

88 Series Thermal Circuit Breaker

Single Pole Push to Reset



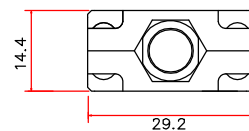
•Technical data

- Current rating range 3~30A
- Input voltage rating 125/250VAC; 32/50VDC
- Interrupting Capacity 125/250VAC x 1,000A(UL 1077)
- Typical life 1,000 operations at 200% overload.
- Insulation co-ordination Rated impulse withstand voltage 2.5kV
- Dielectric Strength > 1.500VAC/min.
- Insulation Resistance >100MOHM (DC 500V)
- Degree of protection Terminal area IP00, operating area IP40



•Mechanical/Environmental Data

- Operating Ambient Temperature: -10°C to +60°C
- Termination: 250"(6.35mm) quick connects or solder terminals
- Mounting: Various options. See Ordering Information and drawings



•Compliance with Rohs

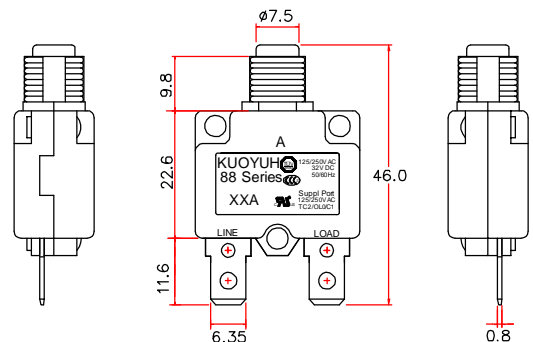
The product accords with the requirement of ROHS(2011/65/EU)
Contacts use Exempted item of RoHS Directive 2010/571/EU 8(a)

•Compliance with REACH, PAHS, PH1, PH2, PH3

• Ignition Proof Yes, UL PEQZ2.E155159

•Typical applications

Transformers, Motors, Battery chargers, Power supplies, appliances, extra low voltage systems, machinery.



* Dimension in mm:

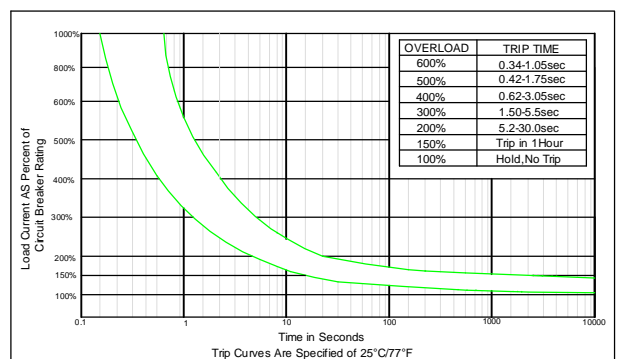
•Calibration(at25°C)

- 100% of Rated Current: Hold , No Trip
- 150% of Rated Current: Trip Within 1 Hour.
- 200% of Rated Current: 5-30 sec Trip
- 300% of Rated Current: 1.5-5.0 sec Trip

•Approval

Approval & File No.	Rated current	Rated voltage
•CUL UL E155159	3-30A	125/250VAC; 50VDC
•TUV SUD B15 09 58611 007	3-20A	125/250VAC; 32VDC
•CCC 201101030752058	3-20A	125/250VAC.
•VDE 40036160	3-16A	125/250VAC
•CSA 102199	3-16A	125VAC

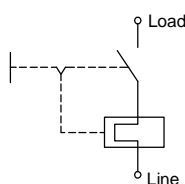
•88 Series 3A-30A Trip Time Curves



•Max.Internal Resistance

Amp rating	Max resistance
3.0 - 5.0Amp	<0.225 Ohms
6.0 - 8.0Amp	<0.175 Ohm
9.0 - 12.0Amp	<0.125 Ohm
13.0 - 16.0Amp	<0.050 Ohm
17.0 - 20.0Amp	<0.040 Ohm
21.0 - 25.0Amp	<0.030 Ohm
26.0 - 30.0Amp	< 0.020 Ohm

•Internal connection diagram



•Ambient Temperature Correction Factor

Ambient temperature	-10°C	0°C	10°C	25°C	35°C	40°C	50°C	60°C
Multiplication factor	*1.30	*1.20	*1.10	1.00	*0.94	*0.85	*0.73	*0.68

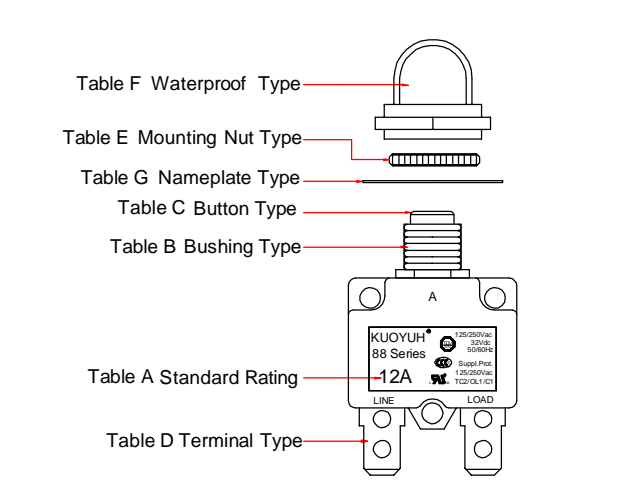
The time/current characteristic curve depends on the ambient temperature prevailing. In order to eliminate nuisance tripping. Please multiply the circuit breaker current ratings by the derating factor shown below.

Example : Normal Continuous Current = 10A
Ambient Temperature = 45°C
Multiplication Factor = 0.85
Recommended Rating= 10A/0.85=11.8A
Select the Nearest Rating = 12A

Order Guide	88- 12- A1 B 1 4- P 0 0 N B
Series No.	
Amp Rating.	(Table A)
Bushing Type.	(Table B)
Color of Button.	(Table C)
Terminal Type.	(Table D)
Voltage.	1=UL& CSA 125Vac, 2=TUV & CCC 250Vac, 3=1+2 125/250Vac, 4=UL+TUV+CCC 125/250Vac/32Vdc, 5=Client designation 6=UL 125/250Vac/50Vdc, 8=VDE 125/250Vac, 9=CSA 125Vac U3 type
Mounting Nut Type.	(Table E)
Waterproof Type.	(Table F)
Nameplate Type.	(Table G)
Terminal Finish.	S=Plate with Tin N=Plate with Nickel O=No plate
Body Type.	B=Black W=White

03= 3.0A	12= 12.0A
3.5= 3.5A	13= 13.0A
04= 4.0A	15= 15.0A
05= 5.0A	16= 16.0A
06= 6.0A	17= 17.0A
07= 7.0A	18= 18.0A
08= 8.0A	20= 20.0A
09= 9.0A	22= 22.0A
10= 10.0A	25= 25.0A
11= 11.0A	30= 30.0A

P1 Plastic M11XP1.0	P2 Plastic M12XP1.0	P3 Plastic 3/8"-27T	PL Plastic No thread
KF Plastic Snap in	PS Plastic Snap in	AW/AB (White) (Black) Plastic No thread	P0 Plastic No thread
A1 Metal M11XP1.0	B1 Metal M11XP1.0	A3 Metal 3/8"-27T	B3 Metal 3/8"-27T



P1,A1,B1	A2,P2	P3,A3,B3	AW/AB	P0	PS,KF
-----------------	--------------	-----------------	--------------	-----------	--------------

B = Black button (黑推桿)	W = White button (白推桿)	R = Red button (紅推桿)
Normal Amp stamp Amps=black	Normal Amp stamp Amps=black	NORMAL AMP STAMP Amps=white
1	5	6
7	8	9
X	Y	Z

None	P Plastic	Q Plastic	A Metal	B Metal	C Metal	4 Plastic	5 Plastic	6 Plastic
------	------------------	------------------	----------------	----------------	----------------	------------------	------------------	------------------

None	R	F	T	V	U or C
------	----------	----------	----------	----------	---------------

0 None	B Black plate	A Black plate	S White plate	L Black plate
	W White plate			

1 Straight 11.8mm	2 90° bend	3 90° bend	4 Line pin Straight Load pin 90° bend	5 Line pin 90° bend Load pin Straight	6 Straight 8.0mm	7 Line pin 90° bend down Load pin bend up	8 45° bend up	9 45° bend down	X Straight 4.0mm	F Screw #8-32 Straight	L Screw #8-32 90° bend up	J Screw #8-32 90° bend down	G Line pin Screw #8-32 90° bend Load pin S0.25 Straight	K Line pin Screw #8-32 Straight Load pin Screw 90° bend	H Line pin Screw #8-32 90° bend Load pin Screw Straight
--------------------------	-------------------	-------------------	--	--	-------------------------	--	----------------------	------------------------	-------------------------	-------------------------------	----------------------------------	------------------------------------	--	--	--