Manufacturer		Model/Type number	Web	UL E-no.
1	Schurter	4430.3004 / CBE TA45-ABTBL200Z8-806 (Before Nov 2020: TA45-ABCBLC00Z8-806) (Suffix -806 indicates this is a custom-made item)	www.schurter.co.uk	E71572
2				

Supplier (informative)		Ordering number (informative)	Web	Must be RoHS compliant !
1				
2				

Required approvals	UL, CSA, VDE	**UL Product Category**	QVNU2
Required marking	Manufacturer, Model/Type		
Description	Main switch and circuit breaker Series TA45, 2-pole, 1 pole 20A thermal overload protection, Black rocker with I-O in white and black body, 12V undervoltage release		

CIRCUIT BREAKERS FOR EQUIPMENT, 2 POLE, ROCKER
GERÄTESCHUTZSCHALTER, 2POLIG, WIPPENBETÄTIGT TA45

Product description

The 2 pole, rocker actuated version of the TA45 line of thermal CBE's can be used for various purposes. Basically it is a CBE for automatic interruption of overloads with facilities for regular manual ON/OFF switching operations under normal load conditions. It is capable of interrupting moderate short circuit currents without the aid of back-up protection.

A special version is available as a «CBE-switch», in which the means for automatic overcurrent interruption (the bimetal relases), are omitted.

Another available version of this line utilizes an undervoltage release to protect persons against injuries caused by unexpected events like the automatic restarting of motors after a power failure. This release can be combined with the thermal release required for overcurrent protection. Protection against injuries is also provided by another CBE of this line, which prevents the starting of a machine should a protective cover be removed from dangerous parts of the machine.



Available options

- CBE for overcurrent protection
  1 or 2 protected poles (thermal)
- CBE with undervoltage release:
  The CBE will open automatically when the voltage drops below the trip level. Only when the supply voltage has reached the reset level, the CBE can be reclosed manually.
- CBE switch with mechanical lock-out latch:
  A spring loaded pin will trip the CBE if a protective cover of the equipment is removed. The CBE can not be switched ON until the protective cover is refitted.
- CBE with remote trip release:
  The remote trip release permits the CBE to be tripped by a external contact (sensor) energizing the trip coil.
- CBE with auxiliary contact:
  All types of the line can be outfitted with an auxiliary contact (changeover contact).

TA45 is positively trip-free. The rated current range is 0,05 to 20 A at AC 240 V / DC 60 V . The CBE comes with snap-in mounting. The rocker is available in various colours and also with illumination. It is approved in all major industrial countries and complies with the CBE-standard EN60934. In conjunction with its accessories the TA45 product line of Schurter paves the way for new unconventional applications.

Applications

- Motors
- Power supplies
- Processing machines
- Etc.

Effect of ambient temperature

The unit is calibrated for an ambient temperature of +23°C. To determine the rated current for a lower or higher ambient temperature, use a correction factor from the table below:

*Ambient temperature [°C]	Correction factor
–10	0,89
–5	0,91
0	0,92
+23	1,00
+30	1,03
+40	1,08
+55	1,16

Example

Rated current at +23°C	5,0 A
Ambient temperature	+40°C
Correction factor	1,08
Chosen rated current at +40°C ambient temperature	

5 A x 1,08 = 5,5 A

*Temperature must be measured at the rear of the breaker next to the terminals after equipment operating temperature has been reached.

Einfluß der Umgebungstemperatur

Die Eichung gilt für eine Umgebungstemperatur von +23°C. Zur Bestimmung des Nennstromes für eine tiefere oder höhere Umgebungstemperatur ist ein Korrekturfaktor gemäß untenstehender Tabelle zu verwenden:

*Umgebungs-temperatur [°C]	Korrekturfaktor
–10	0,89
–5	0,91
0	0,92
+23	1,00
+30	1,03
+40	1,08
+55	1,16

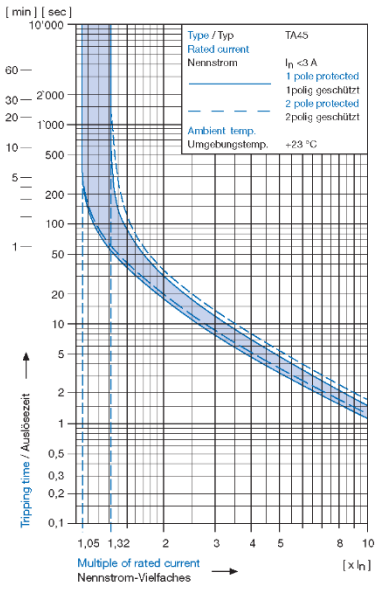
Beispiel

Nennstrom bei +23°C	5,0 A
Umgebungstemperatur	+40°C
Korrekturfaktor	1,08
Gewählter Nennstrom bei +40°C Umgebungstemperatur	

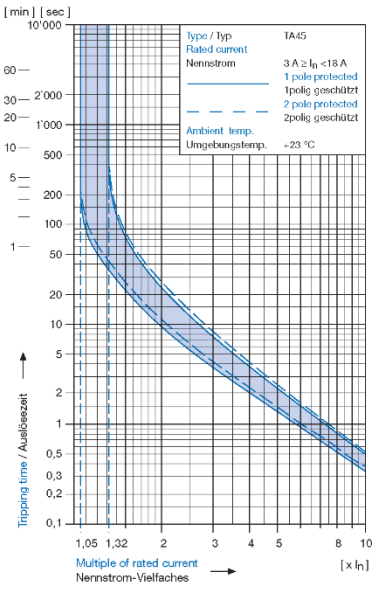
5 A x 1,08 = 5,5 A

*Die Temperatur wird in der Nähe der Schalteranschlüsse ermittelt, nachdem das zu schützende System seine Arbeitstemperatur erreicht hat.

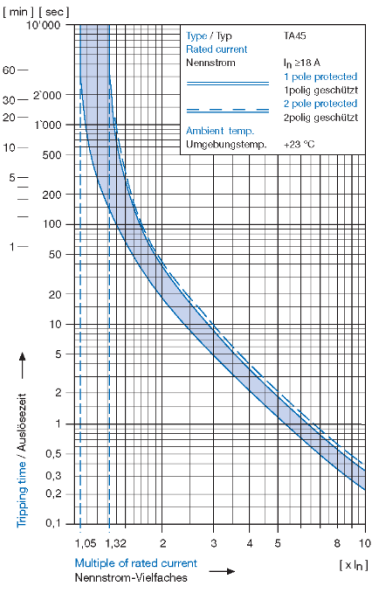
Tripping characteristics
Auslösekennlinien
I_n <3 A



Tripping characteristics
Auslösekennlinien
3 A ≥ I_n <18 A



Tripping characteristics
Auslösekennlinien
I_n ≥18 A



State	Context	Signature	Date & Time	Page (of)	
Released	Standard Components - Morgana	BOL	12/9/2020 11:43	3 (13)	
Plockmatic Group	Designation **Switch**, 20A overload protection		Part/Doc. number **652-011**	Version **B.4**	Insp. lvl **UL**

Technical data / Technische Daten

Rated voltage U_e **Nennspannung U_e**	See approvals page 59 Siehe Approbationen Seite 59		AC 240 V; DC 60 V AC 240 V; DC 60 V
Rated current I_n **Nennstrom I_n**	See approvals page 59 Siehe Approbationen Seite 59		AC/DC 0,05 A – 20 A AC/DC 0,05 A – 20 A
Conditional short circuit current I_{nc} **Bedingtes Schaltvermögen I_{nc}**	EN 60934, PC1, AC 240 V EN 60934, PC1, AC 240 V		1000 A 1000 A
Short circuit capacity I_{cn}	AC 240 V with I_n<3 A AC 240 V with I_n≥3 A DC 60 V with I_n<3 A DC 48 V with I_n ≥3 A	(number of cycles: 3) (number of cycles: 3) (number of cycles: 3) (number of cycles: 3)	10 I_n 300 A 10 I_n 120 A
Schaltvermögen I_{cn}	AC 240 V bei I_n<3 A AC 240 V bei I_n≥3 A DC 60 V bei I_n<3 A DC 48 V bei I_n ≥3 A	(Anzahl Schaltspiele: 3) (Anzahl Schaltspiele: 3) (Anzahl Schaltspiele: 3) (Anzahl Schaltspiele: 3)	10 I_n 300 A 10 I_n 120 A
Degree of protection	Accessible range With accessoris		IP40 IP54, IP65
Schutzklasse	Terminal side With accessoirs Betätigungsbereich Mit Zubehör Anschlussbereich Mit Zubehör		IP00 IP40 IP40 IP54, IP65 IP00 IP40
Dielectric strength **Spannungsfestigkeit**	Accessible range Betätigungsbereich		AC 4000 V AC 4000 V
Insulation resistance **Isolationswiderstand**	DC 500 V DC 500 V		>100 MΩ >100 MΩ
Endurance	Number of cycles at I_n (AC 240 V; DC 60 V) Number of cycles at 6 x I_n (AC 240 V) Number of cycles at 4 x I_n (DC 60 V)		50'000 x 40 x 40 x
Lebensdauer	Anzahl Schaltspiele bei I_n (AC 240 V; DC 60 V) Anzahl Schaltspiele bei 6 x I_n (AC 240 V) Anzahl Schaltspiele bei 4 x I_n (DC 60 V)		50'000 x 40 x 40 x
Permissible ambient temperature **Zulässige Umgebungstemperatur**			-10°C to +55°C -10°C bis +55°C
Resistance to vibration **Schwingungsfestigkeit**	IEC 60068-2-6, test Fc, 0.75 mm amplitude 5-60 Hz, 60-500 Hz IEC 60068-2-6, Test Fc, 0.75 mm Amplitude 5-60 Hz, 60-500 Hz		10 g 10 g
Shock resistance **Stossfestigkeit**	IEC 60068-2-27, test Ea IEC 60068-2-27, Test Ea		30 g 30 g
Type of tripping **Auslöseart**	• Thermal positively trip-free • Undervoltage release (Zero-voltage release) • Remote trip • Mechanical lock-out latch • Thermisch positive Freiauslösung • Unterspannungs-Auslösung (Zero-voltage release) • Fernauslösung • Mechanische Schaltsperre		
Weight **Gewicht**			approx. 35 g ca. 35 g

Technical data (continued) / Technische Daten (Fortsetzung)

Auxiliary contact (changeover) / Hilfskontakt (Wechsler)

Rated voltage **Nennspannung**	DC 28 V DC 28 V	DC 60 V DC 60 V	AC 240 V AC 240 V
Rated current **Max. Nennstrom**	Max. 10 A resistive load Max. 10 A ohmsche Last	max. 2 A resistive load max. 2 A ohmsche Last	max. 2 A cos φ 0,7 max. 2 A cos φ 0,7

Undervoltage release / Unterspannungs-Auslöser

Max. operating voltage **Max. Betriebsspannung**							1,1 U_e 1,1 U_e
Rated operating voltage U_e **Nennbetriebsspannung U_e**	5 V 5 V	12 V 12 V	24 V 24 V	48 V 48 V	120 V 120 V	240 V 240 V	
Current consumption (±10%) **Stromaufnahme (±10%)**	10,5 mA 10,5 mA	16,5 mA 16,5 mA	17,0 mA 17,0 mA	3,2 mA 3,2 mA	3,7 mA 3,7 mA	3,1 mA 3,1 mA	
Highest reset level **Höchste Wiedereinschaltspannung**							0,85 U_e 0,85 U_e
Lowest trip level **Tiefste Abfallspannung**							0,20 U_e 0,20 U_e
Trip delay **Ausschaltverzug**							20 ms – 50 ms 20 ms – 50 ms
Impuls withstand voltage (1,2 / 50 µs) **Stoss-Spannungsfestigkeit (1,2 / 50 µs)**							≥4 kV ≥4 kV

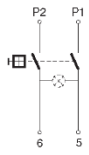
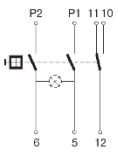
Remote trip / Fern-Auslöser

Permissible impuls duration of the make contact (no) **Zulässige Impulsdauer des Schliesskontaktes**	(Between terminal C and P1) (Zwischen den Anschlüssen C und P1)
Electrical load of the make contact (no) **Elektrische Belastung des externen Schliesskontaktes**	Current max. 12 mA / power max. 1,1 W Strom max. 12 mA / Leistung max. 1,1 W

Approvals / Approbationen

			Rated current range Nennstrombereich AC	Rated voltage Nennspannung AC	Rated voltage Nennspannung DC
	UL	UL 1077	0,05 – 20 A	240 V	60 V
	CSA	CSA C22.2 235	0,05 – 20 A	240 V	60 V
	VDE	EN 60934	0,05 – 20 A	240 V	60 V
	SEMKO	EN 60934	0,05 – 20 A	250 V	60 V
	SEV	EN 60934	0,05 – 20 A	240 V	60 V

Order code 2 pole, rocker actuated / Bestellcode 2polig, wippenbetätigt

Basic type / Grundtyp			Without thermal overload protection / Kein thermischer Überstromschutz			
Auxiliary contact (changeover) / Hilfskontakt (Wechsler) Shunt terminal / Nebenanschluss						
Terminal type / Anschlussart	Quick connect terminal / Flachstecker		●		●	
	Screw type terminal (lineside P1, P2) Schraubanschluss (Netzeingang P1, P2)		●		●	
Snap-in type / Schnappbefestigung	Dimensions / Massbilder	Page / Seite	63	64	66	67
ON/OFF switch / Ein- Ausschalter	Without illumination Ohne Beleuchtung		ABC	AHC	APC	ASC
	With illumination Mit Beleuchtung	220 V…240 V	A02	A52	AK2	A2K
		110 V…120 V	A04	A54	AK4	A4K
		20 V…26 V	A07	A57	AK7	A7K
		10 V…13 V	A08	A58	AK8	A8K
		4 V…7 V	A09	A59	AK9	A9K
Impulse switch / Taster Schalter	Without illumination Ohne Beleuchtung		AEC	AJC	ARC	AUC

ABT - See next page

Colours / Farben

	Switch front / Schalter-Front	Rocker / Wippe	
W	black / schwarz	white / weiss	–
1	black / schwarz	–	clear transp. / natur transp.
B	black / schwarz	black / schwarz	–
R	black / schwarz	red / rot	–
3	black / schwarz	–	red transp. / rot transp.
G	black / schwarz	green / grün	–
4	black / schwarz	–	green transp. / grün transp.
Y	black / schwarz	yellow / gelb	–
X	black / schwarz	orange / orange	–
6	black / schwarz	–	orange transp. / orange transp.

Order example / Bestellbeispiel

Basic type / Grundtyp

TA45- ABT W F 100 U2 – AZM01

Earlier version (before Nov. 2020) had no thermal overload protection (C00)

Rocker legend
Wippen-Beschriftung

	Surface / Oberfläche	Illustration / Bild	Colour of print / Druckfarbe
F	embossed / Relief	– 0	
H	printed / bedruckt	ON OFF	white / weiss
K	printed / bedruckt	ON OFF	black / schwarz
L	printed / bedruckt	– 0	white / weiss
M	printed / bedruckt	– 0	black / schwarz
P	printed / bedruckt	I 0	white / weiss
R	printed / bedruckt	I 0	black / schwarz
S	printed / bedruckt	ON – I 0 OFF	white / weiss
T	printed / bedruckt	ON – I 0 OFF	black / schwarz

Without thermal overload protection: code C00
Ohne thermischen Überstromschutz: Code C00

With thermal overload protection: rated current I_n (A)
Mit thermischem Überstromschutz: Nennstrom I_n (A)

I_n	Code	I_n	Code	I_n	Code	I_n	Code
0,05	Z05	1,2	J12	2,5	J25	9,0	090
0,1	J01	1,3	J13	2,8	J28	10,0	100
0,2	J02	1,4	J14	3,0	030	11,0	110
0,3	J03	1,5	J15	3,5	035	12,0	120
0,4	J04	1,6	J16	4,0	040	13,0	130
0,5	J05	1,7	J17	4,5	045	14,0	140
0,6	J06	1,8	J18	5,0	050	15,0	150
0,7	J07	1,9	J19	6,0	060	16,0	160
0,8	J08	2,0	J20	6,5	065	17,0	170
0,9	J09	2,1	J21	7,0	070	18,0	180
1,0	J10	2,2	J22	7,5	075	19,0	190
1,1	J11	2,3	J23	8,0	080	20,0	200

other rated currents on request / andere Stromwerte auf Anfrage

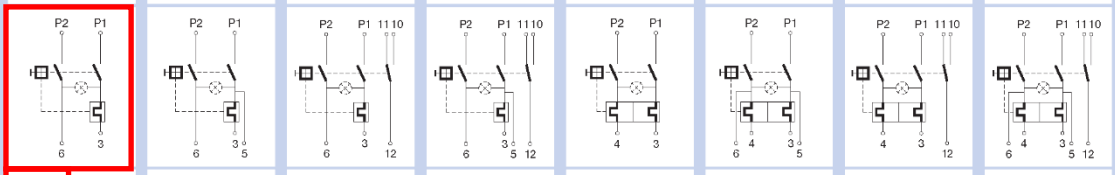
State	Context	Signature	Date & Time	Page (of)	
Released	Standard Components - Morgana	BOL	12/9/2020 11:43	6 (13)	
Plockmatic Group	Designation **Switch**, 20A overload protection		Part/Doc. number **652-011**	Version **B.4**	Insp. lvl **UL**

CIRCUIT BREAKERS FOR EQUIPMENT, 2 POLE, ROCKER
GERÄTESCHUTZSCHALTER, 2POLIG, WIPPENBETÄTIGT

TA45

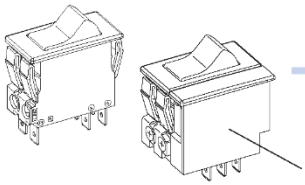
1 pole thermal overload protection
1poliger thermischer Überstromschutz

2 pole thermal overload protection
2poliger thermischer Überstromschutz



•		•		•		•				•				•	
	•		•		•		•		•		•		•		•
63	64	63	64	66	67	66	67	63	64	63	64	66	67	66	67
ABT	**AHT**	**ABF**	**AHF**	**APT**	**AST**	**APF**	**ASF**	**ABD**	**AHD**	**ABG**	**AHG**	**APD**	**ASD**	**APG**	**ASG**
A12	A62	A22	A72	AL2	A2L	AM2	A2M	A32	A82	A42	A92	AN2	A2N	AP2	A2P
A14	A64	A24	A74	AL4	A4L	AM4	A4M	A34	A84	A44	A94	AN4	A4N	AP4	A4P
A17	A67	A27	A77	AL7	A7L	AM7	A7M	A37	A87	A47	A97	AN7	A7N	AP7	A7P
A18	A68	A28	A78	AL8	A8L	AM8	A8M	A38	A88	A48	A98	AN8	A8N	AP8	A8P
A19	A69	A29	A79	AL9	A9L	AM9	A9M	A39	A89	A49	A99	AN9	A9N	AP9	A9P
AET	AJT	AEF	AJF	ART	AUT	ARF	AUF	AED	AJD	AEG	AJG	ARD	AUD	ARG	AUG

Accessories see page 62 / Zubehör siehe Seite 62

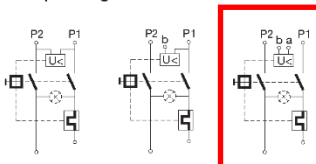


with auxiliary contact
mit Hilfskontakt

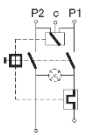
Without release / lock-out latch: code C0
Ohne Auslöser / Schaltsperre: Code C0

Detail see pages 52 – 54
Detail siehe Seiten 52 – 54

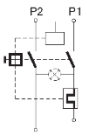
Undervoltage release
Unterspannungs-Auslöser



Remote trip release
Fernauslöser



Mechanical lock-out latch
Mechanische Schaltsperre



U*	E*	Z	A*	Code	Rated voltage U_n Nennspannung U_n AC (V)
•	•	•	•	2	240
•	•	•	•	3	230
•	•	•	•	4	120
					AC / DC (V)
•	•	•	•	6	48
•	•	•	•	7	24
•	•	•	•	8	12
•	•	•		9	5

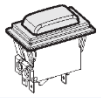
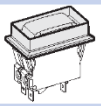
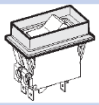
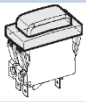
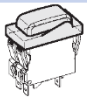
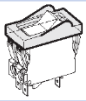
S0

* Release U, E and A in combination with screw clamp terminals on request / Auslöser U, E und A in Kombination mit Schraubanschlüssen auf Anfrage

State	Context	Signature	Date & Time	Page (of)	
Released	Standard Components - Morgana	BOL	12/9/2020 11:43	7 (13)	
Plockmatic Group	Designation **Switch**, 20A overload protection		Part/Doc. number **652-011**	Version **B.4**	Insp. lvl **UL**

Order code accessories 2 pole, rocker actuated
Bestellcode Zubehör 2polig, wipppenbetätigt

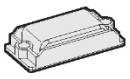
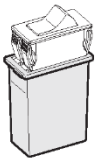
Factory mounted / werkseitig montiert

	**AZM01**	Collar with cover, 2 pole, IP54 Prefered type: improved seal between cover and panel Fronthaube mit Kragen, 2polig, IP54 Vorzugstyp: besseres Abdichten gegenüber Frontplatte
	**AZM02**	Raised collar with cover, 2 pole IP54 Prefered type: improved seal between cover and panel Fronthaube mit Schutzkragen, 2polig, IP54 Vorzugstyp: besseres Abdichten gegenüber Frontplatte
	**AZM03**	Raised collar, 2 pole, IP40 Schutzkragen, 2polig, IP40
	**AZM10**	Collar with cover, narrow, 2 pole, IP54 Fronthaube mit Kragen schmal, IP54
	**AZM11**	Partially raised collar with cover, narrow, 2 pole, IP54 Fronthaube mit Schutzkragen schmal gegen unbeabsichtigtes Einschalten der Wippe, 2polig, IP54
	**AZM12**	Partially raised collar without cover, narrow, 2 pole, IP40 Schutzkragen schmal gegen unbeabsichtigtes Einschalten der Wippe, 2polig, IP40
	**AZM13**	Raised collar narrow, 2-pole, IP40 Schutzkragen schmal, 2-polig, IP40
	**AZM14**	Raised collar, with cover narrow, 2-pole, IP54 Fronthaube mit Schutzkragen schmal, 2-polig, IP54

Dimensions see page 65 / Massbilder siehe Seite 65

For subsequent fitting / Nachträglich montierbar

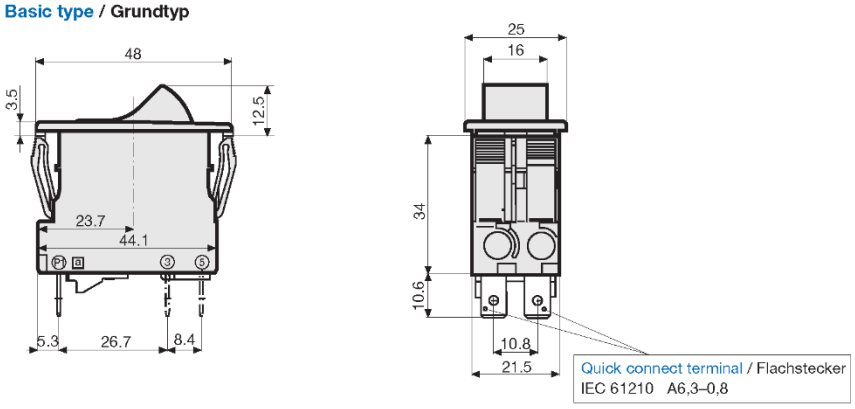
AZZ0
Order example
Bestellbeispiel

	**AZZ04**	Screw-on collar with cover, 2 pole, IP65 Fronthaube mit Schutzkragen schraubbar, 2polig, IP65
	**AZZ51**	Rear cover, 2 pole, IP40 Berührungsschutz rückseitig, 2polig, IP40
	**AZZ31**	Flat gasket, 2 pole, IP54 Flachdichtung, 2polig, IP54

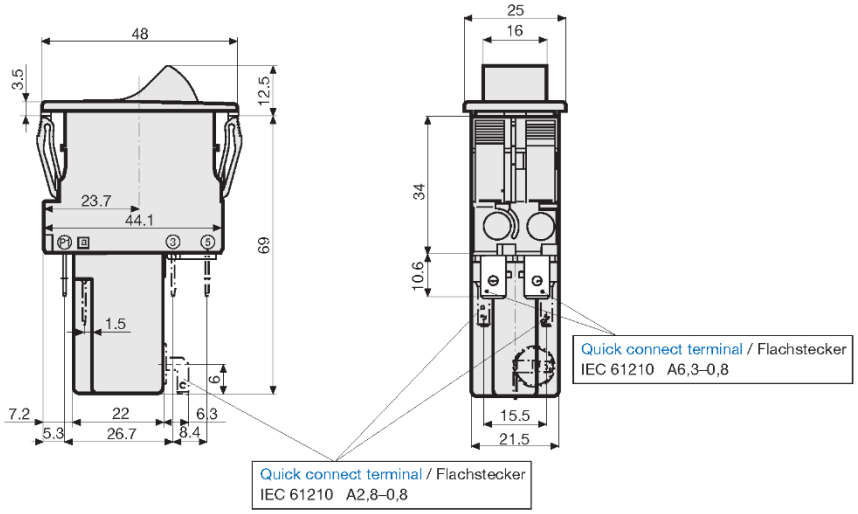
Dimensions see page 65 / Massbilder siehe Seite 65

Quick connect terminals / Flachsteckeranschlüsse

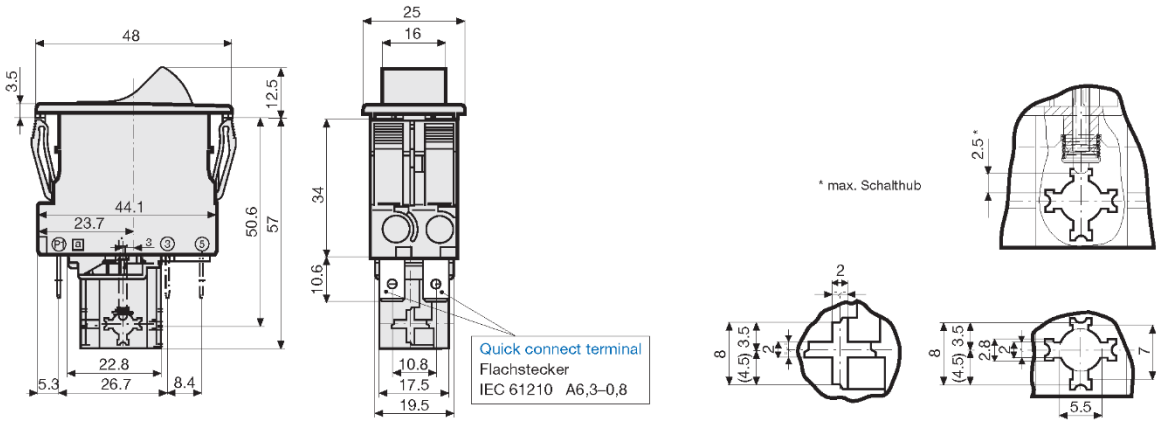
Basic type / Grundtyp



Undervoltage release, remote trip release / Unterspannungsauslösung, Fernauslösung



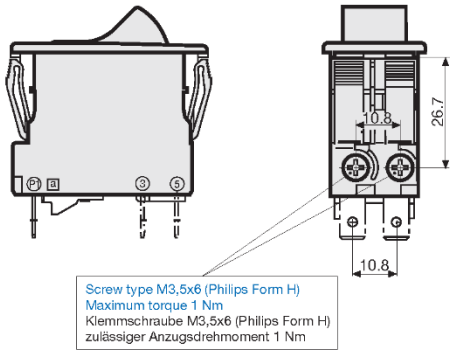
Mechanical lock-out latch / Mechanische Schaltsperre



State	Context	Signature	Date & Time	Page (of)	
Released	Standard Components - Morgana	BOL	12/9/2020 11:43	9 (13)	
// Plockmatic Group	Designation **Switch**, 20A overload protection		Part/Doc. number **652-011**	Version **B.4**	Insp. lvl **UL**

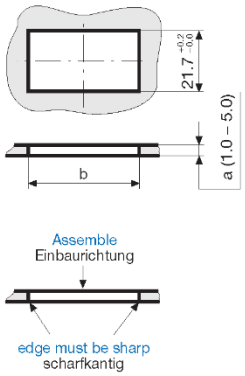
Screw clamp terminal / Schraubanschluss

Basic type / Grundtyp



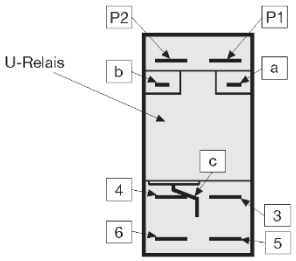
Cut-out and pin-out / Montageöffnung und Anschlussbelegung

Cut-out / Montageöffnung



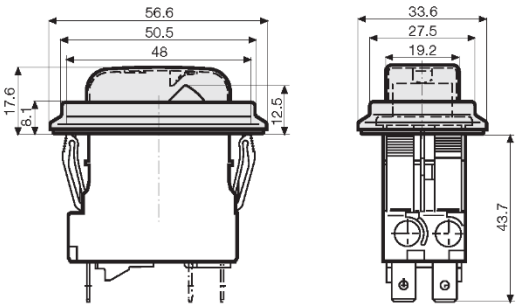
a	b
1.0	44,5...45,0
1.5	44,5...45,0
2.0	44,7...45,2
2.5	44,7...45,2
3.0	44,8...45,3
4.0	44,9...45,4
5.0	45,0...45,5

Pin-out / Anschlussbelegung

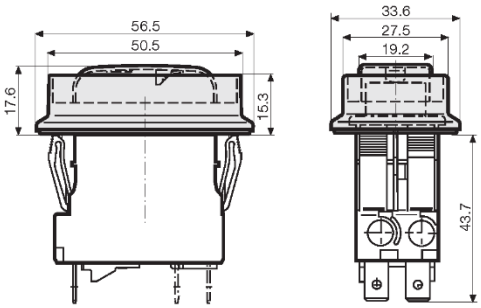


Accessories / Zubehör

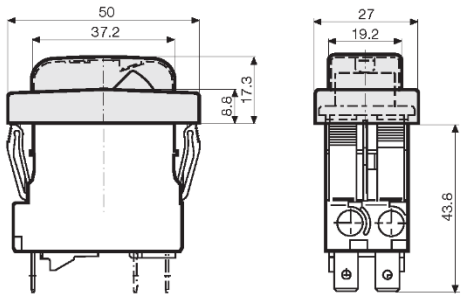
AZM01



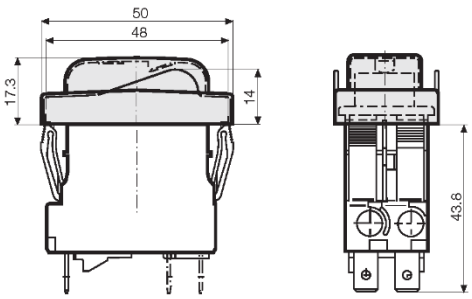
AZM02/AZM03



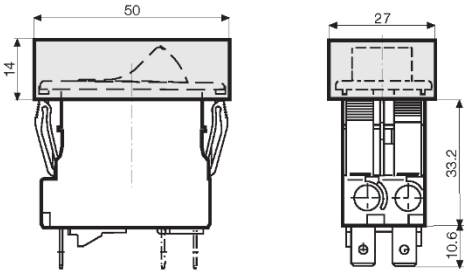
AZM10



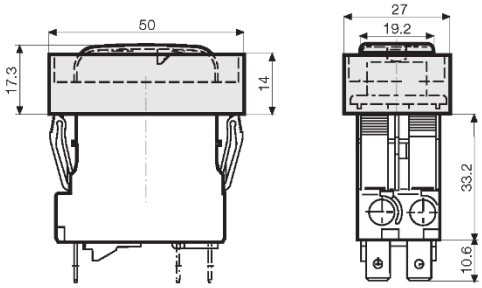
AZM11/AZM12



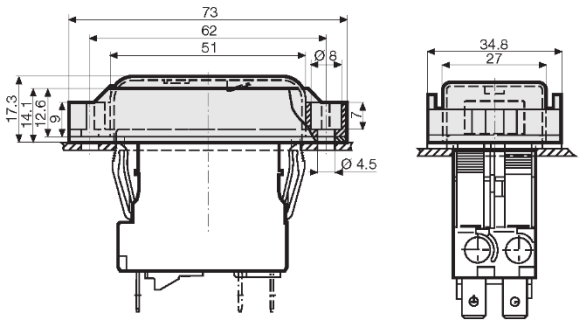
AZM13



AZM14

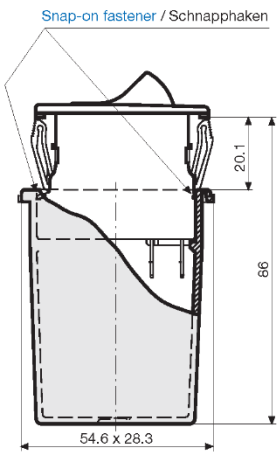


AZZ04



AZZ51

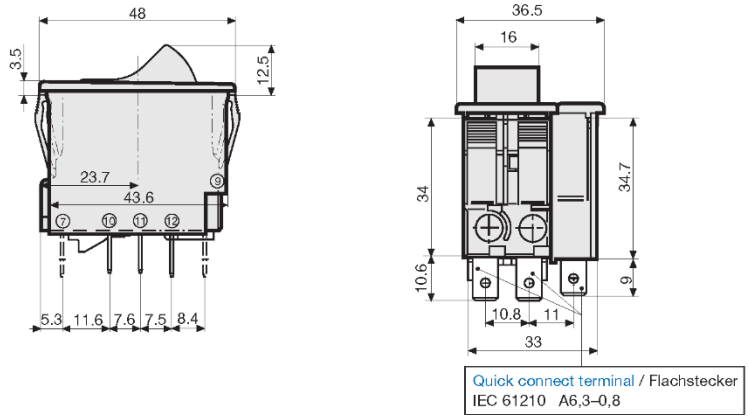
Snap-on fastener / Schnapphaken



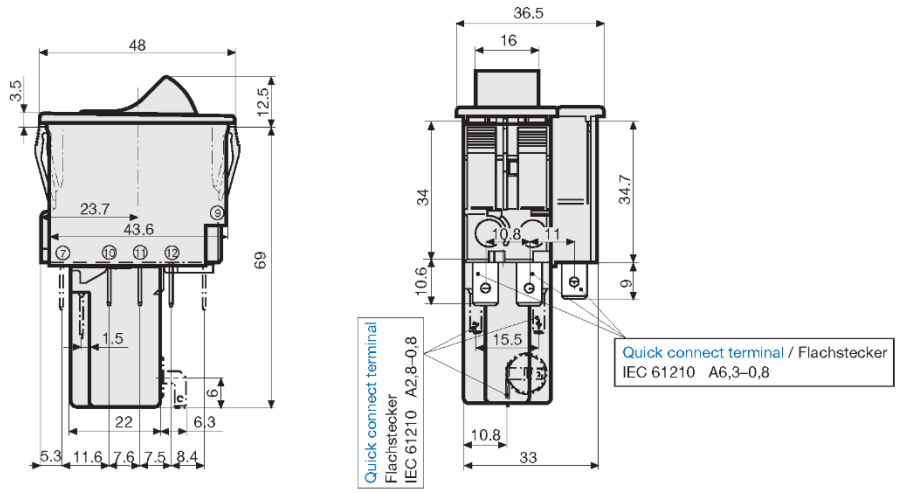
State	Context	Signature	Date & Time	Page (of)	
Released	Standard Components - Morgana	BOL	12/9/2020 11:43	11 (13)	
// Plockmatic Group	Designation **Switch**, 20A overload protection		Part/Doc. number **652-011**	Version **B.4**	Insp. lvl **UL**

Quick connect terminals / Flachsteckeranschlüsse

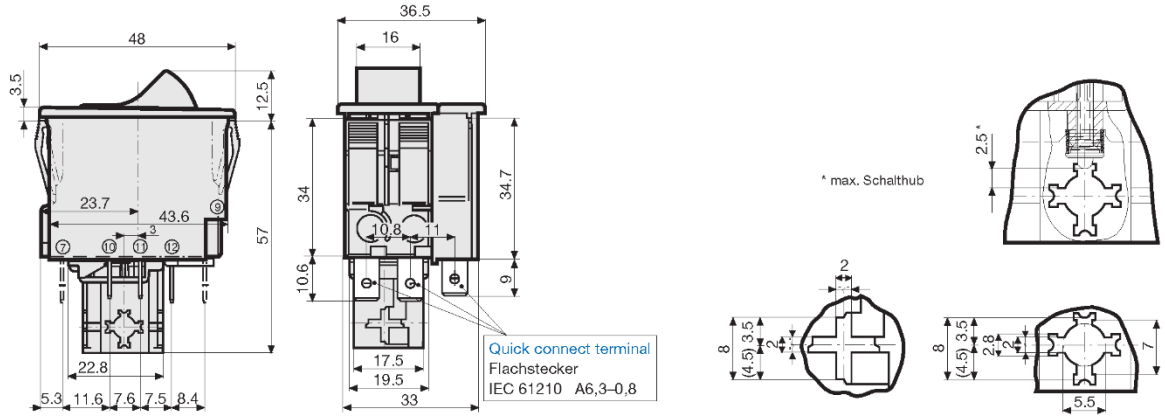
Basic type with auxiliary contact / Grundtyp mit Hilfskontakt



Undervoltage release, remote trip release / Unterspannungsauslösung, Fernauslösung



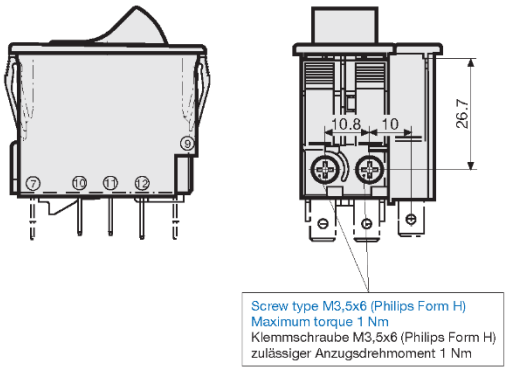
Mechanical lock-out latch / Mechanische Schaltsperre



State	Context	Signature	Date & Time	Page (of)	
Released	Standard Components - Morgana	BOL	12/9/2020 11:43	12 (13)	
// Plockmatic Group	Designation **Switch**, 20A overload protection		Part/Doc. number **652-011**	Version **B.4**	Insp. lvl **UL**

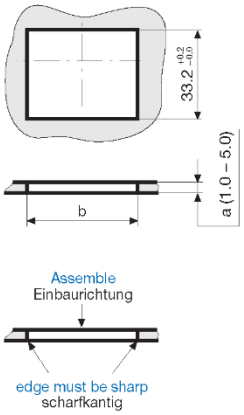
Screw clamp terminal / Schraubanschluss

Basic type with auxiliary contact / Grundtyp mit Hilfskontakt



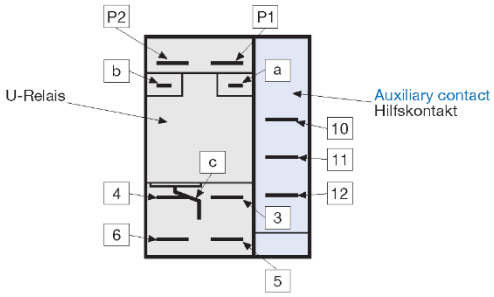
Cut-out and pin-out / Montageöffnung und Anschlussbelegung

Cut-out / Montageöffnung



a	b
1.0	44,5...45,0
1.5	44,5...45,0
2.0	44,7...45,2
2.5	44,7...45,2
3.0	44,8...45,3
4.0	44,9...45,4
5.0	45,0...45,5

Pin-out / Anschlussbelegung



State	Context	Signature	Date & Time	Page (of)	
Released	Standard Components - Morgana	BOL	12/9/2020 11:43	13 (13)	
// Plockmatic Group	Designation **Switch**, 20A overload protection		Part/Doc. number **652-011**	Version **B.4**	Insp. lvl **UL**