
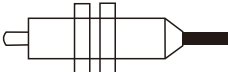
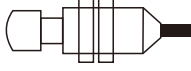
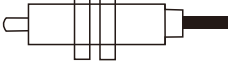
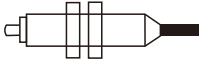

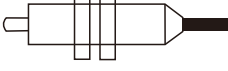



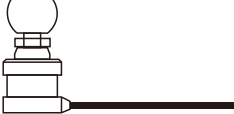





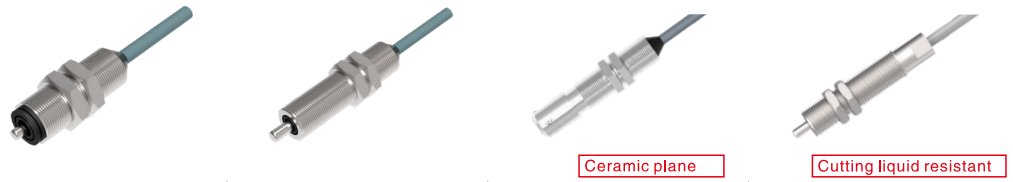
High Accuracy Contact Sensors



- ⦿ Magnetic detection principle, reliable performance, high durability
- ⦿ Repeat accuracy up to 0.001mm
- ⦿ With high precision spring; Min. detected operating force 0.3N




Appearance	Position Repeat Accuracy	Size	Range	Operating Force	Main Model No.	Pages
	± 0.001mm	M8X24	1.5mm	0.3N	MR-T8	H-03
	± 0.001mm	M8X35	3mm	0.6N	MR-T8A	
	± 0.001mm	M8X38.2	3mm	0.6N	MR-T8B	
	± 0.001mm	M8X39	3mm	0.6N	MR-T8P	
	± 0.001mm	M6X21	1.2mm	0.3N	MR-T6	H-04
	± 0.001mm	M10X27	3mm	1N	MR-T10	
	± 0.01mm	M10X21.2	1mm	H:5N J:0.5N	MR-T10B	
	± 0.001mm	M14X37	6mm	0.5~1.5N	MR-T5Z	H-05
	± 0.01mm	φ 14X80.5	5mm	H:2N J:0.8N	MR-T1X	
	± 0.01mm	M6X25	1.2mm	0.3N	MR-T6N	
	± 0.01mm	26X55	360° direction: 3±0.5mm	H:3N J:0.5N	MR-T4X	
	± 0.01mm	φ 12X12.9	1mm	H:7N J:0.5N	MR-T12B	H-06
	± 0.002mm	10.4X7.4X14.9	0.6N	MR-T1QA	
	± 0.01mm	21X22	8mm	0.8N	MR-T93Q	

Contact



Basic Features	Working principle	Contact sensor			
	Housing	Cylindrical			
	Detection distance	1.5mm		3mm	
	Pre-travel(PT)	0.4~0.7mm			
	Operate position(OP)	-			
	Indicator	Approx. 100mm from object			
Electrical data	Position repeatability	+0.001mm			
	Operating frequency	120 cycles per minute			
	Hysteresis	Less than 0.1mm			
	Output type	NPN NO/NPN NC			
	Output current	Without indicator: ≤15mA, with indicator: ≤12mA			
	Operating voltage	5~24VDC			
	Current consumption	Without indicator: ≤15mA, with indicator: ≤12mA			
Environmental conditions	Operating temperature	-20°C~+85°C, No freezing			
	Operating humidity	20%~95%RH, No condensation			
	Insulation strength	250VDC≥20MΩ			
	Dielectric strength	AC1000V for 1 minute			
	Enclosure rating	IP69			
Mechanical data	Operating force	0.3N			
	Travel	1.5mm		3mm	
	Connection	1m/3-core cable			
	Max. tightening torque	5N·m for M8 nut installation			
	Dimension	11.5x10x24mm	11.5x10x30mm	11.5x10x38.7mm	11.5x10x40mm
	Material	SUS303			
	Weight	about 15.8g			
	Accessory	Nut			
Model	MR-T8- Action: Null : OFF→ON B : ON→OFF Indicator on cables: Null : No indicator LED : With indicators	MR-T8A- Action: Null : OFF→ON B : ON→OFF Indicator on cables: Null : No indicator LED : With indicators	MR-T8B- Action: Null : OFF→ON B : ON→OFF Protective hood: Null : Stainless steel TX : Ceramic	MR-T8P- Action: Null : OFF→ON B : ON→OFF	



Basic Features	Working principle	Contact sensor				
	Housing	Cylindrical				
	Detection distance	1.2mm	3mm	1mm		
	Pre-travel(PT)	0.4~0.7mm	Freely specified from 0.4±0.15mm to 2.0±0.15mm	0.3~0.6mm		
	Operate position(OP)	-				
	Indicator	Approx. 100mm from object				
Electrical data	Position repeatability	±0.001mm		±0.01mm		
	Operating frequency	120 cycles per minute	≤60 cycles per minute	120 cycles per minute		
	Hysteresis	Less than 0.1mm				
	Output type	NPN NO/NPN NC				
	Output current	Without indicator: ≤15mA, with indicator: ≤12mA				
	Operating voltage	5~24VDC				
	Current consumption	Without indicator: ≤15mA, with indicator: ≤12mA				
Environmental conditions	Operating temperature	-20°C~+85°C, No freezing				
	Operating humidity	20%~95%RH, No condensation				
	Insulation strength	250VDC≥20MΩ				
	Dielectric strength	AC1000V for 1 minute				
	Enclosure rating	IP67				
Mechanical data	Operating force	0.3N	1N	H:5N, J:0.5N		
	Travel	1.2mm	3mm	1mm		
	Connection	1m/3-core cable				
	Max. tightening torque	2N·m for M6 nut installation	12N·m for M10 nut installation			
	Dimension	7x8x21mm	15x13x27mm			
	Material	SUS303				
	Weight	about 13.1g				
	Accessory	Nut				
Model	MR-T6 - -  Action: Null : OFF→ON B : ON→OFF Indicator on cables: Null : No indicator, LED : With indicators		MR-T10 - -  Built-in sensors: S : Single output, D : Dual output Action: Null : OFF→ON B : ON→OFF		MR-T10B - - -  Action: Null : OFF→ON B : ON→OFF Operating force: H : 5N, J : 0.5N Indicator on cables: Null : No indicator, LED : With indicators	

Contact



Up to 4 action points available



360° degree detection

Basic Features	Working principle	Contact sensor			
	Housing	Cylindrical		Square	
	Detection distance	6mm	5mm	1.2mm	3±0.5mm at 360°
	Pre-travel(PT)	0.1~0.4mm	-	0.4~0.7mm	-
	Operate position(OP)	-	2±0.5mm	-	1.5±0.5mm
	Indicator	Approx. 100mm from object			
Electrical data	Position repeatability	±0.001mm	±0.01mm		
	Operating frequency	120 cycles per minute			
	Hysteresis	Less than 0.08mm		Less than 0.1mm	
	Output type	NPN(NO)		NPN NO/NPN NC	NPN(NO)
	Output current	Without indicator: ≤15mA, with indicator: ≤12mA			
	Operating voltage	5~24VDC			
	Current consumption	Without indicator: ≤15mA, with indicator: ≤12mA			
Environmental conditions	Operating temperature	-20°C~+85°C, No freezing			
	Operating humidity	20%~95%RH, No condensation			
	Insulation strength	250VDC≥20MΩ			
	Dielectric strength	AC1000V for 1 minute			
	Enclosure rating	IP65			
Mechanical data	Operating force	0.5~1.5N	H: 2N; J: 0.8N	0.3N	H: 1.5N; J: 0.5N
	Travel	6mm	5mm	1.2mm	3±0.5mm at 360°
	Connection	1m/3-core cable			
	Max. tightening torque	18N·m for M14 nut installation	-	2N·m for M6 nut installation	-
	Dimension	17x19.6x59mm	80.6x14x14mm	7x8x25mm	26x57x117.5mm
	Material	Rubber sleeve: Butadiene rubber Housing, Nut: SUS303	SUS303		Housing: Zinc alloy; Ball handle: Black phenolic
	Weight	about 34.1g	about 13.1g		
	Accessory	Nut			
Model	MR-T5Z- The shape of contact position S : SUS ball C : Super-hard ball Units of sensors 1~4	MR-T1X- Operating force H : 2N J : 0.8N Indicator on cables Null: No indicator LED: With indicators	MR-T6N- Action Null: OFF—ON B: ON—OFF NT(mm) 40,60,80,100 Indicator on cables Null: No indicator LED: With indicators	MR-T4X- Operating force H : 2N J : 0.8N Indicator on cables Null: No indicator LED: With indicators	



Light operating force

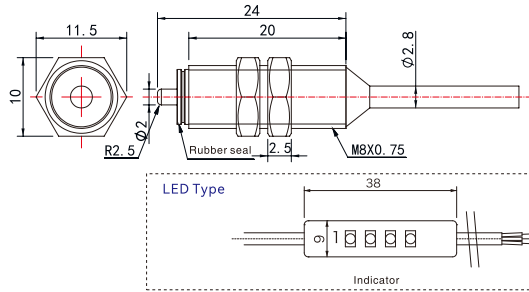
Basic Features	Working principle	Contact sensor		
	Housing	Cylindrical	Square	
	Detection distance	1mm	0.7mm	0.8mm
	Pre-travel(PT)	0.3~0.6mm	0.1~0.4mm	0.3-0.8mm
	Operate position(OP)	-		
	Indicator	Approx. 100mm from object	MR-T93Q: Red ; MR-T93Q-E: None
Electrical data	Position repeatability	±0.001mm		±0.01mm
	Operating frequency	120 cycles per minute		
	Hysteresis	Less than 0.08mm	Less than 0.1mm	
	Output type	NPN NO/NPN NC		
	Output current	Without indicator: ≤15mA, with indicator: ≤12mA		MR-T93Q: ≤80mA; MR-T93Q-E: ≤15mA
	Operating voltage	5~24VDC		MR-T93Q: 12~24VDC; MR-T93Q-E: 5~24VDC
	Current consumption	Without indicator: ≤15mA, with indicator: ≤12mA		MR-T93Q: ≤80mA; MR-T93Q-E: ≤15mA
Environmental conditions	Operating temperature	-20°C~+85°C, No freezing		
	Operating humidity	20%~95%RH, No condensation		
	Insulation strength	250VDC≥20MΩ		
	Dielectric strength	AC1000V for 1 minute		
	Enclosure rating	IP65		
Mechanical data	Operating force	H: 7N J: 0.5N	0.6N	0.8N
	Travel	1mm	0.7mm	8mm
	Connection	1m/3-core cable		
	Max. tightening torque	-		0.3N·m for M3 nut installation
	Dimension	12.9x12x38mm	14.9x10.4x7.4mm	31x22x11mm
	Material	SUS303	Housing: Heat-resistant ABS; Rubber seal: Butadiene rubber	Shaft: SUS303; Housing: Glass fiber reinforced PBT
	Weight	about 17.8g		
	Accessory	Nut		
Model	<p>MR-T12B- ■ - ■ - ■</p> <p>Action Null: OFF→ON B: ON→OFF</p> <p>Operating force H: 7N J: 0.5N</p> <p>Indicator on cables Null: No indicator LED: With indicators</p>	<p>MR-T1QA-B-J MR-T1QA-H</p> <p>Note: MR-T1QA-B-J: Indicates ON→OFF action; Low operating force. MR-T1QA-H: Indicates OFF→ON action; Standard operating force.</p>	<p>MR-T93Q- ■ - ■</p> <p>Output current Null: 80mA E: 15mA</p> <p>Action Null: OFF→ON B: ON→OFF</p>	

Contact

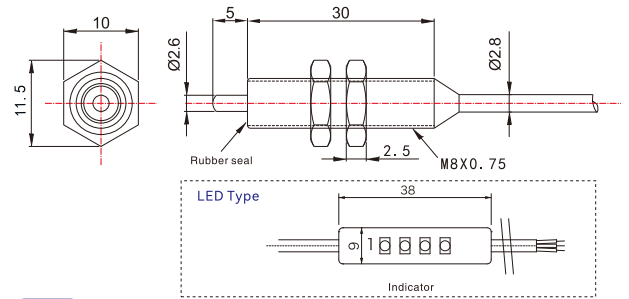
Dimensions

Unit:mm

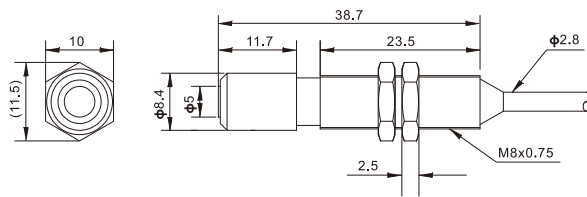
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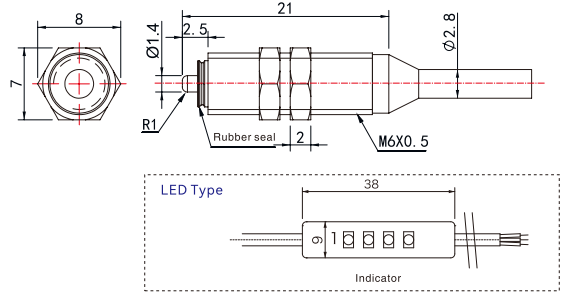
MR-T8A



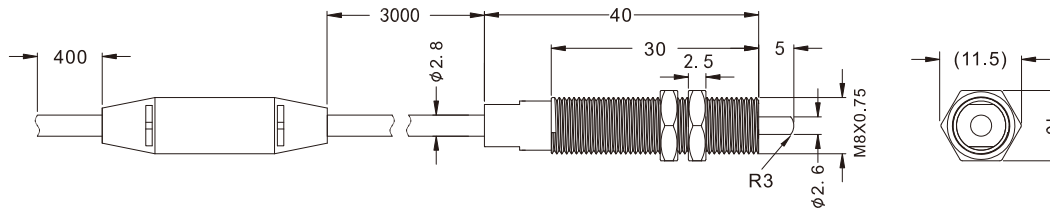
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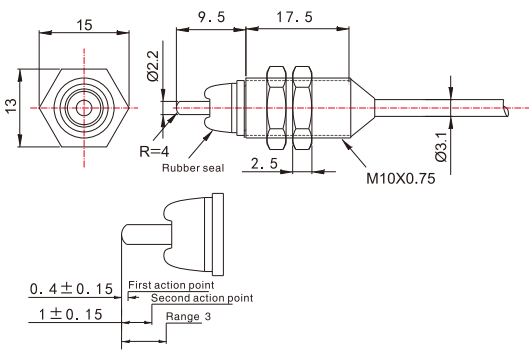
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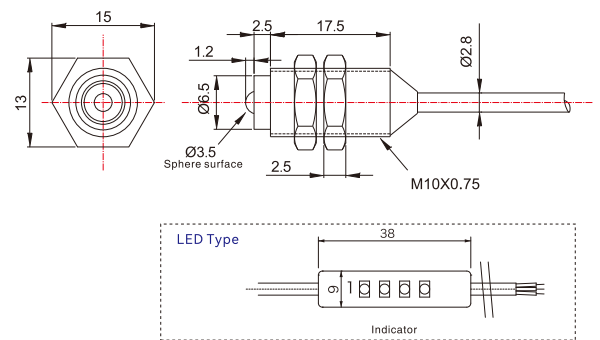
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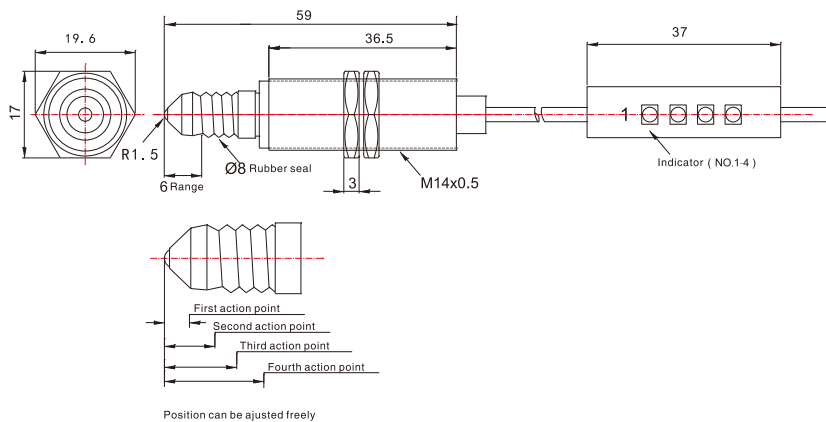
MR-T10



MR-T10B



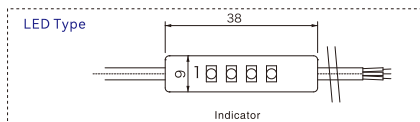
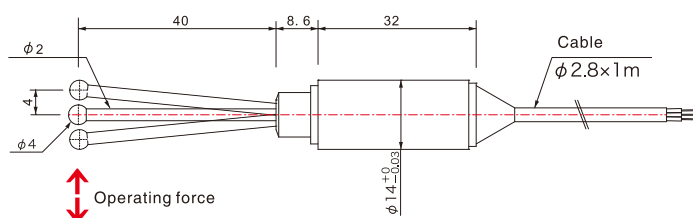
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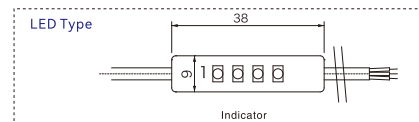
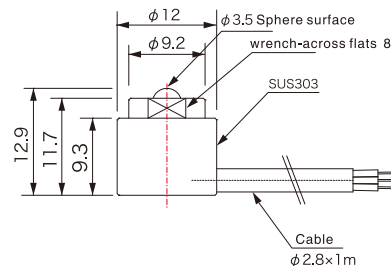
Unit:mm

Dimensions

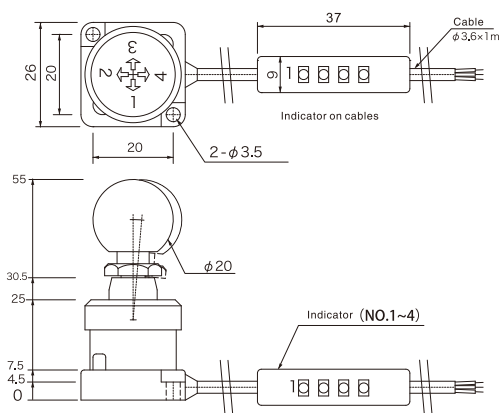
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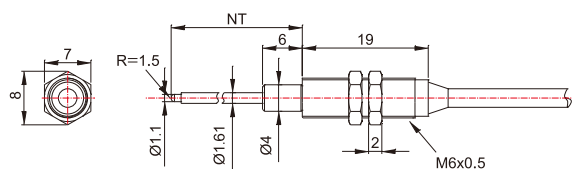
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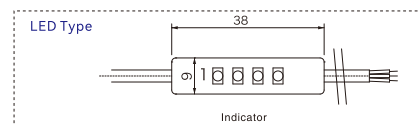
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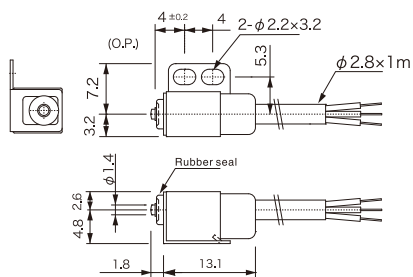
MR-T6N



Noted : NT=40/60/80/100

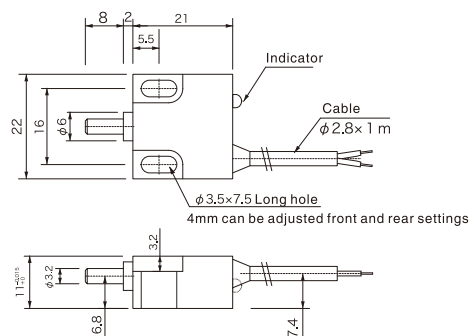


MR-T1QA

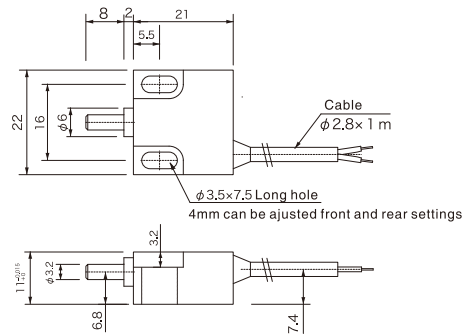


MR-T93Q

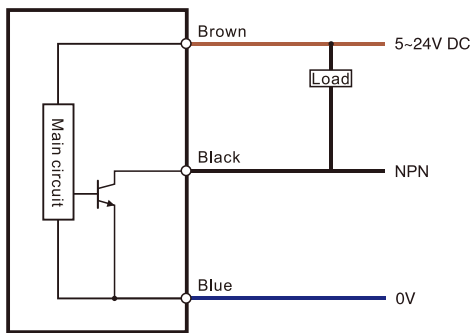
With Light



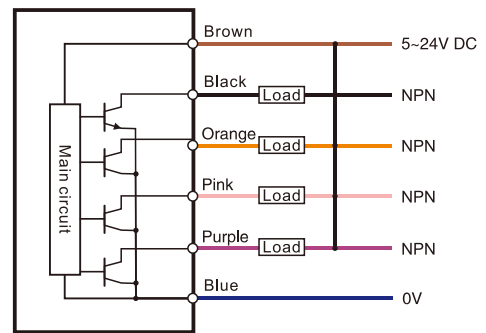
Without Light



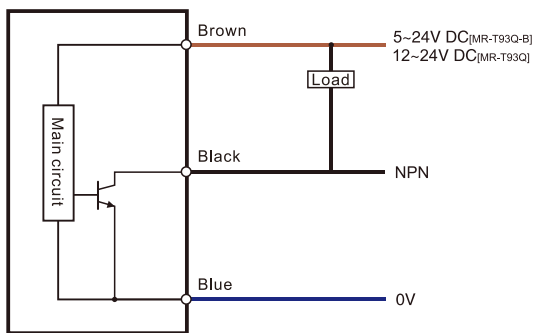
MR-T8(P)/T6/T10(B)/T1X/T6N/T12B/T1QA



MR-T5Z/T4X



MR-T93Q



PNP optional

NPN to PNP



optional: PNP-Ausgang

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