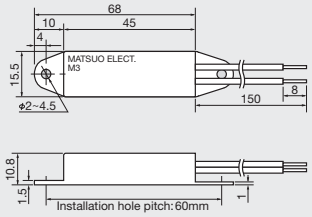
5 amp. Series (AC125V/5A, AC250V/3A DC12V/5A, DC24V/3A)

Each model is available in a double sealed construction.

M3

(Two mounting holes
Two lead wires
X or Y contact



Standard lead wires are AWM1015/AWG20 black,150mm long.

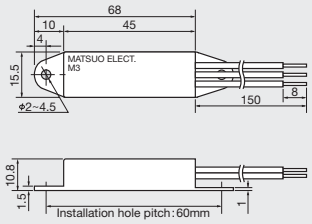
Features:

1) 5Amp. capacity in a compact body.
2) Surprisingly low price for a long life and small differential thermostat.

(See the page to the right for ratings and characteristics.)

M3(Z)

(Two mounting holes
Three lead wires
XZ or YZ



Standard lead wires are AWM1015/AWG20 black,150mm long.

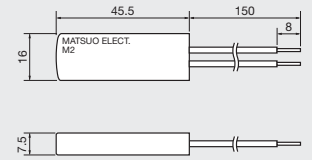
Features:

1) 5Amp. capacity in a compact body.
2) Back contact capacity: 3A standard.
3) Surprisingly low price for a long life and small differential thermostat.

(See the page to the right for ratings and characteristics.)

M2

(No mounting hole
Two lead wires
C or D rank only



Standard lead wires are AWM1015/AWG20 black,150mm long.

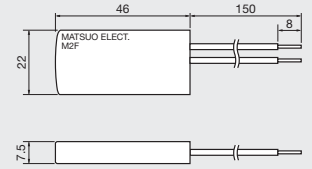
Features:

1) Thin model and C contacts not available.
2) Long life but differential from 8～12deg.
3) Other specifications are the same as M3 Model.

(See the page to the right for ratings and characteristics.)

M2F

(Fuse installed
No mounting hole
Two lead wires
C or D rank only



Standard lead wires are AWM1015/AWG20 black,150mm long.

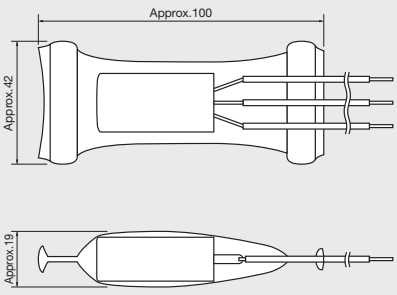
Features:

1) A fuse connected in series with the M2 Model to secure safety.
2) Other specifications are the same as M2 Model.
3) Choose fuse of temperature 25°C higher than the thermostat set temperature.
4) Standard fuse temperatures are 76/102/115/130°C.

(See the page to the right for ratings and characteristics.)

MQT5S/MQT5S(Z)

(Sealed type
3 leads for MQT5S(Z)



Standard lead wires are AWM1015/AWG20 black,150mm long.

Features:

1) By applying double sealing, the model is almost water tight. However, moisture seeping in due to capillarity from the tip of the lead wire cannot be prevented. Care must be taken not to wet the tip of the lead wire.
2) Back contact capacity:3A.

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5 amp. Series (AC125V/5A, AC250V/3A DC12V/5A, DC24V/3A)

Ratings and Characteristics:

Tolerance of Temperature Setting and Differential vs. Temperature Setting

Temperature Setting		-10℃~0℃	1℃~50℃	51℃~75℃	76℃~110℃
Setting Tolerance	(Standard)	±3℃	±3℃	±4℃	±5℃
	(Special)	~±2℃	~±1.5℃	~±2℃	~±3℃
Differential	(Standard)	X=C(6.5℃), Y=B(4.5℃)	X=C(6.5℃), Y=B(4.5℃)	X=C(6.5℃), Y=B(4.5℃)	X, Y=D(10℃)
	(Special)	X=A·B·D, Y=A·C·D	X=A·B·D, Y=A·C·D	X=A·B·D, Y=A·C·D	X, Y=C

Relation between Operating Voltage/Differential Rank and Contact Capacity (based on 100,000 operations)

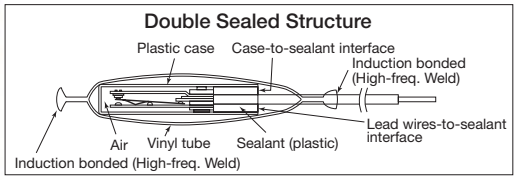
Voltage	Current	M3/M3Z/5S/5SZ		M2/M2F	
		Differential rank	Current(unit power factor 1)	Differential rank	Current(unit power factor 1)
—	DC48V	A	50mA ~ 0.3A		
		B	50mA ~ 0.5A		
		C	50mA ~ 0.8A	C	50mA ~ 0.8A
		D	50mA ~ 0.8A	D	50mA ~ 0.8A
AC250V	DC24V	A	50mA ~ 1.5A		
		B	50mA ~ 2A		
		C	50mA ~ 3A	C	50mA ~ 3A
		D	50mA ~ 3A	D	50mA ~ 3A
AC125V	DC12V	A	50mA ~ 3A		
		B	50mA ~ 4A		
		C	50mA ~ 5A	C	50mA ~ 3A
		D	50mA ~ 5A	D	50mA ~ 3A

NOTE: 1."5 Ampere Series" represents the standard maximum current of M2 Model at AC125V.
2.Maximum current is limited slightly lower for M3 and 5S Models due to heat generated inside the switches.
3.Crossbar contact is not available for the 5 Ampere Series.

Maximum operating voltage : AC250V max., DC48V max.
Temperature setting range : -10℃~110℃ (tolerance/differential will change in the higher temp.)(see the above table)
Differential : rank A ····· 4 ± 1 (3~5)(The differential Rank A of 5 Amp.series is 1℃ higher than the one of 2 Amp.series)
rank B ·····4.5 ±1.5 (3~6)
rank C ·····6.5 ±1.5 (5~8)
rank D ····· 10 ± 2 (8~12)
Contact configuration : 1b (X), or 1a (Y)
1c (XZ or YZ) for M3(Z)/5S(Z).
Operating temperature range : -30℃~105℃ (standard), -30℃~125℃ (special) (no icing, no condensing)
(use within 60 degrees above the set temperature.)
Temperature setting tolerance : Standard tolerance for temperature up to 50℃ is ±3 (see the above table)
Insulation resistance : 100MΩ or more
Contact resistance : 30mΩ or less (lead wire resistance not included)
Voltage tolerance : AC2000V for 2sec.(600V for 1minute between contacts)
Vibration tolerance : Selected from JIS·C·0911-1984
Constant vibration; 50Hz fixed/0.2mm fixed (1G)
Sweep vibration; 10~55Hz/0.35mm fixed (0.1~2.2G)
Withstands 2 hour each in directions X, Y and Z.
Impact tolerance : No damage when dropped three times from the height of 40cm onto a concrete floor (about 70G).
No damage for double sealed model when dropped three times from the height of 1m onto a concrete floor (about 240G).
Withstands substantial impact after being put in a package or mounted in equipment.
Life : 2 million mechanical operations, 100,000 electrical operations at rated load.(see page 15 for details.)
Handling precautions : The thermostat withstands vibration and impact applied along Y and Z axis, but does not tolerate impact from X direction.

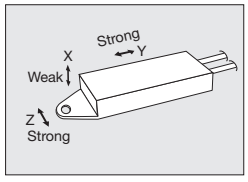
NOTE: "5 Ampere" refers to the value for C and D rank products at AC125V/DC12V.
Please note that the contact capacity of A and B rank products is a little smaller than 5A.

Double Sealed Construction (improvement in water resistance and impact resistance increased)



1. Increased water resistance
Covering a thermostat with a plastic case and sealing its lead wires with plastic sealant is a widely accepted approach to achieve a dust-proof and water-resistant structure. Our thermostats, such as the MQT series in this catalogue, are of this design. Repeated material expansion and contraction, and internal air pressure changes caused by thermal cycle may lead to wear of plastic case and sealant, which consequently deteriorates sealing performance. Our double sealed design, using a vinyl tube, withstands severe environmental conditions for long periods of time.

NOTES: Water resistance is achieved by double sealed construction using a soft vinyl tube.
1.The soft vinyl tube must be taken care of to avoid damage.
2.Do not expose vinyl tube to the direct sunlight.



2. Increased impact resistance
Electrical components such as relays and motors are not very resistant against shocks. Dropping electrical components usually results in damage and subsequent malfunction. Products in the MQT Series are no exception. MQT Series products are fragile to impacts in X direction and more resistive to Y and Z direction impact. However, with the double sealing method using soft vinyl tubes, impact resistance is guaranteed for regular usage.
Impact resistance: 240G

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