

0916610

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Thermal-magnetic circuit breaker, 1-pos., for DIN rail mounting

Your advantages

- Simple feed-in due to bridging capability using CLIPLINE complete accessories
- · High system availability, thanks to easy resetting
- Quick and easy identification with large-area marking options
- The right device for every application, thanks to a nominal current range of 0.5 to 16 A
- Space savings of 30 % compared to miniature circuit breakers owing to the compact width of 12.3 mm

Commercial data

Item number	0916610
Packing unit	6 pc
Minimum order quantity	6 pc
Sales key	CL16
Product key	CLA122
Catalog page	Page 394 (C-4-2019)
GTIN	4046356449069
Weight per piece (including packing)	64.516 g
Weight per piece (excluding packing)	64.516 g
Customs tariff number	85362010
Country of origin	CZ



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Technical data

Product properties

Product type	Thermomagnetic device circuit breakers
Product family	UT 6-TMC
Туре	DIN rail module, one-piece
Number of positions	1
Number of connections	2
Number of rows	1
No. of channels	1
Potentials	1
Insulation characteristics	
Overvoltage category	II
Degree of pollution	2

Electrical properties

Maximum power dissipation for nominal condition ≤ 1.23 VA	

Operating voltage 50 V AC 264 V AC (48 - 62 Hz) 5 V DC 30.8 V DC Rated voltage 240 V AC (50/60 Hz) 28 V DC 240 V AC (50/60 Hz) 28 V DC 240 V AC Rated insulation voltage U₁ 440 V AC Rated surge voltage 2.8 kV Insulation resistance R₁so > 100 MΩ (main contact) Type of actuation 5 type Tripping method TM (thermomagnetic) Tripping level Trip-free mechanism (positive) Device resistance 12.3 mΩ Required backup fuse 25 A Rated short-circuit switching capacity I₂n 200 A (240 V AC) 400 A (28 V DC) 400 A (28 V DC) Dielectric strength 2000 V Switching cycles, max. 6000 (at 1 x I₂n) 50 (at 1.5 x I₂n) 40 (at 6 x I₂n) Fuse M1 (normal blow) Power dissipation ≤ 1.23 VA	General	
$ \begin{array}{c} \text{Rated voltage} \\ & \begin{array}{c} 240 \text{V AC} (50/60 \text{Hz}) \\ \hline 28 \text{V DC} \\ \hline 240 \text{V AC} (50/60 \text{Hz}) \\ \hline 28 \text{V DC} \\ \hline \\ \text{Rated insulation voltage U}_i & 440 \text{V AC} \\ \hline \\ \text{Rated current I}_N & 10 \text{A} \\ \hline \\ \text{Rated surge voltage} & 2.8 \text{kV} \\ \hline \\ \text{Insulation resistance R}_{iso} & > 100 \text{M}\Omega (\text{main contact}) \\ \hline \\ \text{Type of actuation} & \text{S type} \\ \hline \\ \text{Tripping method} & \text{TM} (\text{thermonagnetic}) \\ \hline \\ \text{Tripping level} & \text{Trip-free mechanism (positive)} \\ \hline \\ \text{Device resistance} & 12.3 \text{m}\Omega \\ \hline \\ \text{Required backup fuse} & 25 \text{A} \\ \hline \\ \text{Rated short-circuit switching capacity I}_{cn} & 200 \text{A} (240 \text{V AC}) \\ \hline \\ \text{400 A} (28 \text{V DC}) \\ \hline \\ \text{Dielectric strength} & 2000 \text{V} \\ \hline \\ \text{Switching cycles, max.} & 6000 (\text{at 1 x I}_n) \\ \hline \\ \text{50 (at 1.5 x I}_n) \\ \hline \\ \text{40 (at 6 x I}_n)} \\ \hline \\ \text{Fuse} & \text{M1 (normal blow)} \\ \hline \end{array}$	Operating voltage	50 V AC 264 V AC (48 - 62 Hz)
$\frac{28 \text{ V DC}}{240 \text{ V AC } (50/60 \text{ Hz})}$ $\frac{28 \text{ V DC}}{28 \text{ V DC}}$ Rated insulation voltage U_i 440 V AC Rated current I_N 10 A Rated surge voltage 2.8 kV Insulation resistance R_{iso} > 100 M Ω (main contact) Type of actuation S type Tripping method TM (thermomagnetic) Tripping level Trip-free mechanism (positive) Device resistance 12.3 m Ω Required backup fuse 25 A Rated short-circuit switching capacity I_{cn} 200 A (240 V AC) 400 A (28 V DC) Dielectric strength 2000 V Switching cycles, max. 6000 (at 1 x I_n) 50 (at 1.5 x I_n) 40 (at 6 x I_n) Fuse M1 (normal blow)		5 V DC 30.8 V DC
$ \begin{array}{c} 240 \text{V AC (50/60 Hz)} \\ 28 \text{V DC} \\ \\ \text{Rated insulation voltage U_i} & 440 \text{V AC} \\ \\ \text{Rated current I_N} & 10 \text{A} \\ \\ \text{Rated surge voltage} & 2.8 \text{kV} \\ \\ \text{Insulation resistance R_{iso}} & > 100 \text{M}\Omega \text{ (main contact)} \\ \\ \text{Type of actuation} & \text{S type} \\ \\ \text{Tripping method} & \text{TM (thermomagnetic)} \\ \\ \text{Trip-free mechanism (positive)} \\ \\ \text{Device resistance} & 12.3 \text{m}\Omega \\ \\ \text{Required backup fuse} & 25 \text{A} \\ \\ \text{Rated short-circuit switching capacity I_{cn}} & 200 \text{A (240 V AC)} \\ \\ \text{400 A (28 V DC)} \\ \\ \text{Dielectric strength} & 2000 \text{V} \\ \\ \text{Switching cycles, max.} & 6000 (\text{at 1 x I_n}) \\ \\ \text{50 (at 1.5 x I_n}) \\ \\ \text{40 at 6 x I_n}) \\ \\ \text{Fuse} & \text{M1 (normal blow)} \\ \end{array}$	Rated voltage	240 V AC (50/60 Hz)
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		28 V DC
$ \begin{array}{c} \text{Rated insulation voltage U_i} & 440 \text{V AC} \\ \\ \text{Rated current I_N} & 10 \text{A} \\ \\ \text{Rated surge voltage} & 2.8 \text{kV} \\ \\ \text{Insulation resistance R_{iso}} & > 100 \text{M}\Omega \text{ (main contact)} \\ \\ \text{Type of actuation} & \text{S type} \\ \\ \text{Tripping method} & \text{TM (thermomagnetic)} \\ \\ \text{Tripping level} & \text{Trip-free mechanism (positive)} \\ \\ \text{Device resistance} & 12.3 \text{m}\Omega \\ \\ \text{Required backup fuse} & 25 \text{A} \\ \\ \text{Rated short-circuit switching capacity I_{cn}} & 200 \text{A } (240 \text{V AC}) \\ \hline \\ \text{400 A } (28 \text{V DC}) \\ \\ \text{Dielectric strength} & 2000 \text{V} \\ \\ \text{Switching cycles, max.} & 6000 (\text{at 1 x } I_n) \\ \hline \\ \text{50 (at 1.5 x } I_n) \\ \hline \\ \text{40 (at 6 x } I_n) \\ \hline \\ \text{Fuse} & \text{M1 (normal blow)} \\ \\ \end{array} $		240 V AC (50/60 Hz)
$ \begin{array}{llllllllllllllllllllllllllllllllllll$		28 V DC
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	Rated insulation voltage U _i	440 V AC
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	Rated current I _N	10 A
	Rated surge voltage	2.8 kV
$ \begin{array}{lll} \mbox{Tripping method} & \mbox{TM (thermomagnetic)} \\ \mbox{Tripping level} & \mbox{Trip-free mechanism (positive)} \\ \mbox{Device resistance} & \mbox{12.3 m}\Omega \\ \mbox{Required backup fuse} & \mbox{25 A} \\ \mbox{Rated short-circuit switching capacity } I_{cn} & \mbox{200 A (240 V AC)} \\ \mbox{400 A (28 V DC)} \\ \mbox{Dielectric strength} & \mbox{2000 V} \\ \mbox{Switching cycles, max.} & \mbox{6000 (at 1 x I_n)} \\ \mbox{50 (at 1.5 x I_n)} \\ \mbox{40 (at 6 x I_n)} \\ \mbox{Fuse} & \mbox{M1 (normal blow)} \\ \end{array} $	Insulation resistance R _{iso}	> 100 MΩ (main contact)
$ \begin{array}{lll} \mbox{Tripping level} & \mbox{Trip-free mechanism (positive)} \\ \mbox{Device resistance} & 12.3 \mbox{m}\Omega \\ \mbox{Required backup fuse} & 25 \mbox{A} \\ \mbox{Rated short-circuit switching capacity I}_{cn} & 200 \mbox{A} (240 \mbox{V AC}) \\ \mbox{400 A} (28 \mbox{V DC}) \\ \mbox{Dielectric strength} & 2000 \mbox{V} \\ \mbox{Switching cycles, max.} & 6000 (at 1 \mbox{s I}_n) \\ \mbox{50} (at 1.5 \mbox{s I}_n) \\ \mbox{40} (at 6 \mbox{s I}_n) \\ \mbox{Fuse} & \mbox{M1} (normal blow) \\ \end{array} $	Type of actuation	S type
$\begin{array}{c} \mbox{Device resistance} & 12.3 \ \mbox{m}\Omega \\ \mbox{Required backup fuse} & 25 \ \mbox{A} \\ \mbox{Rated short-circuit switching capacity I}_{cn} & 200 \ \mbox{A} \ (240 \ \mbox{V AC}) \\ \mbox{400 A} \ (28 \ \mbox{V DC}) \\ \mbox{Dielectric strength} & 2000 \ \mbox{V} \\ \mbox{Switching cycles, max.} & 6000 \ \mbox{(at 1 x I}_n) \\ \mbox{50 (at 1.5 x I}_n) \\ \mbox{40 (at 6 x I}_n) \\ \mbox{Fuse} & \mbox{M1 (normal blow)} \end{array}$	Tripping method	TM (thermomagnetic)
$ \begin{array}{c} \text{Required backup fuse} & 25 \text{A} \\ \\ \text{Rated short-circuit switching capacity I}_{\text{cn}} & 200 \text{A} (240 \text{V AC}) \\ \\ 400 \text{A} (28 \text{V DC}) \\ \\ \text{Dielectric strength} & 2000 \text{V} \\ \\ \text{Switching cycles, max.} & 6000 (\text{at 1 x I}_{\text{n}}) \\ \\ \hline 50 (\text{at 1.5 x I}_{\text{n}}) \\ \\ \hline 40 (\text{at 6 x I}_{\text{n}}) \\ \\ \text{Fuse} & \text{M1 (normal blow)} \\ \end{array} $	Tripping level	Trip-free mechanism (positive)
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	Device resistance	12.3 mΩ
$ \begin{array}{c} & & & \\ 400 \text{ A } (28 \text{ V DC}) \\ \\ \text{Dielectric strength} & 2000 \text{ V} \\ \\ \text{Switching cycles, max.} & 6000 (at 1 \times I_n) \\ \\ \hline 50 (at 1.5 \times I_n) \\ \\ \hline 40 (at 6 \times I_n) \\ \\ \text{Fuse} & \text{M1 (normal blow)} \\ \end{array} $	Required backup fuse	25 A
$ \begin{array}{c} \mbox{Dielectric strength} & 2000 \ \mbox{V} \\ \mbox{Switching cycles, max.} & 6000 \ (\mbox{at 1 x I}_{\mbox{n}}) \\ \hline \mbox{50 (at 1.5 x I}_{\mbox{n}}) \\ \mbox{40 (at 6 x I}_{\mbox{n}}) \\ \mbox{Fuse} & \mbox{M1 (normal blow)} \end{array} $	Rated short-circuit switching capacity I _{cn}	200 A (240 V AC)
Switching cycles, max.		400 A (28 V DC)
50 (at 1.5 x I _n) 40 (at 6 x I _n) Fuse M1 (normal blow)	Dielectric strength	2000 V
40 (at 6 x I _n) Fuse M1 (normal blow)	Switching cycles, max.	6000 (at 1 x I _n)
Fuse M1 (normal blow)		50 (at 1.5 x I _n)
		40 (at 6 x I _n)
Power dissipation ≤ 1.23 VA	Fuse	M1 (normal blow)
	Power dissipation	≤ 1.23 VA



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Temperature derating	7.8 A DC (at -30 °C)
	8.1 A DC (at -20 °C)
	8.4 A DC (at -10 °C)
	8.7 A DC (at 0 °C)
	9 A DC (at 10 °C)
	10 A DC (at 23 °C)
	10.5 A DC (at 30 °C)
	11.5 A DC (at 40 °C)
	12.1 A DC (at 50 °C)
	13 A DC (at 60 °C)
Indicator/remote signaling	
Connection name	Auxiliary contact
	•
Connection data	
Nominal cross section	6.00 mm ²
Rated cross section AWG	8
Connection method	Screw connection
Level 1 above 1 below 1	
Screw thread	M4
Tightening torque	1.5 1.8 Nm
Stripping length	10 mm
Conductor cross section rigid	0.2 mm ² 10 mm ²
Cross section AWG	24 8 (converted acc. to IEC)
Conductor cross section flexible	0.2 mm ² 10 mm ²
Conductor cross section, flexible [AWG]	24 8 (converted acc. to IEC)
Conductor cross-section, nexible [AWO] Conductor cross-section flexible (ferrule without plastic sleeve)	0.25 mm ² 6 mm ²
Flexible conductor cross section (ferrule with plastic sleeve)	0.25 mm² 6 mm²
2 conductors with same cross section, solid	0.2 mm² 2.5 mm²
2 conductors with same cross section, flexible	0.2 mm² 2.5 mm²
2 conductors with same cross section, flexible 2 conductors with same cross section, flexible, with ferrule	0.25 mm² 1.5 mm²
without plastic sleeve	0.23 11111 1.3 11111
2 conductors with the same cross section, flexible, with TWIN ferrule with plastic sleeve	0.5 mm² 4 mm²
Nominal current	10 A
Nominal voltage	240 V AC
	28 V DC
Nominal cross section	6 mm²
Main contact	
Connection method	Screw connection
Screw thread	M4
Tightening torque	1.5 Nm 1.8 Nm
Stripping length	12 mm
Conductor cross section flexible	0.2 mm² 10 mm²



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Conductor cross section rigid	0.2 mm ² 10 mm ²
Conductor cross section AWG	24 8
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm² 6 mm²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm² 6 mm²
Dimensions	
Width	12.3 mm
Height	85.5 mm
Depth	89.5 mm
Material specifications	
Color	gray (RAL 7042)
Flammability rating according to UL 94	V-0
Insulating material	PA66
Mechanical properties	
Mechanical data	

Environmental and real-life conditions

Ambient conditions

Open side panel

Degree of protection	IP40 (Actuation area)
	IP20 (Connection area)
Ambient temperature (operation)	-30 °C 60 °C
Altitude	2000 m (acc. to EN 60934)

No

Standards and regulations

Standards/specifications	EN 60934
Standards/specifications	UL 1077
Standards/specifications	CSA 22.2
Note	No. 235
Standards/specifications	EAC

Mounting

Mounting type	DIN rail: 35 mm
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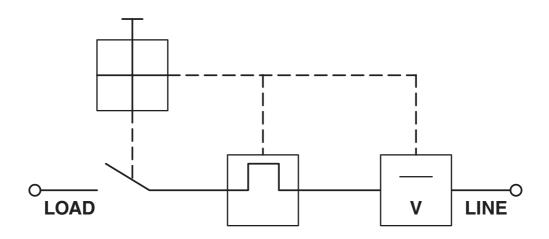


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Drawings

Block diagram



Product drawing



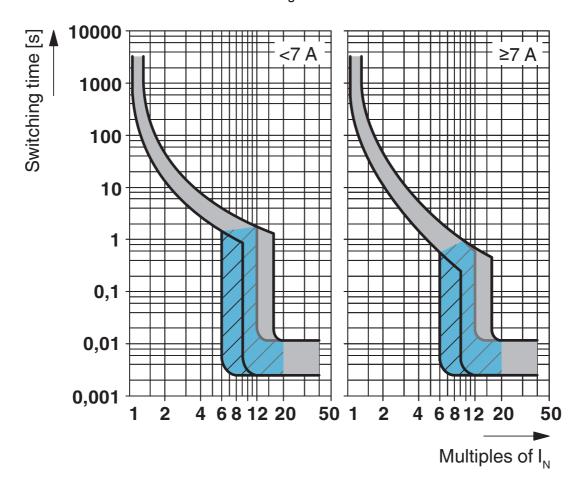


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Application drawing

Diagram



Trigger characteristic



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Application drawing Application drawing Status PLC M



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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/0916610



cUL Recognized

Approval ID: FILE E 140459



UL Recognized

Approval ID: FILE E 140459



EAC

Approval ID: EAC-Zulassung



EAC

Approval ID: RU C-DE.A*30.B01546



VDE Zeichengenehmigung

Approval ID: 40028127



CSA

Approval ID: 250505



KC

Approval ID: SW05013-15001

cULus Recognized



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Classifications

UNSPSC 21.0

ECLASS

ECLASS-11.0	27141116
ECLASS-12.0	27141116
ECLASS-13.0	27140401
ETIM	
ETIM 9.0	EC000899
UNSPSC	

39121400



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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c)
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)



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Accessories

FBS 2-6 - Plug-in bridge

3030336

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Plug-in bridge, pitch: 6.2 mm, number of positions: 2, color: red

FBS 3-6 - Plug-in bridge

3030242

https://www.phoenixcontact.com/us/products/3030242



Plug-in bridge, pitch: 6.2 mm, number of positions: 3, color: red



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FBS 4-6 - Plug-in bridge

3030255

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Plug-in bridge, pitch: 6.2 mm, number of positions: 4, color: red

FBS 5-6 - Plug-in bridge

3030349

https://www.phoenixcontact.com/us/products/3030349



Plug-in bridge, pitch: 6.2 mm, number of positions: 5, color: red



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FBS 10-6 - Plug-in bridge

3030271

https://www.phoenixcontact.com/us/products/3030271



Plug-in bridge, pitch: 6.2 mm, number of positions: 10, color: red

FBS 20-6 - Plug-in bridge

3030365

https://www.phoenixcontact.com/us/products/3030365



Plug-in bridge, pitch: 6.2 mm, number of positions: 20, color: red



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UC-TM 12 - Marker for terminal blocks

0819194

https://www.phoenixcontact.com/us/products/0819194



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 12 mm, lettering field size: 11.45 x 10.5 mm, Number of individual labels: 40

ZB 12:UNPRINTED - Zack marker strip

0812120

https://www.phoenixcontact.com/us/products/0812120



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 12.2 mm, lettering field size: 12 x 10.5 mm, Number of individual labels: 5



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SZS 1,0X4,0 VDE - Screwdriver

1205066

https://www.phoenixcontact.com/us/products/1205066



Screwdriver, slot-headed, VDE insulated, size: $1.0 \times 4.0 \times 100$ mm, 2-component grip, with non-slip grip

SZS 0,8X4,0 VDE - Screwdriver

1212508

https://www.phoenixcontact.com/us/products/1212508



Screwdriver, slot-headed, VDE insulated, size: 0.8 x 4.0 x 100 mm, 2-component grip, with non-slip grip

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