

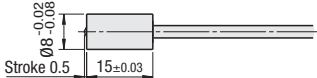

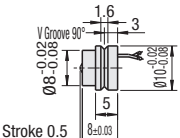
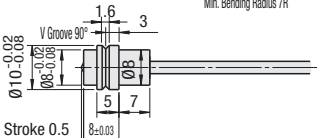

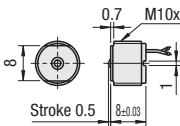
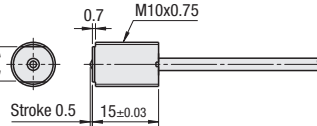

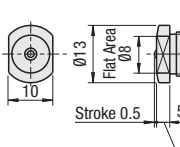
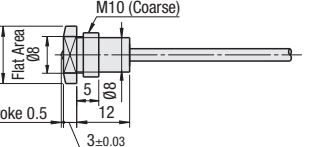

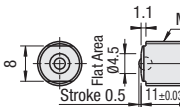
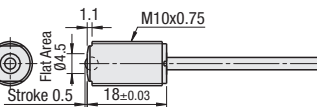


# Contact Switches with Stoppers

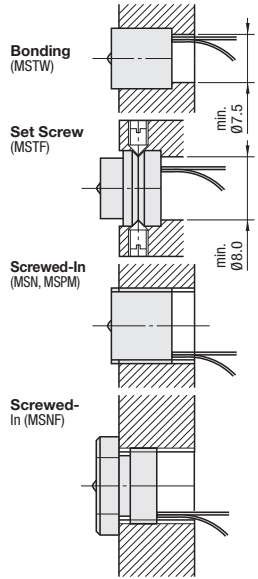
## Mini, Drip-Proof (IP44) /Water-Proof (IP67)

For Mechanical / Electrical Specifications and Precautions for Use, **P2095**

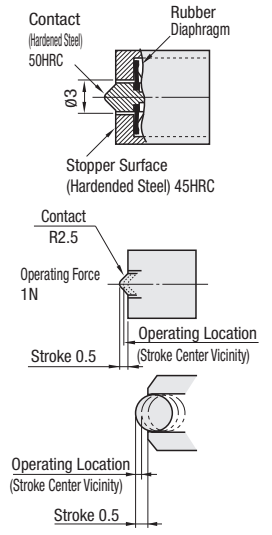
**!** Although this is a drip-proof type, it is not suited for use in environment in which coolant or cutting chips may fall on the product.

<b>Drip-Proof (IP44) Standard</b>  <b>RoHS 10</b>	<b>MSTW-S</b> <b>MSTW-SD</b> (With LED) Cable: Loose Wire (No Thermal Compression Tube) 2 Conductors - Ø0.6, L 0.5m Oil Resistant	<b>MSTW-L</b> Cable: Cab Tire 2 Conductors - Ø3, L 2m, Oil Resistant Min. Bending Radius 7R
	 Stroke 0.5 8±0.03 Ø8-0.08	 Stroke 0.5 15±0.03 Ø8-0.08
<b>Drip-Proof (IP44) Flanged Cylinder</b>  <b>RoHS 10</b>	<b>MSTF-S</b> <b>MSTF-SD</b> (With LED) Cable: Loose Wire (No Thermal Compression Tube) 2 Conductors - Ø0.6, L 0.5m Oil Resistant	<b>MSTF-L</b> <b>MSTF-LD</b> (With LED) Cable: Cab Tire 2 Conductors - Ø3, L 2m, Oil Resistant Min. Bending Radius 7R
	 Stroke 0.5 8±0.03 V Groove 90° 1.6 3 Ø8-0.08 Ø10±0.08	 Stroke 0.5 8±0.03 V Groove 90° 1.6 3 Ø10±0.08 Ø8
<b>Drip-Proof (IP44) Screw</b>  <b>RoHS 10</b>	<b>MSN-S</b> <b>MSN-SD</b> (With LED) Cable: Loose Wire (No Thermal Compression Tube) 2 Conductors - Ø0.6, L 0.5m Oil Resistant	<b>MSN-L</b> <b>MSN-LD</b> (With LED) Cable: Cab Tire 2 Conductors - Ø3, L 2m, Oil Resistant Min. Bending Radius 7R
	 Stroke 0.5 8±0.03 0.7 M10x0.75	 Stroke 0.5 15±0.03 0.7 M10x0.75
<b>Drip-Proof (IP44) Flanged Screw</b>  <b>RoHS 10</b>	<b>MSNF-S</b> <b>MSNF-SD</b> (With LED) Cable: Loose Wire (No Thermal Compression Tube) 2 Conductors - Ø0.6, L 0.5m Oil Resistant	<b>MSNF-L</b> <b>MSNF-LD</b> (With LED) Cable: Cab Tire 2 Conductors - Ø3, L 2m, Oil Resistant Min. Bending Radius 7R
	 Stroke 0.5 5 3±0.03 M10 (Coarse) Ø13 Flat Area Ø6	 Stroke 0.5 12 3±0.03 M10 (Coarse) Ø13 Flat Area Ø6
<b>Drip-Proof (IP44) Ball Contact Screw</b>  <b>RoHS 10</b>	<b>MSPM-S</b> <b>MSPM-SD</b> (With LED) Cable: Loose Wire (No Thermal Compression Tube) 2 Conductors - Ø0.6, L 0.5m Oil Resistant	<b>MSPM-L</b> <b>MSPM-LD</b> (With LED) Cable: Cab Tire 2 Conductors - Ø3, L 2m, Oil Resistant Min. Bending Radius 7R
	 Stroke 0.5 11±0.03 1.1 M10x0.75 Flat Area Ø4.5	 Stroke 0.5 18±0.03 1.1 M10x0.75 Flat Area Ø4.5

**ex** Example



**Structure of Drip-Proof Type (IP44)**



- Use within the contact ratings.
- Do not pull or twist the loose wires with 15N or more. Also do not pull or twist the cab tire cords with 30N or more.

Part Number	Stroke	Operating Point	Contact Force	Allowable Static Load	Max. Impact Energy	Contact Logic	-S		-SD		-L		-LD	
							Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate
MSTW	0.5	Center Vicinity (Repeatability 0.01)	0.8N	3000N	0.2J	NO (Normally Open)	1 ~ 9 pc(s)	10~20	1 ~ 9 pc(s)	10~20	1 ~ 9 pc(s)	10~20	1 ~ 9 pc(s)	10~20
MSTF														
MSN														
MSNF														
MSPM														