

Thermal Circuit Breaker, rocker actuated, 1-, 2- or 3-pole

**NEW**



TA35 1-pole



TA35 2-pole



TA35 3-pole



**Description**

- Thermal circuit breaker 1-, 2- or 3-pole
- Supplementary protector for general industrial use
- Positively trip-free release
- Snap-in mounting
- Version with illuminated rocker
- Different rocker colours
- Protection cover for IP65

**Standards**

- IEC 60934
- UL 1077
- CSA C22.2 235
- GB 17701

**Applications**

- Power tools
- Industrial equipment
- Equipment for building construction
- Medical equipment
- Cleaning equipment
- Power generators
- Commercial and household kitchen appliances

**Weblinks**

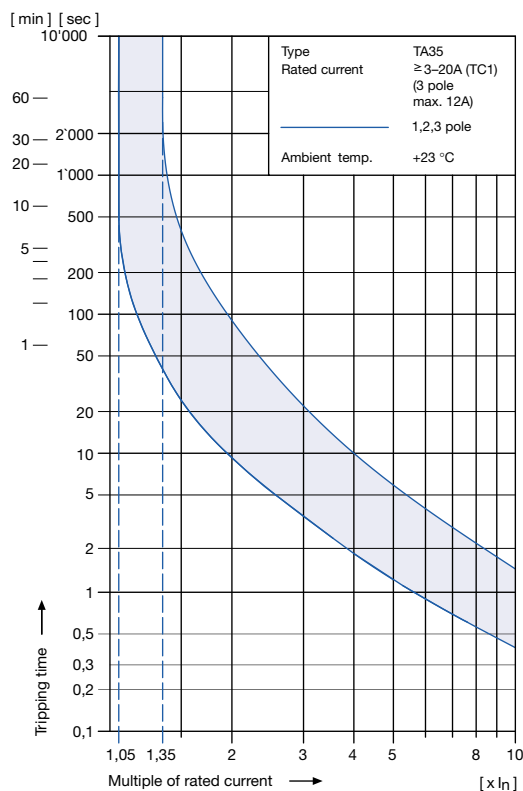
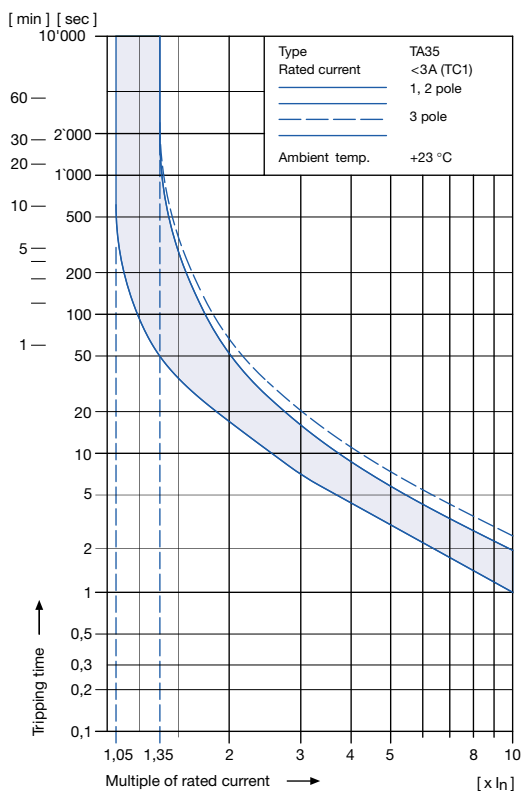
Approvals: <http://www.schurter.com/approvals>  
 RoHS: <http://www.schurter.com/rohs>

**TECHNICAL DATA**

Rated voltage $U_g$	1-pole	AC 240 V / 50/60 Hz DC 32 V
	2-pole	AC 240 V / 50/60 Hz DC 60 V
	3-pole	AC 415 Y/240 V / 50/60 Hz
Rated current $I_n$	1- / 2-pole	0.05 – 20 A
	3-pole	0.05 – 12 A
Conditional short circuit $I_{nc}$	1- / 2-pole, AC 240 V	0.05...20 A: 1000 A, SC (C1)
	3-pole, AC 400 V	0.05...12 A: 1000 A
Degree of protection	Accessible range	IP 40
	Terminal side	IP 00
Dielectric strength	AC 250 V / 50 Hz	1500 V
		Impulse 2000 V
Insulation resistance	DC 500 V	> 100 MΩ
Endurance (typical)	Mechanical	50'000 cycles
	AC: 1 x $I_n$ , cos phi 0.6	30'000 cycles
	DC: 1 x $I_n$ , L/R = 2...3ms	30'000 cycles

Overload	IEC 60934	min. 40 cycles @ 6 x $I_n$ , cos phi 0.6
	UL 1077	min. 50 cycles @ 1.5 x $I_n$ , cos phi 0.75 (OL0)
Admissible ambient air temperature		-10 °C to +55 °C
Resistance to vibration	IEC 60068-2-6, Test Tc	10...60 Hz: ±0.75 mm
		60...500 Hz: 10 G
Shock resistance	IEC 60068-2-27, Test Ea	30 G / 18 ms
Type of tripping		Thermal positively trip free
Weight	1-pole	19 g
	2-pole	32 g
	3-pole	45 g

## TRIPPING CHARACTERISTICS



The above tripping characteristics apply to symmetrical overloads on all poles on the TA35 only.

At asymmetric overloads on multi-pole types, the tripping characteristic will change.

- If a 2-pole type TA35 is loaded at one pole only, the tripping current will be shifted by factor **1.05**.
- If a 3-pole type TA35 is loaded at one pole only, the tripping current will be shifted by factor **1.10**.

To meet the above tripping characteristic at asymmetric overloads on multi-pole types, the value of the rated current of the CBE has to be multiplied by the factor mentioned above.

### Effect of ambient temperature

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

Ambient temperature [°C]	Correction factor
-10	0.87
-5	0.89
0	0.90
+23	1.00
+30	1.04
+40	1.10
+55	1.22

#### Example:




Rated current at +23 °C                    5.0 A  
 Ambient temperature                    +40 °C  
 Correction factor                        1.10  
 Chosen rated current at +40 °C  
 ambient temperature:                    **5 A x 1.10 = 5.5 A**

## Standard rated currents and typical internal resistance

Code	In	Ri [Ohm]
J01	0.1	70.000
J05	0.5	2.750
J10	1.0	0.720
J15	1.5	0.340
J20	2.0	0.190
J25	2.5	0.115
J28	2.8	0.090
030	3.0	0.058
040	4.0	0.044
050	5.0	0.028
060	6.0	0.021
070	7.0	0.016
080	8.0	0.010
100	10.0	0.010
120	12.0	0.0068
140	14.0	0.0052
150	15.0	0.0048
160	16.0	0.0048
180	18.0	0.0048
200	20.0	0.0048

unprotected poles (without bimetal) 0.0022

## APPROVALS

		# of poles	Rated currents	Rated voltage AC	Rated voltage DC	
	UL	UL 1077	1 *	0.05...20 A	240 V	32 V
			2	0.05...20 A	240 V	60 V
			3	0.05...12 A	415 Y/240 V	—
	UL	CSA C22.2 235	1 *	0.05...20 A	240 V	32 V
			2	0.05...20 A	240 V	60 V
			3	0.05...12 A	415 Y/240 V	—
	VDE	IEC 60934	1 *	0.05...20 A	240 V	32 V
			2	0.05...20 A	240 V	60 V
			3	0.05...12 A	415 Y/240 V	—
	CQC	GB 17701	1 *	0.05...20 A	240 V	32 V
			2 *	0.05...20 A	240 V	60 V
			3 *	0.05...12 A	415 Y/240 V	—

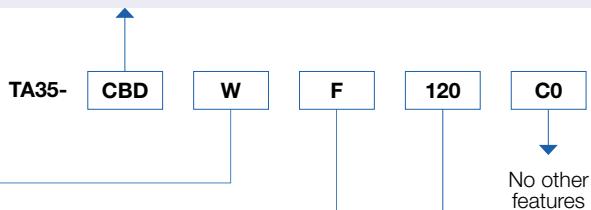
\* Approvals pending

Actual information about approvals can be found on: [www.schurter.com/approvals](http://www.schurter.com/approvals).

## ORDER CODE

	1-pole	2-pole			3-pole		
Switch without illumination	<b>CFC</b>	<b>CFT</b>	<b>CBC</b>	<b>CBT</b>	<b>CBD</b>	<b>CKC</b>	<b>CKD</b>
Switch illuminated 415 V 240 V 120 V 24 V 12 V 5 V	<b>CF2</b> <b>CF4</b> <b>CF7</b> <b>CF8</b> <b>CF9</b>	<b>C2F</b> <b>C4F</b> <b>C7F</b> <b>C8F</b> <b>C9F</b>	<b>C02</b> <b>C04</b> <b>C07</b> <b>C08</b> <b>C09</b>	<b>C12</b> <b>C14</b> <b>C17</b> <b>C18</b> <b>C19</b>	<b>C32</b> <b>C34</b> <b>C37</b> <b>C38</b> <b>C39</b>	<b>CK1</b>	<b>CD1</b>
Momentary without switch illumination	<b>CGC</b>	<b>CGT</b>	<b>CEC</b>	<b>CET</b>	<b>CED</b>	<b>CLC</b>	<b>CLD</b>

Other versions on request



### Colours

	Switch front	Rocker	
<b>W</b>	black	white	-
<b>B</b>	black	black	-
<b>R</b>	black	red	-
<b>G</b>	black	green	-
<b>Y</b>	black	yellow	-
<b>X</b>	black	orange	-
<b>1</b>	black	-	clear transparent
<b>3</b>	black	-	red transparent
<b>4</b>	black	-	green transparent
<b>6</b>	black	-	orange transparent
<b>7</b>	black	-	blue transparent

Other colours on request

### Rocker legend

	Surface	Illustration	Colour of print
<b>F</b>	embossed		-
<b>H</b>	printed		white
<b>K</b>	printed		black
<b>L</b>	printed		white
<b>M</b>	printed		black

Other legends on request

### Without thermal overload protection: code C00

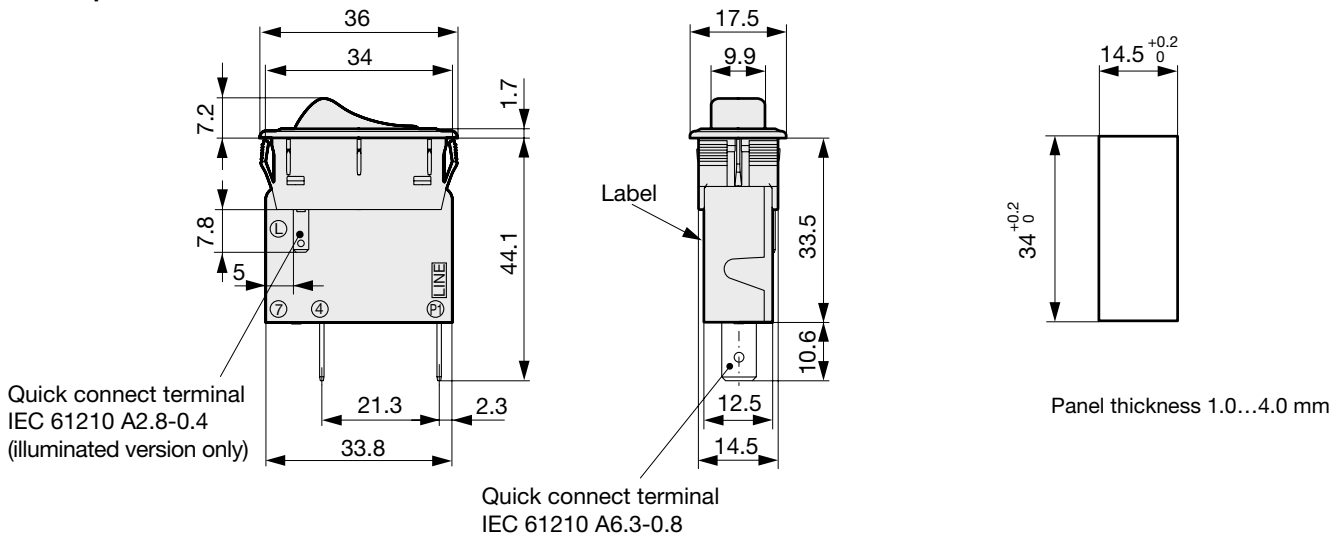
### With thermal overload protection: rated current I<sub>n</sub> (A)

I <sub>n</sub>	Code	I <sub>n</sub>	Code	I <sub>n</sub>	Code	I <sub>n</sub>	Code
0,1	<b>J01</b>	1,2	<b>J12</b>	5,0	<b>050</b>	15,0	<b>150</b>
0,2	<b>J02</b>	1,5	<b>J15</b>	6,0	<b>060</b>	16,0	<b>160</b>
0,3	<b>J03</b>	2,0	<b>J20</b>	7,0	<b>070</b>	18,0	<b>180</b>
0,4	<b>J04</b>	2,5	<b>J25</b>	8,0	<b>080</b>	20,0	<b>200</b>
0,5	<b>J05</b>	3,0	<b>030</b>	10,0	<b>100</b>		
0,8	<b>J08</b>	3,5	<b>035</b>	12,0	<b>120</b>		
1,0	<b>J10</b>	4,0	<b>040</b>	14,0	<b>140</b>		

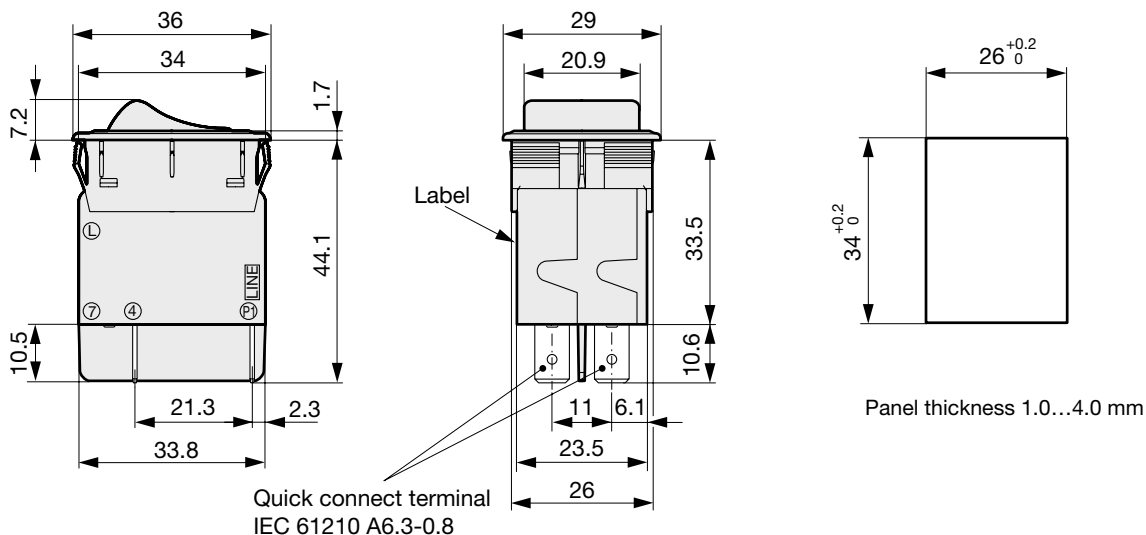
Other rated currents on request

**DIMENSIONS**

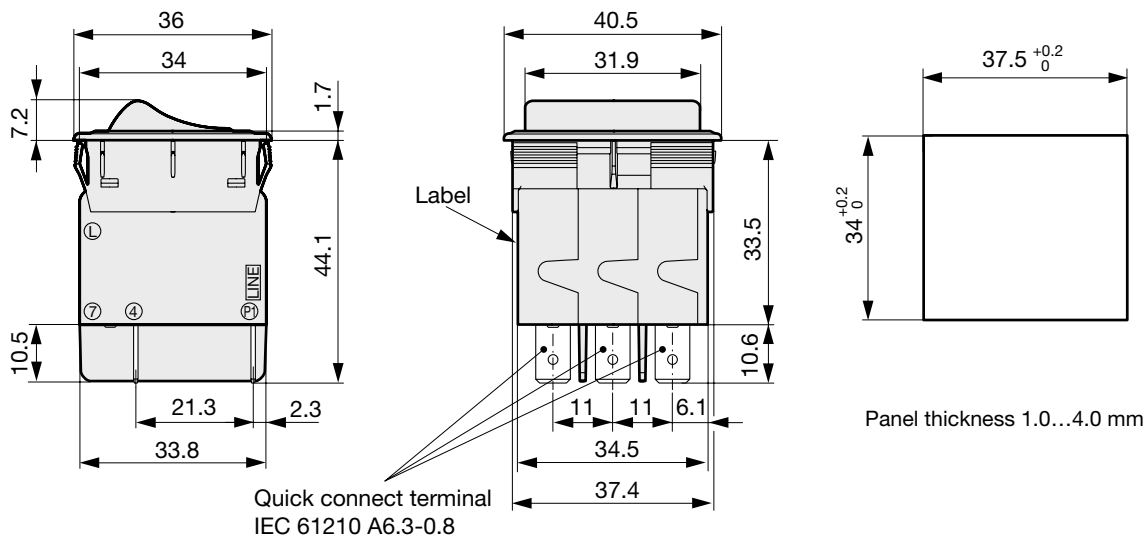
**TA35 1-pole**



**TA35 2-pole**



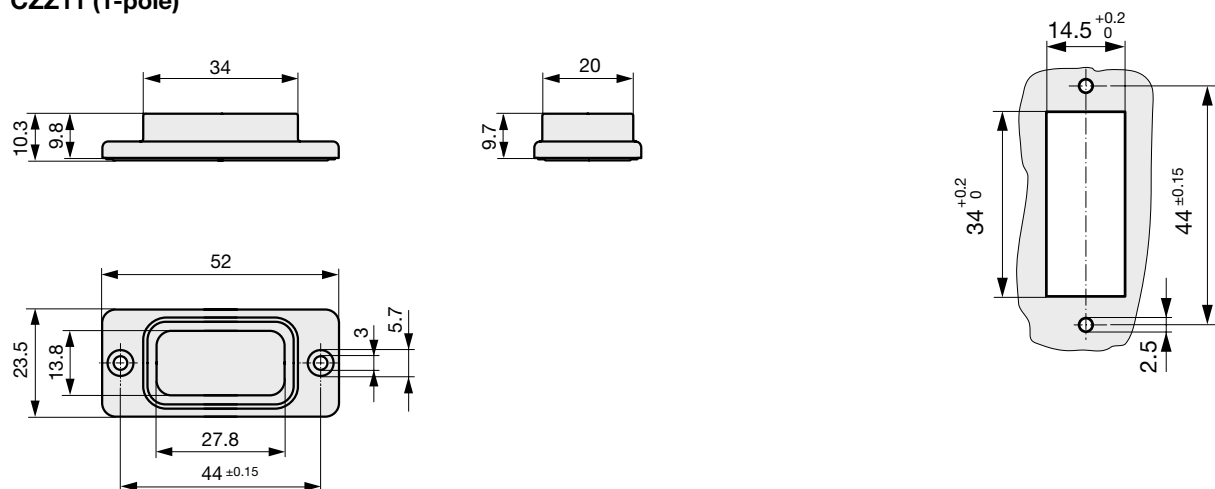
**TA35 3-pole**



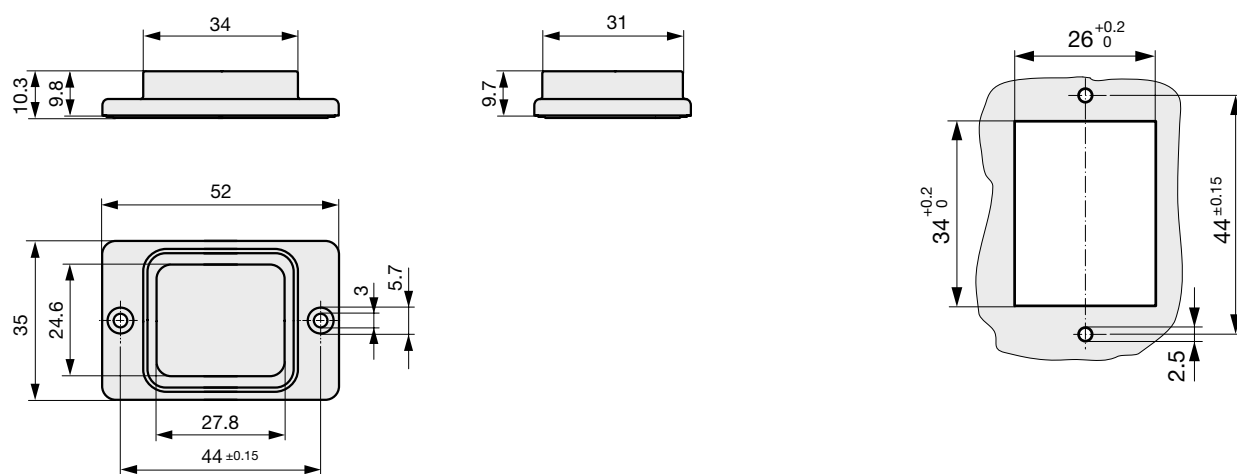
## ACCESSORIES

Cover / collar for protection IP 65

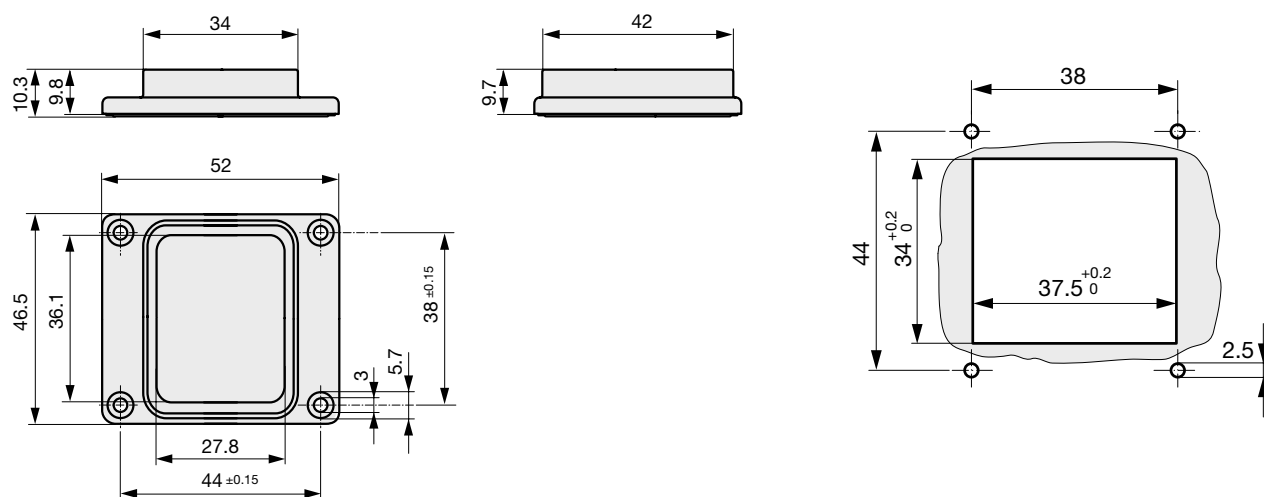
### CZZ11 (1-pole)



### CZZ21 (2-pole)



### CZZ31 (3-pole)



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