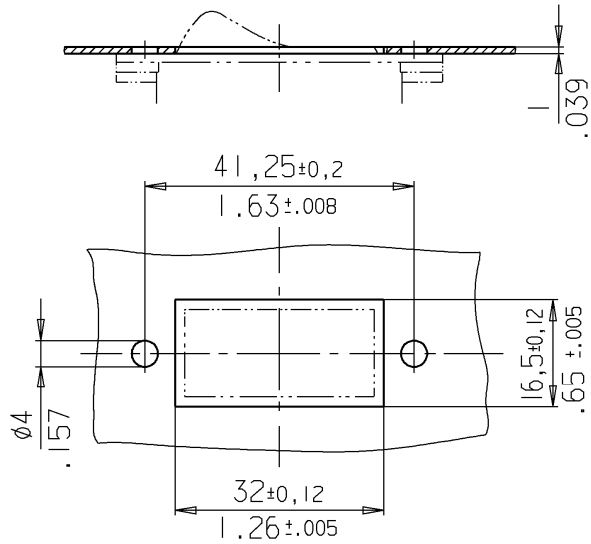


The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not

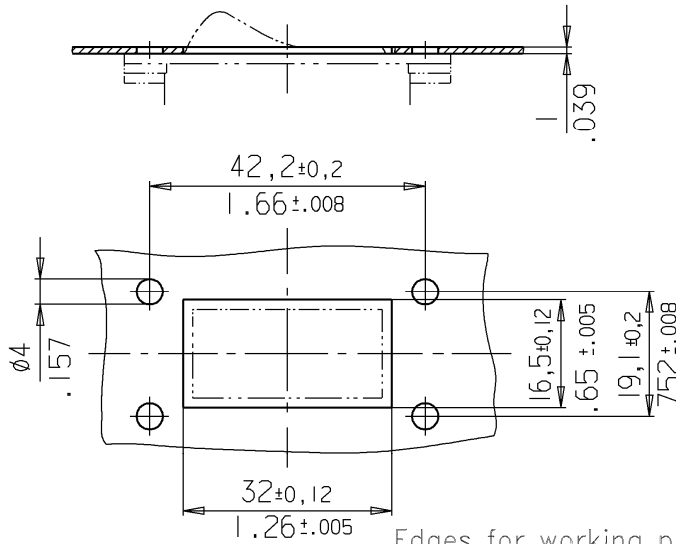
The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

This is a metric design and millimeter dimensions take precedence

Panel cut-out F1.6 / F1.7



Panel cut-out F1.8 / F1.9

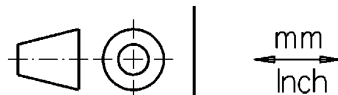


Edges for working parts: DIN 6784

Nominal dimensions without direct tolerance indication: ± IT 13

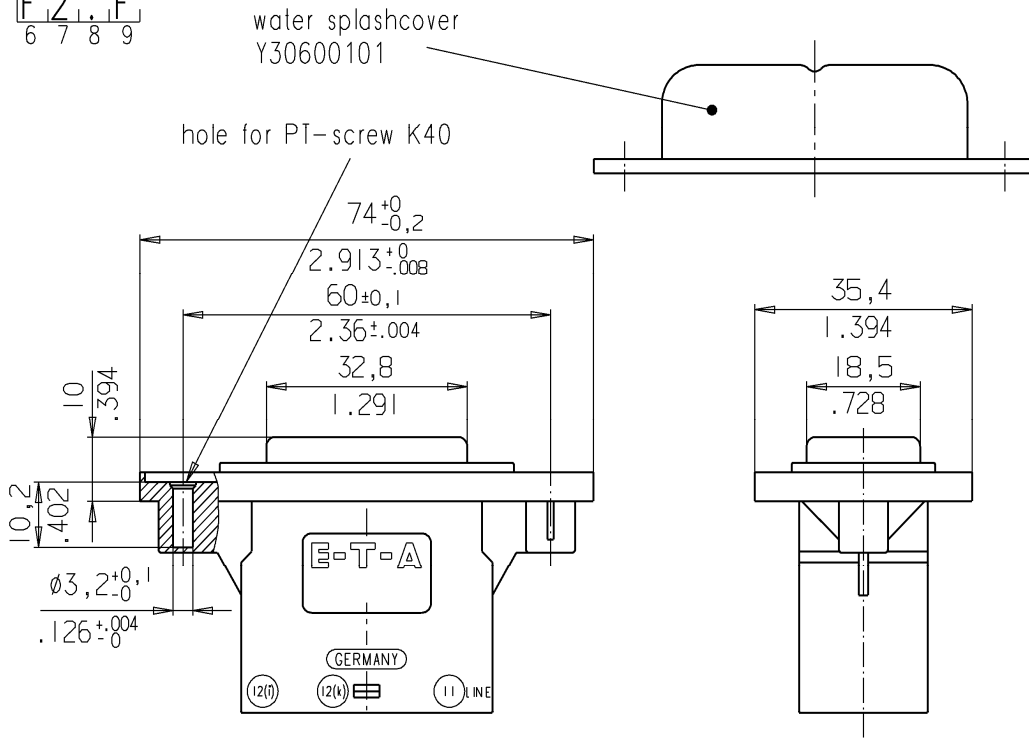
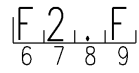
1:1

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

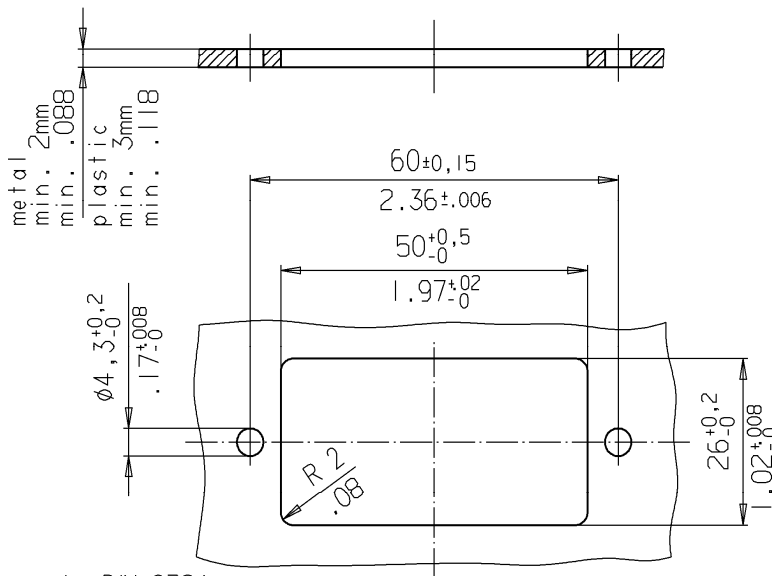


The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.



Panel cut-out



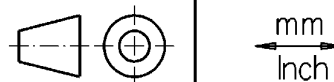
Edges of working parts: DIN 6784

Nominal dimensions without direct tolerance indication: ± IT 13

1:1

This is a metric design and millimeter dimensions take precedence

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



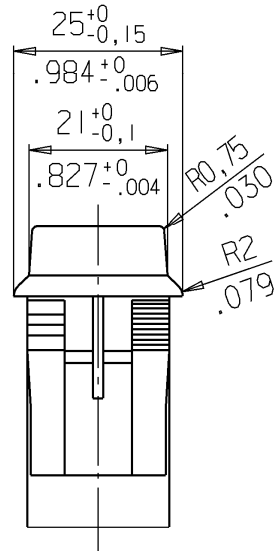
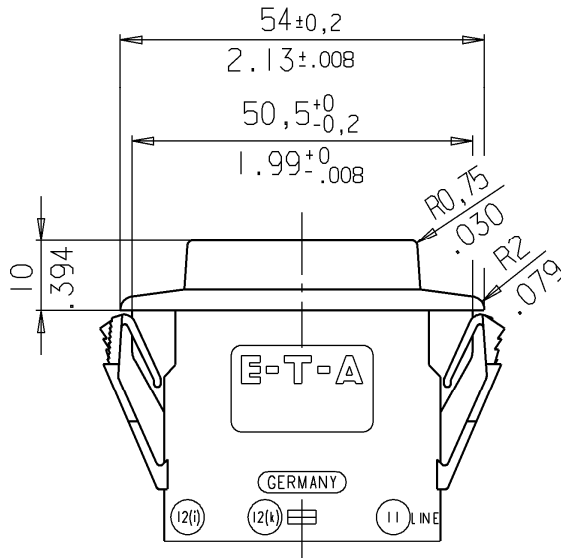


Overcurrent Circuit Breaker
thermal trip
3120-...-T1-..
one and two pole

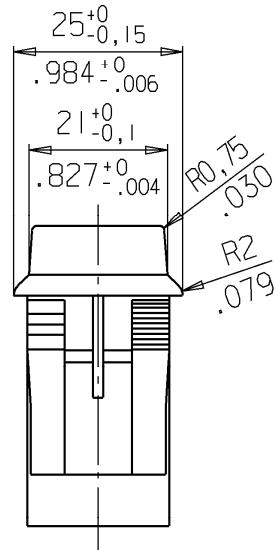
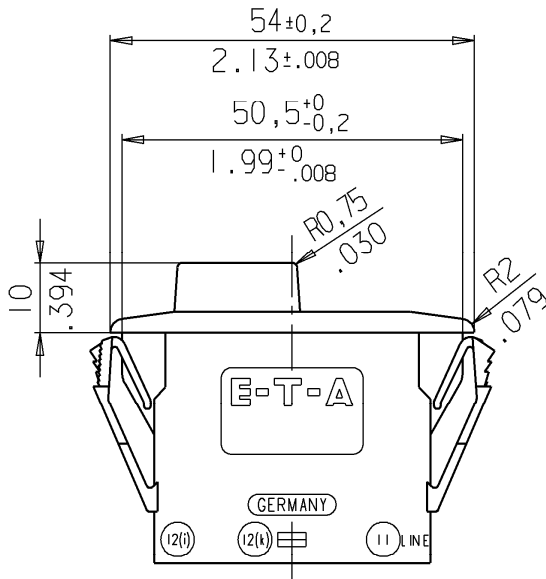
Data Sheet
382.073.468
sheet 13 of 37

The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

F 3 | F
6 7 8 9



F 3 | G
6 7 8 9



This is a metric design and millimeter dimensions take precedence

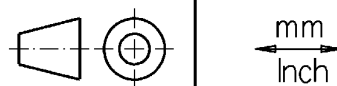
Edges for working parts: DIN 6784

Nominal dimensions without direct tolerance indication: ± IT 13

1 : 1

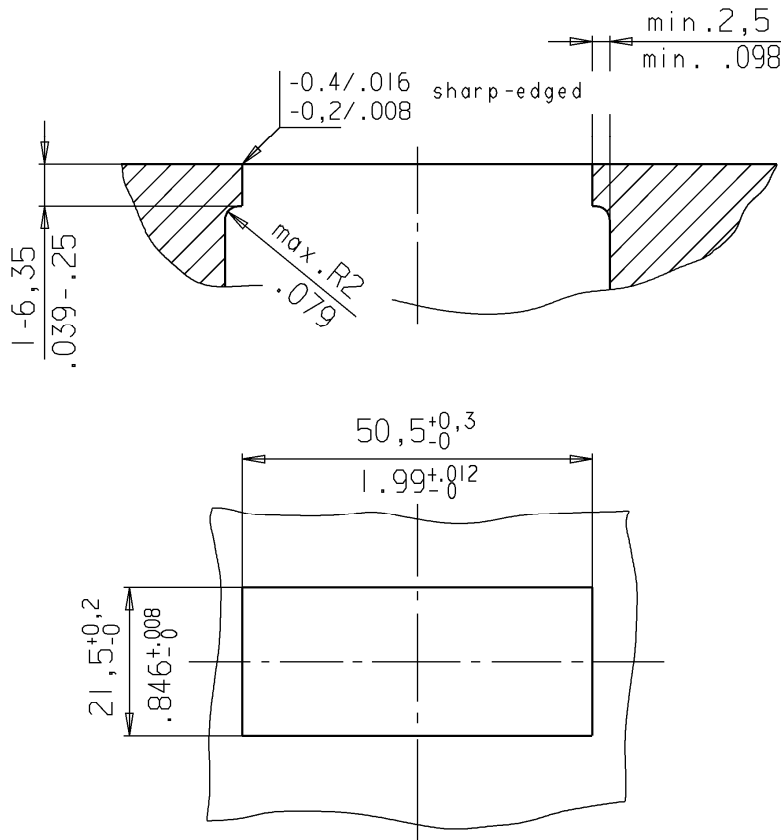
The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



075.367g / 02.02.00

Panel cut-out F3.F / F3.G



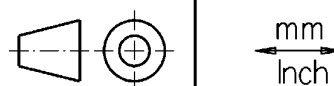
Edges of working parts: DIN 6784

This is a metric design and millimeter dimensions take precedence

Nominal dimensions without direct tolerance indication: $\pm IT 13$

1:1

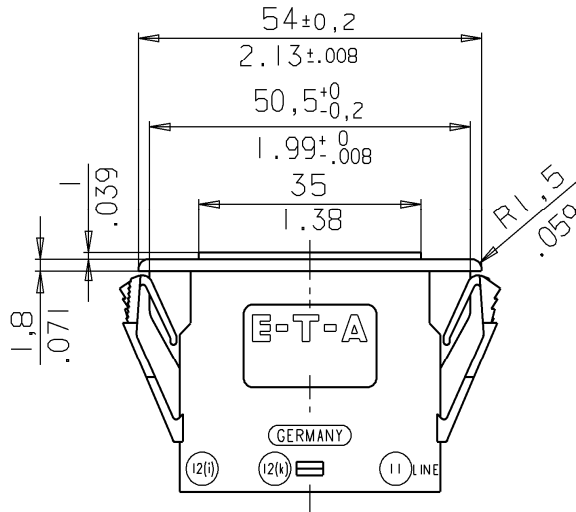
Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

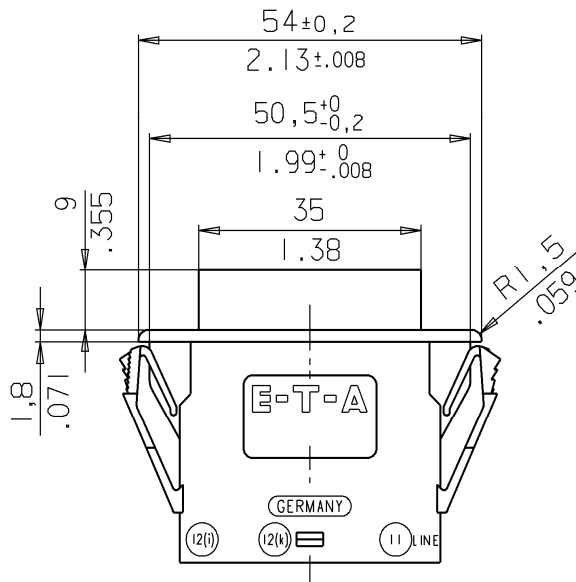
F 3 1 1
6 7 8 9

collar height .039 inch



F 3 1 3
6 7 8 9

collar height .355 inch



Edges of working parts: 6784

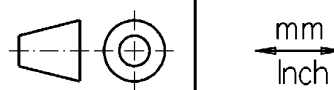
This is a metric design and millimeter dimensions take precedence

Nominal dimensions without direct tolerance indication: ± IT 13

1:1

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

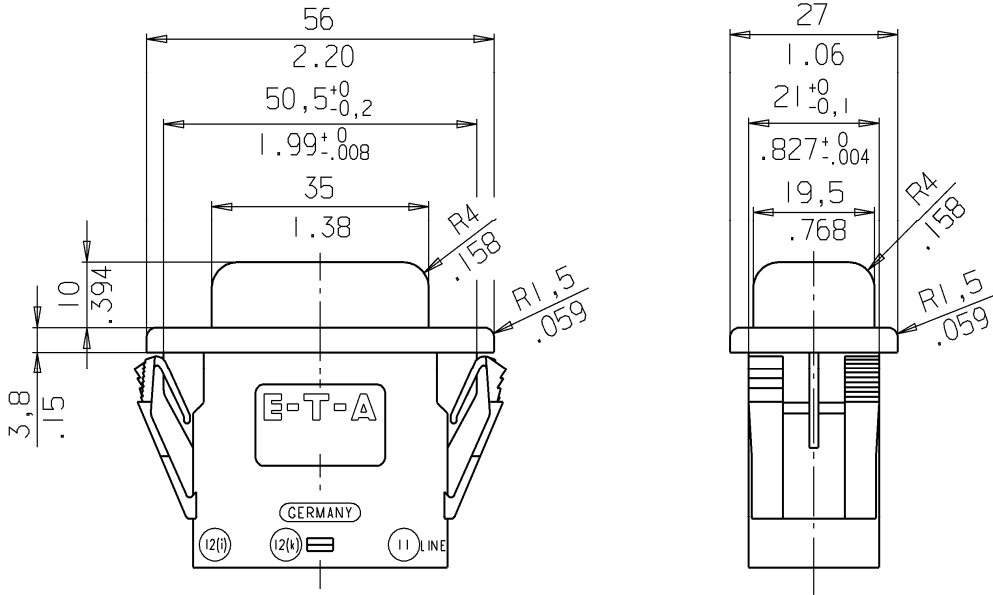


The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

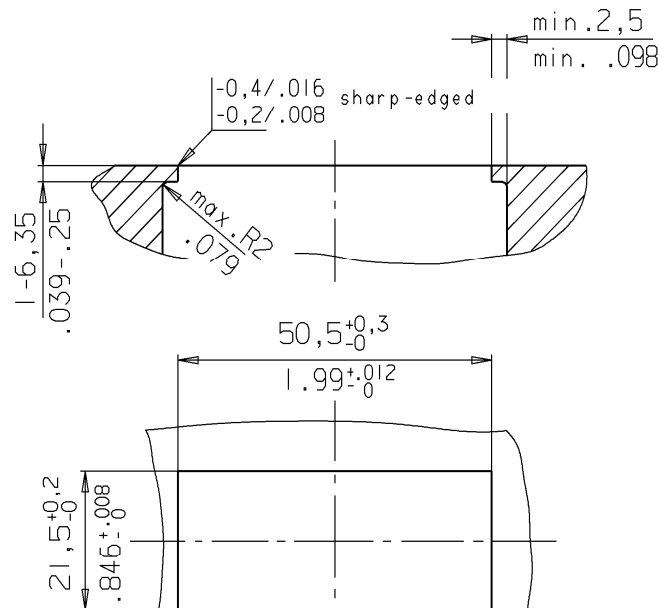
The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

F 3.1 / 4
6 7 8 9

collar height .079 inch with splash water protection



Panel cut-out F3.1 / F3.3 / F3.4



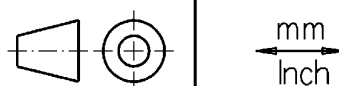
Edges of working parts: DIN 6784

Nominal dimensions without direct tolerance indication: ± IT 13

1:1

This is a metric design and millimeter dimensions take precedence

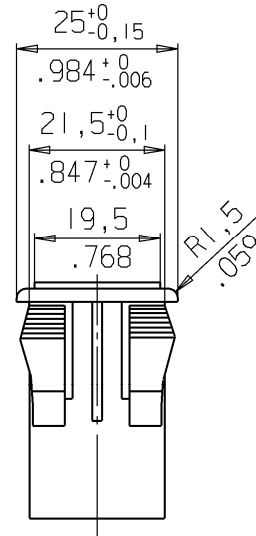
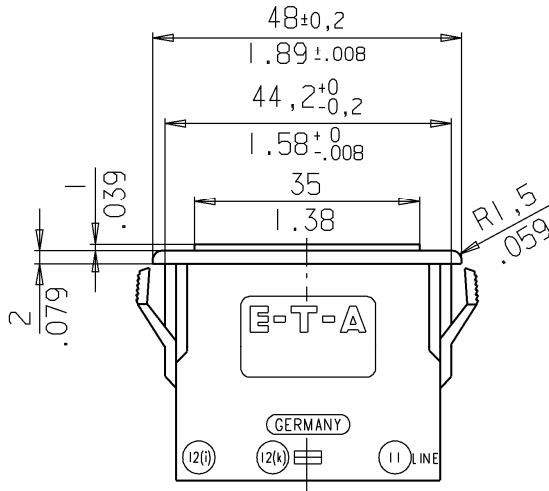
Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

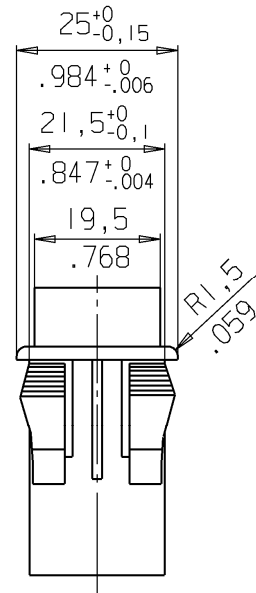
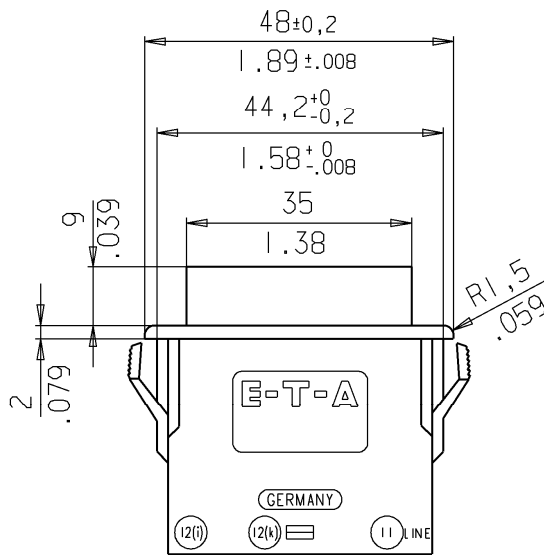
F 4 1 1
6 7 8 9

collar height .039 inch



F 4 1 3
6 7 8 9

collar height .355 inch

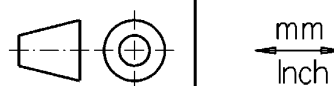


Edges of working parts: DIN 6784

This is a metric design and millimeter dimensions take precedence
Nominal dimensions without direct tolerance indication: ± IT 13 | : |

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

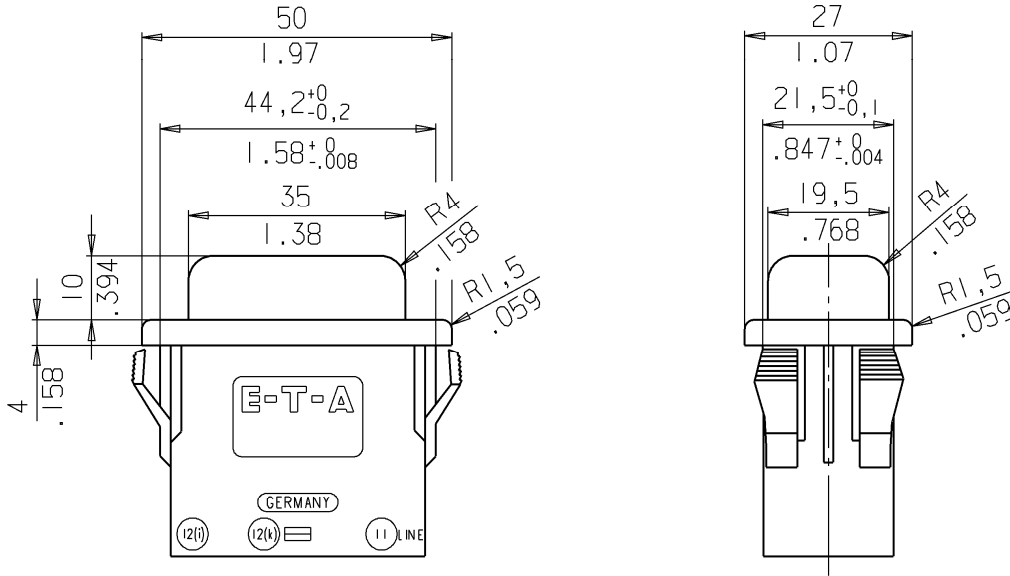


The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not

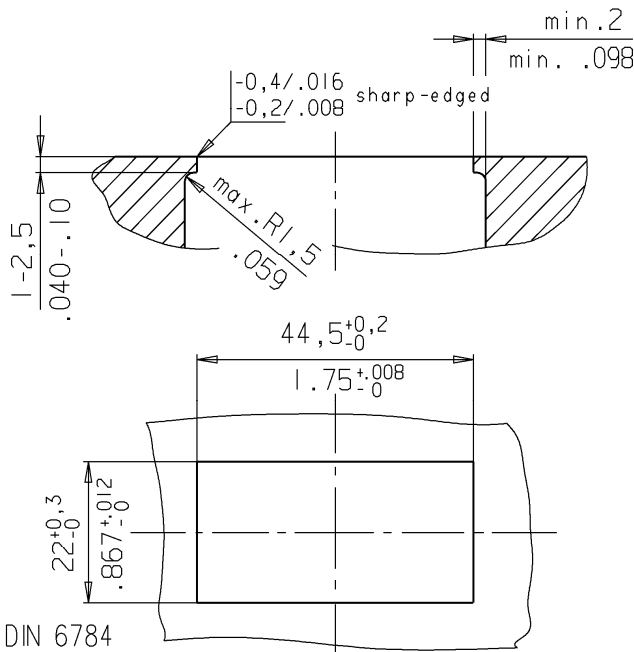
The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

F 4.1.4
6 7 8 9

collar height .079 inch with splash water protection



Panel cut-out F4.1 / F4.3 / F4.4



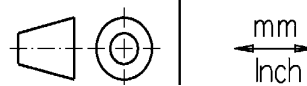
Edges of working parts: DIN 6784

Nominal dimensions without direct tolerance indication: ± IT 13

This is a metric design and millimeter dimensions take precedence

1:1

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

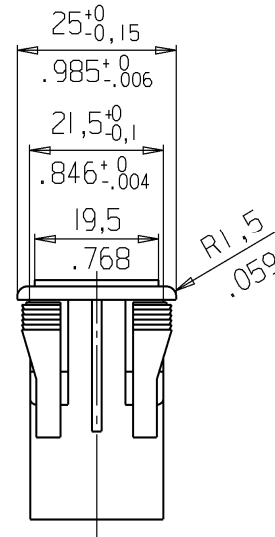
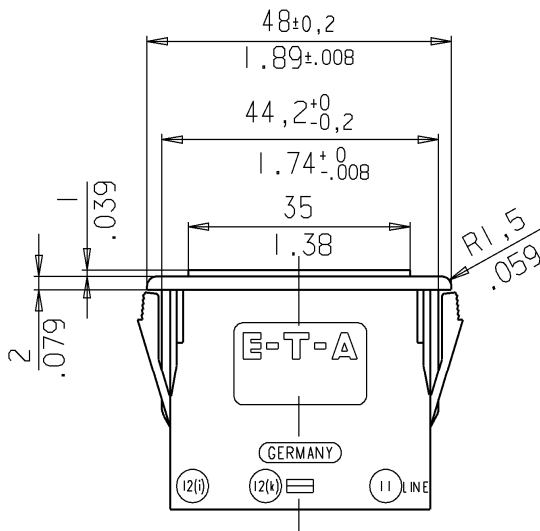


The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

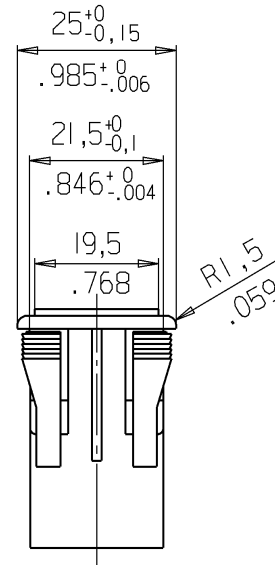
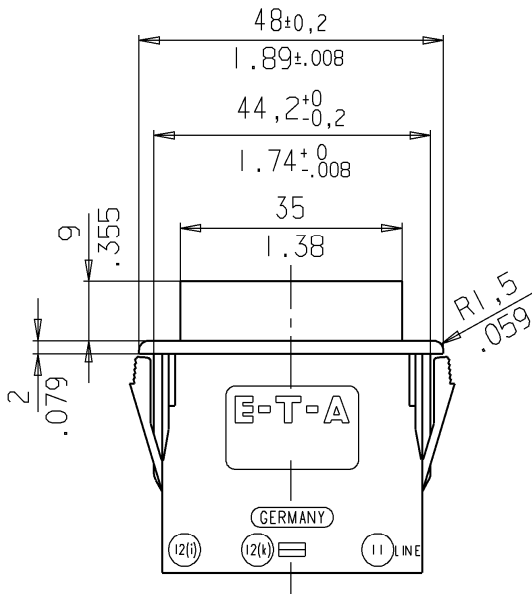
F 5 . . . 1
6 7 8 9

collar height .039 inch



F 5 . . . 3
6 7 8 9

collar height .355 inch



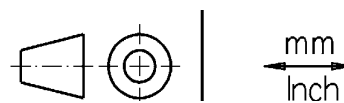
This is a metric design and millimeter dimensions take precedence

Edges of working parts: DIN 6784

Nominal dimensions without direct tolerance indication: ± IT 13

1 : 1

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

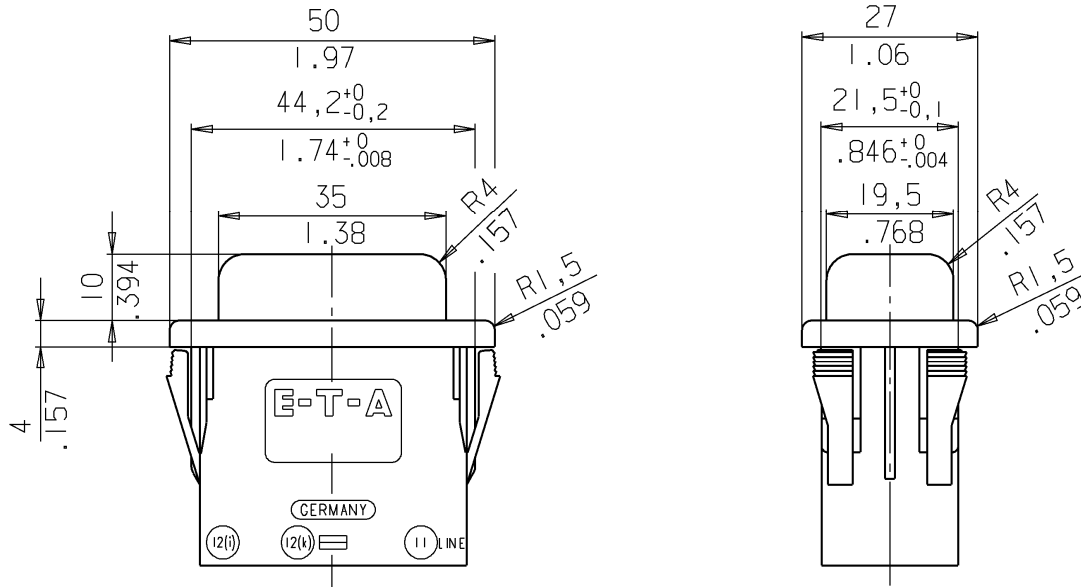


The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not

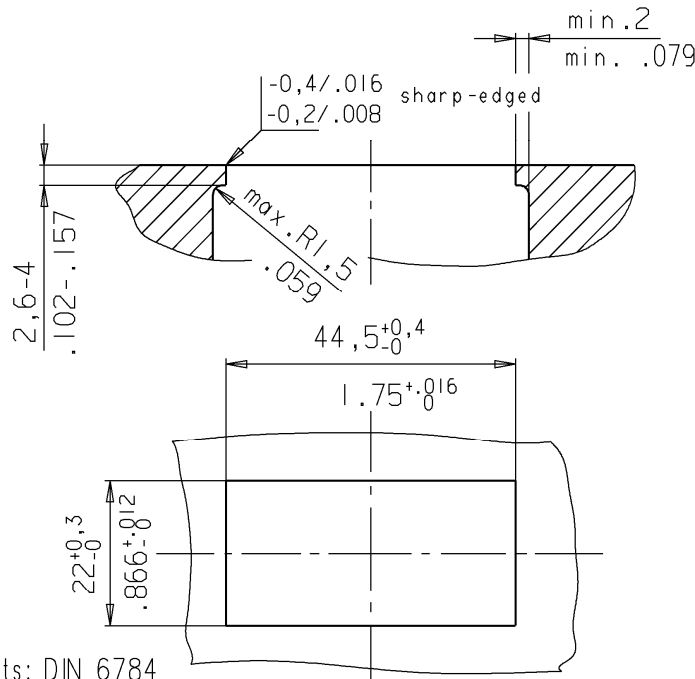
The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

F 5.1 / 4
6 7 8 9

collar height .079 inch with splash water protection



Panel cut-out F5.1 / F5.3 / F5.4



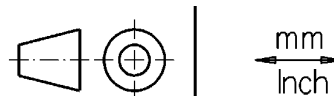
Edges of working parts: DIN 6784

Nominal dimensions without direct tolerance indication: ± IT 13

This is a metric design and millimeter dimensions take precedence

1:1

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

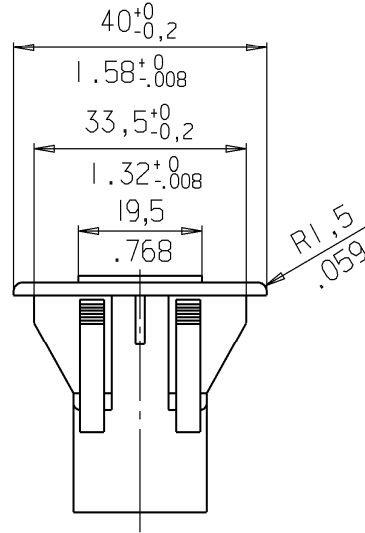
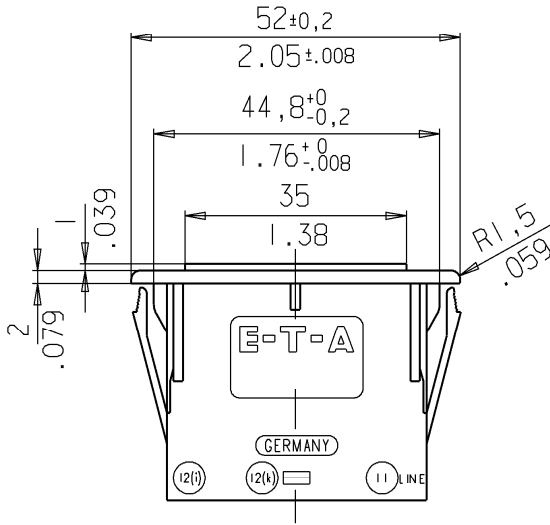


The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

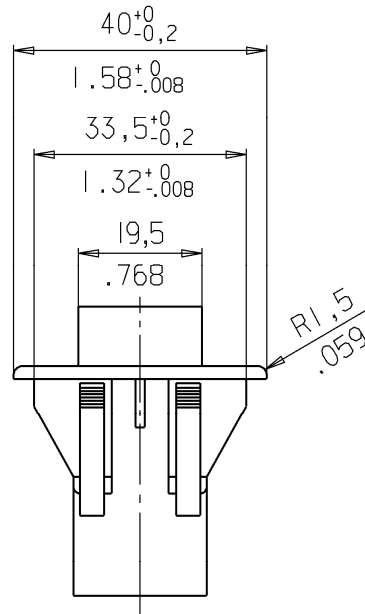
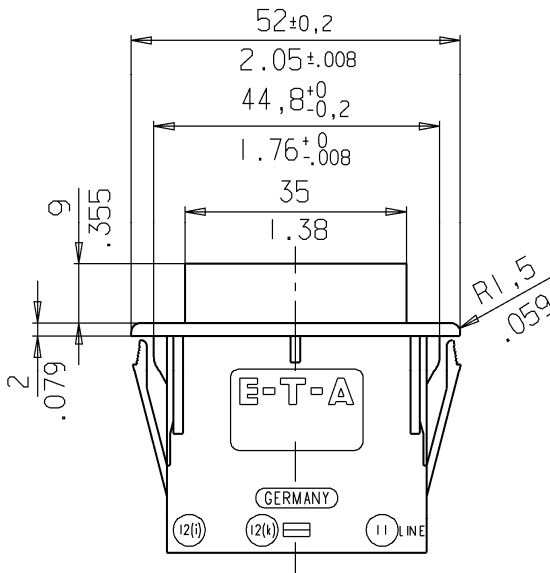
F 6 1
6 7 8 9

collar height .039 inch



F 6 3
6 7 8 9

collar height .355 inch



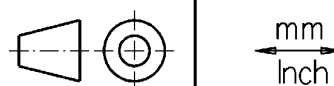
Edges of working parts: DIN 6784

Nominal dimensions without direct tolerance indication: ± IT 13

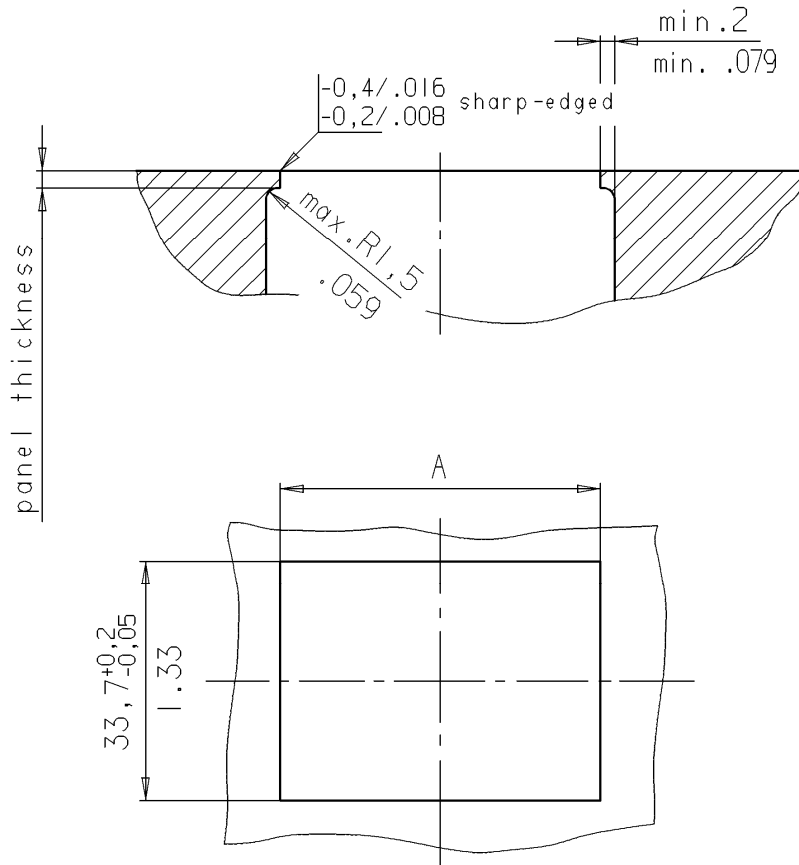
1 : 1

This is a metric design and millimeter dimensions take precedence

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



Panel cut-out F6.1 / F6.3



Panel thickness	$.047^{+0,016}_{-0}$	$.063^{+0,032}_{-0}$	$.094^{+0,040}_{-0}$	$.133^{+0,004}_{-0}$
Dim. A	$1.77^{+0,010}_{-0}$	$1.77^{+0,045}_{-0}$	$1.77^{+0,068}_{-0}$	$1.77^{+0,068}_{-0}$

Edges of working parts: DIN 6784

This is a metric design and millimeter dimensions take precedence

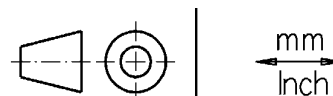
Nominal dimensions without direct tolerance indication: $\pm IT 13$

1:1

The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not

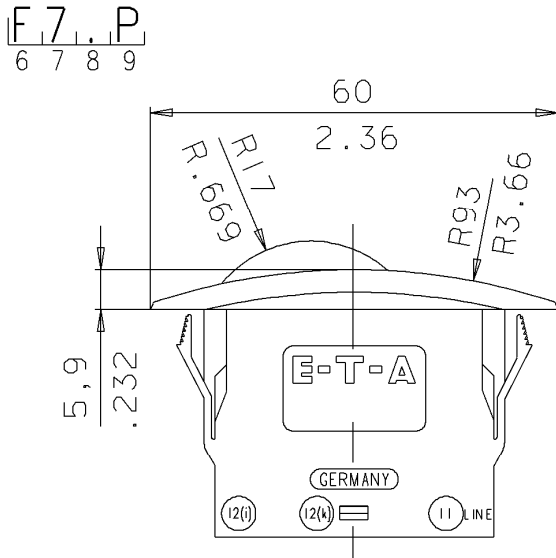
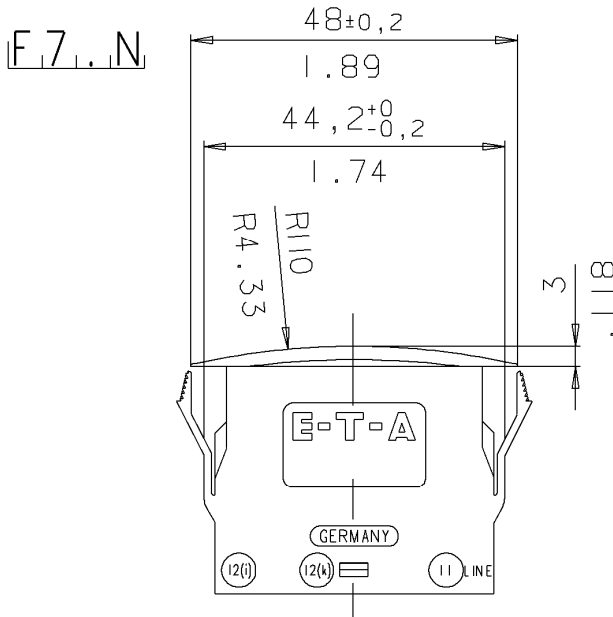
The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				
i	18 338	23.07.01					



The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

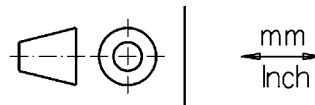


This is a metric design and millimeter dimensions take precedence

Edges of working parts: DIN 6784
Nominal dimensions without direct tolerance indication: $\pm IT 13$

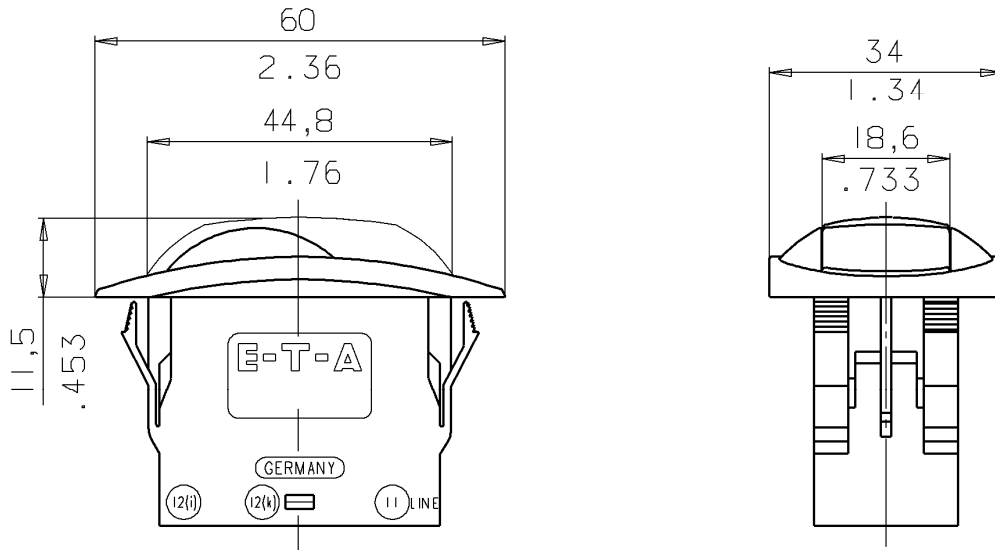
1:1

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

E.T.A. Q



This is a metric design and millimeter dimensions take precedence

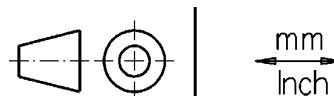
Edges of working parts: DIN 6784

Nominal dimensions without direct tolerance indication: $\pm IT 13$

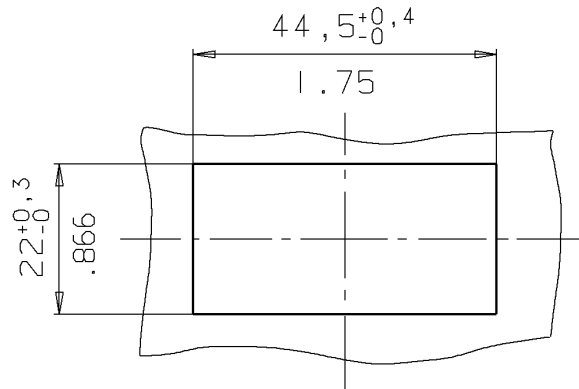
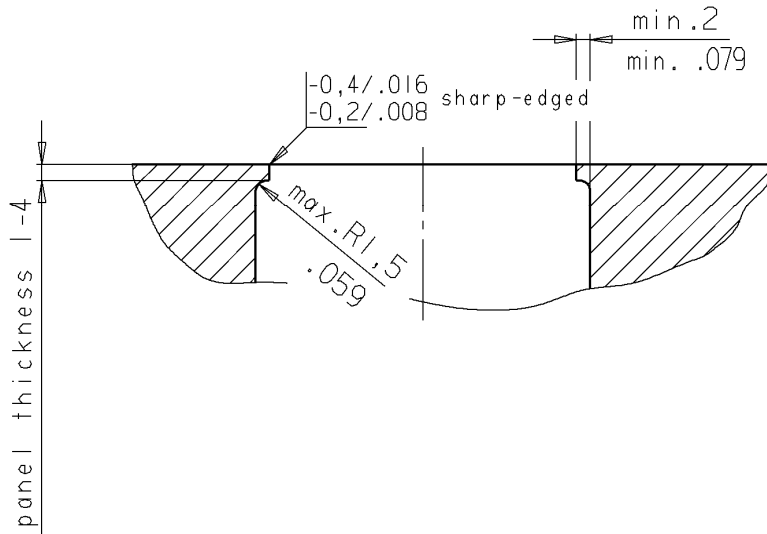
1:1

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



Panel cut-out F7.N / F7.P / F7.Q

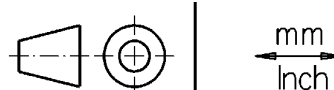


This is a metric design and millimeter dimensions take precedence

Nominal dimensions without direct tolerance indication: $\pm IT 13$

1:1

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

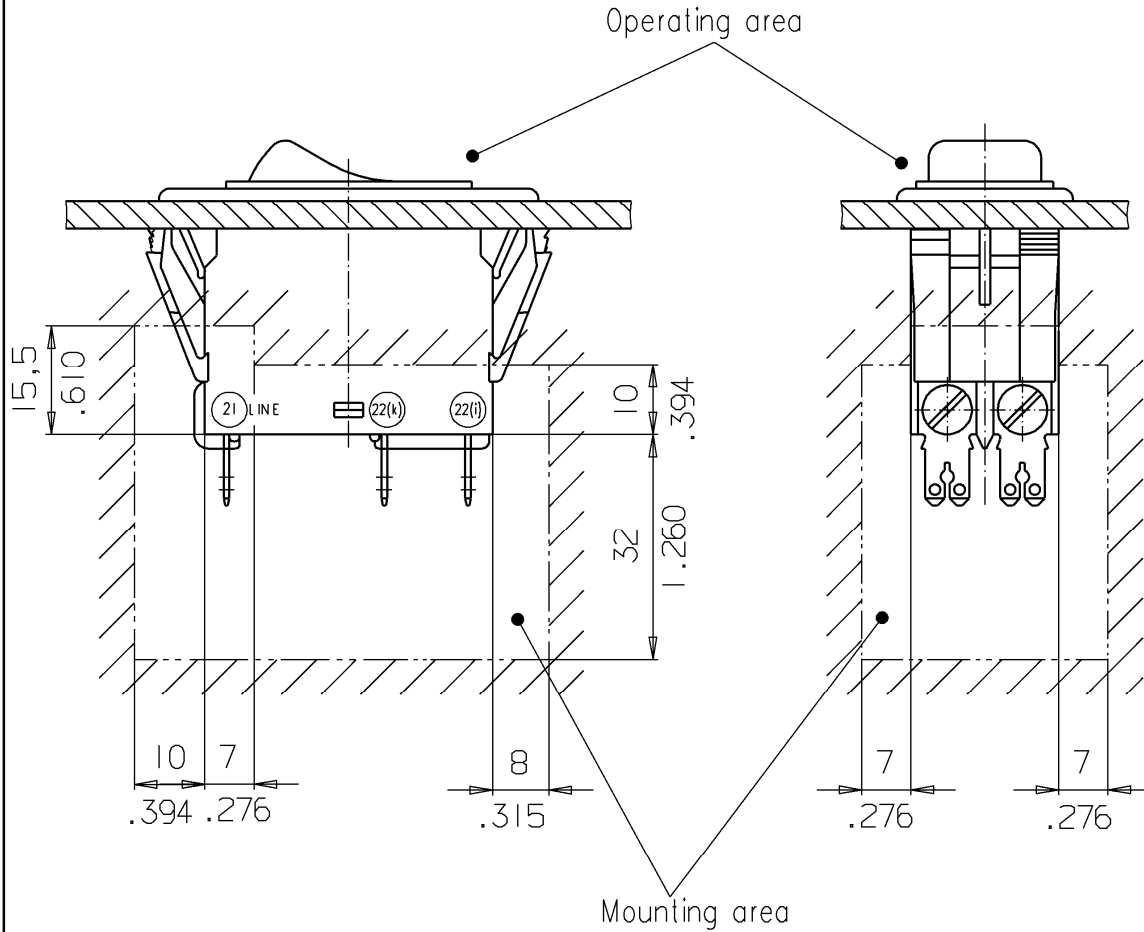


mm
Inch

The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not

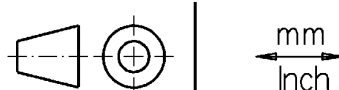
The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Safety distances required for installation
to protection class II



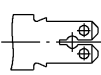
This is a metric design and millimeter dimensions take precedence | : |

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

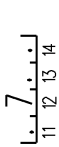


The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not



 2x flat quick connect terminal DIN 46244 - A2,8 - 0,8 - Ms
 or
 flat quick connect terminal DIN 46244 - A6,3 - 0,8 - Ms



Ordering number

3120-1-2-3-4-5-6-7-8-9-10-11-12-13-14-

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

3120 series datasheet.doc



Overcurrent Circuit Breaker
thermal trip
3120-...-T1-..
one and two pole

Data Sheet
382.073.468
sheet 27 of 37

Ordering number	screw terminal M3,5x5 DIN 85 for mains supply		2x flat quick connect terminal DIN 46244 - A2,8 - 0,8 - Ms		flat quick connect terminal DIN 46244 - A6,3 - 0,8 - Ms		Connection diagram
	11	21	11	21	12(i)	22(i)	
0 G1							with illumination at option
0 G7							
0 N1							with illumination at option
0 N7							
6 G1							with illumination at option
6 G7							
6 N1							with illumination at option
6 N7							
2 G1							Version H1,H7,P1,P7 have no 12(i) and 22(i) terminal with illumination at option
2 G7							
2 H1							Version H1,H7,P1,P7 have no 12(i) terminal with illumination at option
2 H7							
2 N1							Version H1,H7,P1,P7 have no 12(i) terminal with illumination at option
2 N7							
2 P1							Version H1,H7,P1,P7 have no 12(i) terminal with illumination at option
2 P7							
5 G1							Version H7,P7 have no 12(i) terminal with illumination at option
5 G7							
5 H1							Version H7,P7 have no 12(i) terminal with illumination at option
5 H7							
5 N1							Version H7,P7 have no 12(i) terminal with illumination at option
5 N7							
5 P1							Version H7,P7 have no 12(i) terminal with illumination at option
5 P7							
1 G7							Version H7,P7 have no 12(i) terminal with illumination at option
1 H7							
1 N7							Version H7,P7 have no 12(i) terminal with illumination at option
1 P7							



Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

Data Sheet
382.073.468
sheet 28 of 37

Back-up fuses to ensure short-circuit protection

E-T-A Current rating (A)	Back-up fuses to DIN Current rating (A)	Back-up fuses to UL 1077 Current rating (A)
0.1	0.20	20
0.2	0.40	
0.3	0.63	
0.4	1.00	
0.5	1.25	
0.6	1.40	
0.8	1.60	
1.0	2.00	
1.2	2.00	
1.5	3.15	
2.0	4.00	
2.5	16	
3.0	16	
3.5	16	
4.0	20	
4.5	20	
5.0	20	20
6.0	25	25
7.0	25	30
8.0	25	30
10.0	25	40
12.0	25	50
14.0	25	60
16.0		60
18.0	32	70
20.0	32	80

The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



Ordering number code

3 120-F 3 2 1 - N7 T1 - W12A B 4 - 10A

| | | | | | | | | | | | | |

1 2 3 4 5 6 7 8 9 10 11 12 13

1. Type number

3120: Thermal or thermal-magnetic circuit breaker, single or double pole (with ON / OFF switch only option)

2. Mounting method

F: Snap-in frame or screw mounting

3. Configuration

		panel cut-out	panel thickness	screw mounting	snap-in housing
1	for rocker	32.0 x 16.5 mm		x	
2	for 2 push buttons and water splash cover	50.0 x 26.0 mm		x	
3	for rocker or push buttons	50.5 x 21.5 mm	1.0 - 6.35 mm		x
4	for rocker	44.5 x 22.0 mm	1.0 - 2.5 mm		x
5	for rocker	44.5 x 22.0 mm	2.6 - 4.0 mm		x
6	for rocker	45.0 x 33.7 mm	1.2 - 3.4 mm		x
7	for rocker	44.5 x 22.0 mm	1.0 - 4.0mm		x

4. Number of poles

0	2 pole, unprotected, switch only
1	1 pole, thermally protected
2	2 pole, thermally protected
5	2 pole, thermally protected on one only
6	1 pole, unprotected, switch only

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



Overcurrent Circuit Breaker
thermal trip
3120-...-..T1-..
one and two pole

Data Sheet
382.073.468
sheet 30 of 37

The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not

5. Style, accessory

		water splash protection	without collar	collar height			mounting method configuration						
				1mm	2mm	9mm	F1	F2	F3	F4	F5	F6	F7
1				X					X	X	X	X	
3						X			X	X	X	X	
4		X			X				X	X	X		
5					X				X	X	X		
6	mounting thread 2 x 6-32 UNC						X						
7	mounting thread 2 x M3,5						X						
8	mounting thread 4 x 6-32 UNC						X						
9	mounting thread 4 x M3,5						X						
A	with transverse hole 4mm dia					X			X	X	X	X	
B	current rating marked on top of flange			X					X	X	X	X	
C	with additional sealing (sealing grease)	X			X				X	X	X		
D	with silicone cover	X			X				X	X	X		
E	with silicone cover and additional sealing (sealing grease)	X			X				X	X	X		
F	frame with 2 push buttons							X	X				
G	frame with 1 push button								X				
H	I and 0 marked on top of flange			X					X	X	X	X	
K	I and 0 marked on top of flange					X			X	X	X	X	
L	I and 0 marked on top of flange			X					X	X	X	X	
M	I and 0 marked on top of flange					X			X	X	X	X	
N	colour grey (stratos grey), new design		X										X
P	Snap-on actuator guard preventing inadvertent operation		X										X
Q	Snap-on splash cover	X	X										X
Z	Snap-in frame			X					X				

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



The information furnished is believed to be accurate and reliable. However, E-T-A assumes no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

6. Terminal design

blade terminals DIN 46 244 - C			number of poles				
Terminal code			0	1	2	5	6
12(i), 22(i) A3 terminals	12(k), 22(k)	11, 12					
A1	x	with screw ISO 1580 - M3.5 and clamping plates		x	x		
A2	x	with M3,5 screw with +/- slot and clamping plates		x	x	x	
A3	x	with M3,5 screw with +/- slot and clamping plates and A3 terminals	x	x	x	x	x
B1	x	with screw ISO 1580 - M3,5 and washer and tab DIN 46244-C	x	x	x	x	x
B2		with screw ISO 1580 - M3,5 and washer and tab DIN 46 244-C		x	x	x	
G7	x	with screw ISO 1580 - M3,5	x	x	x	x	x
H7		with screw ISO 1580 - M3,5		x	x	x	
K7		with M3.5 screw with +/- slot		x	x	x	
L7	x	with M3.5 screw with +/- slot	x	x	x	x	x
N7	x	x	x	x	x	x	x
P7	x	x		x	x	x	

Unprotected chambers only with B1, G7, L7 or N7, but without terminal 12 (k) or 22 (k)

7. Characteristic curve

		number of poles				
		0	1	2	5	6
M1	thermal - magnetic		x	x	x	
Q1	switch only; 50,000 operations, max 20A, cosφ 1, 250 V	x				x
T1	thermal 1. $I_N - 1.4 \times I_N$		x	x	x	
X.	special calibration		x	x	x	

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without notice is reserved.

8. Actuator style

		Style																					
		1	3	4	5	6	7	8	9	A	B	C	D	E	F	G	H	K	L	M	N	P	Q
A	rocker																				x	x	x
D	1 push button															x							
K	rocker, momentary switch	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x			
M	rocker	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x			
S	2 push buttons														x								
U	rocker, momentary switch	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x			
W	rocker	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x	x			
X	custom designed rocker	x	x		x	x	x	x	x	x	x						x	x	x	x			
Z	1 push button, momentary switch															x							

For markings of A, K, M, U W and X see sheets 33 - 35

9. Actuator colour

opaque (without illumination)	translucent (suitable for illumination)	colour	Actuator style									
			A	D	K	M	S	U	W	X	Z	
01		black		x	x	x	x	x	x	x	x	x
02		white			x	x		x	x			
04		red		x	x	x	x	x	x			x
06		blue			x	x		x	x			
08		light grey			x	x		x	x			
09		green			x	x		x	x			
	12	white		x	x	x	x	x	x			x
	14	red			x	x		x	x			
	15	orange			x	x		x	x			
	19	green		x	x	x	x	x	x			x
20	30	blue (katana blue)	x									

Special version												
2 push buttons of different colours	button „ON“ (translucent)	button „OFF“ (opaque)	A	D	K	M	S	U	W	X	Z	
GR	green	red						x				
WB	white	black						x				
WR	white	red						x				

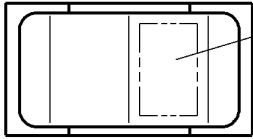
The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				
h	18 056	13.12.00	K.Go				

The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

10. Actuator marking rocker



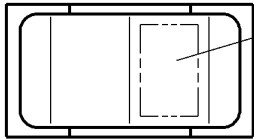
illumination window

	Actuator						Actuator / colour				
	A	K	M	U	W	X	U01	U02	W01	W02	
A	-			0							
B	EIN			AUS							
C	ON			OFF							
D		0	-								
E		AUS	EIN								
F		OFF	ON								
G		OFF	ON								
H		OFF	ON								
J	○		-								
K	○		-								
L	○ OFF		ON								
M	TRIPPED		PRESS TO RESET								
N	STAND BY		NO								
P	OFF 0		NO								
Q	0		-								
				marking impressed							
					×					×	×
									×	×	×
									×	×	×

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				

The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not

10. Actuator marking rocker



illumination window

				Actuator					
				A	K	M	U	W	X
7	ACL	PUSH ON	ACL				X	X	
8	VENT	PUSH ON	VENT				X	X	
9	STROBE LITE	PUSH ON	STROBE LITE				X	X	
A	PILOT HEAT	PUSH ON	PILOT HEAT		X	X			
B	OFF	ON			X	X			
C	OFF	ON	LIGHT		X	X			
D	OFF	ON	ROTOR		X	X			
E	GEN	PUSH ON			X	X			
F	NO		OFF		X	X			
G		ON			X	X			

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not

10. Actuator marking

Push button

		Actuator		
		D	S	Z
X	without marking	x	x	x
Y	with black marking on actuator face	x	x	x

11. Actuator illumination

		Actuator			Actuator colour													
		D, S, Z	K, M, U, W	X	01	02	04	06	08	09	12	14	15	19	GR	WB	WR	
B	Lamp illumination	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
L	Lamp illumination	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x
G	LED illumination - green	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x
R	LED illumination - red	x	x		x	x	x	x	x	x	x	x	x				x	x
Y	LED illumination - yellow	x	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x

12. Illumination voltage range

		marked	Actuator illumination									
			B	B	L	G	R	R	Y	Y		
0	4 - 7 V	6 V	x	x		x	x		x			
1	10 - 14 V	12 V	x	x		x	x		x			
2	20 - 28 V	24 V	x	x		x	x		x			
3	90 - 140 V	115 V	x		x							
4	185 - 275 V	230 V	x		x							
5	52 - 54 V	48 V	x	x					x	x		
6	320 - 450 V	400 V	x		x							
7	50 - 70V	60 V							x	x		
			Actuator	K, M, U, W	x			x	x	x	x	x
				D, S, Z		x	x	x	x	x	x	x
			Type of current	DC	x	x	x	x	x	x	x	x
				AC	x	x	x	x	x		x	

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				



The information furnished is believed to be accurate and reliable. However no responsibility for its use, in the interest of improved design, performance and cost effectiveness the right to make changes in these specifications without not

13. Current ratings

current rating (A)	characteristic curve						
	M1	T1	Q1	X1	X2	X3	X4
0.05		x					
0.1	x	x					
0.15	x	x					
0.2	x	x					
0.25	x	x					
0.3	x	x					
0.35	x	x					
0.4	x	x					
0.45	x	x					
0.5	x	x					
0.55	x	x					
0.6	x	x					
0.65	x	x					
0.7	x	x					
0.8	x	x					
0.9	x	x					
1	x	x					
1.2	x	x		x			
1.4	x	x					
1.5	x	x					
1.7	x	x					
1.8	x	x					
2	x	x					
2.5	x	x		x	x	x	
2.8	x	x					
3	x	x		x	x	x	x
3.5	x	x					
4	x	x			x	x	x
4.5	x	x			x		
5	x	x			x	x	
6	x	x		x			
7	x	x			x		
8	x	x			x		
9	x	x					
10	x	x					
11	x	x					
12	x	x					
13	x	x					
14	x	x			x		
15	x	x		x	x		
16	x	x					
17		x			x		
18		x					
20		x	x				

Note: Boldface references are in conformance with the ordering informations shown in the E-T-A Catalogue

The copying, distribution and utilization of this document as well as the communication of its contents to others without expressed authorization is prohibited. Offenders will be held liable for the payment of damages. All rights reserved in the event of the grant of a patent, utility model or ornamental design registration. Protection mark according to DIN 34.

Index	AM	Date	Name	Index	AM	Date	Name
g	17 866	26.06.00	K.Go				