TeSys U motor starters – open version

Starter-controller

Non-reversing power bases

1

LUB 12, LUB 32

Two types of bases are available, each in two versions:
- LUB12, LUB32 Standard power bases: 12 A and 32 A versions.
- Advanced power bases for use in conjunction with LUB120, LUB320 function or communication module: 12 A and 32 A versions.

Common characteristics

- Breaking capacity: 50 kA at 400 V.
- Ratings: 12 A or 32 A at 400 V.
- Built-in auxiliary contacts: max. operating voltage (Up): 690 V AC, 250 V DC. Max. current (Ith): 5 A 1 NO, 1 NC.
- Guaranteed continuity of service (complete coordination) between the protection and control functions to EN 60947-6-2.
- Connection by screw clamp terminal.

References for Standard power bases

Voltage (V)	≤ 440 V	500 V	690 V	Reference	Weight (kg)
Rating (A)	12	12	9	LUB12	0.900
Breaking capacity (kA)	50	10	4		
Rating (A)	32	23	21	LUB32	1.270
Breaking capacity (kA)	50	10	9		

The Standard bases are fitted with auxiliary contacts and a fixed terminal block.

LUB 120, LUB 320

References for Advanced power bases

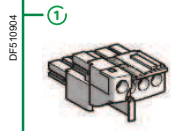
Voltage (V)	≤ 440 V	500 V	690 V	Reference	Weight (kg)
Rating (A)	12	12	9	LUB2 B120	0.865
Breaking capacity (kA)	50	10	4		
Rating (A)	32	23	21	LUB2 B320	0.865
Breaking capacity (kA)	50	10	9		

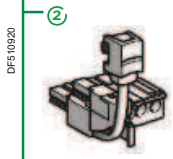
Terminal blocks for Advanced power bases

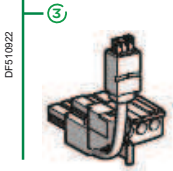
- 3 types of terminal blocks are available, providing different types of pole status remote indication and coil control.
- A cover is always supplied for each terminal block so that the top cavity of the base designed to receive the function modules (communication, alarm, etc.) can be closed off, if necessary.

Terminal block for built-in auxiliary contacts

Description	Reference
① Single terminal block for wire remote indication and local coil control	LU9B N11
② Terminal block with status remote indication cable to communication module LUF C00, LUL C033, ASILUF C51, local coil control	LU9B N11C
③ Terminal block with a cable for controlling the coil via communication module LUL C07, LUL C08, LUL C09, LUL C15, wire remote indication	LU9B N11L







TeSys U motor starters – open version

Starter-controller

Non-reversing and reversing power bases

"Reverser" power bases

The reverser power bases (non-reversing and reversing) consist of a combined power base and reverser block and are supplied as an assembled unit. They can also be assembled by the customer from units ordered separately.

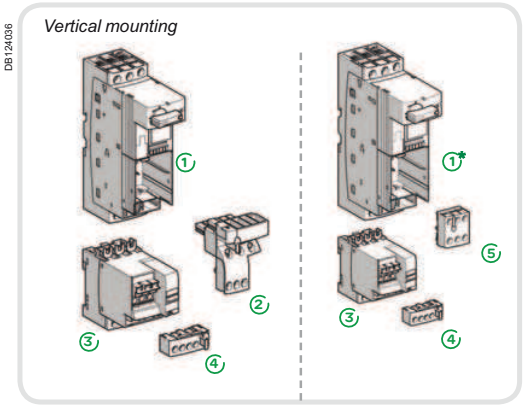
Common characteristics

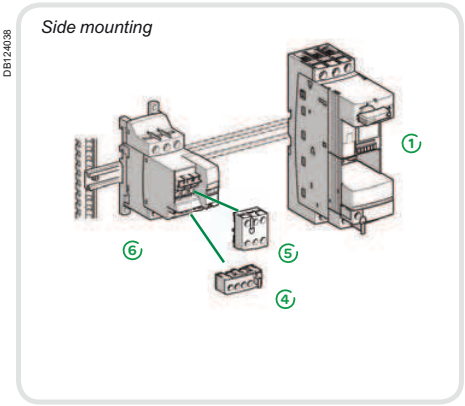
- Ratings: 12 A or 32 A at 400 V.
- Built-in auxiliary contacts: max. operating voltage (Up): 690 V AC, 250 V DC Max. current. (Ith): 5 A 1 NO, 1 NC.
- Guaranteed continuity of service (complete coordination) between the protection and control functions to EN 60947-6-2.
- Connection by screw clamp terminal.

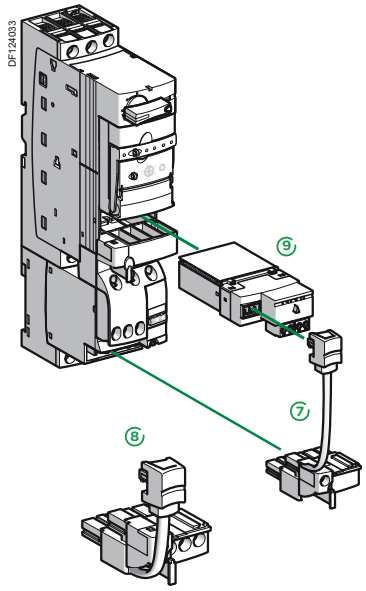
References for Reverser power bases

Voltage (V)	≤ 440V	500 V	690 V	Reference	Weight (kg)
Rating (A)	12	12	9	**LU2B12••**	1.270
Breaking capacity (kA)	50	10	4		
Rating (A)	32	23	21	**LU2B32••**	1.270
Breaking capacity (kA)	50	10	9		

Reverser to be assembled: 3 solutions







Assembly components

Description	Reference
①* 12 A and 32 A bases	**LUB12, 32**
① 120 A and 320 A bases	**LUB120, 320**
② Prewired reverse control link	**LU9MR1C**
③ Reverser block for vertical mounting	**LU2MB0••**
④ Single terminal block for built-in auxiliary contacts	**LU9M1**
⑤ Terminal block for wired control connection	**LU9MR1**
⑥ Reverser block for side mounting	**LU6MB0••**
⑦ Terminal block with contact status remote indication cable to LULC communication module ⑨	**LU9MRC**
⑧ Terminal block with jumper for controlling the coil via LULC communication module ⑨	**LU9MRL**

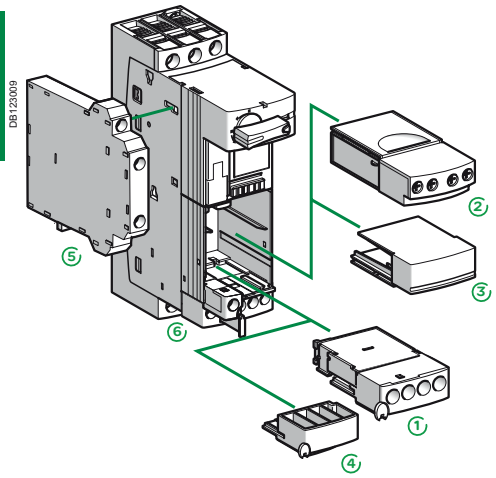
Full power base references

One or two letters must be added to the power base reference to identify the control voltage of its coil.
Example: LUB12B = 12 A power base with 24 V AC coil control

Volts	24	48…72	110…240
⎓	BL	–	–
∿	B	–	–
⎓ or ∿	–	ES *(1)*	FU *(2)*

(1) ⎓ : 48…72 V, ∿ : 48 V.
(2) ⎓ : 110…220 V, ∿ : 110...240 V.

Signalling contacts
Non-reversing power base



Covers ③ and ④ for empty cavities are supplied with the basic module.

Reminder: TeSys U is similar to a motor protection circuit breaker and a contactor sharing the same power contacts (poles).

Monitoring TeSys U protection status

Auxiliary contacts are used to identify the operating mode:
OPERATION ALLOWED / FAULT-TRIGGERED STOP / OFF
They reproduce the status of the rotary handle: ⏻ (Operation allowed) / TRIP / OFF
They can be similar to the contacts of a conventional circuit breaker:
□ open / closed circuit breaker
□ OK / tripped.

2 locations for installing the contacts
■ in the function module cavity: plug-in box ①
■ on the side of the power base: side-mounting box ⑤.

Item	Composition	Reference	Weight (kg)
①	1 SD contact (NC / 95-96)	**LUA1 C11**	0.03
	1 OF contact (NO / 17-18)		
①	1 SD contact (NO / 97-98)	**LUA1 C20**	0.03
	1 OF contact (NO / 17-18)		
⑤	2 OF contacts (NO)	**LUA8 E20**	0.048

Monitoring the pole status of the TeSys U

The auxiliary contacts are used to find the status of the load:
■ ON / OFF
■ They reproduce the status of the common power contacts (NO contacts) or the reverse status (NC contacts).

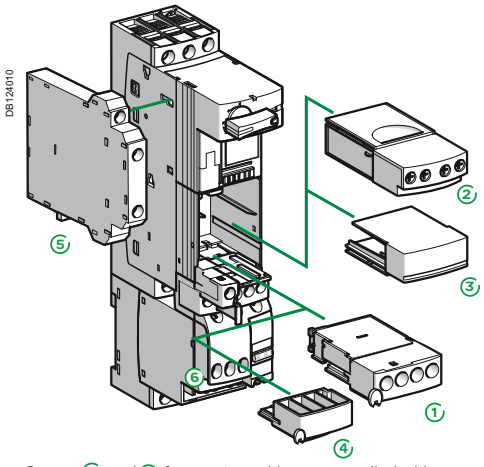
Auxiliary contacts ⑥ built into the TeSys U power base	
Generally used for self-holding	
1 NO contact (13-14)	built-in
1 NF contact (21-22)	built-in

■ **Module with two additional plug-in contacts**
Used as an extension to the built-in contacts, for automations, signalling.

Item	Composition	Reference	Weight (kg)
②	2 NO contacts (33-34 and 43-44)	**LUF N20**	0.05
②	1 NC contact (31-32) and 1 NO contact (43-44)	**LUF N11**	0.05
②	2 NF contacts (31-32 and 41-42)	**LUF N02**	0.05

Electrical characteristics of the contacts
Use of add-on and auxiliary contacts: ~ or = 24 …250 V, Ith: 5 A.

Signalling contacts
Non-reversing and reversing power base



Covers ③ and ④ for empty cavities are supplied with the basic module

Monitoring TeSys U protection status

The auxiliary contacts are used to identify the load running mode:
■ OPERATION ALLOWED / FAULT-TRIGGERED STOP / OFF.
They reproduce the status of the rotary handle: ⏻ (Operation allowed) / TRIP / OFF.
They may be similar to the OF (Open/Closed) and SD (Fault indicating) contacts of a conventional circuit breaker.
□ OF contact: open / closed circuit breaker
□ SD contact: circuit breaker OK / tripped

2 locations for installing contacts
■ in a function module cavity: plug-in box ①
■ on the side of the power base: side-mounting box ⑤

Item	Composition	Reference	Weight (kg)
①	1 SD contact (NC / 95-96) 1 OF contact (NO / 17-18)	**LUA1 C11**	0.03
①	1 SD contact (NO / 97-98) 1 OF contact (NO / 17-18)	**LUA1 C20**	0.03
⑤	2 OF contacts (NO)	**LUA8 E20**	0.048

Monitoring the pole status of TeSys U: by auxiliary contacts

■ The auxiliary contacts are used to find the status of the load: ON / OFF.
They reproduce the status of the common power contacts (NO contacts) or the reverse status (NC contacts).

Additional plug-in module with 2 auxiliary contacts
The contacts built into the power base are used to control the reverser block.
To remotely indicate the status of the power poles, one of the following accessories must be used.

Item	Composition	Reference	Weight (kg)
②	2 NO contact (33-34)	**LUF N20**	0.05
②	1 NO contact (43-44) 1 NF contact (31-32)	**LUF N11**	0.05
②	2 NF contacts (31-32 and 41-42)	**LUF N02**	0.05

Monitoring the direction of rotation

Auxiliary contacts are used to find the direction of the load control: FORWARD / REVERSED.
They reproduce the status of the reverser block power contacts.

Auxiliary contact ⑥ built into the reverser block
Generally used to indicate the direction of rotation of a motor.
1 reversing contact (82 - 81 - 84).

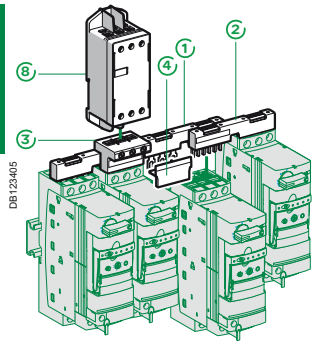
Electrical characteristics of the contacts
Use of add-on and auxiliary contacts: ~or = 24 …250 V, Ith: 5 A.

TeSys motor starters – open version

TeSys U starter-controllers

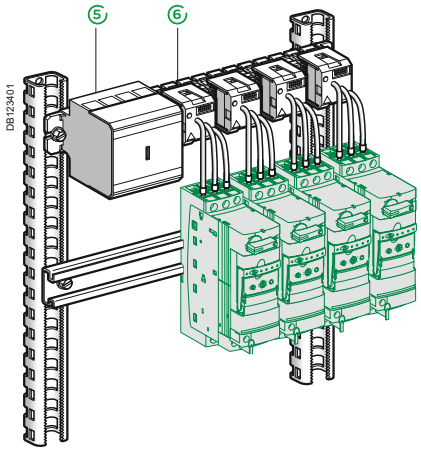
Pre-wired system for power connections

1



Pre-wired system for power connections up to 63 A

Description	Application	Pitch mm	Item	Sold in lots of	Unit reference	Weight kg
Sets of 3-pole 63 A busbars	2 tap-offs	45	②	1	**GV2 G245**	0.036
		54	–	1	**GV2 G254**	0.038
	3 tap-offs	45	–	1	**GV2 G345**	0.058
		54	–	1	**GV2 G354**	0.060
	4 tap-offs	45	①	1	**GV2 G445**	0.77
		54	–	1	**GV2 G454**	0.085
	5 tap-offs	54	–	1	**GV2 G554**	0.100
Protective end cover	For unused busbar outlet	–	④	5	**GV1 G10**	0.005
Terminal block for supply to one or more busbar sets		–	③	1	**GV1 G09**	0.040



Pre-wired system for power connections up to 160 A

The busbar can be screw-mounted onto any support.

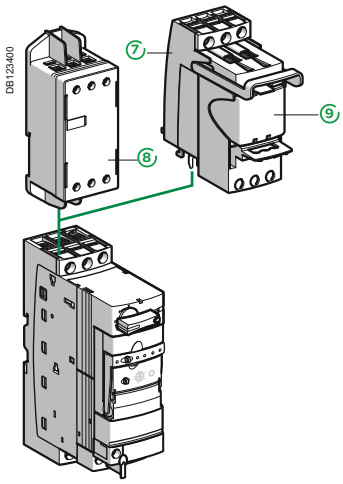
Set of 4-pole busbars: 3-phase + neutral or 3-phase + common

Number of tap-off units at 18 mm intervals	Item	Length mm	Mounting in enclosure width mm	Reference	Weight kg
18	5	452	800	**AK5 JB144**	0.900

Removable 3-phase power sockets

Number of points used on the busbar system	Thermal current	Item	Cable length	Sold in lots of	Unit reference	Weight kg
2	16	⑥	200	6	**AK5 PC13** *(1)*	0.040
	32	⑥	250	6	**AK5 PC33** *(1)*	0.045
			1000	6	**AK5 PC33L** *(1)*	0.060

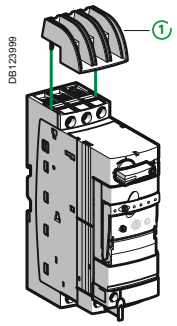
TeSys motor starters – open version
TeSys U starter-controllers
Limiter blocks and accessories



Limiter blocks and accessories

Application	Item	Breaking capacity Iq		Mounting	Unit reference	Weight kg
		≤ 440 V	690 V			
		kA	kA			
Limiter-disconnector *(3) (5)*	⑦ + ⑨	130	70	Direct on power base	**LUALB1** *(2)*	0.310
Limiter *(3)*	⑧	100	35	Separate	**LA9LB920**	0.320
Limiter cartridge	⑨	130	70	Limiter-disconnector	**LUALF1**	0.135
Clip-in marker holder	–	–	–	On power bases, on reverser block, on parallel link splitter box	**LAD90** *(4)*	0.001

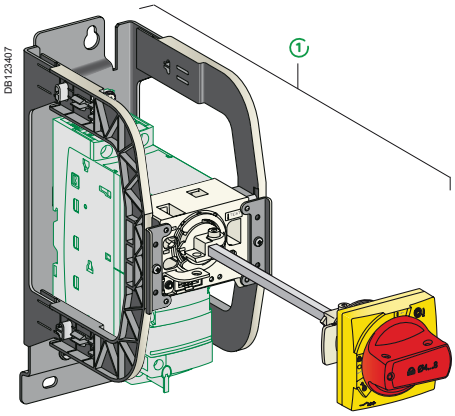
(1) The rated peak current for the power sockets AK5 PC•• is 6 kA.
When used in association with power bases LUB••, the prospective short-circuit current must not exceed 7 kA.
(2) Supplied with limiter cartridge.
(3) These devices make it possible to increase the breaking capacity of the power base.
(4) Sold in lots of 100.
(5) The limiter must be mounted on an LUB or LU2B power base. The limiter can therefore not be common to several motor starters.

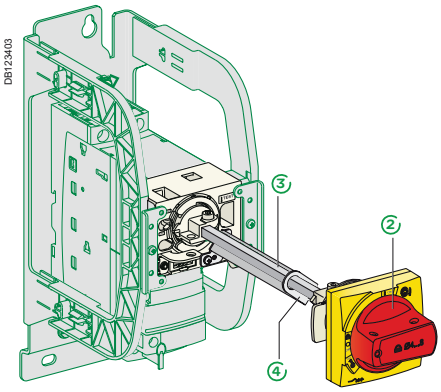


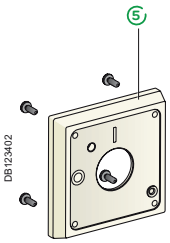
Phase barrier LU9 SP0 must be used:
- to build a UL 508 Type E certified starter (Self Protected Starter)
- without the phase barrier, the starter-controller is certified UL 508
- if the starter-controller is to be used at an operational voltage of 690 V.

Description	Item	Application	Mounting	Reference	Weight kg
Phase barrier	①	LUB or LU2B 12 or 120 LUB or LUB2B 32 or 320 LUA LB1	Direct on terminals L1, L2, L3	**LU9SP0**	0.030

TeSys motor starters – open version
TeSys U starter-controllers







Extended rotary handle

Allows a circuit-breaker or a TeSys U starter-controller installed in back of an enclosure to be operated from the front of the enclosure.
The rotary handle can be black or red/yellow, IP 54 or IP 65. It includes a function for locking the circuit breaker or the starter in the O (OFF) or | (ON) position (depending on the type of rotary handle) by means of up to 3 padlocks with a shank diameter of 4 to 8 mm.
The extended shaft must be adjusted to the depth of the enclosure.
The IP54 rotary handle is fixed with a nut (Ø 22) to make it easier to assemble.

Padlockable external controls

Description

1. Handle + mounting system kit
2. Universal handle
3. Shaft
4. Shaft support plate for deep enclosure
5. Retrofit accessory
6. Laser Square accessory

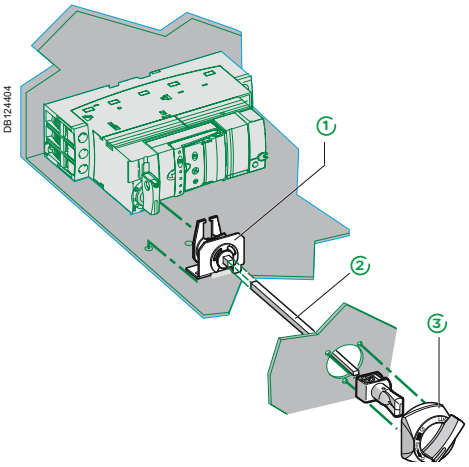
Padlockable external controls

Handle + mounting system kit

Description		Item	Reference	Weight kg
	Black handle, with error status, IP 54	1	**LU9APN21**	0.820
	Red handle, with error status, IP 54	1	**LU9APN22**	0.820
	Red handle, without error status, IP 65	1	**LU9APN24**	0.820
	Black handle, IP 54	2	**GVAPB54**	0.140
	Red handle, IP 54	2	**GVAPR54**	0.140
	Red handle, IP 65	2	**GVAPR65**	0.140
Shaft				
	L = 315 mm	3	**GVAPA1**	0.110
Shaft support plate for deep enclosure				
	Depth ≥ 300 mm	4	**GVAPK12**	0.030
Retrofit accessory				
		5	**GVAPP01**	0.160
Sticker (vendu par lot de 10)				
Warning label	French		**GVAPSFR**	
	English		**GVAPSEN**	
	German		**GVAPSDE**	
	Spanish		**GVAPSES**	
	Chinese		**GVAPSCN**	
	Portuguese		**GVAPSPT**	
	Russian		**GVAPSRU**	
	Italian		**GVAPSIT**	

TeSys motor starters – open version

TeSys U starter-controllers



Remote controls - small handle

Description	Item	Reference	Weight kg
Handle for mounting in the MCC drawer with fixing kit	① + ② + ③	**LU9 AP20**	0.586

TeSys motor starters - open version
TeSys U starter-controllers
Control units

1

Operating characteristics

Control units	Standard	Advanced			Multifunction
	LUCA	LUCB	LUCC	LUCD	LUCM
Thermal overload protection					
Overcurrent protection	14.2 x the setting current				3 to 17 x the setting current
Short-circuit protection	14.2 x the max. current				
Protection against phase loss					
Protection against phase imbalance					
Earth fault protection (equipment protection only)					
Tripping class	10		10	20	5…30
Motor type	3-phase		Single-phase	3-phase	Single-phase and 3-phase
Thermal overload test function					
Overtorque					
No-load running					
Long starting time					
Reset method Manual					Parameters can be set
Automatic or remote		With function module, or parameters can be set via the bus with a communication module, see chart below.			Parameters can be set
					Parameters can be set via the bus with a communication module (see below).
Alarm		Thermal overload alarm only with function module or communication module, see below.			Possible for each type of fault. Indication on front panel of the control unit, via remote terminal, via PC or via PDA *(1)*.
					With communication modules to make use of these alarms via a bus, see below.
"Log" function					Log of the last 5 trips. Number of starts, number of trips, number of operating hours.
"Monitoring" function					Display of main motor parameters on front panel of the control unit, via remote terminal, via PC or via PDA *(1)*.

With function modules *(2)*

Thermal overload alarm		With module LUF W			
Thermal overload signalling and manual reset		With module LUF DH11			
Thermal overload signalling and automatic or remote reset		With modules LUF DA01 and LUF DA10			
Indication of motor load (analogue)		With module LUF V			

With communication module or via Modbus port on control unit LUCM *(2)*

Starter status (ready, running, fault)	With any communication module				
Reset method		Parameters can be set via the bus			
Alarm		With modules LUL C031, LUL C033, LUL C15, LUL C07, LUL C08 and LUL C09 (thermal overload alarm only).			With module LUL C031, LUL C033, LUL C15, LUL C07, LUL C08 and LUL C09 and Modbus port on the control unit (alarm possible for all types of fault).
Remote reset via the bus					
Indication of motor load					
Fault signalling and differentiation					
Remote programming and monitoring of all functions					With modules LUL C031, LUL C033, LUL C15, LUL C07, LUL C08 and LUL C09 and Modbus port on the control unit.
"Log" function					
"Monitoring" function					

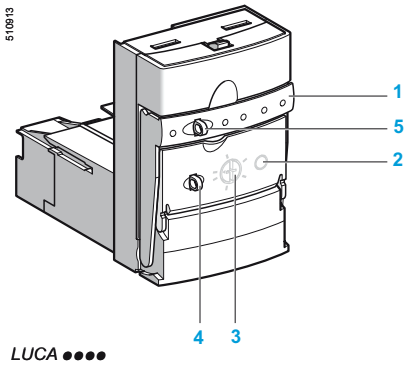
Built-in function *Function provided with accessory*

(1) PDA: Personal Digital Assistant.
*(2) Mounting possibilities: 1 function module **or** 1 communication module.*

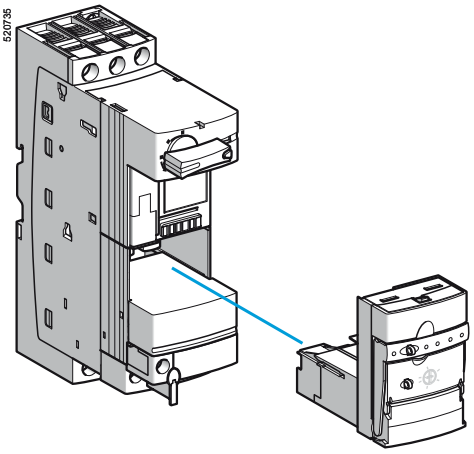
TeSys motor starters - open version

TeSys U starter-controllers

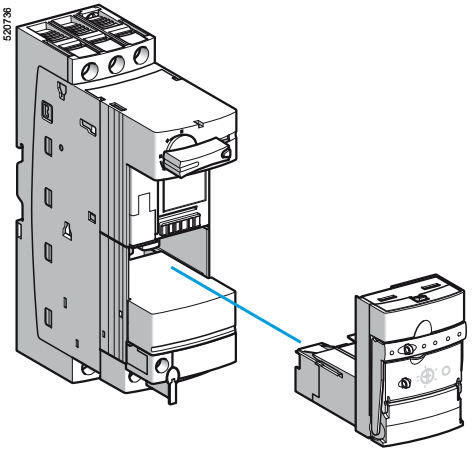
Standard and advanced control units



LUCA ●●●●
LUCB ●●●●



LUB ●2 + LUCA ●●●●



LUB ●2 + LUCB ●●●●

Description

1 Extraction and locking handle
2 Test button (on advanced control unit only)
3 Ir adjustment dial
4 Locking of settings by sealing the transparent cover
5 Sealing of locking handle

Standard control units

Maximum standard power ratings of 3-phase motors 50/60 Hz			Setting range	Clip-in mounting on power base Rating	Reference, to be completed by adding the voltage code *(1)*	Weight
400/440 V	500 V	690 V				
kW	kW	kW	A	A		kg
Class 10 for 3-phase motors						
0.09	–	–	0.15…0.6	12 and 32	**LUCA X6●●**	0.135
0.25	–	–	0.35…1.4	12 and 32	**LUCA 1X●●**	0.135
1.5	2.2	3	1.25…5	12 and 32	**LUCA 05●●**	0.135
5.5	5.5	9	3…12	12 and 32	**LUCA 12●●**	0.135
7.5	9	15	4.5…18	32	**LUCA 18●●**	0.135
15	15	18.5	8…32	32	**LUCA 32●●**	0.135

Advanced control units

Pressing the Test button on the front panel simulates tripping on thermal overload.

Class 10 for 3-phase motors						
0.09	–	–	0.15…0.6	12 and 32	**LUCB X6●●**	0.140
0.25	–	–	0.35…1.4	12 and 32	**LUCB 1X●●**	0.140
1.5	2.2	3	1.25…5	12 and 32	**LUCB 05●●**	0.140
5.5	5.5	9	3…12	12 and 32	**LUCB 12●●**	0.140
7.5	9	15	4.5…18	32	**LUCB 18●●**	0.140
15	15	18.5	8…32	32	**LUCB 32●●**	0.140
Class 10 for single-phase motors						
–	–	–	0.15…0.6	12 and 32	**LUCC X6●●**	0.140
0.09	–	–	0.35…1.4	12 and 32	**LUCC 1X●●**	0.140
0.55	–	–	1.25…5	12 and 32	**LUCC 05●●**	0.140
2.2	–	–	3…12	12 and 32	**LUCC 12●●**	0.140
4	–	–	4.5…18	32	**LUCC 18●●**	0.140
7.5	–	–	8…32	32	**LUCC 32●●**	0.140
Class 20 for 3-phase motors						
0.09	–	–	0.15…0.6	12 and 32	**LUCD X6●●**	0.140
0.25	–	–	0.35…1.4	12 and 32	**LUCD 1X●●**	0.140
1.5	2.2	3	1.25…5	12 and 32	**LUCD 05●●**	0.140
5.5	5.5	9	3…12	12 and 32	**LUCD 12●●**	0.140
7.5	9	15	4.5…18	32	**LUCD 18●●**	0.140
15	15	18.5	8…32	32	**LUCD 32●●**	0.140

(1) Standard control circuit voltages:

Volts	24	48…72	110…240
⎓	BL *(2), (3)*	–	–
∿	B	–	–
⎓ or ∿	–	ES *(4)*	FU *(5)*

(2) Voltage code to be used for a starter-controller with communication module.
(3) d.c. voltage with maximum ripple of ± 10 %.
(4) ⎓ : 48…72 V, ∿ : 48 V.
(5) ⎓ : 110…220 V, ∿ : 110...240 V.

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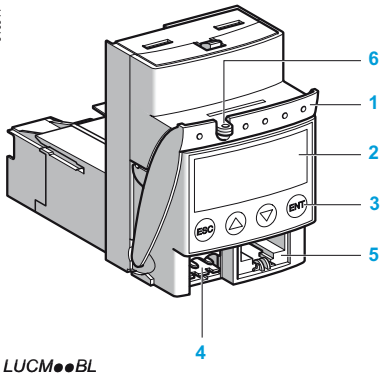
TeSys motor starters - open version

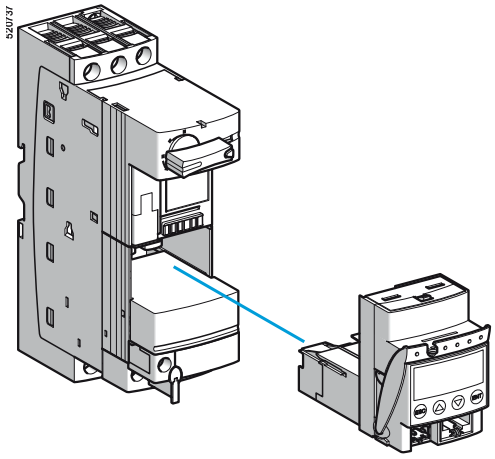
TeSys U starter-controllers

Multifunction control units

1



LUCM●●BL



LUB ●2 + LUCM ●●BL

XBT NU400

Description

1 Extraction and locking handle
2 Built-in display window (2 lines, 12 characters)
3 4-button keypad
4 ⎓ 24 V auxiliary power supply
5 Modbus RS485 communication port. Connection by RJ45 connector.
6 Sealing of locking handle

The display window 2 and keypad 3 allow:
- in configuration mode: local configuration of protection functions and alarms,
- in run mode: display of parameter values and events.

The Modbus communication port 5 is used to connect:
- an operator terminal,
- a PC,
- a Personal Digital Assistant (PDA).

Multifunction control units

Parameter entry, monitoring of parameter values and consultation of logs are carried out:
- either on the front panel, using the built-in display window/keypad,
- or via an operator terminal,
- or via a PC or a PDA with PowerSuite software,
- or remotely, via a Modbus communication bus.

Programming of the product via the keypad requires a ⎓ 24 V auxiliary power supply.

Maximum standard power ratings of 3-phase motors 50/60 Hz			Setting range	Clip-in mounting on power base Rating	Reference *(1)*	Weight
400/415 V	500 V	690 V				
kW	kW	kW	A	A		kg
0.09	–	–	0.15…0.6	12 and 32	**LUCM X6BL**	0.175
0.25	–	–	0.35…1.4	12 and 32	**LUCM 1XBL**	0.175
1.5	2.2	3	1.25…5	12 and 32	**LUCM 05BL**	0.175
5.5	5.5	9	3…12	12 and 32	**LUCM 12BL**	0.175
7.5	9	15	4.5…18	32	**LUCM 18BL**	0.175
15	15	18.5	8…32	32	**LUCM 32BL**	0.175

TeSys U user's manual *(2)*

Application	Language	Reference	Weight kg
On CD-Rom	Multi-language *(3)*	**LU9 CD1**	0.022

HMI terminal

This compact Magelis terminal enables the parameters of multifunction control unit LUCM to be read and modified.
It is supplied pre-configured to provide dialogue with 8 TeSys U starter-controllers (Modbus protocol, application pages and alarm pages loaded).
Starter-controller alarm and fault management takes priority.

Language	Display window	Supply voltage	Reference	Weight kg
Multi-language *(3)*	4 lines of 20 characters	⎓ 24 V	**XBT NU400**	0.150

Connecting cable *(4)*

Function	Length	Type	Reference	Weight kg
Connects terminal XBT NU400 to a multifunction control unit.	2.5 m	SUB-D 25-way female - RJ45	**XBT Z938**	0.200

(1) Input voltage ⎓ 24 V with maximum ripple of ± 10 %.
(2) The CD-Rom contains user's manuals for the AS-Interface and Modbus communication modules, multifunction control units and gateway modules, as well as the gateway programming software.
(3) English, French, German, Italian, Spanish
(4) If a terminal is used with several control units, this cable can be connected to a Modbus hub or to T-junctions (see page 1/95).

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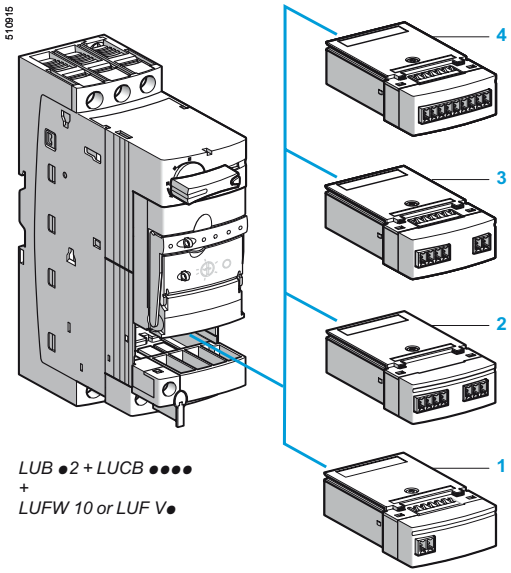
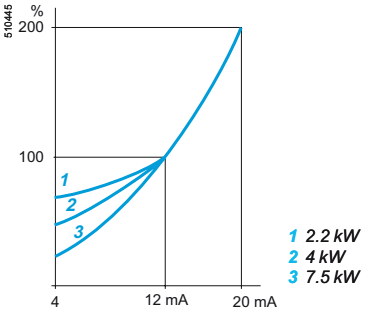
TeSys motor starters - open version

TeSys U starter-controllers

Function modules



LUB ●2 + LUCB ●●●●
+
LUFW 10 or LUF V●



Function modules

Output	Item	Application	Reference	Weight kg
Thermal overload signalling and manual reset				
Module LUF DH11 makes it possible to differentiate thermal overload and short-circuit faults. (The short-circuit fault can then be signalled via add-on contact blocks LUA1 C). The module includes two contacts for thermal overload signalling, as well as an LED on the front panel. To reset the motor starter, the operator must use the rotary knob on the power base. The module can only be used with an advanced control unit and requires an ∿/⎓ 24…240 V external power supply.				
1 N/O + 1 N/C	3	∿ or ⎓ 24…250 V	**LUF DH11**	0.060
Thermal overload signalling and automatic or remote reset				
These modules make it possible to differentiate thermal overload and short-circuit faults. (The short-circuit fault can then be signalled via add-on contact blocks LUA1 C). The modules include one contact for thermal overload signalling, as well as an LED on the front panel. A second contact (terminals Z1-Z2) must be wired in series with terminal A1 of the motor starter. In the event of a thermal overload fault, this wiring allows motor control to be switched off. The rotary knob on the power base will then stay in the "ready position" ⏻. Resetting of the motor starter is automatic after the required motor cooling time if terminals X1-X2 are linked by a strap, or remote by pulsed closing of a volt-free contact connected to terminals X1-X2. These modules can only be used with an advanced control unit and require an ∿/⎓ 24…240 V external power supply. ***Note:*** *Terminals X1-X2 are not isolated from the signalling module power supply.* *For remote resetting, use a volt-free contact specific to each module to be reset.*				
1 N/C	4	∿ or ⎓ 24…250 V	**LUF DA01**	0.055
1 N/O	4	∿ or ⎓ 24…250 V	**LUF DA10**	0.055
Thermal overload alarm				
Through load shedding, this module makes it possible to avoid stoppages in operation due to overload tripping. Imminent thermal overload tripping is displayed as soon as the thermal state exceeds the threshold of 105 % (hysteresis = 5 %). Signalling is possible via an LED on the front panel of the module and externally by an N/O relay output. It can only be used with an advanced control unit, from which it takes its power.				
1 N/O	1	∿ or ⎓ 24…250 V	**LUF W10**	0.055
Indication of motor load				
This module provides a signal which is representative of the motor load status (I average/Ir). ■ I average = average value of the rms currents in the 3 phases, ■ Ir = value of the setting current. The value of the signal (4-20 mA) corresponds to a load status of 0 to 200 % (0 to 300 % for a single-phase load). It can be used with an advanced or multifunction control unit. Module LUF V2 requires a ⎓ 24 V external power supply.				
4 - 20 mA	2	–	**LUF V2**	0.050

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pages 1/98 and 1/103

Schemes:
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