

# TEKNIC

## Supplementary Protector / Circuit Breaker for equipment - TR 20



The TR 20 circuit breaker for equipment (CBE) is a single pole, thermally operated, snap action over load protector, with a manual, push-to-reset mechanism, providing reliable 'cycling trip free' operation on overloads & short circuits within maximum capacity specified. A high contact force is maintained till the contacts break due to overload through the snap action bimetal disc.

APPLICATION : Protection against overloads.

OPERATION: The entire mechanism of the circuit breaker is based on the use of a snap action cantilevered, thermo-bimetal disc profile with silver alloy contacts, designed to open in the event of a current flow in excess of the rated current, according to the time/current characteristic of the device. The contacts open and close with a positive snap action and the tripped state is clearly indicated by the extended projection of the reset button.

TIME & CURRENT CHARACTERISTICS :

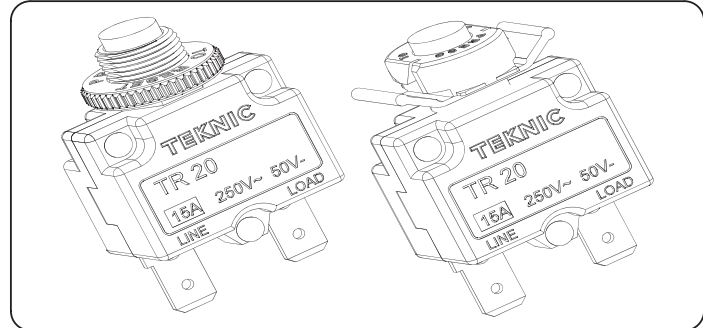
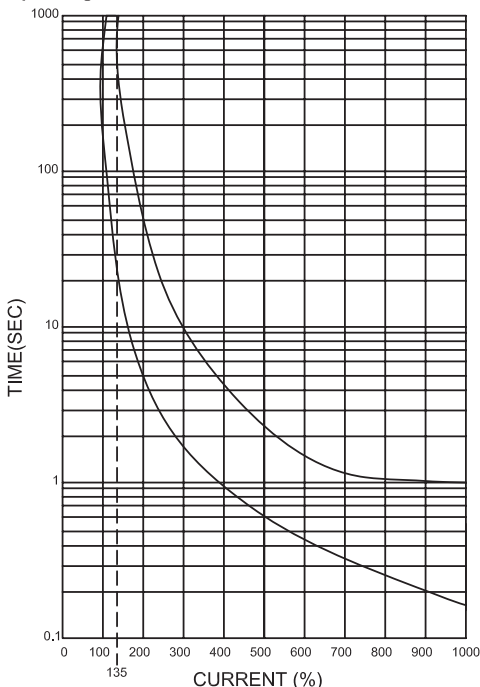
The standard characteristic is valid for an ambient temperature of 25 °C. If the device is to be used in an ambient temperature other than 25°C, allowance must be made when selecting the current rating according to the following guide lines.

Example :

Normal continuous current	: 5.0A
Ambient temperature	: 40°C
Multiplication factor	: 1.1
Selected rated current at +40°C ambient temperature	: 5 X 1.1 =5.5 : 6.0A (nearest)

AMBIENT MULTI- PLICATION FACTOR	TEMP.(°C)						
	-20°C	-10°C	0°C	10°C	25°C	30°C	35°C
3A to 4A	0.8	0.85	0.9	0.9	1	1	1.1
5A to 20A	0.8	0.85	0.88	0.9	1	1.1	1.3

Operating Characteristics :



### Technical Data

Application type	: General Industrial Ref.CSA22.2 No.235-04
Function	: SPST
Standard Current Rating in(Amp)	: 3, 4, 5, 6, 7, 8, 10, 12, 15,16 & 20 AC-Inductive DC-Resistive.
Rated Voltage	: 125 / 250V AC, 50/60 Hz,50V DC.
Method of tripping	: Thermal TO Cycling trip - free
Type of actuation	: Reset type 'R'
Initial insulation resistance	: > 100 M Ω (DC500V)
Dielectric strength	: 1500V AC for 1 minute
Impulse withstand voltage	: 2.5kV Ref.: EN 60934
Contact Gap	: Micro disconnection(μ) Ref. : EN60934
Housing Material	: Thermoplastic / Thermoset
Slider Material	: Thermoset
Contact Material	: Silver alloy
Terminal Material	: Copper alloy
Fixing	: By a nut or snap fitting
Resettable over load capacity	: 10 times the rated current
Overload capacity	: 2 times rated current for 50 switching cycles min. Ref. : UL 1077
Rated Short Circuit Capacity I <sub>cn</sub>	: Min 6 times the rated current (6 I <sub>n</sub> ) for 250V AC (Inductive) Ref. : EN60934 Min 4 times the rated current (4 I <sub>n</sub> ) for 50V DC (Resistive)
Rated Conditional Short Circuit	: 1000A 125/250V AC 50V DC
Current Capacity I <sub>nc1</sub> (PC1)	SC : 1kA, C1, 125/250V AC, 50V DC Ref.: EN 60934 Ref.: CSA 22.2 No.235-04, UL1077
Tripping current code (TC)	: TC 2 Ref.: CSA 22.2 No.235-04
Over load rating	: OLO 125/250V AC,50V DC,Ref.: CSA 22.2 No.235-04
Weight	: approx. 17g
Applicable Standards	: UL-1077, CSA 22.2 No. 235-04, EN 60934
Approvals	:

### Ordering Example :

TR 20 - C - 63 S - B 1 - A - 7.0A - 2

- Product type**: TR 20 - C - 63 S - B 1 - A - 7.0A - 2
- Mounting Bush**: C Plastic M11
- Terminal options**: S Straight, L 90° Bend, Left side, R 90° Bend, Right side
- Slider Marking**: 0 None, 1 White, Vertical, 2 Black, Vertical, 3 White, Horizontal, 4 Black, Horizontal
- Std. Current Rating**: 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 10.0, 12.0, 15.0, 16.0, 20.0
- Terminal size**: 63 6.3 x 0.8mm
- Slider Colour**: B Black, WB White with trip indication
- Mounting Nut**: N None or wing clip, A Plastic knurled, B Metal knurled, C Metal Hex Nut, D Sealing knurled boot
- Indicator plate**: 0 None, 1 Black letters on Aluminum Background, 2 Silver Letters on Black Background.

