Operational area
40 mm ± 3 mm

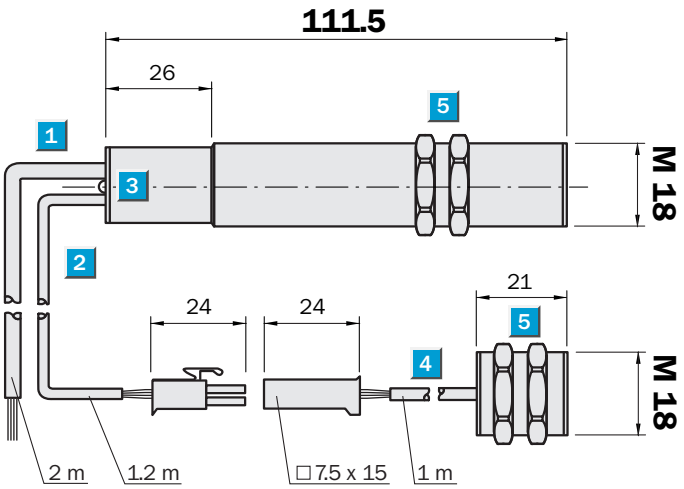
Ultrasonic double-sheet detector

- Double-sheet detection of foils, metal sheets and ultra-fine corrugated cardboards
- Automatic adjustment, no Teach-in necessary
- Color-independent
- Plug & Play
- 2 PNP outputs for double- and mis-fed-sheets

CE

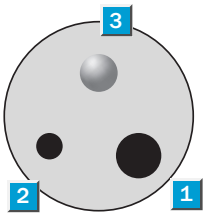
Accessories
Mounting systems

Dimensional drawing



Adjustments possible

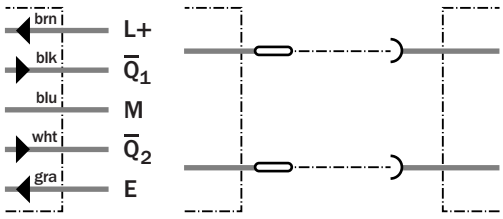
UM 18-20012



1 Connection cable 2 m (receiver)
2 Connection cable 1.2 m, 2-pin sender and receiver
3 2-color LED indicator, receiver
4 Connection cable 1 m, 2-pin sender and receiver
5 Fastening nuts, width across 24 mm

Connection types

UM 18-20012*)

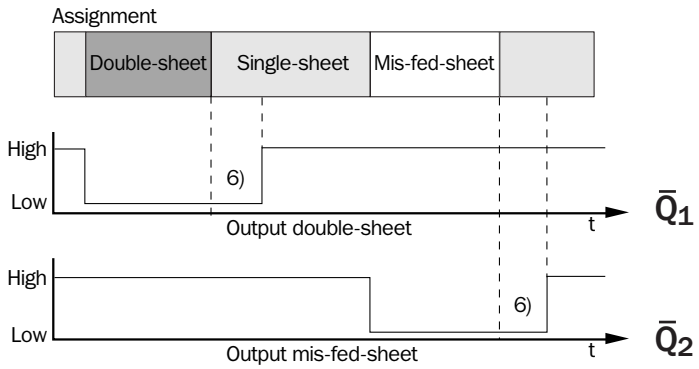
Receiver	Sender
	
5 x 0,25 mm²	2-pin
	2-pin

*) Sender/receiver pair:
Individual components on request

Technical data	UM 18-	20012
Installation distance		
sender – receiver	40 mm ± 3 mm	
Blind zone	7 mm, each time before sender and receiver	
Permissible angle deviation	± 45° perpendicular to sheet	
Ultrasonic frequency	400 kHz	
Resolution	Double-sheets not completely glued together	
Operational area		
Paper grams per square meter	20 ... 1200 g/m²	
Metal-laminated sheets and films	≤ 0.4 mm thickness	
Self-adhesive films, metal sheets	≤ 0.3 mm	
Ultra-fine corrugated cardboard		
Supply voltage V_S	12 ... 30 V DC [1]	
Ripple	± 10 %	
Current consumption [2]	≤ 45 mA	
Double-sheet switching/Q_1 [3]	PNP, V_S –2 V, I_{max} = 500 mA	
Mis-fed-sheet switching output/Q_2 [3]	PNP, V_S –2 V, I_{max} = 500 mA	
Response time [4]	2.5 ms or 6.5 ms	
Off delay	10 ms	
V_S at control unit [4]	Response time 6.5 ms: V_S > 9 V DC	
	Response time 2.5 ms: V_S < 5 V DC	
Standby delay	300 ms	
Connection type	Cable PVC, 2 m; 5 x 0.25 mm²	
Sender cable [5]	PVC, 1.2 m with 2-pin plug	
Receiver cable [5]	PVC, 1 m with 2-pin plug	
Enclosure rating	IP 65	
Ambient temperature	Operation +5 °C ... +60 °C	
	Storage –40 °C ... +85 °C	
Weight	280 g	
Housing material	Nickel-plated brass	

1) Limit values
2) Without load
3) Outputs short-circuit protected, Opener; no switching hysteresis
4) If the control line is laid against a ground, the response time is 2.5 ms. If the control line is laid against L+, the response time is 6.5 ms.
5) Not reverse-polarity protected

Measurement ranges



6) Off delay

Order information

Type	Part no.
UM 18-20012	6 025 670