

Double-sheet Detection Sensor

MUD Series

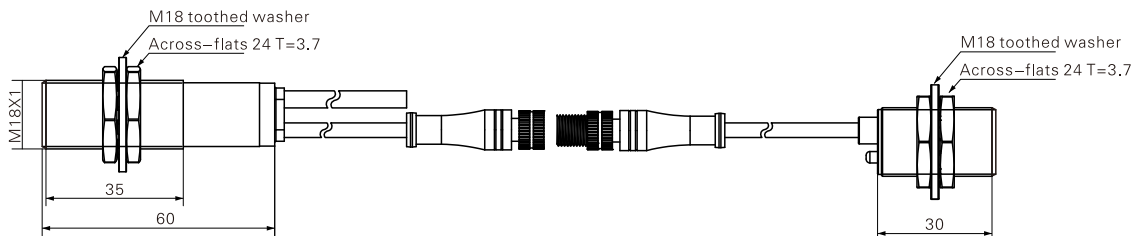
Ultrasonic



Appearance		
Sensing distance	20~40mm, 20mm ± 2mm(Optimum)	20~60mm, 40mm ± 5mm (Optimum)
Blind area	In front of the transmitter and receiver 5mm	
Angle deviation	± 45° with vertical planes	
Transducer frequency	400kHz	200kHz
Operating voltage	20~30V DC, Reverse polarity protection	
Response time	The automatic operation mode is 2.5ms	The automatic operation mode is 6.5ms
Power-on delay	<750ms	<1.9s
Voltage pulsation	± 10%	
No-load current	≤50mA	
Probe material	Polyurethane foam, glass filled epoxy resin	
Housing material	Copper nickel plating	
Tightening torque	15Nm	
Protection degree	IP65	
Operating temperature	+5°C~+60°C	
Storage temperature	+40°C~+85°C	
Control device	Control input: C1 to C3	
Control description	<-V+6V: Logic 1 (control input terminal -V or floating);>-V+10V: Logic 0 (control input terminal +V)	
Indicator	Green light: single sheet Green light flashing: teaching Red light: double/multiple sheet Red light flashing: no paper	
Output	NPN/PNP Output, Lmax=200mA(-V+2V), Short circuit protection	
Output logic	No paper status: White line OFF, Black line OFF	
	Single sheet status: white line ON, black line OFF	
	Dual/multiple sheet status: white line OFF, black line ON	
Scope of application	Paper and paper of 20~1200g/m ² in unit area, alloy laminates and film thickness up to 0.4mm, self-adhesive film	Paper and paper of 50~1200g/m ² in unit area, alloy laminate, self-adhesive film
Model No.	NPN	MUD-60N-400
	PNP	MUD-60P-400
		MUD-60N-200
		MUD-60P-200

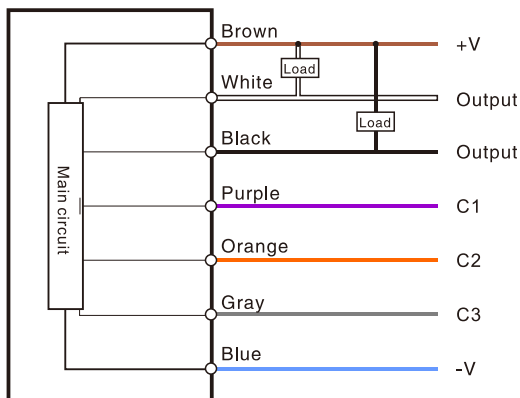
Dimensions

Unit: mm

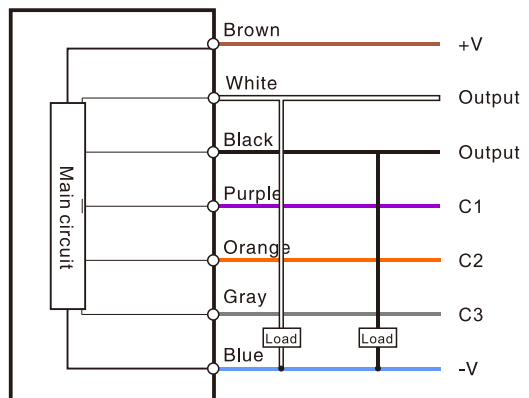


Circuit Diagram

NPN



PNP



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Ultrasonic



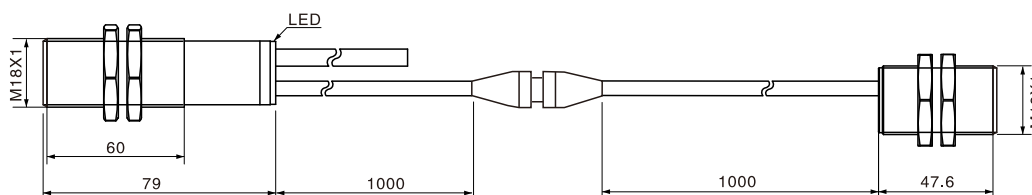
Appearance	
Scope of detection	30~60mm
Transducer frequency	Approx. 200kHz
Working voltage	18~30V DC, 10%V
Refreshment rate	1ms
Detection methods	Non-Contact
Testing materials	Ideal for reliable detection of no, single or multiple overlapping sheets of material
Output mode	three NPN/PNP
Calibration mode	With calibration mode
Display	LED green, single sheet detected; LED yellow, no target (air); LED red, double sheet detected
No-load current	< 50mA
Pulse width	> 100ms
impedance	> 4kΩ
Output	Three NPN/PNP normally open for air, single and multiple; 100mA short-circuit protection, overload protection; voltage drop <2V
Learning line	Used to calibrate the energy of a single sheet when different materials are used
Response delay	Approx. 15ms
Judgement	Approx. 15ms
Working temperature	-20°C~+70°C (253~343K)
Storage temperature	-40°C~+70°C(233~343K)
EMC	GB/T17626.2-2006 / GB/T17626.4-2008
Protection level	IP65
Connection mode	WITH SIX-CORE CABLE VC, 2 M
Shell material	Copper nickel plating
Weight	170g
Model	NPN MUD-60N-18 PNP MUD-60P-18

- Fiber Optic
- Slot Sensors
- Photoelectric
- Laser
- Proximity
- Displacement
- Magnetic
- Contact
- Area
- Ultrasonic**
- Vision
- Vibration
- Temperature
- Annexes

Guidance

Dimensions

单位: mm



- Ultrasonic**
- Cylindrical type
- Solid liquid level switches type
- Fork type liquid level switch type
- Double-sheet detection sensor**

Circuit Diagram

