

Cylindrical Type

M18 Short-body Series



Ultrasonic

Basic Features	Operating Principle	Ultrasonic Detection		
	Enclosure Shape	Cylindrical		
	Detection Method	Diffuse reflection		
	Detection Range	40~300mm	60~800mm	
	Divergence Angle	7°±2°	8°±2°	
	Resolution	2mm		
	Detection Range Adjustment	External teaching		
Electrical data	Output Mode	0~10V / 4~20mA / NPN / PNP	0~10V / 4~20mA / NPN / PNP	
	Response Time	Switch output 12ms, Analog output 500ms	Switch output 80ms, Analog output 500ms	
	Switching Frequency	8Hz	5Hz	
	Repeatability	2%		
	Hysteresis	2%		
	Operating Voltage	15~30VDC		
	Operating Current	≤35mA		
	Residual Voltage	2.2Vmax(1L=100mA)		
	Load Current	≤100mA		
	Maximum Ripple	±5%		
	Voltage Drop	≤2.2V(100mA)		
	Protection Circuit	Reverse polarity protection/short circuit protection (auto reset)/surge protection		
	Temperature Drift	5%		
	Temperature Compensation	Have		
	Environmental conditions	Working Temperature	-20~70°C	
Protect Degree		IP67		
Mechanical data	Connection Method	M12/4-pin connector		
	Maximum Tightening Torque	1Nm		
	Dimensions	M18x60.4mm		
	Material	PBT		
	Weight	0.015kg		
	Accessories	Plastic nut M18x1		
Model	Analog	Voltage	MS18-30V	MS18-90V
		Current	MS18-30I	MS18-90I
	Switch	NPN	MS18-30N	MS18-90N
		PNP	MS18-30P	MS18-90P

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Safety door lock
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Guidance

Ultrasonic

Cylindrical type

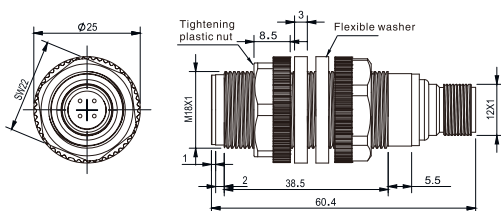
Solid level switches type

Fork level switch typ

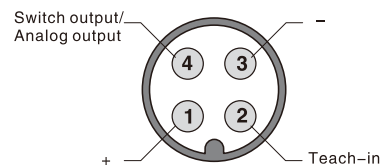
Double-sheet sensor

Dimensions

Unit: mm



Wiring Diagram



Cylindrical Type

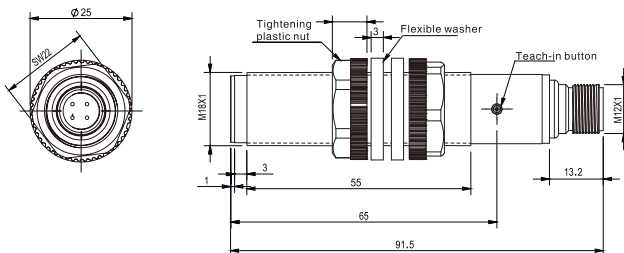
M18 Plastic Housing Series



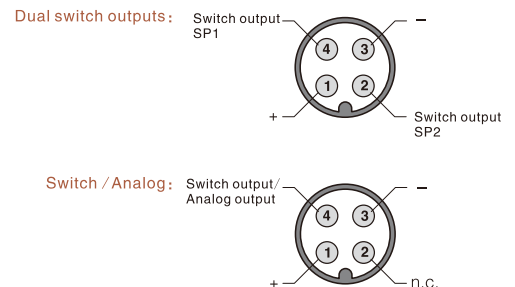
Basic Features	Operating Principle	Ultrasonic Detection				
	Enclosure Shape	Cylindrical				
	Detection Method	Diffuse reflection				
	Detection Range	50~400mm	100~900mm	150~1600mm	200~2200mm	
	Divergence Angle	± 8°	± 7°	± 8°	± 7°	
	Resolution	3mm	2mm	3mm		
	Detection Range Adjustment	-				
Electrical data	Output Mode	0~10V / 4~20mA / NPN / PNP	0~10V / 4~20mA / NPN / PNP	0~10V / 4~20mA / NPN / PNP	0~10V / 4~20mA / NPN / PNP	
	Response Time	500ms	≤ 125ms	≤ 250ms	≤ 500ms	
	Switching Frequency	10Hz	4Hz	2Hz	1Hz	
	Repeatability	0.5%				
	Hysteresis	1%				
	Operating Voltage	15~30VDC				
	Operating Current	≤ 50mA				
	Residual Voltage	2.2V max. (1L=100mA)				
	Load Current	≤ 100mA				
	Maximum Ripple	± 5%				
	Voltage Drop	≤ 2.2V(100mA)				
	Protection Circuit	Reverse Polarity Protection/Short-circuit (Auto-reset)/Pulse Overvoltage Protection				
	Temperature Drift	5%				
	Temperature Compensation	Have				
	Environmental conditions	Working Temperature	-20~60°C			
Protect Degree		IP67				
Mechanical data	Connection Method	M12/4-pin connector				
	Maximum Tightening Torque	50Nm				
	Dimensions	M18x91.5mm				
	Material	PBT				
	Weight	0.026kg				
	Accessories	Plastic nut M18x1				
Model	Analog	Voltage	MC18-40V	MC18-90V	MC18-160V	MC18-220V
		Current	MC18-40I	MC18-90I	MC18-160I	MC18-220I
	Switch	NPN	MC18-40N	MC18-90N	MC18-160N	MC18-220N
		PNP	MC18-40P	MC18-90P	MC18-160P	MC18-220P

Dimensions

Unit: mm



Wiring Diagram





Basic Features	Operating Principle	Ultrasonic Detection	
	Enclosure Shape	Cylindrical	
	Detection Method	Diffuse reflection	
	Detection Range	60~1000mm	
	Divergence Angle	± 7°	
	Resolution	0.5mm	
	Ultrasonic Frequency	200kHz	
	Detection Range Adjustment	-	
	Indicator	When no target is detected, the learning status LED remains lit: red LED; when a target is detected, it blinks in learning mode: blue LED; operational mode: yellow LED; power on: green LED	
Electrical data	Output Mode	0~5V / 0~10V / 4~20mA / NPN / NPN Hysteresis Mode / PNP / PNP Hysteresis Mode	
	Response Time	100ms	
	Switching Frequency	5Hz	
	Repeatability	0.3%	
	Linearity	< 1%	
	Operating Voltage	9~30VDC	
	Operating Current	≤25mA	
	Residual Voltage	≤10μA(30VDC)	
	Load Current	≤200mA	
	Maximum Ripple	±10%	
	Insulation Resistance	-	
	Protection Circuit	Reverse Connection Protection/Transient Overvoltage Protection	
	Temperature Drift	0.05%/°C	
	Temperature Compensation	Have	
Environmental conditions	Working Temperature	-20~70°C	
	Protect Degree	IP65	
Mechanical data	Connection Method	V3 Connector, 4 Pins	
	Maximum Tightening Torque	50Nm	
	Dimensions	M18x90.7mm	
	Material	Nickel-Copper Plating	
	Weight	0.062kg	
	Accessories	Nut M18x1	
Model	Analog	Voltage Output 0~5V	MT18-100V
		Voltage Output 0~10V	MT18-100V2
		Current Output 4~20mA	MT18-100A
	Switch	NPN	MT18-100N
		NPN Hysteresis Mode	MT18-100N2
		PNP	MT18-100P
		PNP Hysteresis Mode	MT18-100P2
Numerical Capacity	TTL Output	MT18-100T	

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Solid level switches type

Fork level switch typ

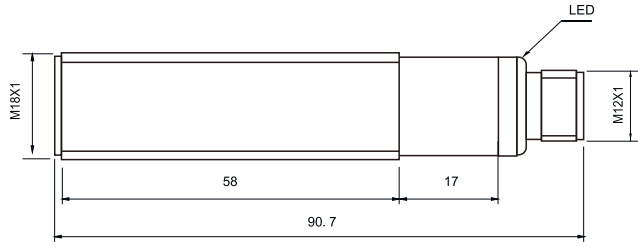
Double-sheet sensor

Cylindrical Type

M18 Metal Housing Series

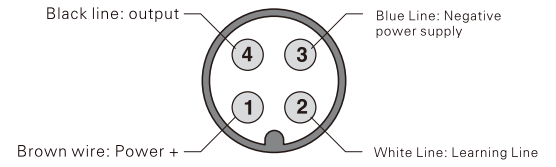
Dimensions

Unit: mm

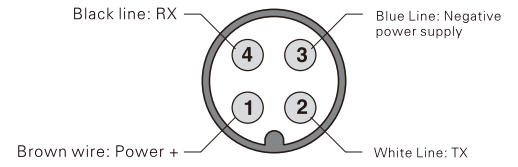


Circuit Diagram

TTL output



Other output



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Basic Features	Operating Principle	Ultrasonic Detection	
	Enclosure Shape	Cylindrical	
	Detection Method	Diffuse reflection	
	Detection Range	50~400mm	
	Divergence Angle	≤12°	
	Resolution	0.1mm	
	Ultrasonic Frequency	300kHz	
	Detection Range Adjustment	Teach Button	
	Indicator	Operational/Error Mode: LED; Switch Status: LED	
Electrical data	Output Mode	NPN+0~10V	
	Response Time	25ms	
	Switching Frequency	20Hz	
	Repeatability	1mm	
	Hysteresis	2mm	
	Operating Voltage	18~30VDC	
	Operating Current	≤30mA	
	Residual Voltage	≤10μA(30VDC)	
	Load Current	≤100mA	
	Voltage Drop	≤2.2V(100mA)	
	Protection Circuit	Short-circuit Protection/Reverse Polarity Protection/Overload Protection	
	Temperature Compensation	None	
	Environmental conditions	Working Temperature	-25~60°C
		Protect Degree	IP67
Mechanical data	Connection Method	M12/5-Pin Connector	
	Maximum Tightening Torque	-	
	Dimensions	M18x86.0mm	
	Material	Stainless steel	
	Weight	0.062kg	
	Accessories	Nut M18x1	
	Model	MD18-35V	

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Ultrasonic

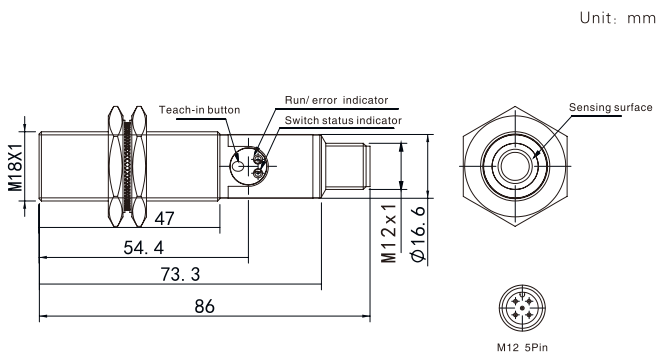
Cylindrical type

Solid level switches type

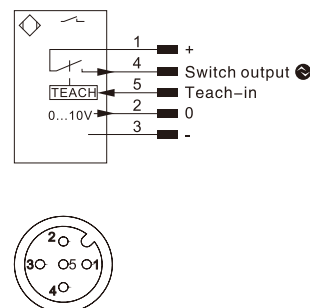
Fork level switch typ

Double-sheet sensor

Dimensions



Wiring Diagram



Cylindrical Type

M30 Series

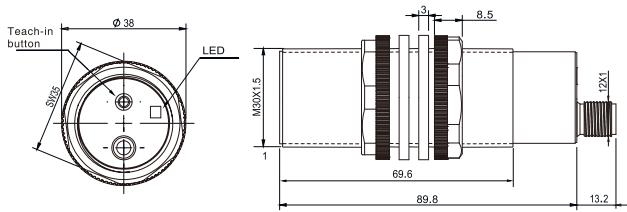


Basic Features	Operating Principle	Ultrasonic Detection		
	Enclosure Shape	Cylindrical		
	Detection Method	Diffuse reflection		
	Detection Range	250~3500mm	350~6000mm	
	Divergence Angle	± 7°	± 9°	
	Resolution	4.0mm	6.0mm	
	Detection Range Adjustment	Teach Button		
Electrical data	Output Mode	Analog: 0~10V / 4~20mA, Switch: NPN / PNP, Dual-channel Digital Output: 2NPN / 2PNP Analog + switch: NPN+4~20mA / PNP+4~20mA / NPN+0~10V / PNP+0~10V		
	Response Time	Switch value 250ms, analog value 600ms	Switch value 500ms, analog value 600ms	
	Switching Frequency	2Hz	1Hz	
	Repeatability	1.0%	0.5%	
	Hysteresis	1%		
	Operating Voltage	12~30VDC, Analog voltage output: 15~30VDC(5%)		
	Operating Current	≤ 50mA		
	Residual Voltage	2.2V max. (1L=100mA)		
	Load Current	≤ 100mA		
	Maximum Ripple	± 5%		
	Voltage Drop	≤ 2.2V(100mA)		
	Protection Circuit	Reverse Polarity Protection/Short-circuit (Auto-reset)/Transient Overvoltage Protection		
	Temperature Drift	± 8% (switch output), ± 5% (analog output)		
	Temperature Compensation	Have		
	Environmental conditions	Working Temperature	-20~70°C	
Protect Degree		IP67		
Mechanical data	Connection Method	M12/4pin connector		
	Maximum Tightening Torque	1.5Nm		
	Dimensions	M30x102.0mm	M30x93.0mm	
	Material	PBT		
	Weight	0.14kg	0.17kg/0.17kg/0.14kg/0.14kg/0.14kg/0.14kg	
	Accessories	Nut M30x1.5		
Model	Analog	Voltage	MC30-350V	
		Current	MC30-350I	
	Switch	NPN	MC30-350N	
		PNP	MC30-350P	
	Dual-channel Digital Output	NPN	MC30-350N2	MC30-600N2
		PNP	MC30-350P2	MC30-600P2
	Analog + switch	NPN+Current	MC30-350NI	MC30-600NI
		PNP+Current	MC30-350PI	MC30-600PI
NPN+Voltage		MC30-350NV	MC30-600NV	
PNP+Voltage		MC30-350PV	MC30-600PV	

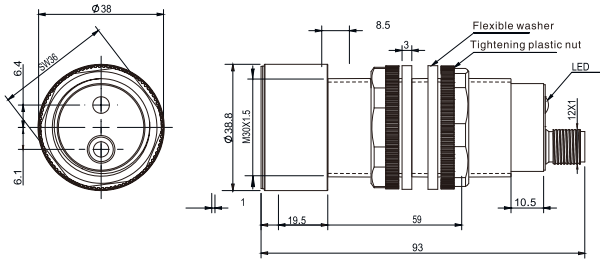
Dimensions

Unit: mm

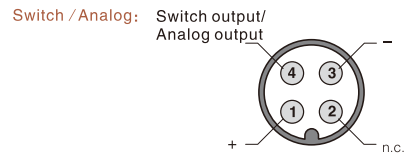
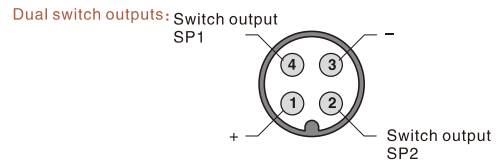
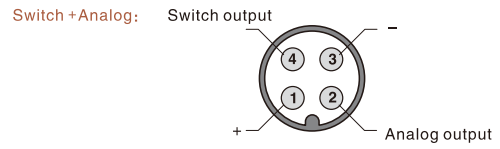
MC30-350



MC30-600



Wiring Diagram



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