

# Heat-Resistant Positioning Switches

Contact / Ball Plunger / with Stoppers / with Stoppers (Mini Type)

For Mechanical / Electrical Specifications and Precautions for Use, refer to P.2188.

**Heat Resistant Positioning Switches – Bolt (IP65)**

**MSTKD-HR**

Use within the contact ratings. Do not pull or twist the cable with a force of 30N or more.

Contact Part		Main Body Material		Cable	Accessories
Material	Hardness	Material	Hardness		
420 Stainless Steel	45-50 HRC min.	303 Stainless Steel		Cable 2 m, 2-Conductors Ø3, Heat Resistant Min. Bending Radius R7	Hex Nuts 2 pcs. (Thickness 3.2 Wrench Size 8)

Operating Temperature: ~200°C  
The export application to the Ministry of Economy, Trade and Industry is necessary for exporting this product.

Part Number	Stroke S	Operating Point	Contact Force	Contact Mechanism
MSTKD-HR	2.8	0.3 from Tip (Repeatability 0.01 Ambient Temperature)	1N	NO (Normally Open)

For Mechanical / Electrical Specifications and Precautions for Use, refer to P.2188.

**Heat Resistant Positioning Switches – Ball Plunger (IP40)**

**MSPB-HR**

Care must be taken for the object not to hit the switch body before hitting the operating point. Less than 5°

Use within the contact ratings. Do not pull or twist the cable with a force of 30N or more.

Pin		Main Body Material		Cable	Accessories
Material	Hardness	Material	Hardness		
440C Stainless Steel	50-55 HRC min.	303 Stainless Steel		Cable 2 m, 2-Conductors Ø3, Oil Resistant Min. Bending Radius R7	Hex Nut 2 pcs. (Coarse Thread JIS Class 3) Toothed Washer 1 pc.

Operating Temperature: ~200°C  
The export application to the Ministry of Economy, Trade and Industry is necessary for exporting this product.

Part Number	Stroke S	Operating Point	Contact Force		Contact Mechanism
			min.	max.	
MSPB-HR	0.8	0.2-0.4 (Repeatability 0.01 Ambient Temperature)	6N	13N	NO (Normally Open)

For Mechanical / Electrical Specifications and Precautions for Use, refer to P.2188.

**Heat Resistant Positioning Switches – With Stopper (IP40)**

**MSTB-HR**

Use within the contact ratings. Do not pull or twist the cable with a force of 30N or more.

Tip of Contact		Stopper		Main Body Material		Cable	Accessories
Material	Hardness	Material	Hardness	Material	Hardness		
420 Stainless Steel	45-50 HRC min.	420 Stainless Steel	50 HRC min.	416 Stainless Steel		Cable 2 m, 2-Conductors Ø3, Heat Resistant Min. Bending Radius R7	Hex Nut 2 pcs. (Coarse Thread JIS Class 3) Toothed Washer 1 pc.

Operating Temperature: ~200°C  
The export application to the Ministry of Economy, Trade and Industry is necessary for exporting this product.

Part Number	Stroke S	Operating Point	Contact Force	Allowable Static Load	Shock Resistance Energy	Contact Mechanism

**Heat Resistant Positioning Switches – Mini (IP67)**

**MSNWL-HR**

Calbe: Cab Tire 2 Conductors – Ø3, L 2 m, Oil Resistant Min. Bending Radius 7R

Material: Main Body: 416 Stainless Steel (45 HRC min.) Contact Part: 420 Stainless Steel (50 HRC min.) Accessories: Hex Nut 2 pcs. (Thickness 3 Hex Socket 13) Toothed Washer 1 pc.

Use within the contact ratings. Do not pull or twist the cable with a force of 30N or more.

Operating Temperature: ~200°C  
The export application to the Ministry of Economy, Trade and Industry is necessary for exporting this product.

Part Number Type	Stroke S	Operating Point	Contact Force	Static Load Capable Structure	Shock Resistance Energy	Contact Point
MSNWL-HR	0.3	Center Vicinity Repeatability 0.01 Ambient Temp.	1N	3000N	0.2J	NO (Normally Open)

Part Number Example: **MSTKD-HR**, **MSPB-HR**, **MSTB-HR**, **MSNWL-HR**

Contact Method of Detected Subject Except Ball Plunger Switch (Declination within ±3°)

# Positioning Switches

Spring Plunger / Ball Plunger / Waterproof Ball Plunger

ⓘ Cable Protectors are omitted for a shorter length design option.

For Mechanical / Electrical Specifications and Precautions for Use, refer to P.2188.

**Positioning Switches – Spring Plunger (IP40)**

**MSPSS N-MSPSS-D With LED**

Use within the contact ratings. Do not pull or twist the cable with a force of 30N or more. ⓘ Material for pin has been changed.

Pin		Main Body		Cable	Accessories
Material	Hardness	Material	Hardness		
440C Stainless Steel	50-55 HRC min.	303 Stainless Steel		Cable 2 m, 2-Conductors Ø3, Oil Resistant Min. Bending Radius R7	Hex Nut 2 pcs. (Coarse Thread JIS Class 3) Toothed Washer 1 pc.

Force must be applied normal to the switch. (Declination within ±3°)

Part Number Type	No.	M (Coarse)	d	Stroke S	Operating Point	Contact Force N		Contact Mechanism	B
						min.	max.		
MSPSS N-MSPSS-D	6	6	2.5	3	from Body End 0.8 (Repeatability 0.01)	6	11	NO (Normally Open)	5
	8	8				6	11		7

ⓘ Cable Protectors are omitted for a shorter length design option.

For Mechanical / Electrical Specifications and Precautions for Use, refer to P.2188.

**Positioning Switches – Ball Plunger (IP40)**

**MSPB N-MSPB-D With LED**

Use within the contact ratings. Do not pull or twist the cable with a force of 30N or more.

Pin		Main Body		Cable	Accessories
Material	Hardness	Material	Hardness		
440C Stainless Steel	50-55 HRC min.	303 Stainless Steel		Cable 2 m, 2-Conductors Ø3, Oil Resistant Min. Bending Radius R7	Hex Nut 2 pcs. (Coarse Thread JIS Class 3) Toothed Washer 1 pc.

Possible to contact objects in all directions.

Part Number Type	No.	M (Coarse)	Stroke S	Operating Point	Repeatability	Contact Force N		Contact Mechanism	L	d	B
						min.	max.				
MSPB N-MSPB-D	6	6	0.8	0.3	0.01	6	13	NO (Normally Open)	32	3	5
	6F					1					

Part Number Example: **MSPSS6**, **MSPB6**, **N-MSPB-D6F**