

MINIATURE CIRCUIT BREAKERS LTN-UC

- The series of circuit breakers for protection of direct current (DC) and alternating current (AC) circuits up to 63 A, DC 220 V (1-pole), DC 440 V (2-pole), AC 230/400 V. In connection in DC circuit it is mandatory to observe device polarity.
- For protection of cables and conductors against overload and short-circuit.
- Tripping characteristics C according to EN 60898-2.
- Breaking capacity 10 kA.



Circuit breakers for direct current (DC) and alternating current (AC) circuits, 1-pole

I _n [A]	Characteristic C		Number of modules	Weight [kg]	Package [pcs]
	Type	Order code			
1	LTN-UC-1C-1	OEZ:41846	1	0.182	12
2	LTN-UC-2C-1	OEZ:41847	1	0.186	12
4	LTN-UC-4C-1	OEZ:41848	1	0.177	12
6	LTN-UC-6C-1	OEZ:41849	1	0.165	12
8	LTN-UC-8C-1	OEZ:41850	1	0.181	12
10	LTN-UC-10C-1	OEZ:41851	1	0.184	12
13	LTN-UC-13C-1	OEZ:41852	1	0.182	12
16	LTN-UC-16C-1	OEZ:41853	1	0.157	12
20	LTN-UC-20C-1	OEZ:41854	1	0.180	12
25	LTN-UC-25C-1	OEZ:41855	1	0.190	12
32	LTN-UC-32C-1	OEZ:41856	1	0.158	12
40	LTN-UC-40C-1	OEZ:41857	1	0.177	12
50	LTN-UC-50C-1	OEZ:41858	1	0.185	12
63	LTN-UC-63C-1	OEZ:41859	1	0.189	12

Circuit breakers for direct current (DC) and alternating current (AC) circuits, 2-pole

I _n [A]	Characteristic C		Number of modules	Weight [kg]	Package [pcs]
	Type	Order code			
1	LTN-UC-1C-2	OEZ:41860	2	0.329	6
2	LTN-UC-2C-2	OEZ:41861	2	0.319	6
4	LTN-UC-4C-2	OEZ:41862	2	0.315	6
6	LTN-UC-6C-2	OEZ:41863	2	0.317	6
8	LTN-UC-8C-2	OEZ:41864	2	0.333	6
10	LTN-UC-10C-2	OEZ:41865	2	0.333	6
13	LTN-UC-13C-2	OEZ:41866	2	0.338	6
16	LTN-UC-16C-2	OEZ:41867	2	0.341	6
20	LTN-UC-20C-2	OEZ:41868	2	0.341	6
25	LTN-UC-25C-2	OEZ:41869	2	0.317	6
32	LTN-UC-32C-2	OEZ:41870	2	0.340	6
40	LTN-UC-40C-2	OEZ:41871	2	0.339	6
50	LTN-UC-50C-2	OEZ:41872	2	0.354	6
63	LTN-UC-63C-2	OEZ:41873	2	0.365	6

Accessories

Auxiliary and signal switches	PS-LT, SS-LT	page B33
Shunt trips	SV-LT	page B34
Undervoltage releases	SP-LT	page B34
Locking inserts	OD-LT-VU01, OD-LT-VU02	page B35
Sealing insert	OD-LT-VP01	page B35
Interconnecting busbars	S1L, S2L, S3L, S4L	page B41
Terminal extension	AS-50-S-AL01	page B43



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Specifications

Type		LTN-UC
Standards		EN 60898-2
Approval marks		
Number of poles		1, 2
Tripping characteristics		C
Rated current	I_n	1 ÷ 63 A
Rated operating voltage	U_e	AC 230/400 V DC 220 V (1pole), DC 440 V (2pole)
Max. operating voltage	U_{max}	AC 250/440 V, DC 250 V / protected pole
Min. operating voltage (1 pole)	U_{min}	AC/DC 24 V
Rated insulation voltage	U_i	AC 250/440 V, DC 250 V / protected pole
Rated frequency	f_n	50/60 Hz
Rated short-circuit breaking capacity (EN 60898-2)	I_{cn}	AC/DC 10 kA
Electrical endurance		10 000 operating cycle, for 40, 50, 63 A 5 000 operating cycles
Mechanical endurance		10 000 operating cycles, for 40, 50, 63 A 5 000 operating cycles
Energy limitation class		3
Mounting on "U" rail according to EN 60715 - type		TH 35
Degree of protection - with connected conductors		IP20
Connection		
Conductor		see table Connection range
Screw head type		PZ2
Torque		max. 3.5 Nm
Top or bottom connection		top/bottom ¹⁾
Operating conditions		
Ambient temperature	°C	-25 ÷ +55 °C, max. 95 % air humidity
Working position		arbitrary
Climatic resistance (EN 60068-2-30)		6 operating cycles
Shocks (EN 60068-2-27)	m/s ²	150 za 11 ms half-sine pulse
Resistance to sinusoidal vibration (EN 60068-2-6)	m/s ²	50 at 25 ÷ 150 Hz and 60 at 35 Hz (4 s)

¹⁾ It is necessary to keep the connection polarity marked on the device in the DC circuits

Connection range

Type and conductor cross-section for front side of the terminal		Type and conductor cross-section for rear side of the terminal															
		Interconnecting busbar	1 rigid conductor			2 rigid conductors			1 flexible conductor ¹⁾			2 flexible conductor ¹⁾		1 flexible conductor with a sleeve			2 flexible conductors with a sleeve
			0.75 ÷ 10 mm ²	16 mm ²	25 mm ²	0.75 ÷ 6 mm ²	1 ÷ 6 mm ²	10 mm ²	16 mm ²	1 ÷ 2.5 mm ²	4 mm ²	0.75 ÷ 6 mm ²	10 mm ²	16 mm ²	0.75 ÷ 2.5 mm ²	4 mm ²	
Type and conductor cross-section for front side of the terminal	1 rigid conductor	0.75 ÷ 16 mm ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		25 mm ²	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		35 mm ²	✓	✓	✗	✗	✓	✓	✓	✗	✓	✓	✓	✗	✗	✓	✗
	2 rigid conductors	0.75 ÷ 10 mm ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
		1 ÷ 16 mm ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	1 flexible conductor ¹⁾	25 mm ²	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓
1 ÷ 6 mm ²		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2 flexible conductors ¹⁾	0.75 ÷ 16 mm ²	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	25 mm ²	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	
1 flexible conductor with a sleeve	0.75 ÷ 6 mm ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	25 mm ²	✓	✓	✓	✗	✓	✓	✓	✓	✓	✓	✓	✓	✗	✓	✓	
2 flexible conductors with a sleeve	0.75 ÷ 6 mm ²	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

¹⁾ The conductor must be twisted before insertion to a terminal; individual conductor fibres must not stick out of the terminal
 Conductors of the same type and cross-section must be used for connection of two conductors to the same level of a terminal

- ✓ the stated connection combination is possible
- ✗ the stated connection combination is not possible

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Internal impedance Z, powers losses P, impedance of fault loop Z_f

I _n [A]	Z ¹⁾ [mΩ/pole]	P ¹⁾ [W/pole]	Max. impedance of fault loop TN Z _f [Ω] ²⁾			
			DC network		AC network ³⁾	
			t ≤ 5 s (for U _o 220 V DC)	t ≤ 0,1 s (for U _o 440 V DC)	t ≤ 0,4 s (for U _o 230 V AC)	t ≤ 5 s (for U _o 230 V AC)
1	1210	1.2	35.4	29.3	23.0	37.0
2	295	1.2	17.7	14.7	11.5	18.5
4	81	1.3	8.8	7.3	5.8	9.2
6	44	1.6	5.9	4.9	3.8	6.2
8	14	0.9	4.4	3.7	2.9	4.6
10	10	1.0	3.5	2.9	2.3	3.7
13	8	1.4	2.7	2.3	1.8	2.8
16	5.9	1.5	2.2	1.8	1.4	2.3
20	4	1.6	1.8	1.5	1.2	1.8
25	3.3	2.1	1.4	1.2	0.9	1.5
32	2.4	2.5	1.1	0.92	0.7	1.2
40	2.1	3.3	0.9	0.73	0.6	0.92
50	1.4	3.5	0.7	0.59	0.5	0.74
63	1.1	4.4	0.6	0.47	0.4	0.59

¹⁾ Average values per protected pole

²⁾ According to EN60364-4-41

³⁾ If the measured value exceeds the table value, we recommend to use residual current circuit breaker

Correction of rated current I_n

Correction of circuit breaker rated current I_n is determined by relation I_{n1} = K_T x K_N x I_n where:

I_{n1} ... is corrected rated current of the circuit breaker

I_n ... is rated current of the circuit breaker (i.e. the one placed separately at reference temperature 30 °C)

K_T ... is correction factor taking ambient temperature into account

K_N ... is correction factor taking into account placement of more loaded circuit breakers side-by-side

1) Correction factor K_T

For concrete circuit breaker type (I_r, characteristic, number of poles), determine correction curve number (1, 2 or 3) in the table, and using the correction curve number and given ambient temperature on the graph, determine correction factor K_T.

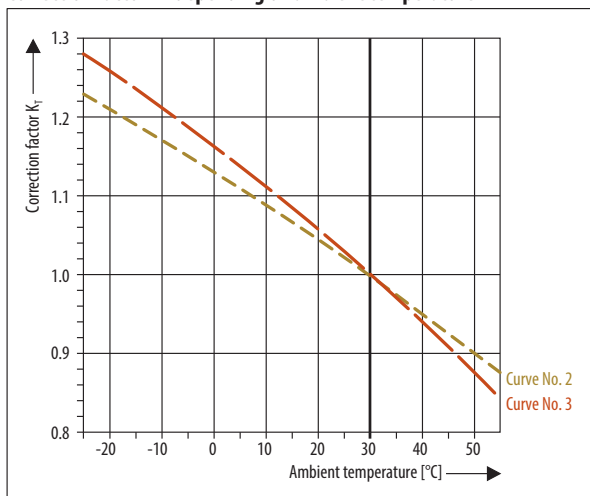
Characteristic	Number pole	Rated current of the circuit breaker I _n [A]													
		1	2	4	6	8	10	13	16	20	25	32	40	50	63
C	1.2	2	2	3	3	3	3	2	3	3	2	2	3	2	3

2) Correction factor K_N

Determine correction factor K_N according to the number of circuit breakers placed side-by-side.

Correction factor KN for circuit breakers placed side-by-side				
Number of LTN-UC circuit breakers side-by-side	1	2 ÷ 3	4 ÷ 6	> 7
Correction factor K _N	1.00	0.90	0.88	0.85

Correction factor K_T depending on ambient temperature



Example

Task: how rated current I_n = 32 A will change for circuit breaker LTN-UC-32C-1 at ambient temperature 10 °C and for 4 circuit breakers placed side-by-side?

Determination of K_T: for characteristic C, number of poles 1, and I_n 32 A, it is possible to take correction curve No. 2 from the table. For intersection of the correction curve No. 2 and ambient temperature 10 °C it is possible to determine correction factor K_T = 1.09 on the vertical scale of the graph.

Determination of K_N: for 4 circuit breakers LTN-UC-32C-1 placed side-by-side it is possible to determine from the table correction factor K_N = 0.88

Correction I_{n1}: new rated current
 $I_{n1} = K_T \times K_N \times I_n = 1.09 \times 0.88 \times 32 \text{ A} = 30.69 \text{ A}$

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Correction of tripping characteristic depending on frequency

Reference frequency: 50 Hz

Thermal release

I_n [A]	Correction factor					
	0 Hz	16 2/3 Hz	50 Hz	125 Hz	400 Hz	1 000 Hz
1 ÷ 10	1	1	1	1	0.99	0.97
13 ÷ 40	1	1	1	0.98	0.97	0.93
50 ÷ 63	1	1	1	0.97	0.92	0.85

Electromagnetic release

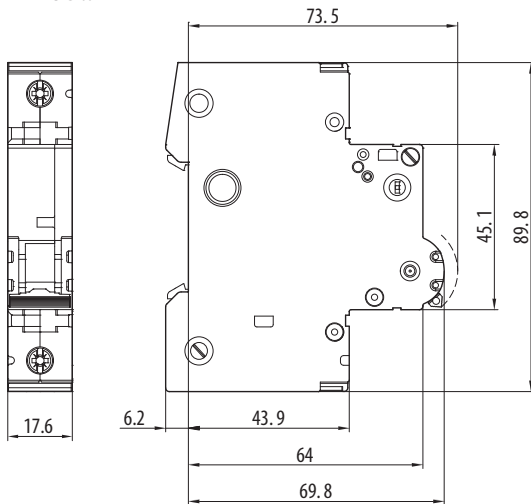
I_n [A]	Correction factor					
	0 Hz	16 Hz	50 Hz	125 Hz	400 Hz	1 000 Hz
1 ÷ 63	1.4	1	1	1.2	1.4	1.7

Example:

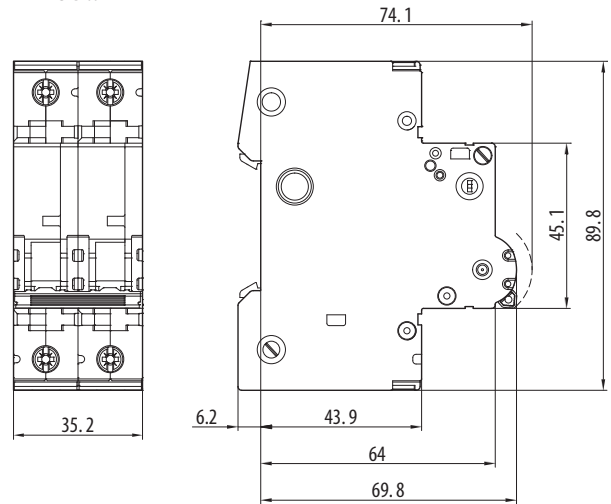
- For circuit breaker LTN-UC-50C-2 in a circuit with frequency of 125 Hz, rated current is corrected: $I_n = 50 \times 0.97 = 48.5$ A. For characteristic C, range of electromagnetic release switching is changed to $1.2 \times (5 \div 10) I_n = (6 \div 12) I_n$
- For circuit breaker LTN-UC-20C-1 in DC current (frequency 0 Hz), rated current is unchanged: $I_n = 20 \times 1 = 20$ A. For characteristic C, range of electromagnetic release switching is changed to $1.4 \times (5 \div 10) I_n = (7 \div 14) I_n$

Dimensions

LTN-UC...-1



LTN-UC...-2

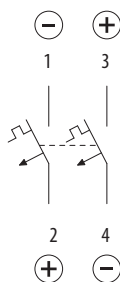


Diagram

LTN-UC...-1

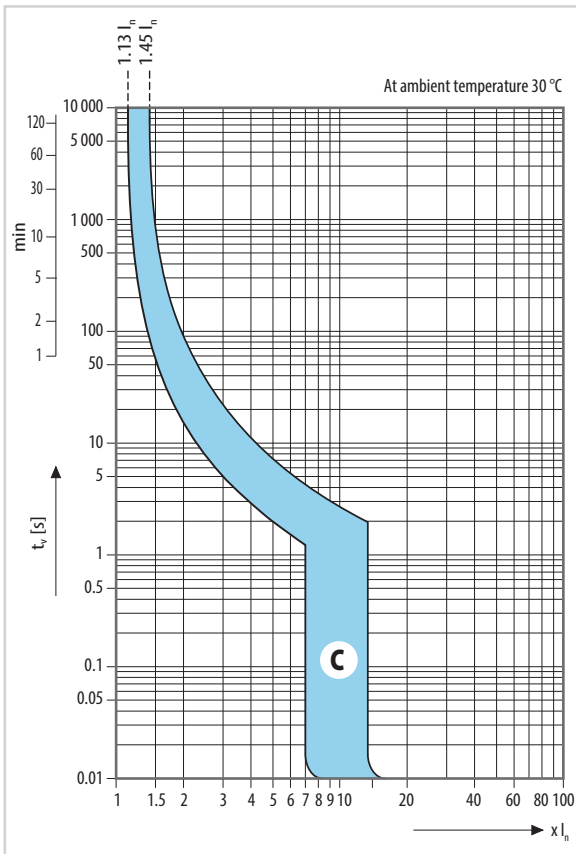


LTN-UC...-2



MINIATURE CIRCUIT BREAKERS LTN-UC

Characteristics LTN-UC in DC circuit



- **Characteristic C:** for protection of line of electrical circuits with equipment, which causes current surges.

Tripping characteristics of circuit breakers according to EN 60898-2

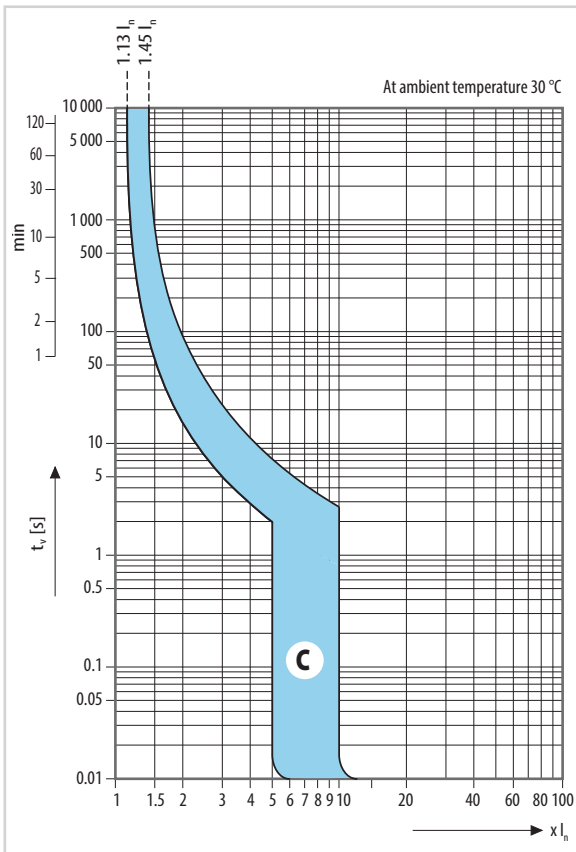
Thermal release	Tripping characteristic type	
	C	
Conventional non-tripping current	I_{nt} for $t \geq 1$ hr	$I_{nt} = 1.13 I_n$
Conventional tripping current	I_t for $t < 1$ hr	$I_t = 1.45 I_n$
Current I_3 for	$1 s < t < 60 s$ (for $I_n \leq 32 A$)	$I_3 = 2.55 I_n$
	$1 s < t < 120 s$ (for $I_n > 32 A$)	

t - break time of the circuit breaker

Electromagnetic release	Characteristic C	
	DC circuit	AC circuit
Current I_4 for	$0.1 s < t < 15 s$ (for $I_n \leq 32 A$)	$I_4 = 7 I_n$
	$0.1 s < t < 30 s$ (for $I_n > 32 A$)	$I_4 = 5 I_n$
Current I_5 for	$t < 0.1 s$	$I_5 = 15 I_n$

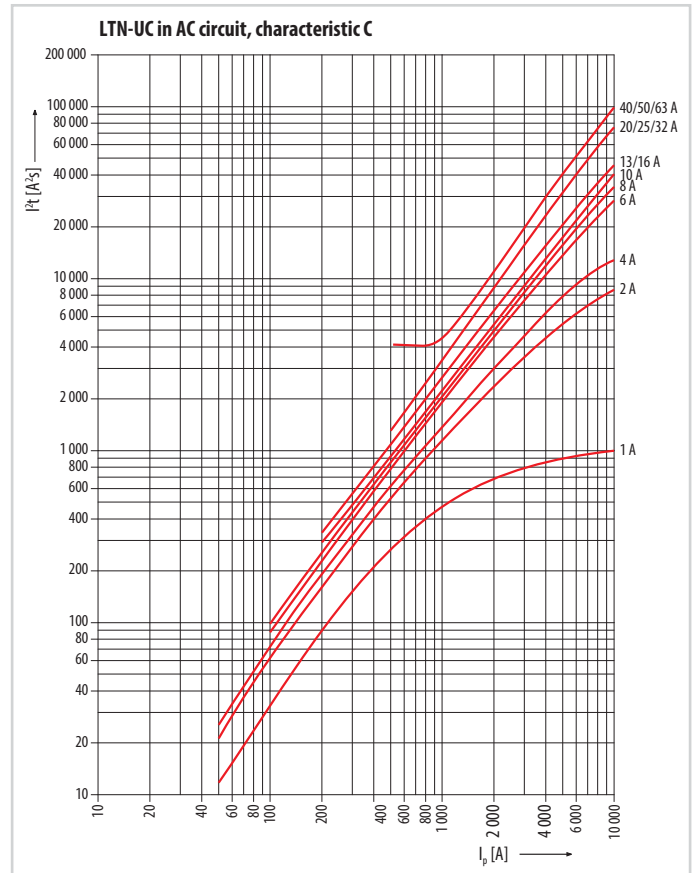
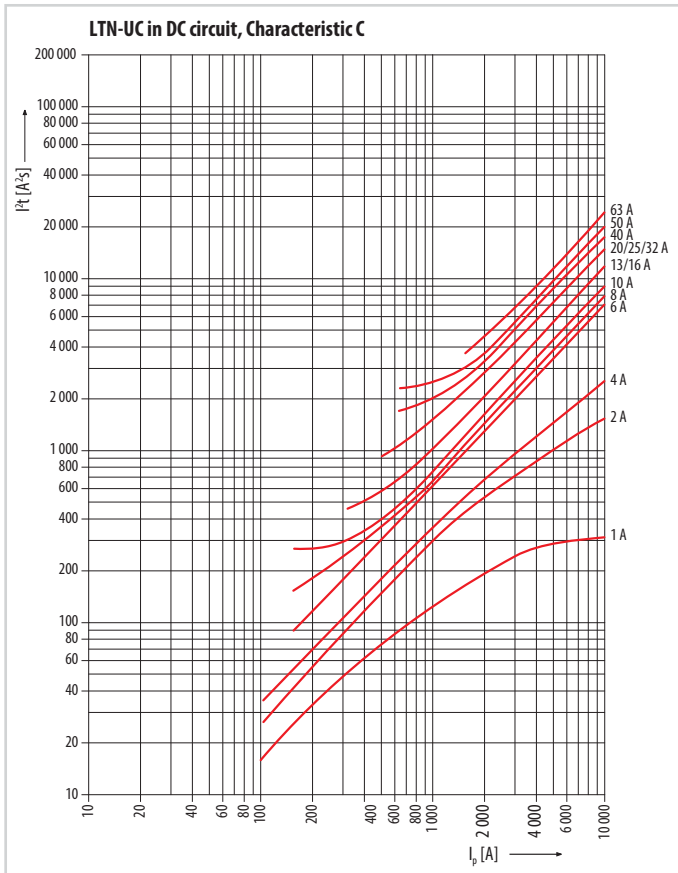
t - break time of the circuit breaker

Characteristics LTN-UC in AC circuit



MINIATURE CIRCUIT BREAKERS LTN-UC

Characteristics I²t



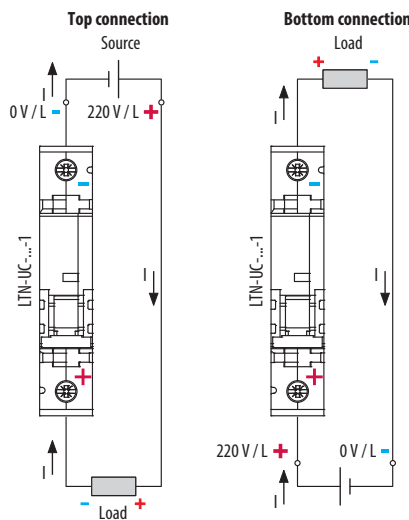
Protection of DC circuits

For protection of DC circuits it is possible to use LTN-UC, LTP, LTS, LVN, LST-DC circuit breakers depending on voltage.

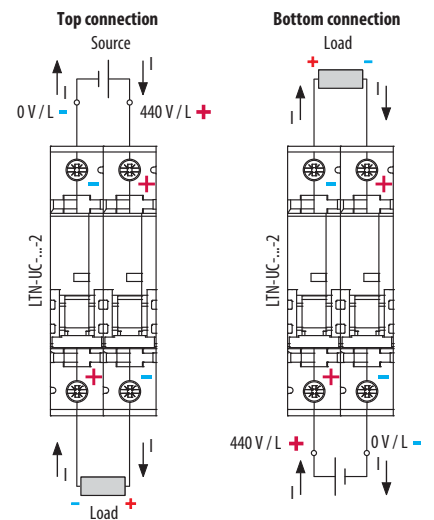
Miniature circuit breaker		DC voltage
Type	I _n [A]	
LTN-UC...-1 ¹⁾	do 63 A	DC 220 V
LTN-UC...-2 ¹⁾	do 63 A	DC 440 V
LST-DC...-2 ¹⁾	do 125 A	DC 440 V
LTP,LTS...-1	do 63 A	DC 60 V
LTP,LTS...-2	do 63 A	DC 120 V
LTP,LTS...-3	do 63 A	DC 180 V
LVN...-1	do 125 A	DC 72 V
LVN...-3	do 125 A	DC 216 V
LVN...-4	do 125 A	DC 288 V

¹⁾ It is necessary to keep the polarity marked on the circuit breaker

1-pole connection of LTN-UC

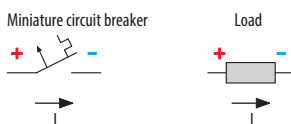


2-pole connection of LTN-UC



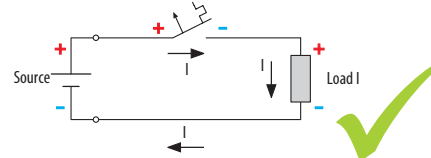
Correct polarity connection of DC circuit breakers, loads etc. in the circuit has to follow the direction of current flow in DC circuit that is from (+) to (-).

Example of current flow according to polarity is shown by the arrow:



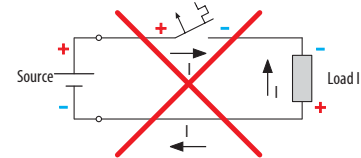
1) Correct connection of devices

= equal direction of current flow on the devices



2) Wrong connection of devices

= contradictory current flow on the devices



The correct connection of devices (point 1) seems to be illogical due to connection of load terminal (+) and circuit breaker terminal (-). However, it is **correct connection**.

ACCESSORIES



Auxiliary switches

- Accessory to:
 - miniature circuit breakers LTP, LTS, LVN, LTN-UC
 - residual current circuit breakers: LFN, LFE
 - switches: MSO, AVN-DC
- For signalling the position of contacts of the device in switching off by releases or manually, i.e. in switching off by overload, short-circuit, shunt trip or undervoltage release, residual current and manually by control lever.
- Mounting:
 - on the right side of the device
 - 2 auxiliary switches can be connected to one device in combination with the other accessories - see page B40.
- Width 9 mm.
- Auxiliary switch function can be checked by test lever on the front side of the device (version PS-...-TE).
- Variant for switching small direct current voltages up to DC 30 V.
- They are suitable for application in SELV and PELV circuits - sufficient insulation is provided between the circuit breaker and the auxiliary switch.

Design	Arrangement of contacts ¹⁾	Type	Order code	Number of modules	Weight [kg]	Package [pcs]
Standard	11	PS-LT-1100	OEZ:42297	0.5	0.065	1
	20	PS-LT-2000	OEZ:42299	0.5	0.071	1
	02	PS-LT-0200	OEZ:42298	0.5	0.065	1
With test lever	11	PS-LT-1100-TE	OEZ:42300	0.5	0.054	1
	20	PS-LT-2000-TE	OEZ:42302	0.5	0.058	1
	02	PS-LT-0200-TE	OEZ:42301	0.5	0.080	1
For small voltages standard	11	PS-LT-1100-MN	OEZ:42303	0.5	0.075	1
For small voltages with test lever	11	PS-LT-1100-MN-TE	OEZ:42304	0.5	0.054	1

¹⁾ Each digit indicates successively the number of make and break contacts



Signal switches

- Accessory to:
 - miniature circuit breakers LTP, LTS, LVN, LTN-UC
 - residual current circuit breakers: LFN, LFE
- For position signalling of main contacts of the device in switching off by releases, i.e. in switching off by overload, short-circuit, shunt trip and undervoltage release or residual current.
- Mounting:
 - on the right side of the device
 - 2 signal switches can be connected to one device in combination with the other accessories - see page B40.
- Auxiliary switch function can be checked by test lever on the front side of the device (version SS-...-TE).
- Signal switch can be reset by means of the red reset lever on the front side of the device without switching the device on by the control lever (version SS-...-RE).
- They are suitable for application in SELV and PELV circuits - sufficient insulation is provided between the circuit breaker and the signal switch

Design	Arrangement of contacts ¹⁾	Type	Order code	Number of modules	Weight [kg]	Package [pcs]
Standard	11	SS-LT-1100	OEZ:42306	0.5	0.065	1
	20	SS-LT-2000	OEZ:42307	0.5	0.075	1
	02	SS-LT-0200	OEZ:42308	0.5	0.078	1
With test lever	11	SS-LT-1100-TE-RE	OEZ:42309	0.5	0.055	1
	20	SS-LT-2000-TE-RE	OEZ:42310	0.5	0.057	1
	02	SS-LT-0200-TE-RE	OEZ:42311	0.5	0.057	1

¹⁾ Each digit indicates successively the number of make and break contacts

ACCESSORIES



Shunt trips

- Accessory to:
 - miniature circuit breakers LTS, LVN, LTN-UC
 - residual current circuit breakers: LFN, LFE
- They are used for device switching off by applied voltage.
- Mounting:
 - on the right side of the device
 - one shunt trip can be connected to one device in combination with the other accessories - see page B40.

Rated voltage U_c	Type	Order code	Number of modules	Weight [kg]	Package [pcs]
AC/DC 24 ÷ 60 V	SV-LT-X060	OEZ:42312	1	0.106	1
AC 110 ÷ 415 V / DC 110 V	SV-LT-X400	OEZ:42313	1	0.098	1

Undervoltage releases

- Accessory to:
 - miniature circuit breakers LTS, LVN, LTN-UC
 - residual current circuit breakers: LFN, LFE
- They are used for tripping the device at loss of voltage as well as at gradual decrease of voltage.
- They are used for elimination of closing of circuit breaker if voltage is lower than 35 % U_c (switching is possible at voltage higher than 85 % U_c).
- They are often used for protection against device restart following mains failure.
- Mounting:
 - on the right side of the device
 - one undervoltage release can be connected to one device in combination with the other accessories - see page B40.

Rated voltage U_c	Arrangement of contacts ¹⁾	Type	Order code	Number of modules	Weight [kg]	Package [pcs]
AC 230 V	-	SP-LT-A230	OEZ:42315	1	0.109	1
	20	SP-LT-A230-2000	OEZ:42317	1	0.123	1
DC 24 V	-	SP-LT-D024	OEZ:42319	1	0.113	1
	20	SP-LT-D024-2000	OEZ:42321	1	0.117	1
DC 110 V	-	SP-LT-D110	OEZ:42320	1	0.105	1
	20	SP-LT-D110-2000	OEZ:42322	1	0.128	1

¹⁾ Each digit indicates successively the number of make and break contacts

ACCESSORIES



Locking insert OD-LT-VU01

- Accessory to:
 - miniature circuit breakers LVN, LTN-UC
 - residual current circuit breakers: OLI, OLE
 - switches: AVN-DC
- For safe locking of the control lever in off or on position.
- The protective function of the devices is functional even in locked position.
- Maximum diameter of lock rod - 3 mm.
- The lock is not included in the package.

Type	Order code	Weight [kg]	Package [pcs]
OD-LT-VU01	OEZ:42324	0.012	1



Locking insert OD-LT-VU02

- Accessory to:
 - miniature circuit breakers: LTP, LTS, LVN, LTN-UC
 - residual current circuit breakers: OLI, OLE, LFN, LFE
 - switches: MSO, AVN-DC
- For safe locking of the control lever in off or on position.
- The protective function of the devices is functional even in locked position.
- Maximum diameter of lock rod - 6 mm.
- The lock is not included in the package.
- **In installation it is necessary to press the fixing springs of the insert by two fingers against each other, and then slide them in the holes in the circuit breaker. In case of pressing the insert against the circuit breaker body a part of the plastic cover could break off!**

Type	Order code	Weight [kg]	Package [pcs]
OD-LT-VU02	OEZ:42325	0.003	1





Sealing insert OD-LT-VP01

- Accessory to:
 - miniature circuit breakers LTP, LTS, LVN, LTN-UC
 - residual current circuit breakers: OLI, OLE
 - switches: MSO, AVN-DC
- For covering and sealing of terminal screws.

Type	Order code	Weight [kg]	Package [pcs]
OD-LT-VP01	OEZ:42323	0.002	1

ACCESSORIES







Specifications of auxiliary and signal switches

Type				PS-LT SS-LT	PS-LT-1100-MN PS-LT-1100-MN-TE
Standards				EN 60947-5-1 EN 62019	EN 60947-5-1 EN 62019
Approval marks					
Arrangement of contacts ¹⁾				11, 20, 02	11, 20, 02
Rated operating voltage/current	U_e/I_e	AC-13	400 V	2 A	-
			230 V	6 A	-
		AC-14	400 V	2 A	-
			230 V	6 A	-
		DC-13	220 V	1 A	-
			110 V	1 A	-
			60 V	3 A	-
		24 V	6 A	-	
Max. voltage/current				-	DC 30 V / 50 mA
Min. voltage/current				24 V / 50 mA	DC 5 V / 1 mA
Backup protection - fuse / miniature circuit breaker				6 A gG / 6A characteristic B, C	6 A gG / 6A characteristic B, C
Mechanical endurance				10 000 operating cycles	10 000 operating cycles
Electrical endurance at I_e				10 000 operating cycles	10 000 operating cycles
Degree of protection				IP20	IP20
Connection					
Conductor Cu rigid (solid, stranded)				0.5 ÷ 2.5 mm ²	0.5 ÷ 2.5 mm ²
Conductor Cu flexible				0.5 ÷ 2.5 mm ²	0.5 ÷ 2.5 mm ²
Torque				0.5 Nm	0.5 Nm
Connection				top/bottom	top/bottom
Operating conditions					
Ambient temperature				-25 ÷ +55 °C	-25 ÷ +55 °C
Working position				arbitrary	arbitrary
Climatic resistance dle IEC 60068-2-30				28 operating cycles	28 operating cycles
Shocks (EN 60068-2-27)		m/s^2		150 za 11 ms half-sine pulse	150 za 11 ms half-sine pulse
Vibration resistance according to 60068-2-6		m/s^2		50 at 10 ÷ 150 Hz	50 at 10 ÷ 150 Hz

¹⁾ Each digit indicates successively the number of make and break contacts

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Specifications of shunt trips and undervoltage releases

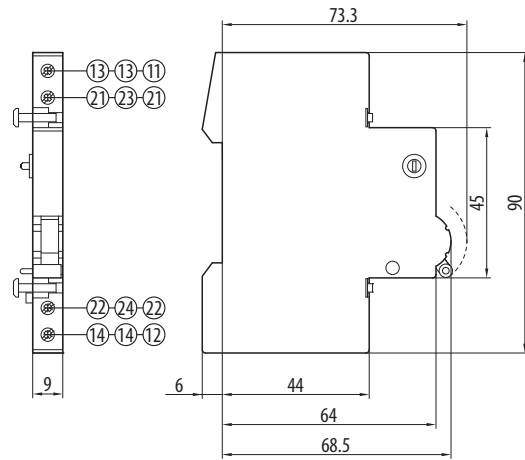
Type		SV-LT	SP-LT
Standards		EN 60947-1	EN 60947-1
Approval marks		  	  
Mounting		on the right side of the device	on the right side of the device
Degree of protection		IP20	IP20
Control circuit coil			
Rated voltage	U_c	AC/DC 24 ÷ 60 V	AC 230 V
Range of rated voltage		AC 110 ÷ 415 V / DC 110 V	DC 24, 110 V
Voltage range for switching off		$0.7 \div 1.1 U_c$	$0.85 \div 1.1 U_c$
Rated frequency	f_n	50/60 Hz	50/60 Hz
Backup protection - fuse / miniature circuit breaker		6 A gG / 6 A characteristic B, C	6 A gG / 6 A characteristic B, C
Contact			
Arrangement of contacts ¹⁾		-	20
Rated operating voltage/current	U_c/I_c	AC-1	230 V / 6 A
Min. voltage/current		-	24 V / 50 mA
Backup protection - fuse / miniature circuit breaker		-	6 A gG / 6 A char. B, C
Connection			
Conductor Cu rigid (solid, stranded)		0.5 ÷ 2.5 mm ²	0.5 ÷ 2.5 mm ²
Conductor Cu flexible		0.5 ÷ 2.5 mm ²	0.5 ÷ 2.5 mm ²
Torque		0.8 Nm	0.8 Nm
Connection		top/bottom	top/bottom
Operating conditions			
Mechanical endurance		10 000 operating cycles	10 000 operating cycles
Electrical endurance		2 000 operating cycles	2 000 operating cycles
Ambient temperature		-25 ÷ +55 °C	-25 ÷ +55 °C
Working position		arbitrary	arbitrary
Climatic resistance according to IEC 60068-2-30		28 operating cycles	28 operating cycles
Shocks (EN 60068-2-27)	m/s ²	50 za 11 ms half-sine pulse	50 za 11 ms half-sine pulse
Vibration resistance according to IEC 60068-2-6	m/s ²	50 at 10 ÷ 150 Hz	50 at 10 ÷ 150 Hz

¹⁾ Each digit indicates successively the number of make and break contacts

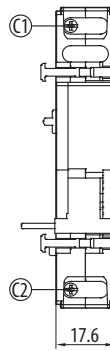
ACCESSORIES

Dimensions

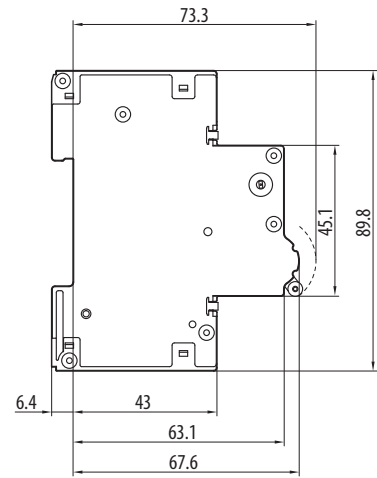
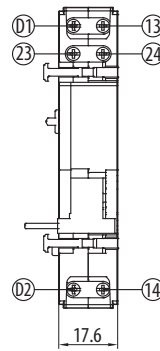
PS-LT, SS-LT



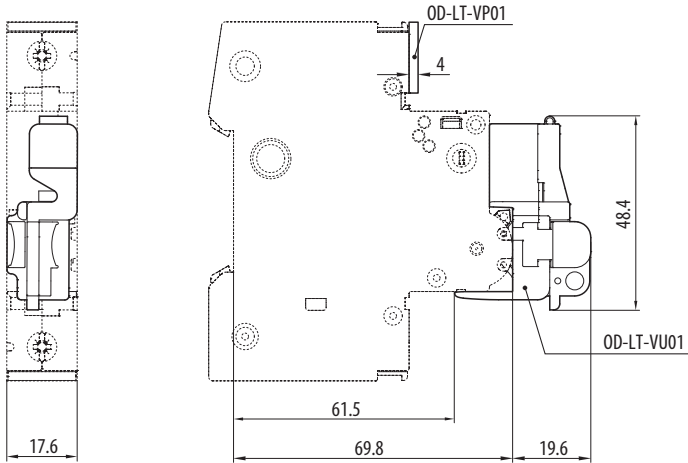
SV-LT



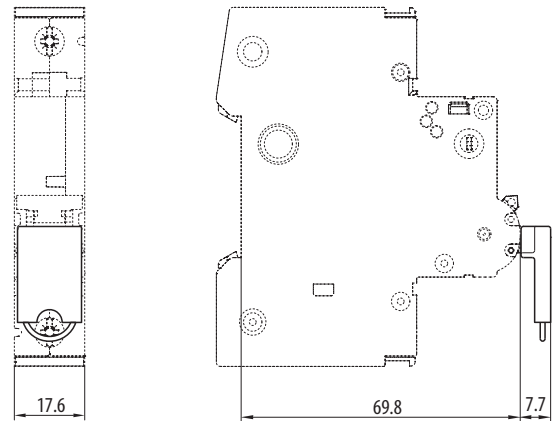
SP-LT



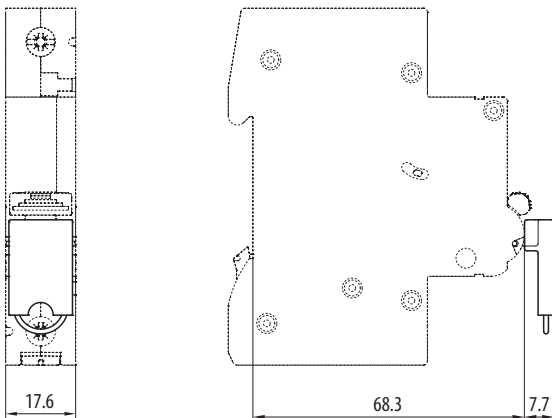
LTN-UC, LVN + OD-LT-VU01 + OD-LT-VP01



LTN-UC, LVN + OD-LT-VU02

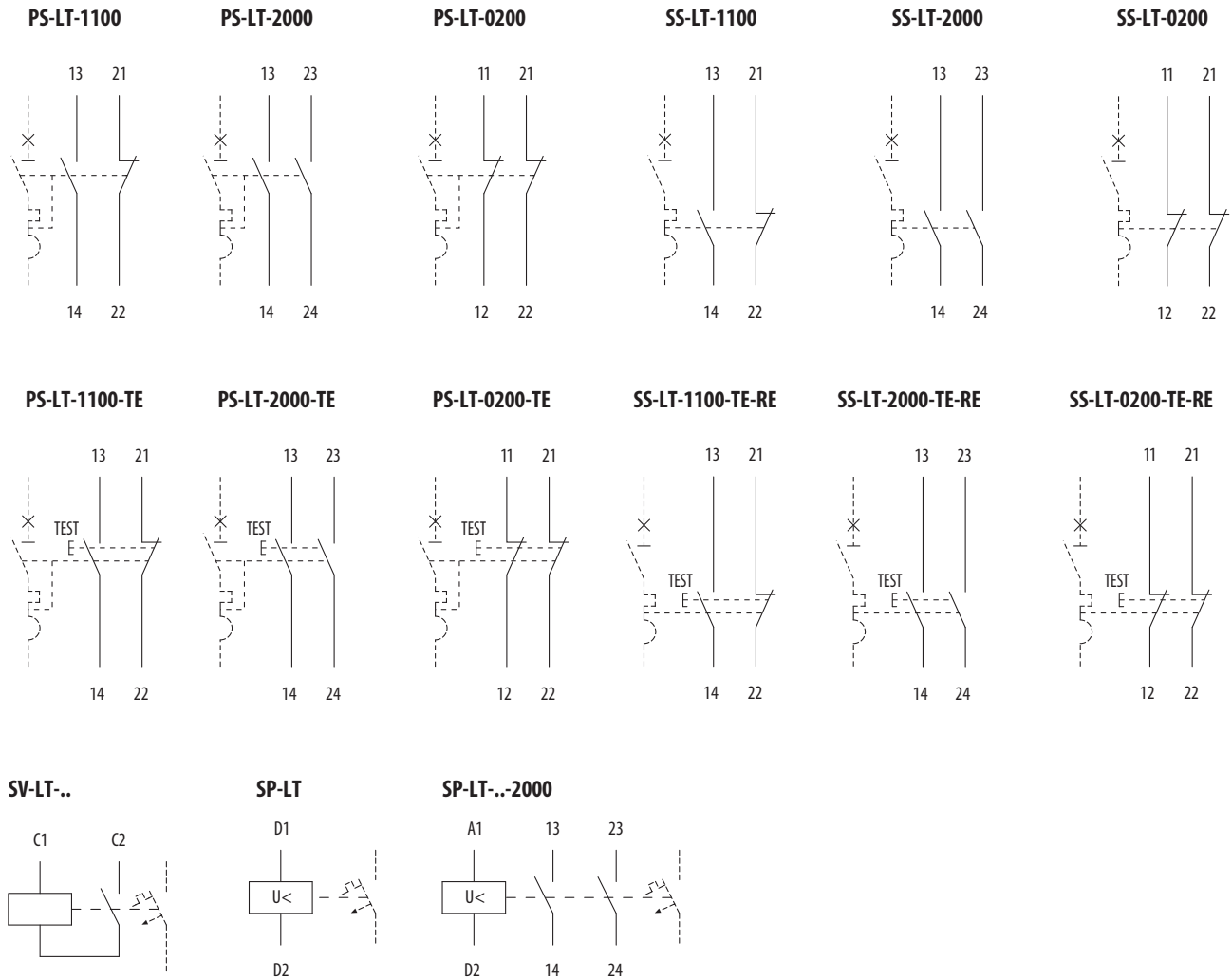


LTP, LTS + OD-LT-VU02



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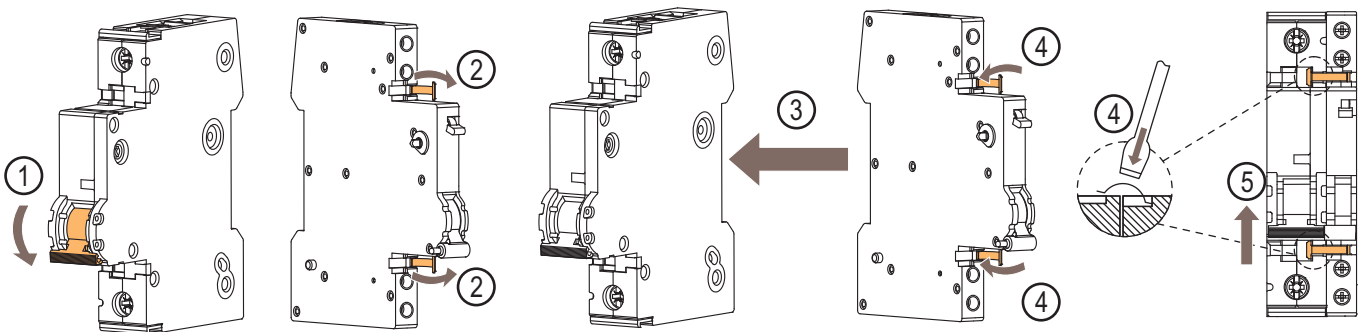
Diagram



Installation of auxiliary switch, shunt trips or undervoltage releases

For installation of an auxiliary switch, shunt trip or undervoltage releases on a circuit breaker, residual current circuit breaker or switch, the same procedure shall apply as described on the example of installation of the auxiliary switch on the circuit breaker in the following points.

1. In mounting the levers of auxiliary switch and of the circuit breaker are in OFF position.
2. Tilt both fixing springs of the auxiliary switch to the right so that they do not get between the auxiliary switch and circuit breaker in installation.
3. Slide the auxiliary switch onto the circuit breaker from the right.
4. Lock the fixing springs in the circuit breaker body so that the auxiliary switch cannot release.
5. Check correct function by switching.



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Combination of accessories

