

TEKNIC

Supplementary Protector / Circuit Breaker for equipment - TR 30



The TR 30 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.
Used in home appliances, single phase motors/generators, marine products, UPS, power strips, portable gensets.

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 :

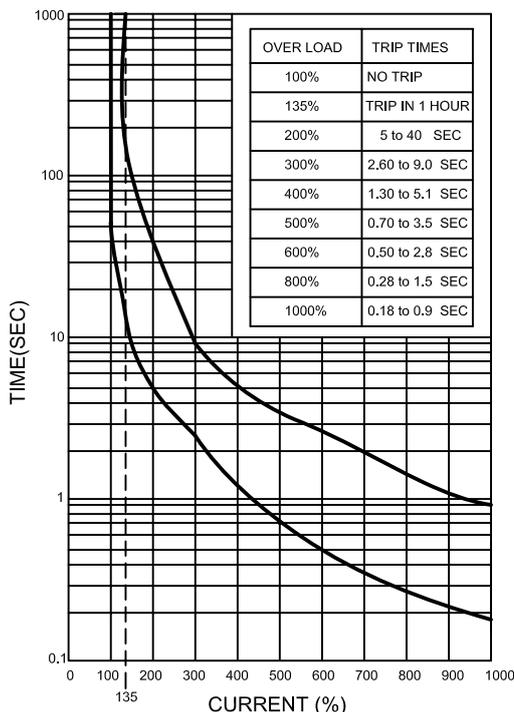
The standard characteristic is valid for an ambient temperature of 25 °C. If the device is to be used in an ambient temperature other than 25 °C, allowance must be made when selecting the current rating according to the following guide lines.

Example :

Normal continuous current	: 5.0A
Ambient temperature	: 40°C
Multiplication factor	: 1.15
Selected rated current at +40°C	
ambient temperature	: 5 X 1.15 = 5.75
	: 6.0A (nearest)

MULTIPLICATION FACTOR	AMBIENT TEMP. (°C)								
	-5°C	0°C	10°C	20°C	25°C	30°C	40°C	50°C	60°C
5A	0.9	0.92	0.95	0.98	1	1.12	1.15	1.25	1.5
6A to 30A	0.9	0.92	0.95	0.98	1	1.05	1.15	1.25	1.35
35A	0.9	0.93	0.95	0.98	1	1.05	1.15	1.32	1.35

Operating Characteristics :



Technical Data

Application type	: General Industrial Ref.CSA22.2 No.235-04
Function	: SPST
Standard Current Rating in(Amp)	: 5A - 35A 5A,6A,7A,10A,12A,15A, 20A, 25A, 30A & 35A
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	: Thermoset -- UL94-V0 flammability class
Slider Material	: Thermoset -- UL94-V0 flammability class
Contact Material	: Silver alloy
Terminal Material	: Copper alloy
Fixing	: By a nut or snap fitting
Resettable over load capacity	: 10 times the rated current
Rated Short Circuit Capacity I _{cn}	: Min 6 times the rated current (6 I _n) for 250V AC (Inductive) Ref.: EN60934 Min 4 times the rated current (4 I _n) for 50V DC (Resistive)
Rated Conditional Short Circuit Current Capacity I _{nc1} (PC1)	: 1kA , 5 to 15A , 250VAC, 2kA , 20 to 35A , 250VAC, As per EN 60934 1kA , 5 to 35A , 50VDC, As per CSA 22.2 No.235-04 & UL 1077
Tripping current code (TC3)	: 1kA , C1, 50VDC, -(5-35A) 500A , U3, 125VAC, -(20-35A) 1kA , U1a, 125VAC, -(5-35A) 2kA , C1, 125VAC, -(5-35A) 1kA , C1, 250VAC, -(5-15A) 2kA , C1, 250VAC, -(20-35A)
Over load rating	: 5 - 35A -- OLO 125/250V AC,50V DC As per CSA 22.2 No.235-04 5 - 35A -- OL1 125V AC 5 - 25A -- OL1 250V AC
Weight	: approx. 25g
Applicable Standards	: UL-1077, CSA 22.2 No. 235-04, EN 60934,UL 1500.
Approvals	:
Ignition Protected	: Compliant as per UL 1500 (Standard for safety for Ignition protection test for Marine products)

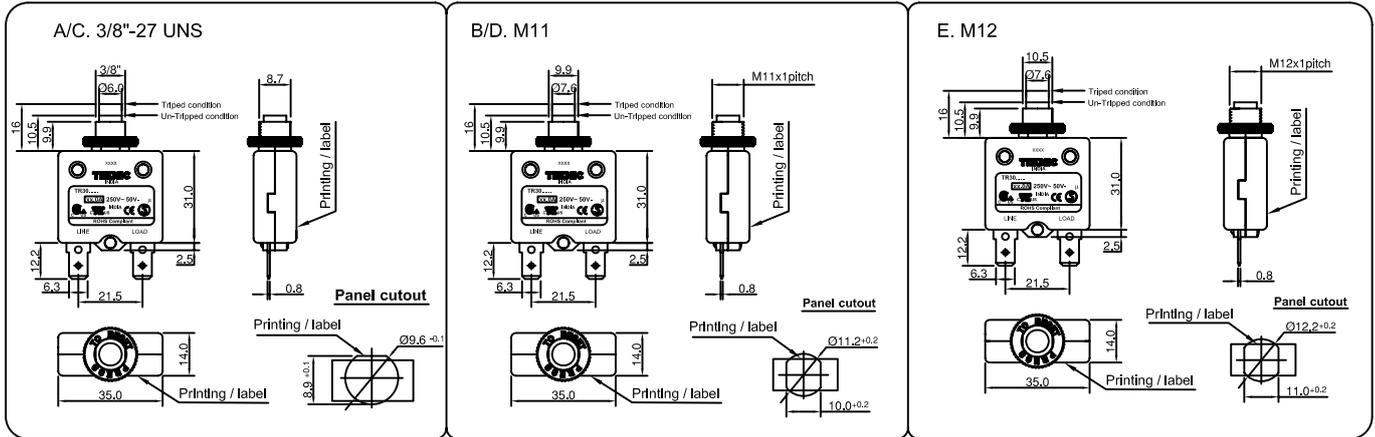
Ordering Example :

TR 30 - C - 63 S - W 1 - A - 7.0A - 2

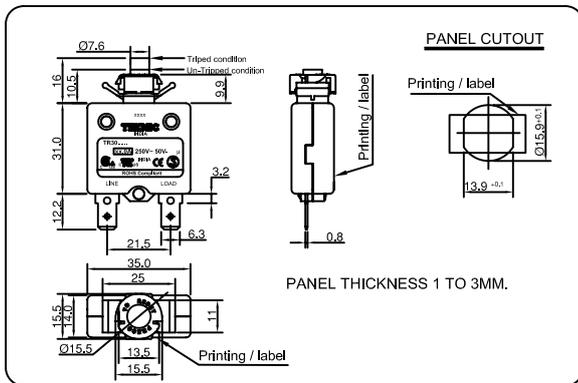
1 Mounting Bush	4 Terminal options	3 Slider Marking	0 Std. Current Rating
A Plastic 3/8"-27UNS B Plastic M11 C Metal 3/8"-27UNS D Metal M11 E Metal M12 W Wing clip	S Straight L 90° Bend, Left side R 90 Bend, Right side T Screw type terminal (#8-32NCF pan head screw with external teeth star washer)	0 None 1 Vertical 2 Horizontal Note : (colour of marking is standard) On red /black slider -white marking white slider-black marking)	5A, 6A, 7A, 10A 12A, 15A, 20A, 25A 30A & 35A
2 Terminal size	5 Slider Colour	1 Mounting Nut	0 Indicator plate
63 6.3 x 0.8mm	W White RB Red slider with white trip band BB Black slider with white trip band	N None or wing clip A Plastic knurled B Metal knurled C Metal Hex Nut D Sealing knurled boot	0 None 1 Black letters on Aluminum Background. 2 Silver Letters on Black Background.

Mounting options:

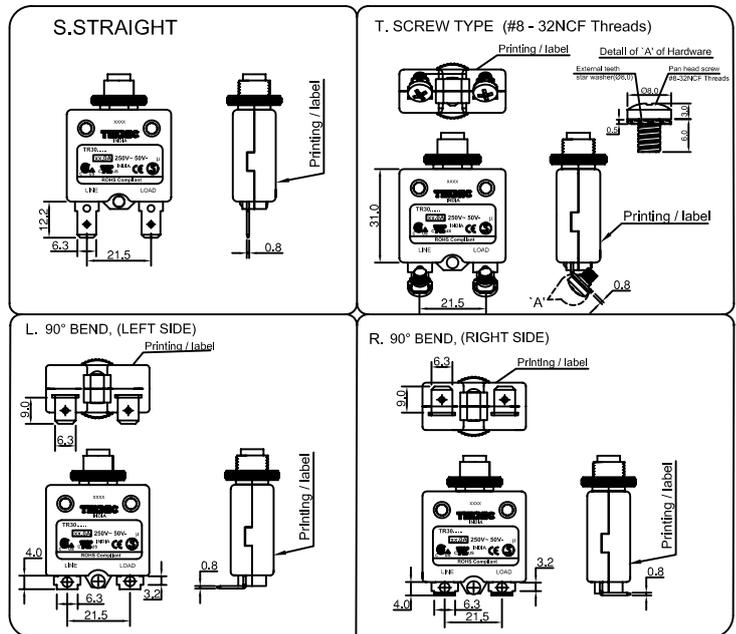
CENTRAL MOUNTING



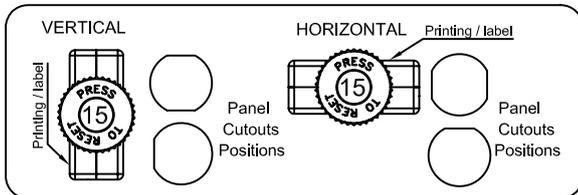
W. WING CLIP



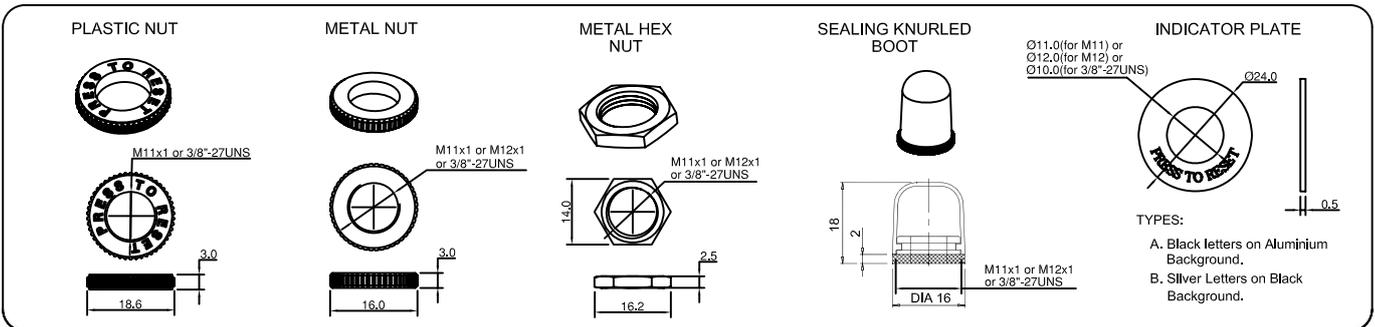
TERMINAL OPTIONS



SLIDER PRINTING FOR CURRENT RATING



ACCESSORIES



For further details, please write to:

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