

ATR Thermal Circuit Protector for Equipment



The ATR thermal circuit protector for equipment is a single pole, thermally operated overload protector with a snap-acting trip mechanism that provides reliable, trip-free operation on current overloads.

Approvals:

0.1 to 16A,
240Vac, 50Vdc



0.5 to 12A
240Vac, 24Vdc

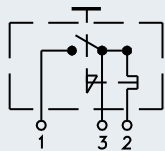


RoHS Compliant

Specifications:

- Current Ratings: 0.1A - 16A, Standard Ratings Available
- Rated Voltage: 240 Vac, 50/60HZ, 50Vdc, 24Vdc (VDE)
- Max. Breaking Capacity: $8 \times I_n$ for $< 6A$, 60A max. $> 6A$
- Ambient Operating Temperature: $-20^{\circ}C$ to $60^{\circ}C$
- Conditional Short Circuit Capacity: 1KA, PC1, 240Vac 24Vdc, ref: EN60934, SC: 1KA, C1 240Vac 50Vdc, ref: CSA22.2 No. 235.04, UL-1077
- Tripping Current code (TC): TC2 ref: CSA22.2, No. 234-04
- Insulation Resistance: > 100 megohms (per EN60934)
- Dielectric Strength: 1.5 KV for 1 min. (per EN60934)
- Operational Life: 1000 Cycles @ $2 \times I_n$
- Overload rating: OLO 240Vac, 50Vdc, ref: CSA22.2, No. 235-04
- Overload Switching Capacity: $6 \times I_n$ AC Up to 9A, $4 \times I_n$ DC Up to 12A 60A Max. from 10A to 12A
- Application type: General Industrial ref: CSA22.2, No. 235-04
- Method of Tripping: Thermal "TO," trip-free
- Type of Actuation: Reset type "R"

Warranty: 24 months from date of manufacture, as marked on unit



Application: Typical applications include power strips, single-phase motors, transformers, solenoids, UPS, etc.

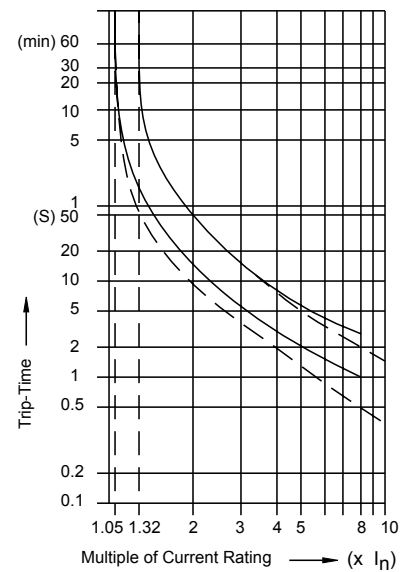
Operation: The trip mechanism of the circuit protector is designed to open the contacts in the event of a current flow in excess of the rated current and in accordance with the time/current characteristics of the device. A bimetal strip deflects and releases the latch mechanism when heated by an overload. The strip has the advantage of being immune to high inrush currents and line transients. The contacts open and close with a positive snap action, and the tripped state is clearly indicated by the protruding reset button.

Shunt Terminal (Option N): Available on units of up to 6 amps equipped with a heater winding, an optional additional terminal can be provided as a parallel circuit to the main current-sensing circuit. The shunt circuit between terminals 1 and 3 may be used for any signal that may be required in addition to the main circuit. However, since the circuit makes use of the bimetal strip as a current-carrying path, the trip time of the circuit protector may be slightly influenced.

Time/Current Characteristics: The standard characteristic is valid for an ambient temperature of $23^{\circ}C$. However, if the device is to be used in an ambient temperature other than $23^{\circ}C$, an allowance must be made when selecting the current rating. See the following guidelines:

Example:
Normal Continuous Current:
1.8 A
Ambient Temp.:
 $40^{\circ}C$
Multiplication Factor:
1.12
Recommended Rating:
 $1.8 \times 1.12 = 2.016$
Select the Nearest Rating:
2 A

Operating Characteristics:



Rated Current
--- $\leq 6A$
--- $\geq 6A$
Ambient Temperature $23^{\circ}C$

Ambient Temperature Correction Factor									
Ambient Temp. ($^{\circ}C$)	-20	-5	0	+10	+20	+30	+40	+50	+60
Multiplication Factor	0.8	0.88	0.9	0.96	1	1.05	1.12	1.2	1.3

1 First Decision
Type
ATR11 Single pole, series, thermal circuit protector

2 Second Decision
Mounting
C Central hex nut
W Wing clip
D Wing clip
D1 Wing clip
S Snap-in
B Integral
P PCB

3 Third Decision
Terminal Configuration
X Series 1 & 2, $\leq 12A$
Y Series 2 & 3, $> 6A$
N Shunt 1, 2 & 3, $\leq 6A$

4 Fourth Decision
Terminal
63 .250 Q.C.
48 .187 Q.C.
28 .110 Q.C.
10 .040 solder

5 Fifth Decision
Reset Button
R Red
B Black
W White
RB Red w/trip band
BB Black w/trip band
WB White w/trip band

6 Sixth Decision	
Button Marking*	
0 No Marking	
1 Vertical	
2 Horizontal	
*D & D1 Mounting are supplied with -2 marking	

7 Seventh Decision
Mounting Nut
N None
A Knurled Metal
B Slotted Knurled Metal
C Hex Metal
D Knurled Sealing Boot

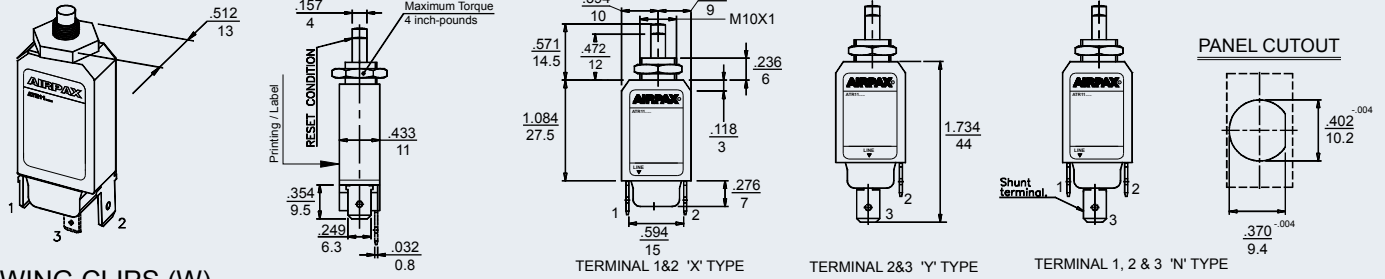
ATR11 - C - X - 63 - R - 1 - A - 7.0A

8 Eighth Decision	
Standard Current Ratings*	
0.1, 0.25, 0.5, 0.8, 0.9, 1.0, 1.2, 1.5, 1.8, 2.0, 2.2, 2.5, 2.7, 3.0, 3.3, 4.0, 5.0, 6.0, 6.5, 7.0, 8.0, 9.0, 10.0, 12.0, 15.0, 16.0	
*For other ratings, please consult the factory.	

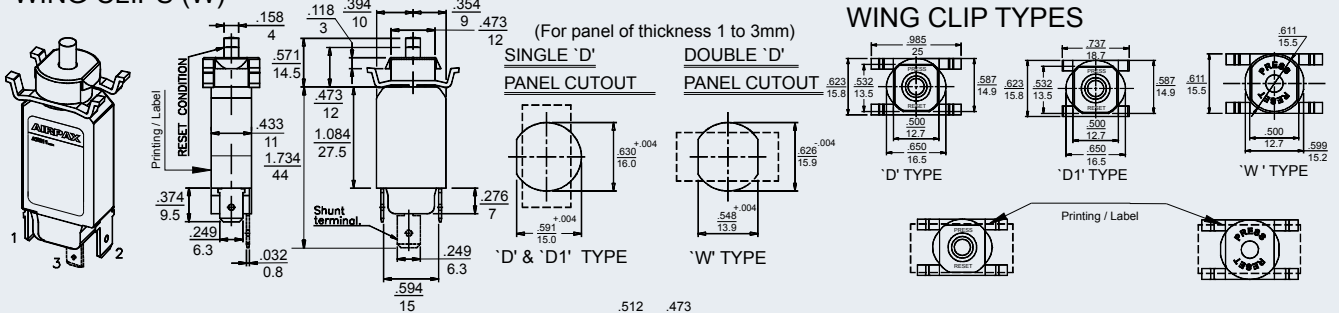
Mounting Options:

inch
mm

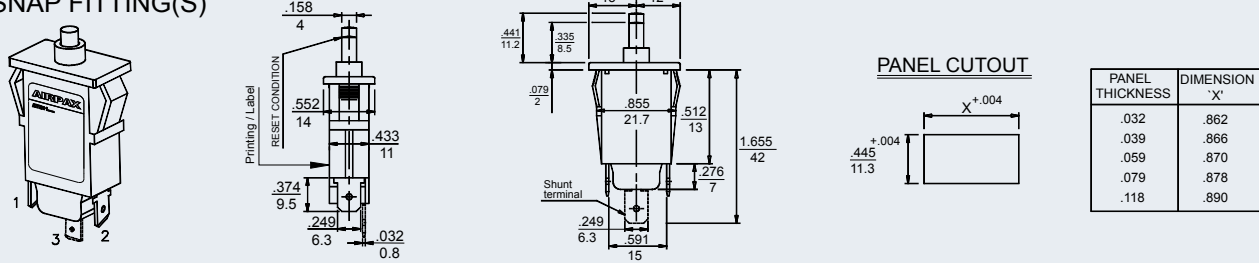
CENTRAL MOUNTING (C)



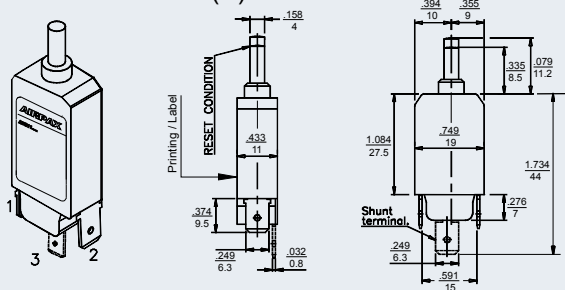
WING CLIPS (W)



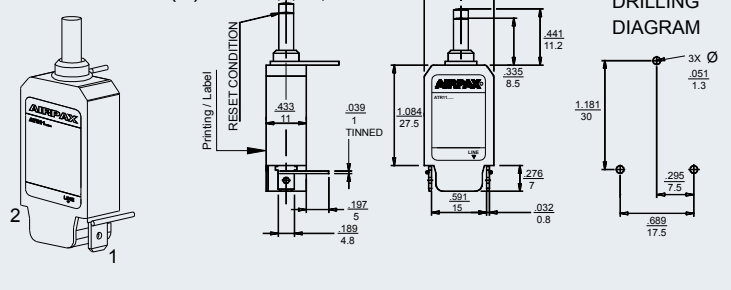
SNAP FITTING(S)



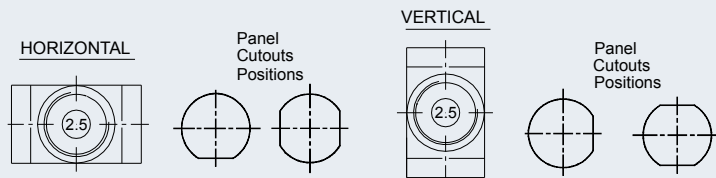
BODY MOUNTING (B)



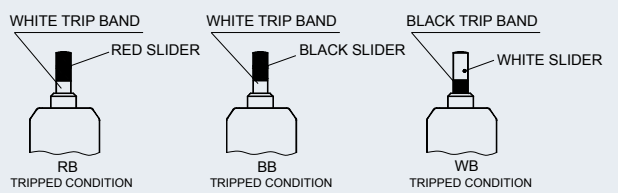
PCB MOUNTING (P)



BUTTON MARKING FOR CURRENT RATING



BUTTON COLOR WITH TRIP BAND



ACCESSORIES

KNURLED NUT
P/N 053-000-0002

SEALING KNURLED BOOT
(Type C only, Dust & splash protection, IP 54)
P/N 053-000-0001

Notes:
Reverse wiring is not recommended.
Approximate weight (without nut): 10 grams

