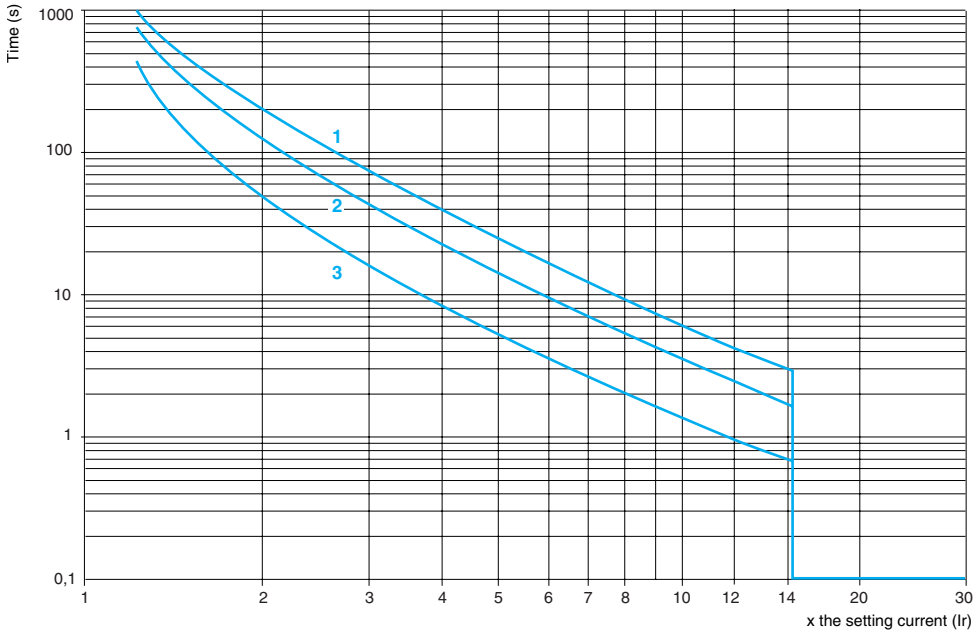
Tripping curves for control units LUCA, LUCB, LUCD

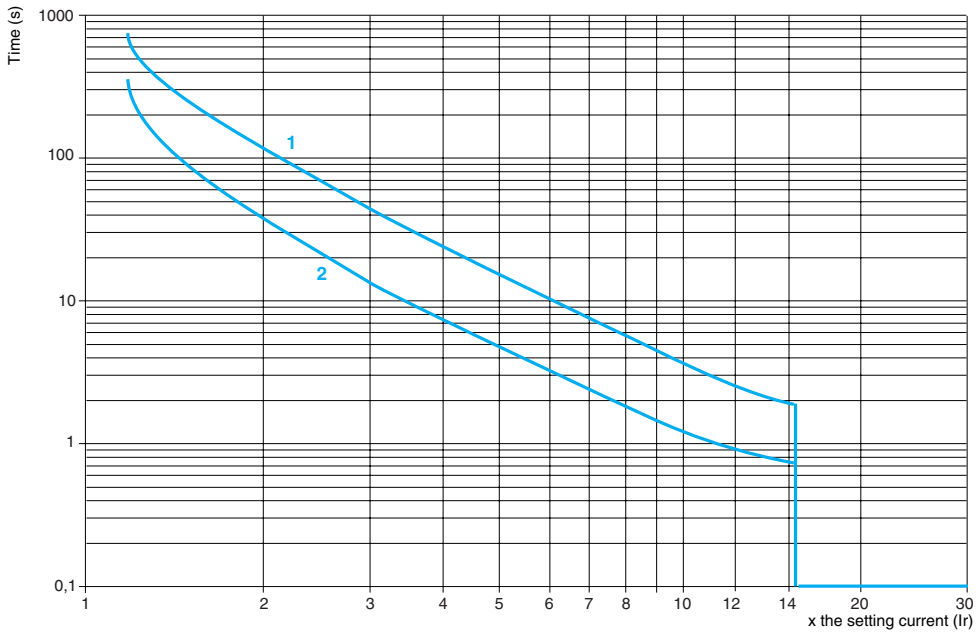
Average operating times at 20 °C according to multiples of the setting current, tolerance : ± 20 %.



1 LUCD, 3 poles from cold state, class 20.
2 LUCA, LUCB, 3 poles from cold state, class 10.
3 LUCA, LUCB, LUCD, 3 poles from hot state.

Tripping curves for control units LUCC

Average operating times at 20 °C according to multiples of the setting current, tolerance : ± 20 %.



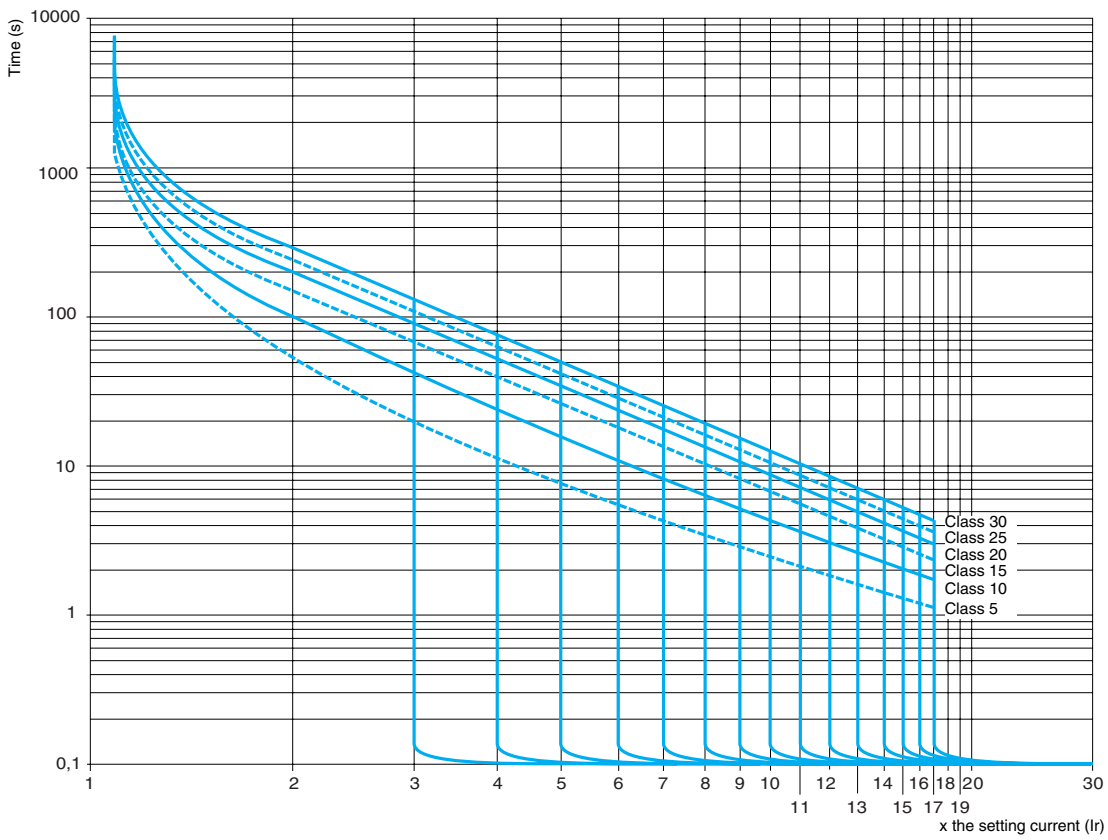
1 LUCC, single-phase, cold state.
2 LUCC, single-phase, hot state.

References :
page 19

Tripping curves for control units LUCM

Cold state curves

Average operating times at 20 ˚C according to multiples of the setting current, tolerance : ± 20 %.

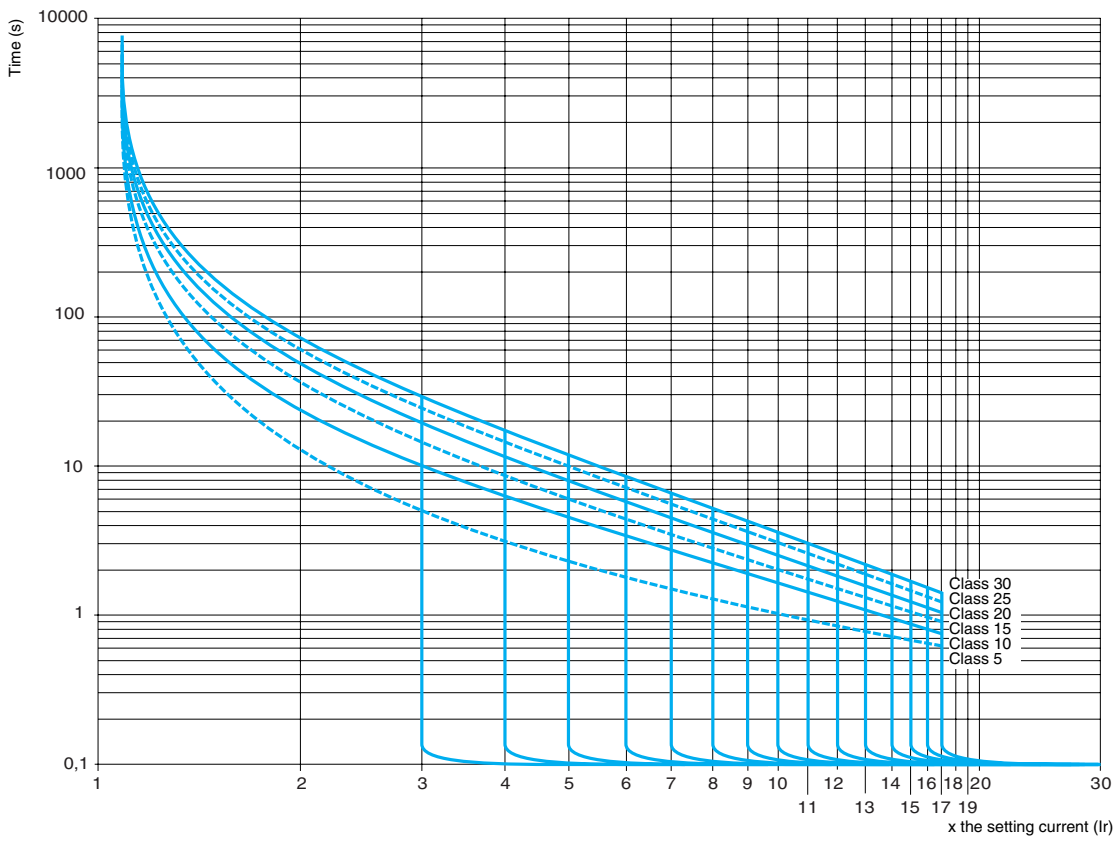


References :
page 20

Tripping curves for control units LUCM

Hot state curves

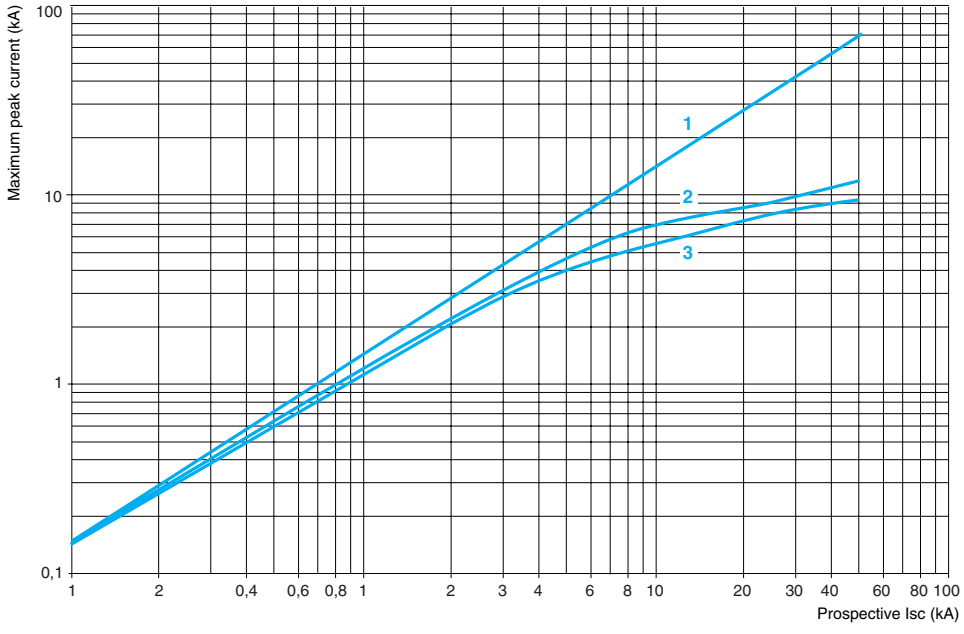
Average operating times at 20 ˚C according to multiples of the setting current, tolerance : ± 20 %



References :
page 20

Current limitation on short-circuit

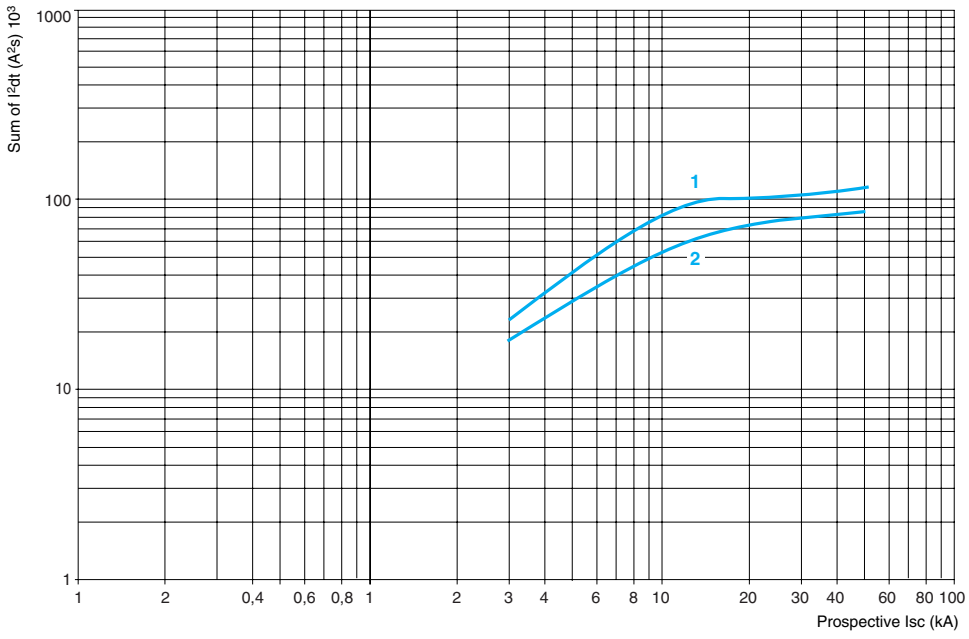
U_e = 460 V



1 Maximum peak current
2 32 A power base
3 12 A power base

Thermal limit on short-circuit

U_e = 460 V

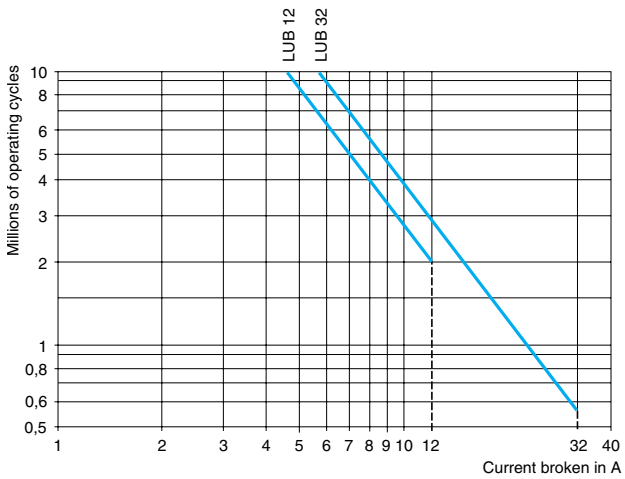


1 32 A power base
2 12 A power base

References :
pages 14 to 20

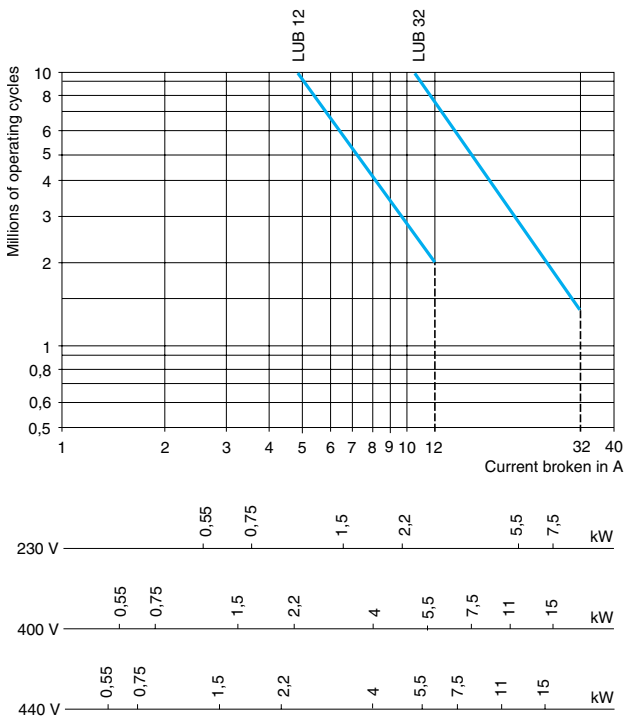
TeSys Model U
Starter-controllers

Use in category AC-41

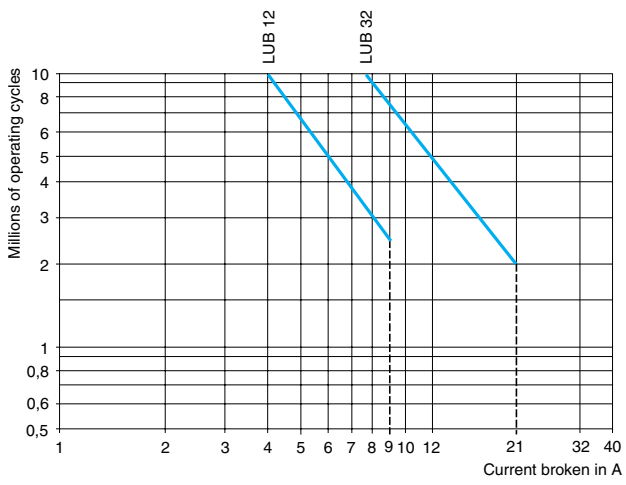


Use in category AC-43

Ue ≤ 440 V



Ue = 690 V

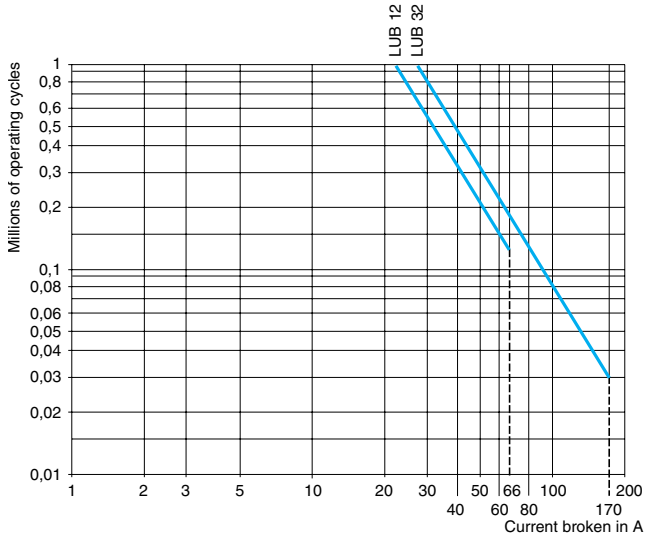


References :
pages 14 to 20

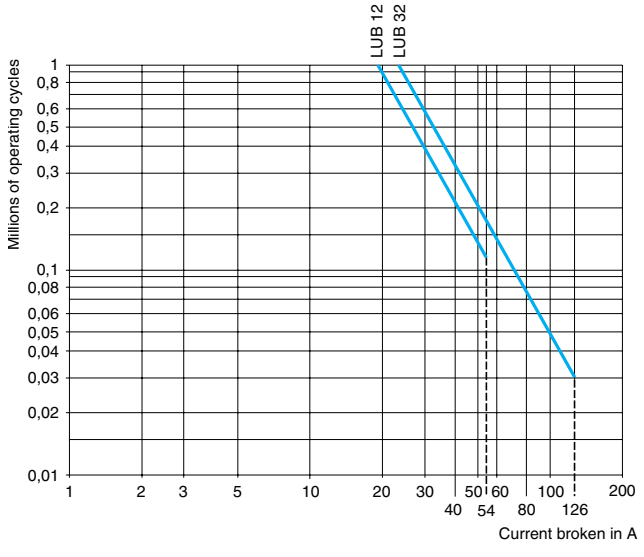
TeSys Model U
Starter-controllers

Use in category AC-44

Ue ≤ 440 V



Ue = 690 V

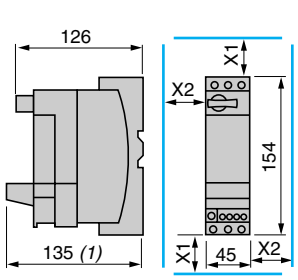


References :
pages 14 to 20

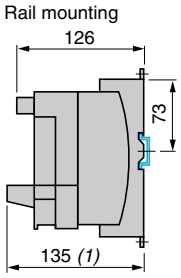
TeSys Model U
Starter-controllers

Starter-controllers

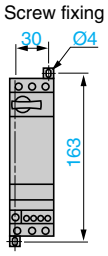
Non-reversing



Rail mounting



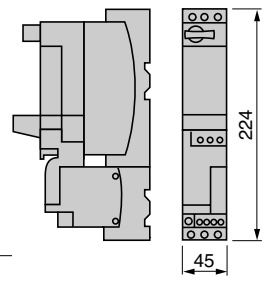
Screw fixing



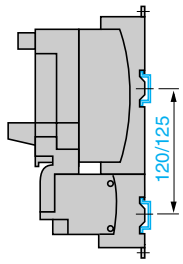
Minimum electrical clearance :
X1 = 50 mm for Ue = 440 V and 70 mm for Ue = 500 and 690 V,
X2 = 0

(1) Maximum depth (with Modbus communication module)

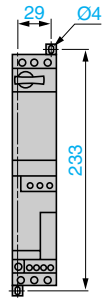
Reversing



Rail mounting

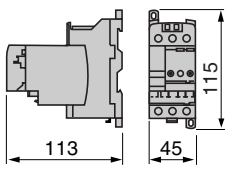


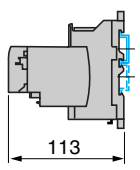
Screw fixing



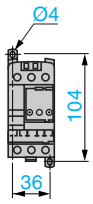
Reverser block for mounting separately from power base

Rail mounting



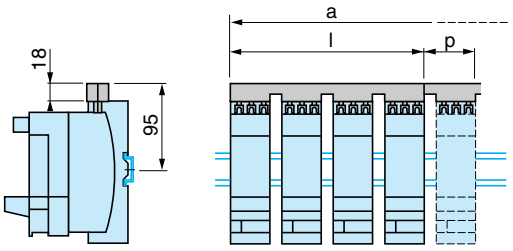


Screw fixing



Sets of busbars and plug-in power sockets

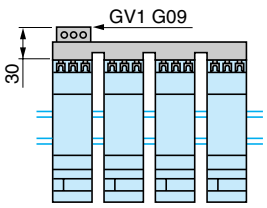
GV2 G445 and GV2 G454



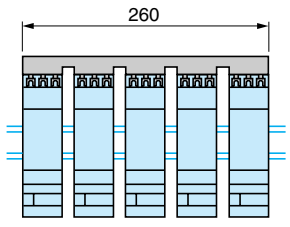
	l	P
GV2 G445 (2 x 45)	179	45
GV2 G454 (2 x 54)	206	54

	a			
Number of tap-offs	5	6	7	8
GV2 G445 (2 x 45)	224	269	314	359
GV2 G454 (2 x 54)	260	314	368	422

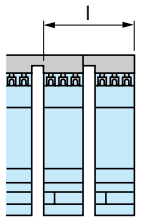
GV2 G●●● with terminal block GV1 G09



GV2 G554

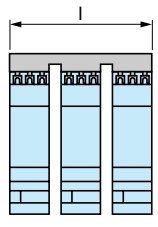


GV2 G245 and G254



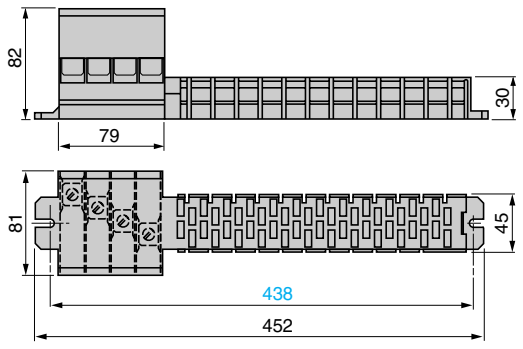
	l
GV2 G245 (2 x 45)	89
GV2 G254 (2 x 54)	98

GV2 G345 and G354

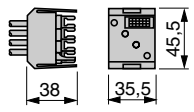


	l
GV2 G345 (2 x 45)	134
GV2 G354 (2 x 54)	152

AK5 JB144

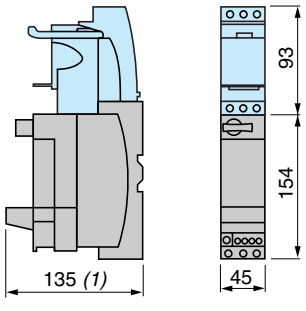


AK5 PC13, PC33, PC33L



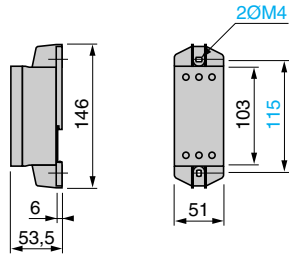
TeSys Model U
Starter-controllers

Limiter-disconnector LUA LB1
Disconnector LUA LB10

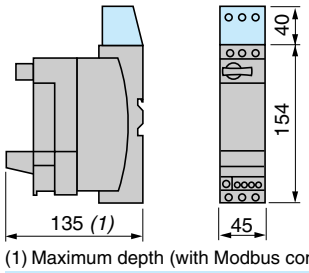


(1) Maximum depth (with Modbus communication module).

Current limiter LA9 LB920



Current limiter GV1 L3

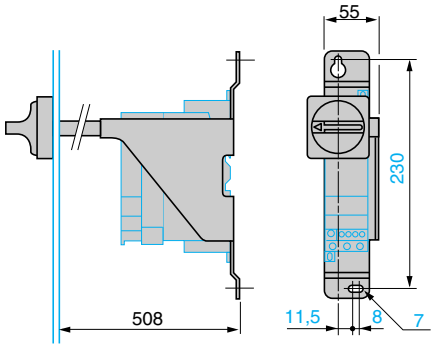


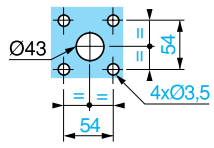
(1) Maximum depth (with Modbus communication module).

Door interlock mechanisms

LU9 AP00

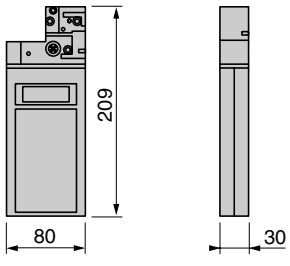
Door cut-out



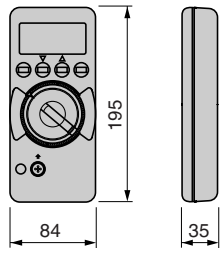


Addressing consoles

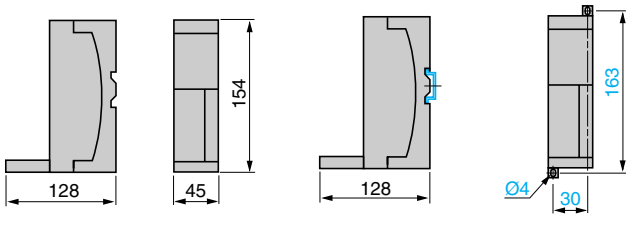
XZ MC11



ASI TERV2



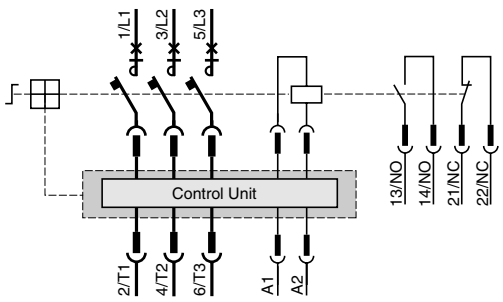
Modbus splitter box LU9 CG3
Splitter box LU9 G02



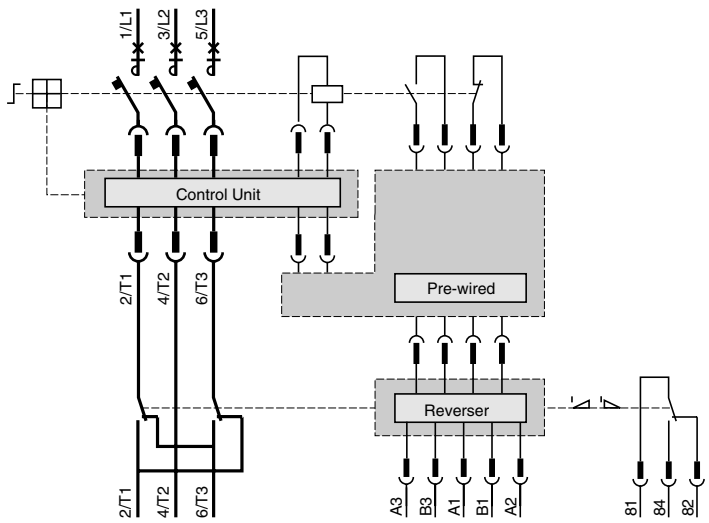
Starter-controllers, 12 or 32 A

With standard, advanced or multifunction control unit

Non-reversing

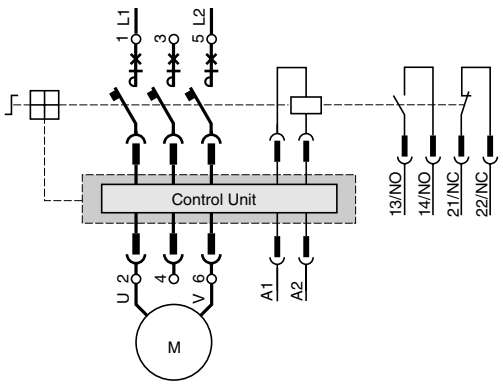


Reversing

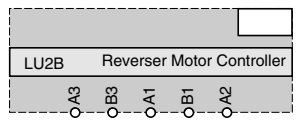


With control unit LUCC or LUCM

Connection of a single-phase motor

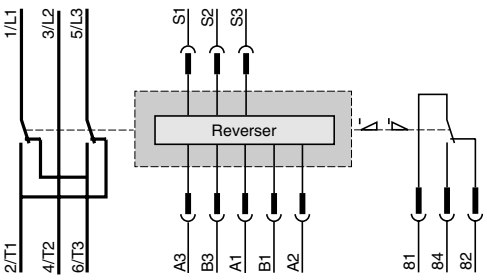


Control terminal block

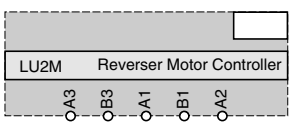


Reverser blocks

LU2M

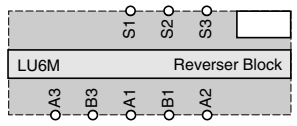


Control terminal block

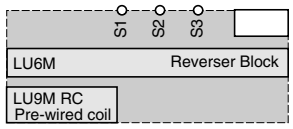


LU6M

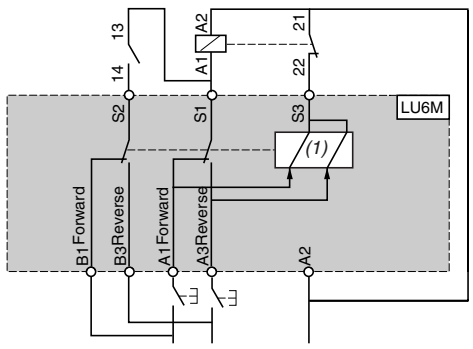
Control terminal blocks



With pre-wired connector LU9M RC



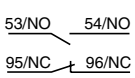
Basic scheme



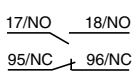
S1 *Start next stage*
S2 *Electrical interlocking*
S3 *Maintaining contact*
B1 *Maintain forward running*
B3 *Maintain reverse running*
A1 *Pulse forward running*
A2 *Common*
A3 *Pulse reverse running*
(1) Electronically operated bistable electromagnet.

Add-on contact blocks

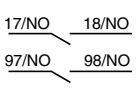
LUA1 D11



LUA1 C11

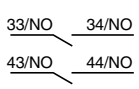


LUA1 C20

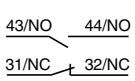


Add-on contact modules

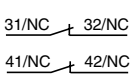
LUFN 20



LUFN 11



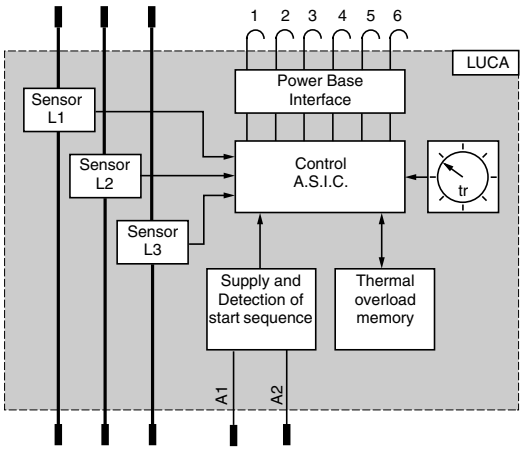
LUFN 02



Control units

Standard control unit LUCA

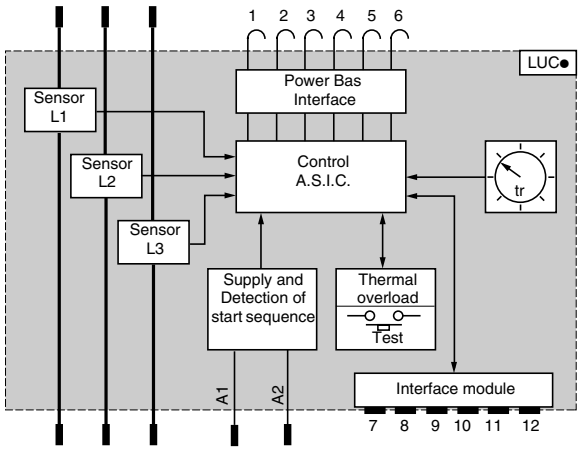
Basic scheme



1 and 2 *Trips*
3 and 4 *Electromagnet*
5 *Power base rating*
6 *N/C*

Advanced control unit LUCB, LUCC, LUCD

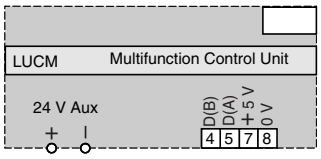
Basic scheme



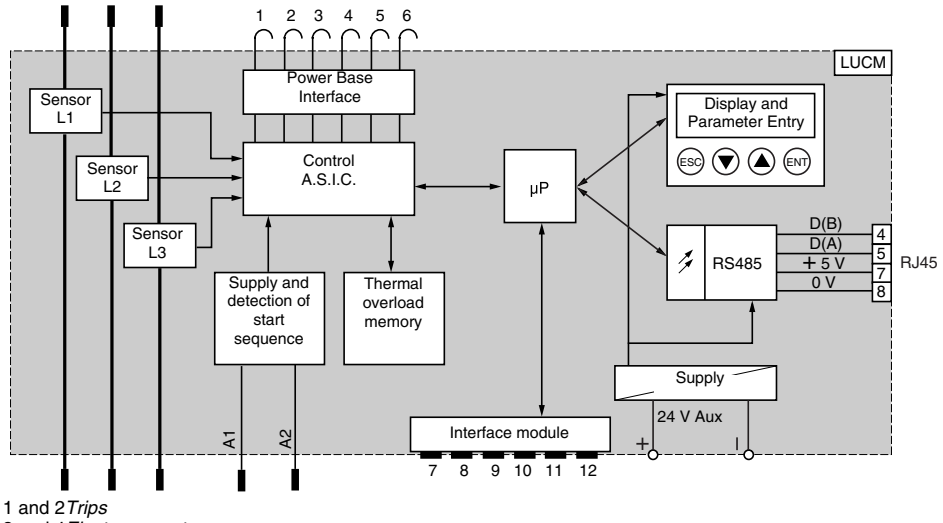
1 and 2 *Trips*
3 and 4 *Electromagnet*
5 *Power base rating*
6 *N/C*
7 *Load*
8 *Thermal status/Set*
9 *Reset mode/Reset*
10 *(Im/Ir)*
11 *Vc2*
12 *Vc1*

Multifunction control unit LUCM

Control terminal block



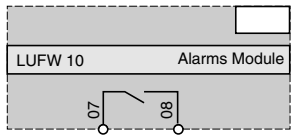
Basic scheme



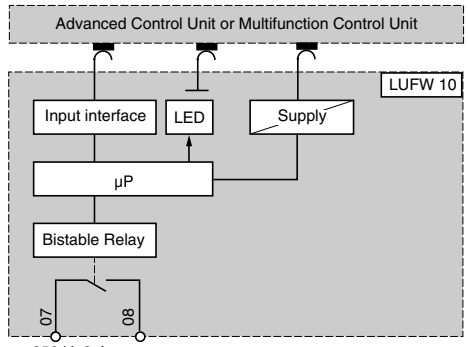
1 and 2 *Trips*
3 and 4 *Electromagnet*
5 *Power base rating*
6 *N/C*
7 *Load*
8 *N/C*
9 *Load*
10 *(Im/Ir)*
11 *Rx/Tx*
12 *Vc1*

Function modules

Alarm
LUF W10



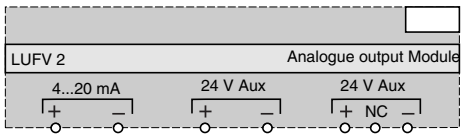
Basic scheme



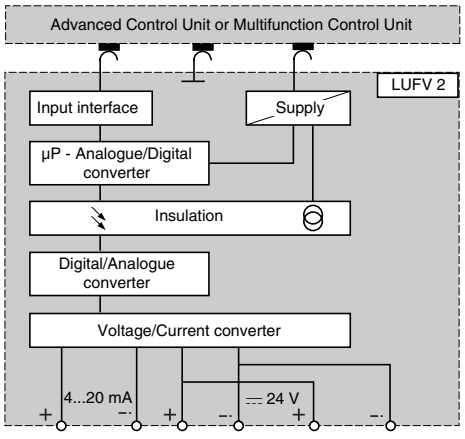
~ 250 V, 2 A
⎓ 24 V, 2 A

Indication of motor load
LUFV 2

4-20 mA output



Basic scheme

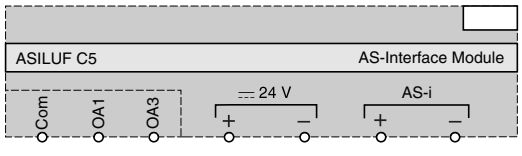


100 Ω < load < 500 Ω ⎓ 30 V max and 40 mA min

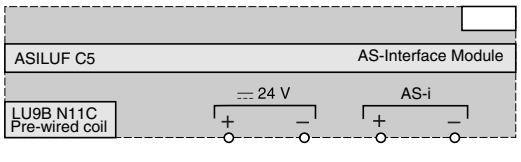
Communication modules

Communication module ASILUF C5

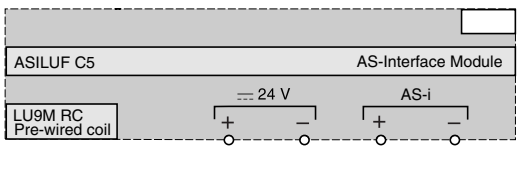
Without pre-wired coil connection



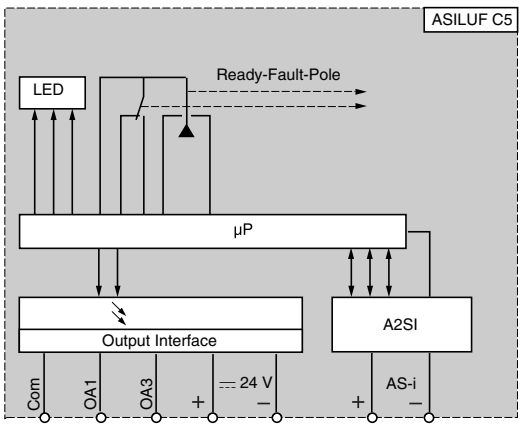
With pre-wired coil connection LU9B N11C



With pre-wired coil connection LU9M RC

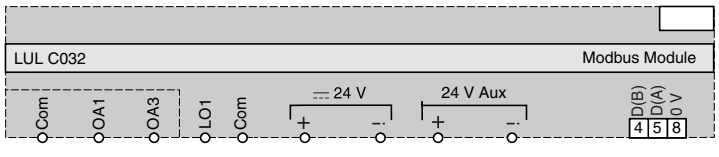


Basic scheme

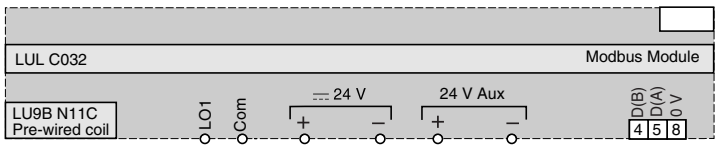


Modbus communication module LULC

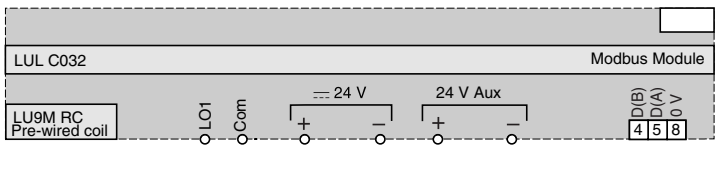
Without pre-wired coil connection



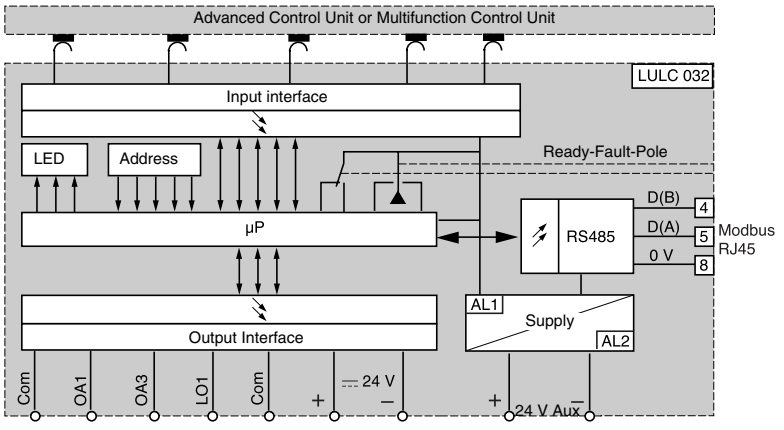
With pre-wired coil connection LU9B N11C



With pre-wired coil connection LU9M RC

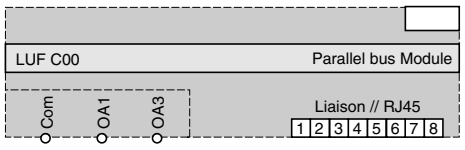


Basic scheme

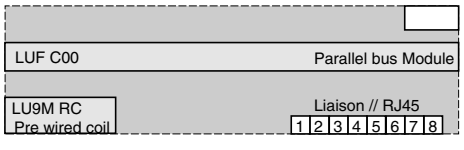


Parallel wiring module

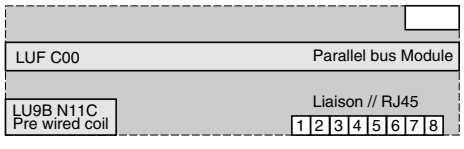
Without pre-wired coil connection



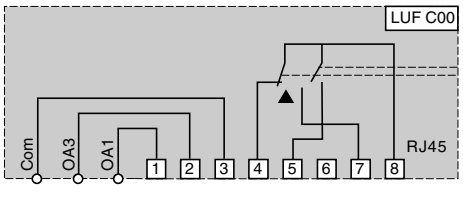
With pre-wired coil connection LU9M RC



With pre-wired coil connection LU9B N11C



Basic scheme

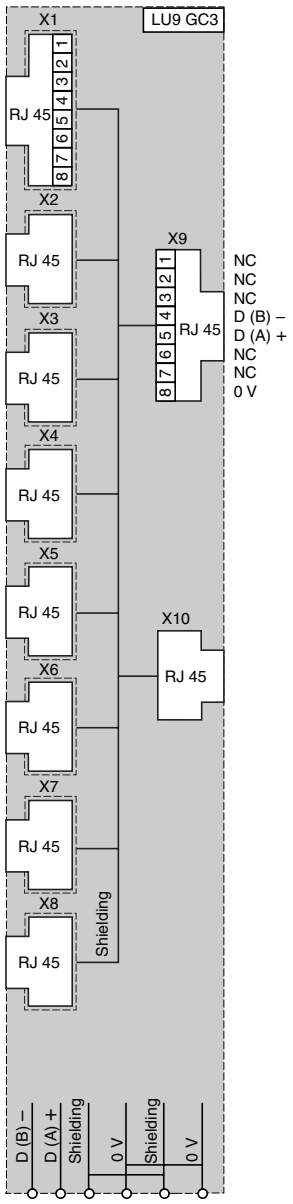


1 *Forward running*
2 *Reverse running*
3 *Output common*
4 *Position button* ⏻
5 *Pole state*
6 *Reserved*
7 *Fault*
8 *Input common*

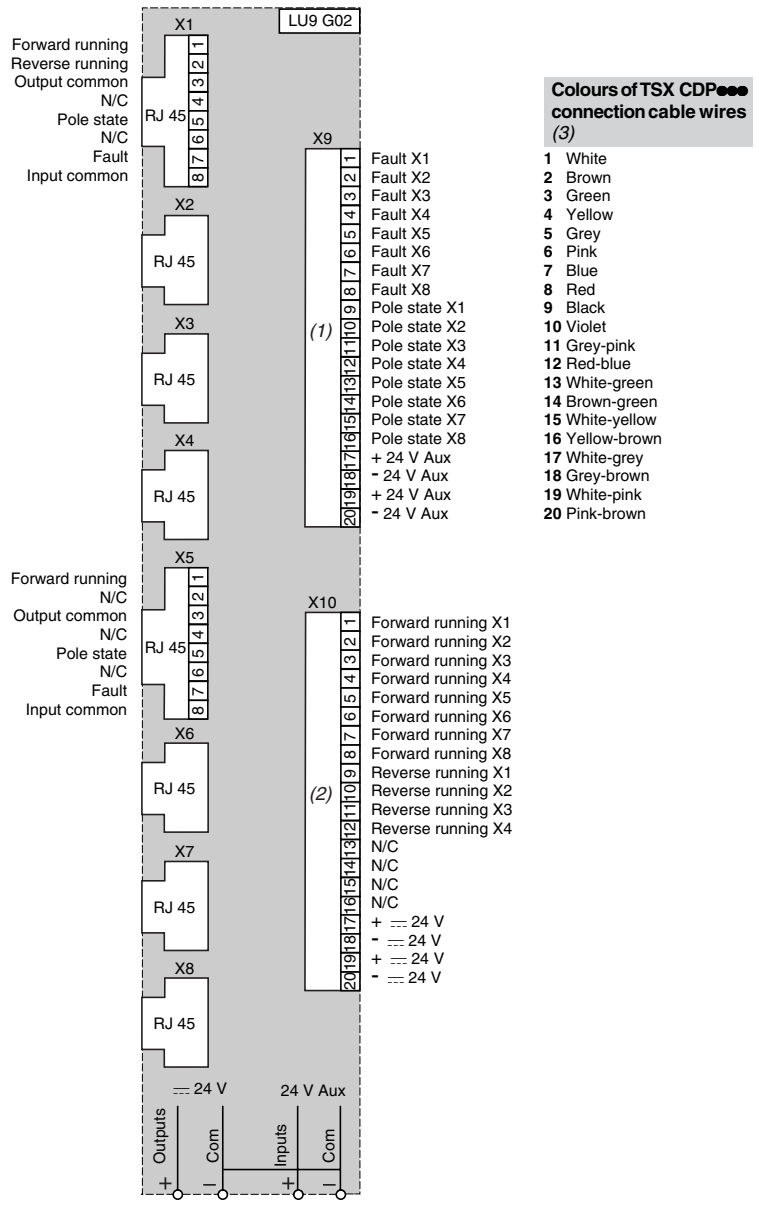
Communication modules (continued)

Wiring hub and splitter box

Modbus hub LU9 GC3



Parallel wiring splitter box LU9 G02



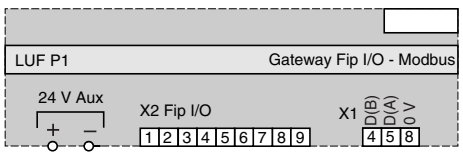
Colours of TSX CDP●●● connection cable wires *(3)*

1	White
2	Brown
3	Green
4	Yellow
5	Grey
6	Pink
7	Blue
8	Red
9	Black
10	Violet
11	Grey-pink
12	Red-blue
13	White-green
14	Brown-green
15	White-yellow
16	Yellow-brown
17	White-grey
18	Grey-brown
19	White-pink
20	Pink-brown

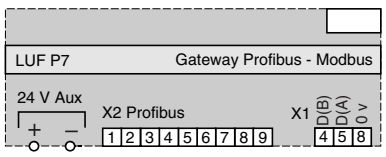
(1) 20-way HE 10 input connector.
(2) 20-way HE 10 output connector.
(3) Corresponding to colour of the HE 10 connector pin wires.

Gateways

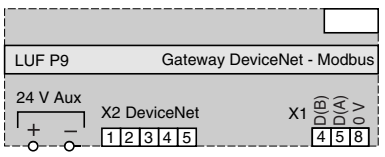
LUF P1



LUF P7



LUF P9



Data profile under AS-Interface

Control unit present in the product				Standard	Advanced	Multifunction
Status		D0	Ready (available)			
		D1	Poles closed (running)			
Commands		D0	Forward running			
		D1	Reverse running			

Register addresses accessible under Modbus

Control unit present in the product				Standard	Advanced	Multifunction
Identification	Register 0…Register 99	Words…Bits	Commercial reference, serial number, software version			
Log	Register 100…Register 450	Words…Bits	Fault log, Operating log, Log of last 5 trips			
Status	Register 451…Register 464	Words…Bits	Alarm signalling (bits), Fault signalling (bits)			
Values	Register 465…Register 473	Words	Irms phase 1, phase 2, phase 3. Motor load, thermal status Earth leakage current. Phase imbalance and phase failure			
	Register 474…Register 599	Words…Bits	Reserved			
Configuration	Register 600…Register 699	Words…Bits	Protection and alarm thresholds, fallback mode and reset mode			
Commands	Register 700…Register 714	Words…Bits	Commands			

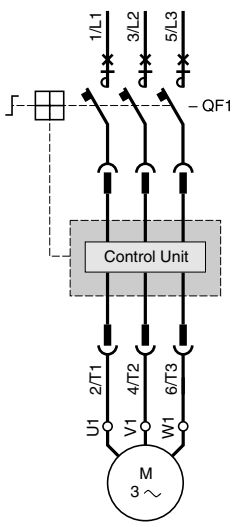
Status and values	Register 452	Bit 0	Short-circuit fault			
		Bit 1	Overcurrent fault			
		Bit 2	Thermal overload fault			
	Register 455	Bit 0	Ready (available)			
		Bit 1	Poles closed			
		Bit 2	Fault			
		Bit 3	Alarms			
		Bit 4	Tripped (“TRIP” position)			
		Bit 5	Fault acknowledgement allowed			
		Bit 6	Reserved			
		Bit 7	Motor running			
		Bit 8	Motor current % (bit 0)			
		Bit 9	Motor current % (bit 1)			
		Bit 10	Motor current % (bit 2)			
		Bit 11	Motor current % (bit 3)			
		Bit 12	Motor current % (bit 4)			
		Bit 13	Motor current % (bit 5)			
		Bit 14	Reserved			
		Bit 15	Motor starting			
	Register 461	Bit 3	Thermal overload alarm			
	Register 465	Word	Thermal status value			
	Register 466	Word	Motor load value (Im/Ir)			

Configuration	Register 602	Bit 0	Manual reset on thermal overload fault			
		Bit 1	Remote reset on thermal overload fault			
		Bit 2	Automatic reset on thermal overload fault			
	Register 682	Value 0	Fallback mode validation			
		Value 1	Outputs OA1 and OA3 unchanged			
		Value 2	Outputs OA1 and OA3 forced to 0			
		Value 3	Outputs OA1 and OA3 unchanged, signalling existence of communication failure			
		Value 4	Outputs OA1 forced to 1 and OA3 unchanged			
		Value 5	Outputs OA3 forced to 1 and OA1 unchanged			

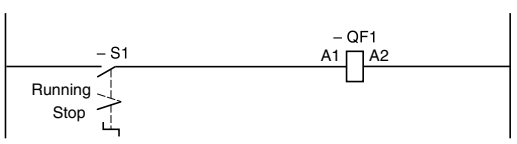
Commands	Register 700	Bit 0	LO1 output command			
	Register 704	Bit 0	OA1 output command			
		Bit 1	OA3 output command			
		Bit 2	Reserved			
		Bit 3	Fault acknowledgement			
		Bit 4	Reserved			
		Bit 5	Trip test			
		Bit 6…15	Reserved			

Data accessible

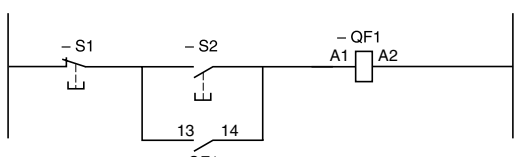
Non-reversing starter-controllers LUB



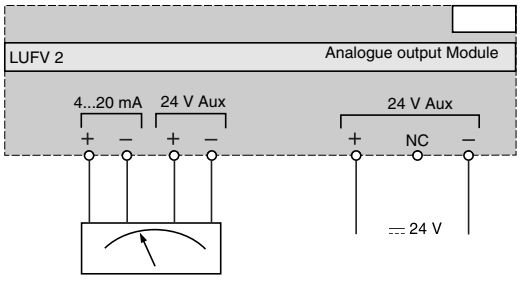
2-wire control via 2-position switch



3-wire control, pulsed start with maintaining contact



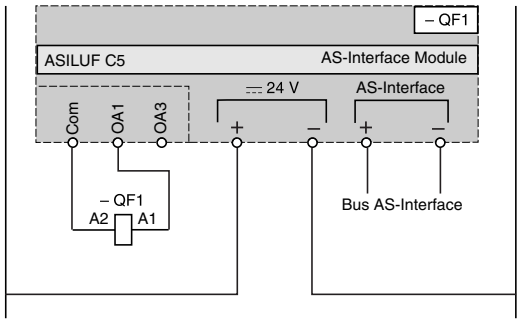
Connection of a motor load indicator module LUFV 2



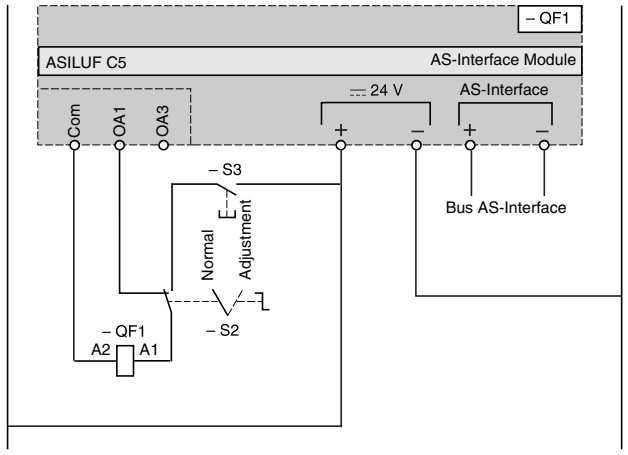
Non-reversing starter controllers LUB (continued)

Control via communication module ASIL UFC5

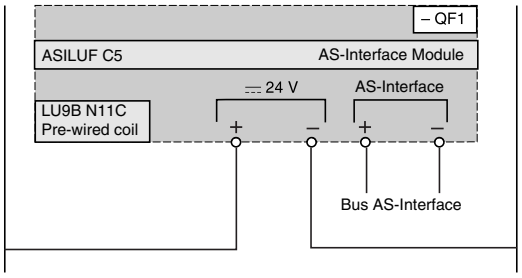
Without pre-wired coil connection



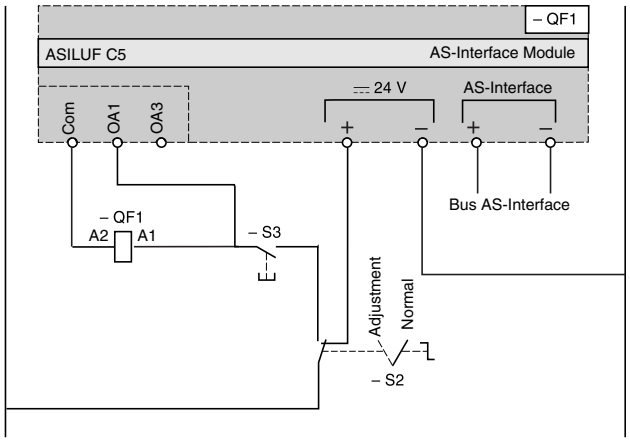
Without pre-wired coil connection
With local control



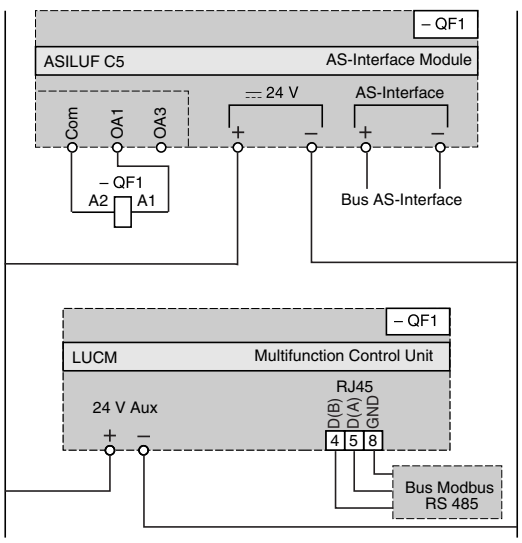
With pre-wired coil connection LU9B N11C



Without pre-wired coil connection
With local control

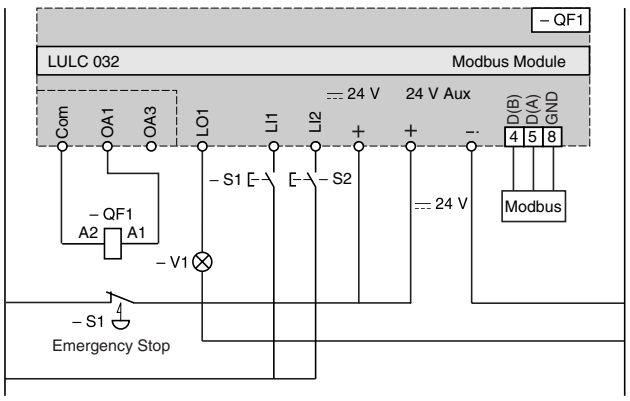


Without pre-wired coil connection
With multifunction control unit LUCM



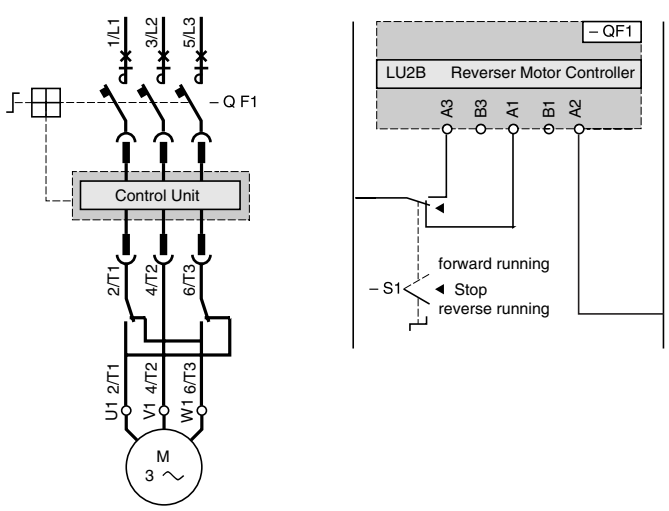
Control via Modbus communication module LULC 032

Without pre-wired coil connection

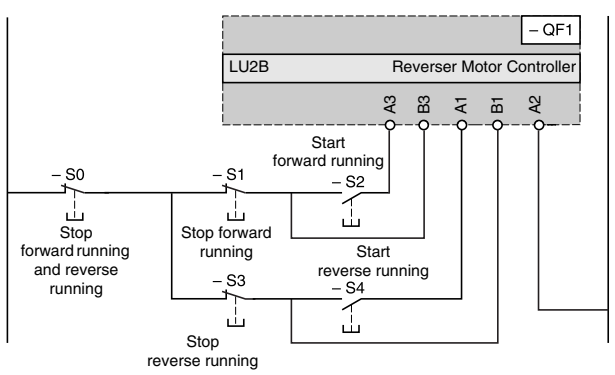


Reversing starter-controllers LUB

2-wire control via 3-position switch

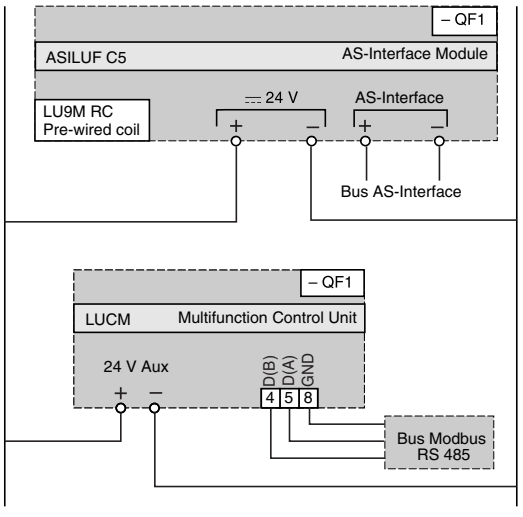


3-wire control, pulsed start with maintaining contact

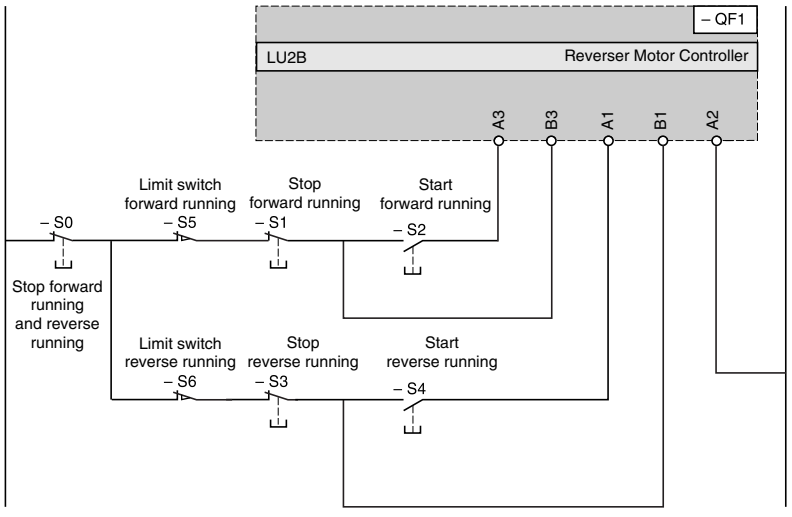


Control via communication module ASIL UFC5

With pre-wired coil connection LU9M RC
With multifunction control unit LUCM

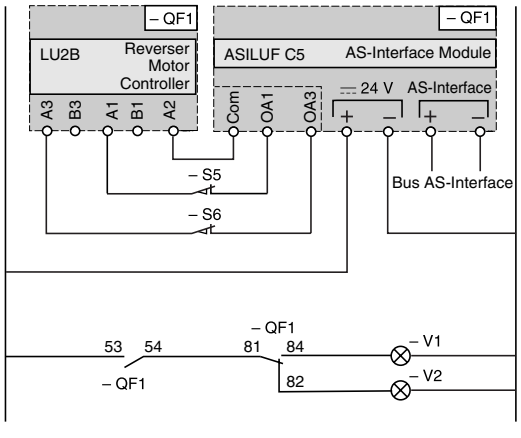


3-wire control, pulsed start with maintaining contact and limit switches



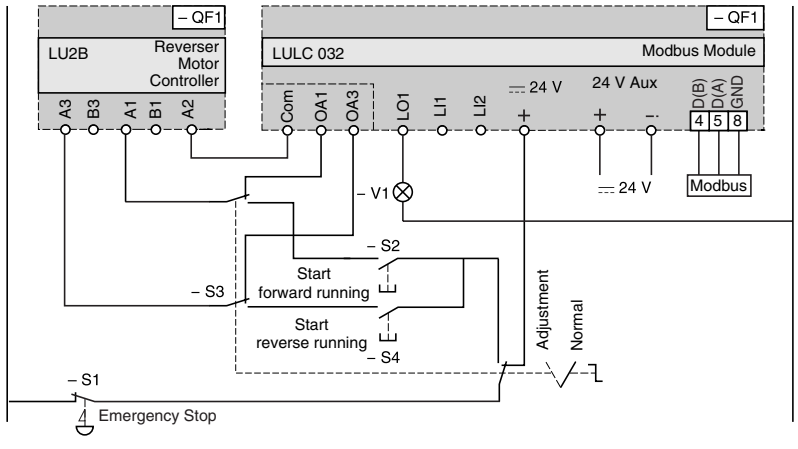
Control via communication module ASILUF C5

Without pre-wired coil connection
With running direction pilot lights and limit switches

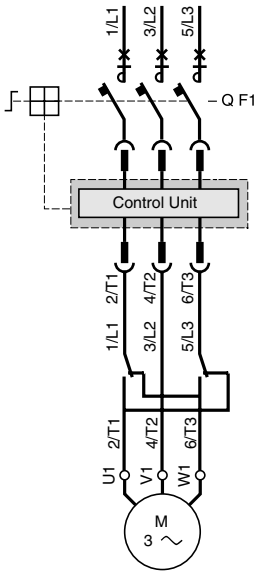


Control via Modbus communication module LULC 032

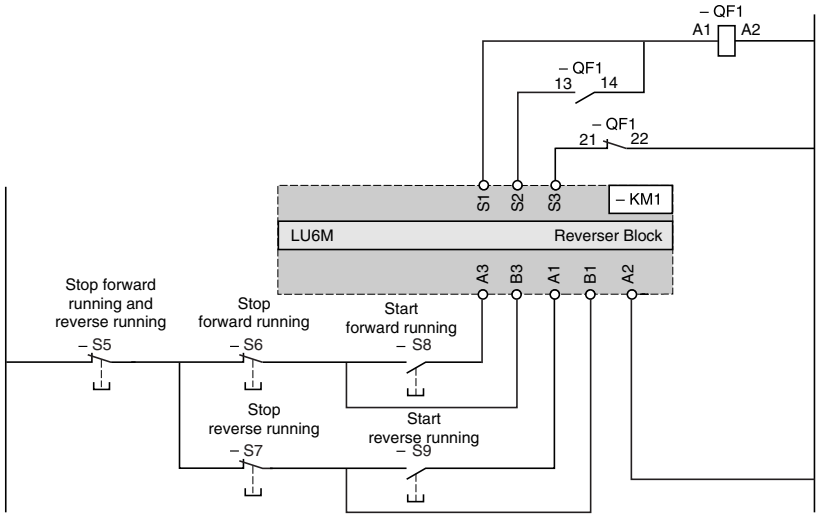
Without pre-wired coil connection
With local control



Reversing starter-controllers LUB + LU6M



3-wire control, pulsed start with maintaining contact



2-wire control via 3-position switch