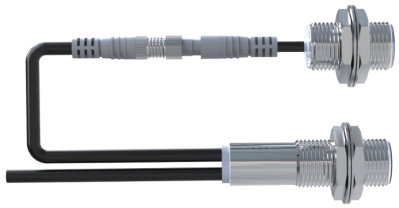
M18 Ultrasonic Double Sheet Detection Sensor

BUDS-M18-4.0-Z8X series · Sensing Distance: 20...40mm · Transducer Freq.: 400k Hz

IP65
Ingress Protection



KEY SPECIFICATIONS

SENSING DISTANCE **20...40mm**	TRANSDUCER FREQ. **400k Hz**
AMBIENT TEMP. **+5°C...+60°C**	HOUSING **M18*1mm**
INGRESS PROTECTION **IP65**	

MODEL CODES

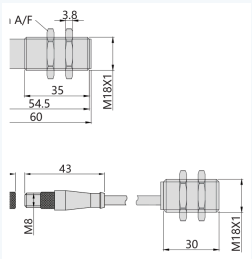
Output Type	Model Code
NPN N.O+N.C	**BUDS-M18-N314.0-Z8X** SKU 10105195
PNP N.O+N.C	**BUDS-M18-P314.0-Z8X** SKU 10105196

TECHNICAL DATA

Exterior structure	M18*1mm
Sensing distance	20...40mm
Target object material	Paper, cardboard, metal laminated board with weight 20-1200g/m², films/foils and self-adhesive films up to 0.4mm thickness
Design	Cylindrical M18 ultrasonic wave transducer
Operating mode	Double sheet control
Detection method	Pulse operation with amplitude evaluation
Transducer frequency	400k Hz
Blind zone	5mm in front of emitter and receiver
Operating voltage	20...30VDC, reverse polarity protection
Ripple voltage	±10%
No-load current	≤60mA
Connection method	2m PUR cable, 7*0.25mm²
Cable	Emitter: 1.2m PVC cable, cable between M8 connector and receiver: 1.2m PVC
Output	NPN/PNP output; Imax=200mA, Voltage drop: 2V, short circuit protection
Output logic	No paper status: white wire OFF, black wire ON; Single status: white wire ON, black wire ON; Double/multiple status: white wire ON, black wire OFF

Response time	Automatic running mode: 2.5ms
Power-on delay	<750ms
Gap between emitter and receiver	20...40mm; optimal: 20mm±2mm
Permissible tilting angle	Within ±45° from the sheet perpendicular
Housing material	Brass, nickel-plated
Ultrasonic transducer	PU foam, glass filled epoxy resin
Max. tightening torque of nuts	M18: 15Nm
Ingress protection (EN 60529)	IP65
Operating temperature	+5°C...+60°C
Storage temperature	-40°C...+85°C
Control input	Control input: C1 to C3
Control description	←V+6V: Logic 1(control input terminal-v)
Range setting	Teaching by control input
Indicator light	Green: single sheet; green flash: teaching; red: double/multiple sheets; red flash: no paper

DIMENSIONAL DRAWINGS



All dimensions in mm.