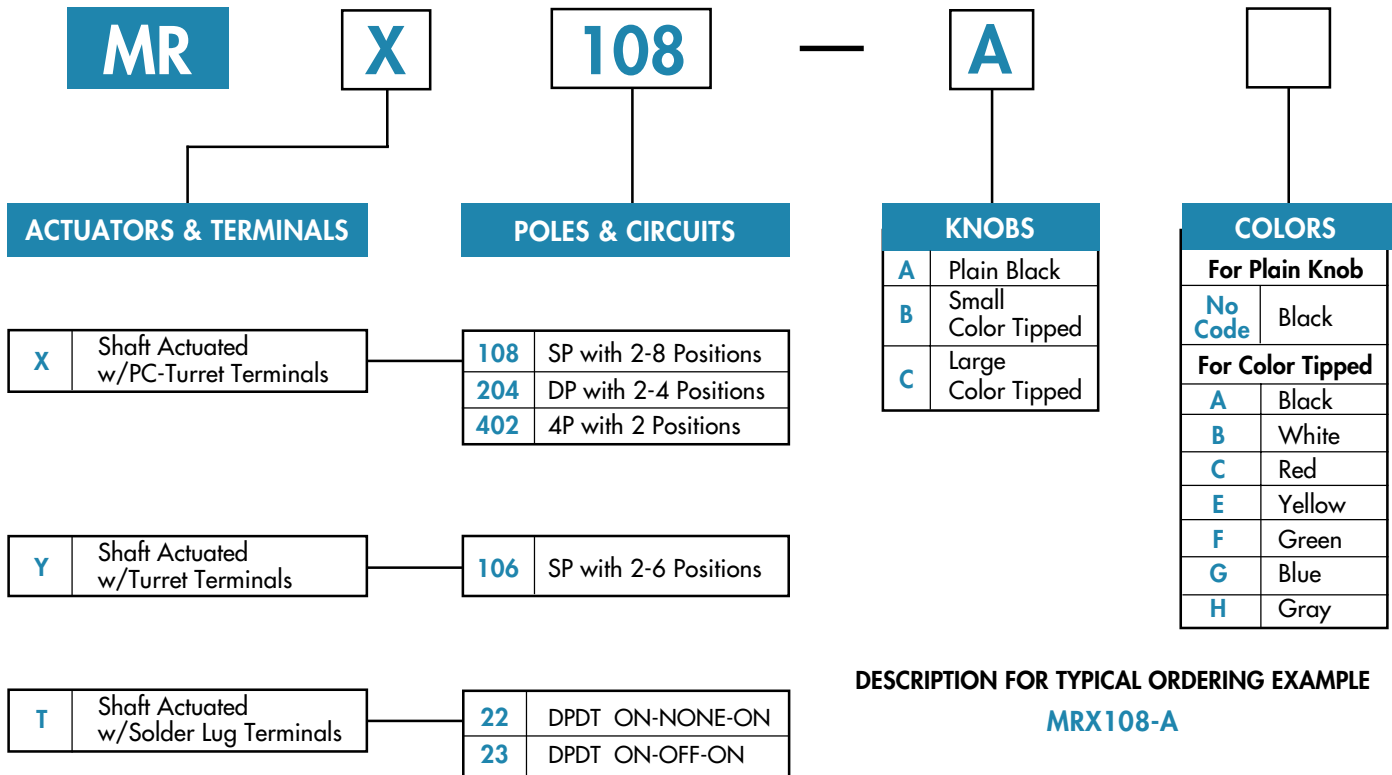




Series MR

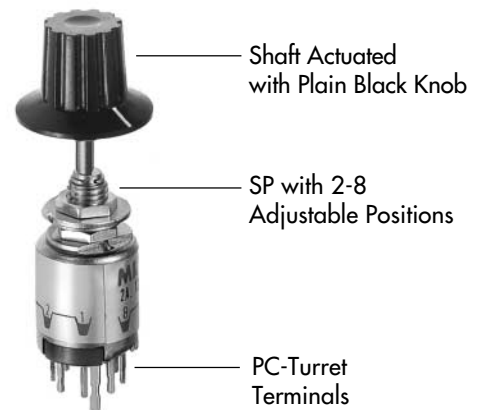
Half-Inch Diameter Rotary Switches

TYPICAL SWITCH ORDERING EXAMPLE



DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

MRX108-A



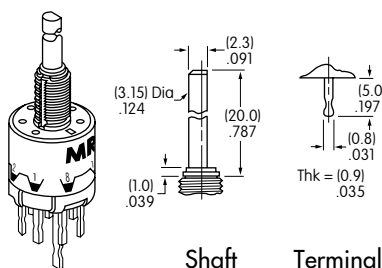
IMPORTANT:

MRT Switches are supplied without UL marking unless specified. Specific models & ratings noted on General Specifications page.

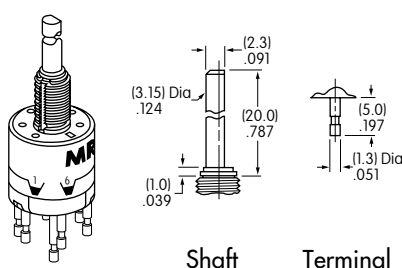
■ General Specifications ■ Dimensions

ACTUATORS & TERMINALS

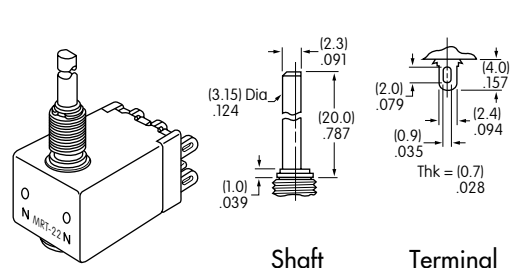
X Shaft Actuated with PC-Turret Terminals



Y Shaft Actuated with Turret Terminals



T Shaft Actuated with Solder Lug Terminals





GENERAL SPECIFICATIONS

Electrical Capacity (Resistive Load)

For MRX:	2A @ 125V AC or 1A @ 30V DC
For MRY:	3A @ 125V AC or 2A @ 30V DC
For MRT:	10A @ 125V AC or 4A @ 30V DC for MRT22 5A @ 125V AC or 3A @ 30V DC for MRT23

Other Ratings

Contact Resistance:	10 milliohms maximum
Insulation Resistance:	100 megohms minimum @ 500V DC for MRX & MRY 200 megohms minimum @ 500V DC for MRT
Dielectric Strength:	1,000V AC minimum
Mechanical Life:	15,000 operations minimum
Electrical Life:	7,500 operations minimum
Range of Operating Torque:	500 ~ 1500 grams-cm for MRX; 500 ~ 1000 grams-cm for MRY; 200 ~ 500 grams-cm for MRT
Contact Timing:	Nonshorting (break-before-make) MRX ~ self-cleaning, sliding contact; MRY ~ Rotary contactor dish; MRT ~ Butt contacts
Indexing:	45° for MRX; 60° for MRY; 120° for MRT22; 60° for MRT23

Materials & Finishes

Shaft:	Brass with nickel plating
Stopper Plate:	Steel with zinc plating for MRX & MRY
Bushing/Housing:	Brass with nickel plating
Movable Contacts:	Silver alloy for MRX & MRT Copper with silver plating for MRY
End Contacts & Terminals:	Copper with silver plating for MRX & MRT Silver alloy plus brass with silver plating for MRY
Common Contacts & Terminals:	Copper with silver plating for MRX, MRY, & MRT22 Brass with silver plating for MRT23
Base:	Phenolic resin

Environmental Data

Operating Temp Range:	-10°C through +70°C (+14°F through +158°F)
Humidity:	90 ~ 95% humidity for 96 hours @ 40°C (104°F)
Vibration:	10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours
Shock:	50g acceleration (tested in 3 right angled directions, with 3 shocks in each direction)

Installation

Mounting Torque:	2 ~ 3 kgf/cm (1.75 ~ 2.60 lb/in)
Soldering Time & Temperature:	3 seconds @ 350°C or 5 seconds @ 270°C

Standards & Certifications

UL Recognized:	MRT22 models recognized at 10A @ 125V AC; MRT23 models recognized at 5A @ 125V AC; UL File No. E44145
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Series MR

Half-Inch Diameter Rotary Switches

POLES & CIRCUITS

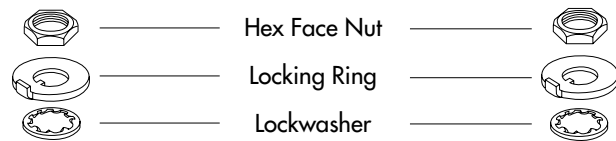
Pole	Model	Number of Positions	Stopper Settings	Number of Terminals	Schematics
SP	MRX108	2-8	2, 3, 4, 5, 6, 7, 8	1 COM, 8 LOAD	
	MRY106	2-6	2, 3, 4, 5, 6	1 COM, 6 LOAD	
DP	MRX204	2-4	2, 3, 4	2 COM, 8 LOAD	
DPDT	MRT22	2	ON-NONE-ON	2-3 2-1 5-6 5-4	
	MRT23	3	ON-OFF-ON	2-3 OPEN 2-1 5-6 OPEN 5-4	
4P	MRX402	2	1 & 2	4 COM, 8 LOAD	

POSITION SETTING FOR MRX & MRY MODELS

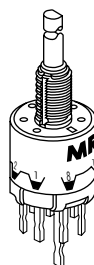
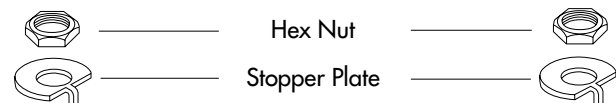
Each switch is supplied with the stopper set for the maximum number of positions allowed for that model. Prior to installation, the desired position setting should be made.

- Using the actuator knob, turn the shaft counterclockwise to the extreme left. If the shaft is not turned to this extreme position where the white line on the knob points to the number 1 position shown on the side of the switch, proper setting cannot be achieved.
- Remove the knob from the shaft and loosen the nut far enough to allow raising the stopper plate for resetting to the desired position.
- Note the position numbers on the side of the switch; these correspond to the terminal numbers and stopper holes. Insert the stopper in the hole numbered for the maximum desired number of stop settings. Satisfactory switch functioning cannot be assured if the stopper plate is not properly positioned.
- Tighten the nut (beveled side up) firmly against the stopper plate.

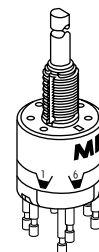
Standard Mounting Hardware Packaged Loose with Each Switch:



Factory Assembled:



MRX



MRY



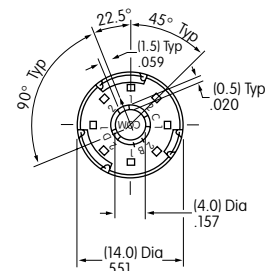
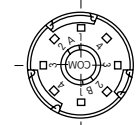
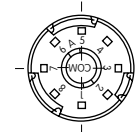
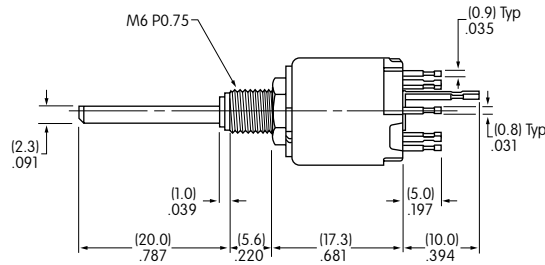
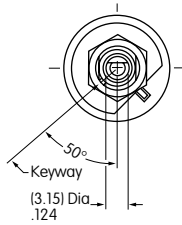
Series MR

Half-Inch Diameter Rotary Switches

TYPICAL SWITCH DIMENSIONS

MRX • PC-Turret Terminals

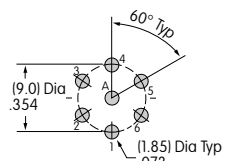
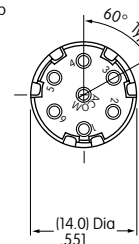
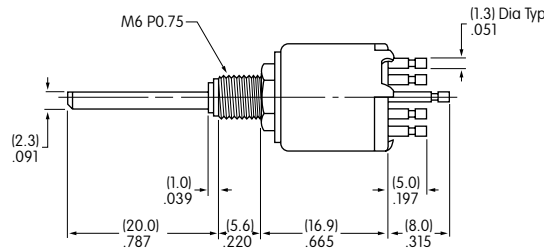
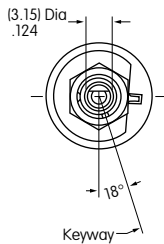
1, 2, & 4 Pole



MRX108

MRY • Turret Terminals

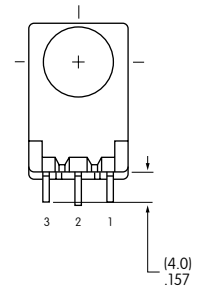
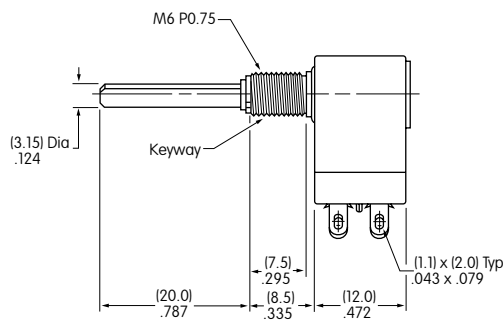
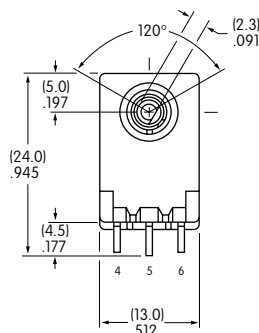
1 Pole



MRY106

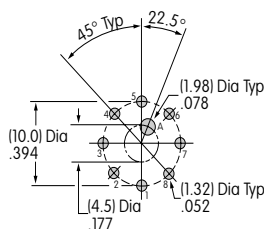
MRT • Solder Lug Terminals

2 Pole

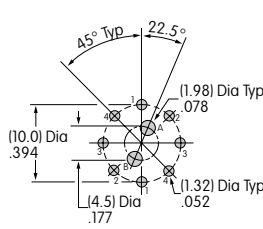


MRT22

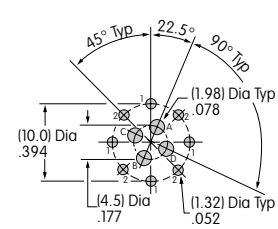
PC FOOTPRINTS FOR MRX 1, 2, & 4 POLE



Single Pole



Double Pole



Four Pole



Series MR

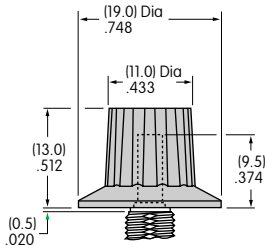
Half-Inch Diameter Rotary Switches

KNOB

A AT433 Plain Black

Material:
Polyacetal

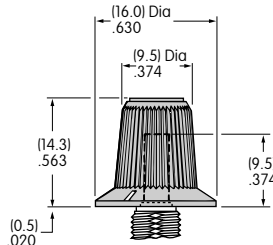
Color:
Black only



B AT4103 Small Color Tipped

Base Material:
Polyester
Base Color:
Black

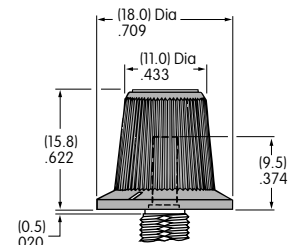
Polyamide
Tip Colors:
A, B, C, E,
F, G, H



C AT4104 Large Color Tipped

Base Material:
Polyester
Base Color:
Black

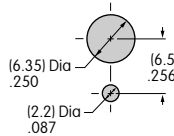
Polyamide
Tip Colors:
A, B, C, E,
F, G, H



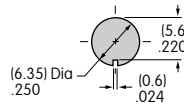
Color Codes: **A** Black **B** White **C** Red **E** Yellow **F** Green **G** Blue **H** Gray

PANEL CUTOUTS & MAXIMUM EFFECTIVE PANEL THICKNESS

Without
Keyway



With
Keyway



Maximum Effective Panel Thickness

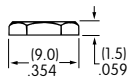
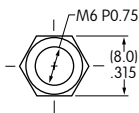
With Standard Hardware:
MRX & MRY 2.4mm (.095")
MRT 2.7mm (.106")

Without Locking Ring:
MRX & MRY 3.2mm (.126")
MRY 3.5mm (.138")

HARDWARE

AT513M Hexagon Nut

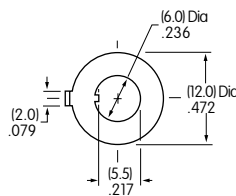
Material:
Brass, nickel plated



1 for MRT; 1 for MRX, MRY

AT507M Locking Ring

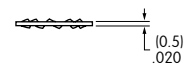
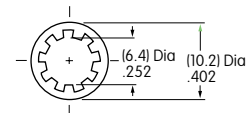
Material:
Steel, chromate
over zinc plating



1 for MRT; 1 for MRX, MRY

AT509 Lockwasher

Material:
Steel, chromate
over zinc plating



1 for MRT; 1 for MRX, MRY