

M4-4 Series

Compact Heavy Duty Limit Switch

◆ Features

- ✓ Compact heavy duty aluminum limit switch
- ✓ Complete seal; IP67-rated
- ✓ Positive-opening type available
- ✓ VCTF or SJTO(18 AWG) bottom cable-out 2 or 3 meters; optional side-out
- ✓ AC or DC M12 quick connect type available

◆ Recognition(s)

- ✓ CE – EN60947
- ✓ UL – UL-508
- ✓ CCC – GB14048.5-2008
- ✓ RoHS Compliant
- ✓ Reach Unaffected



◆ Characteristics

Positive Opening	Electrical Contact	Terminal Type	Contact Form(s)	Poles & Throws	Actuation Sequence(s)
Yes & No	3 Points	Wire	Form C	SPDT	Break(1) Make(2)

Operating Temp.	AC Rated	DC Rated	IP	Oil Resist	Dust Resist	Water Resist	Operating Speed
-20 to 70 Celsius	5A 125-250V	0.4A 125V	67	Yes	Yes	Yes	0.1mm to 0.5m/sec

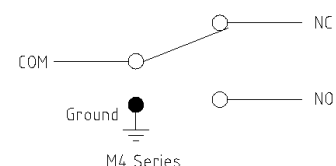
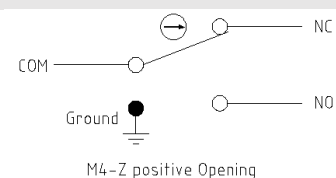
Operation Frequency	Contact Resistance	Insulation Resistance	Vibration
Mechanically: 120/min Electrically: 30/min	300mΩ max. (initial)	100MΩ min. (500VDC)	1.5mm amplitude at 10-55Hz

Storage Humidity	Service Life (min.)	Dielectric Strength
85% RH max	Mechanically: 2,000,000 operations 500,000 (positive opening) Electrically: 200,000 operations	1000VAC, 50/60Hz for 1 minute between non-continuous terminals

Recommended tightening forces

Purpose	Screw type	Tightening
Mounting	M5	4.9~5.88N·m

Circuitry

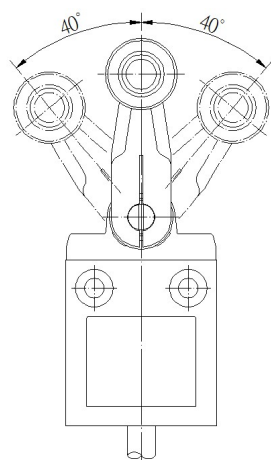


◆ Materials

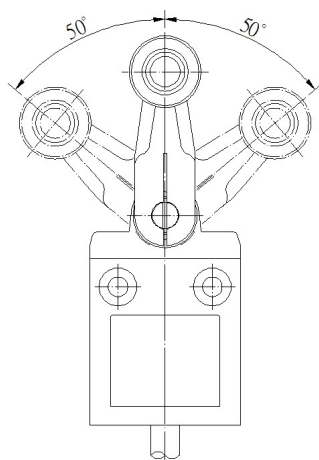
Actuation touch part	Electrical contact point	Enclosure
Stainless Steel	Silver 99.9%	Aluminum alloy

◆ Nomenclature

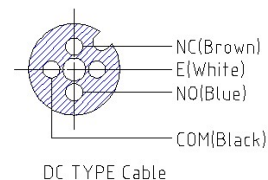
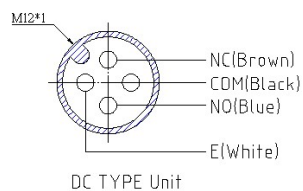
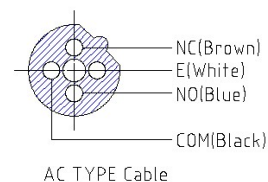
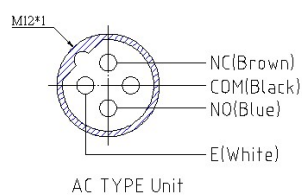
Series:	Actuator:	Connection type:	Positive opening:	Cable:
M4 -	4101 -	Q -	Z -	AC
	4101=Plunger 4102=Roller plunger 4102R=Cross roller plunger 4103=Bevel plunger 4104=Side rotary, roller 40° 4114=Side rotary, roller 50° 4106=Spring, coil <u>Actuator with rubber boot</u> 4111=Plunger 4112=Roller plunger 4112R=Cross roller plunger <u>Panel mount actuator</u> 4310=Plunger 4311=Roller plunger 4312=Cross roller plunger	Blank=Bottom cable-out S=Side cable-out Q=M12 Quick connect	Blank=None Z=Yes	2=2m VCTF 2L=2m SJTO 3=3m VCTF 3L=3m SJTO AC=AC Type (only applicable for suffix "Q" M12 quick connect type) DC=DC Type (only applicable for suffix "Q" M12 quick connect type)



M4-4104



M4-4114

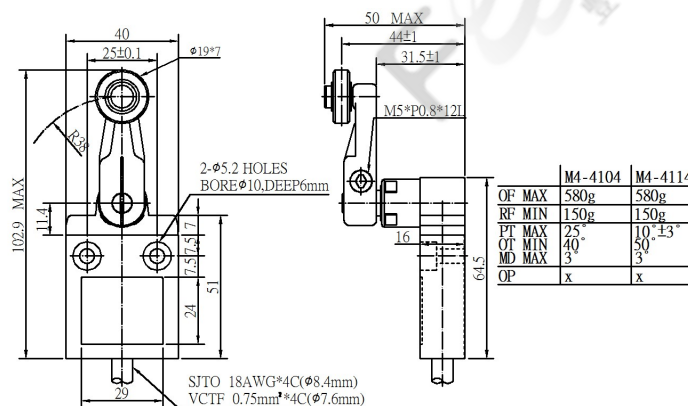
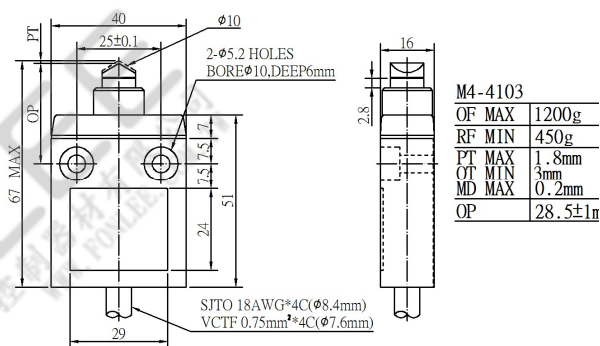
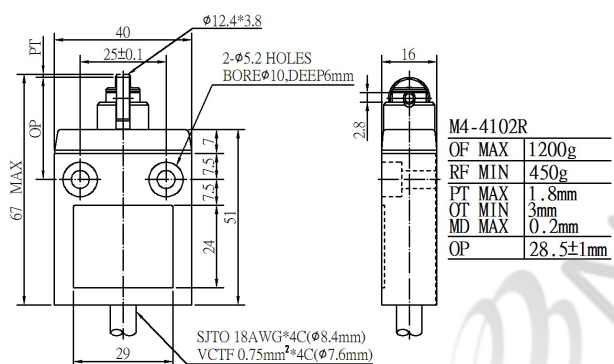
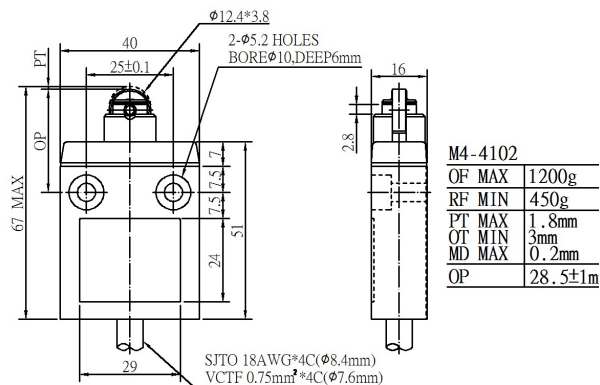
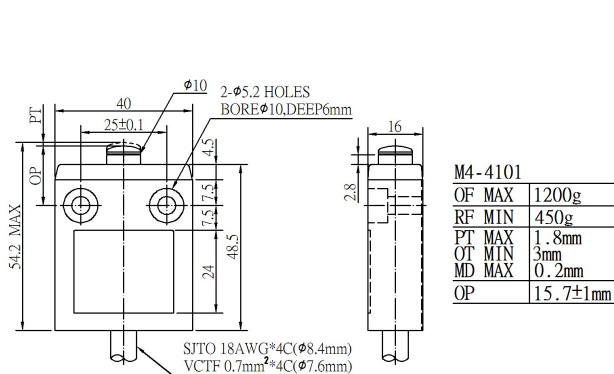

M12 Quick Connectors (AC/DC)

◆ Dimensions & Operating Characteristics

*Measurements are in *millimeters*

*Connection types and cable lengths do not affect dimensions and operating characteristics

*MD=Movement Differential=DT=Differential Travel



M4-4101



M4-4102



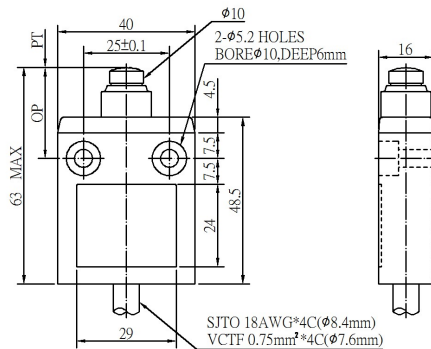
M4-4102R



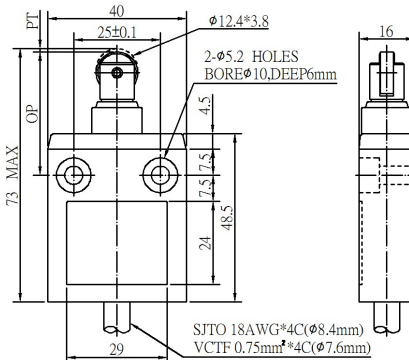
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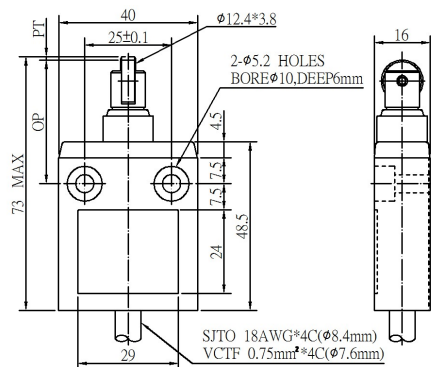
M4-4104/4114



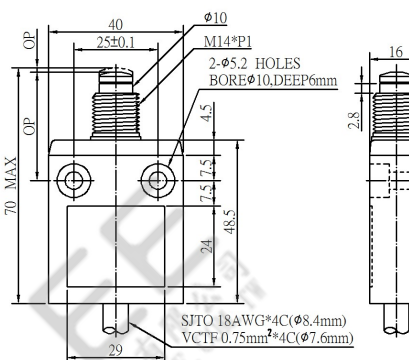
M4-4111	
OF MAX	1200g
RF MIN	450g
PT MAX	1.8mm
OT MIN	3mm
MD MAX	0.2mm
OP	28.5±1mm



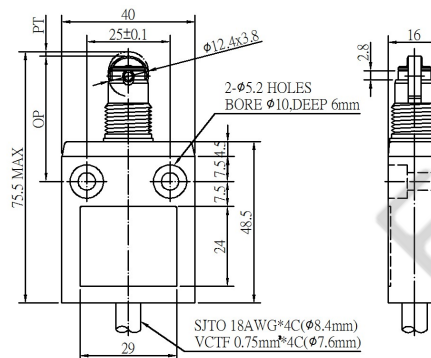
M4-4112	
OF MAX	1800g
RF MIN	450g
PT MAX	1.8mm
OT MIN	3mm
MD MAX	0.2mm
OP	34.3±1mm



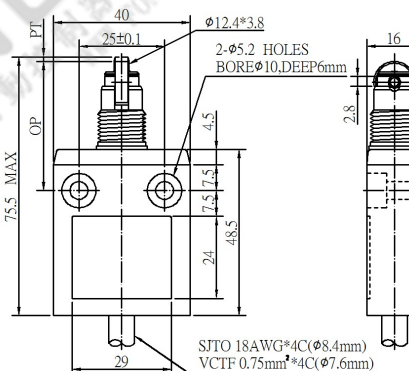
M4-4112R	
OF MAX	1800g
RF MIN	450g
PT MAX	1.8mm
OT MIN	3mm
MD MAX	0.2mm
OP	34.3±1mm



M4-4310	
OF MAX	1200g
RF MIN	450g
PT MAX	1.8mm
OT MIN	3mm
MD MAX	0.2mm
OP	31.2±1mm



M4-4311	
OF MAX	1200g
RF MIN	450g
PT MAX	1.8mm
OT MIN	3mm
MD MAX	0.2mm
OP	36.8±1mm



M4-4312	
OF MAX	1200g
RF MIN	450g
PT MAX	1.8mm
OT MIN	3mm
MD MAX	0.2mm
OP	36.8±1mm



M4-4111



M4-4112



M4-4112R



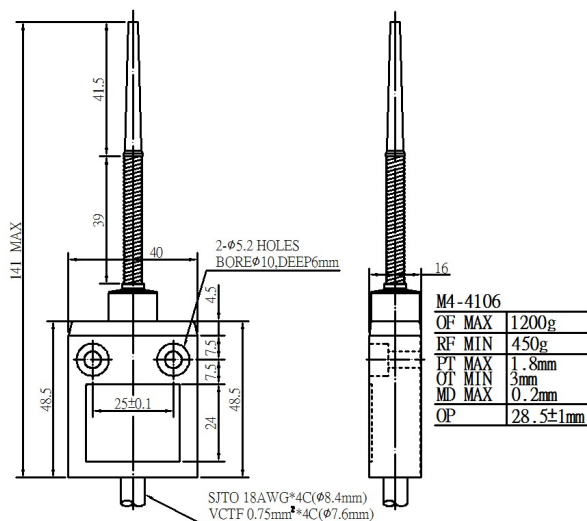
M4-4310



M4-4311



M4-4312



M4-4106

◆ Handling and Usage

The bottom of the Switch at the cable outlet is resin-molded. Secure the cable at a point 5 cm from the Switch bottom to prevent exertion of excess force on the cable.

When bending the cable, provide a bending radius of 45 mm min. so as not to damage the cable insulation or sheath. Excessive bending may cause fire or leakage current.

