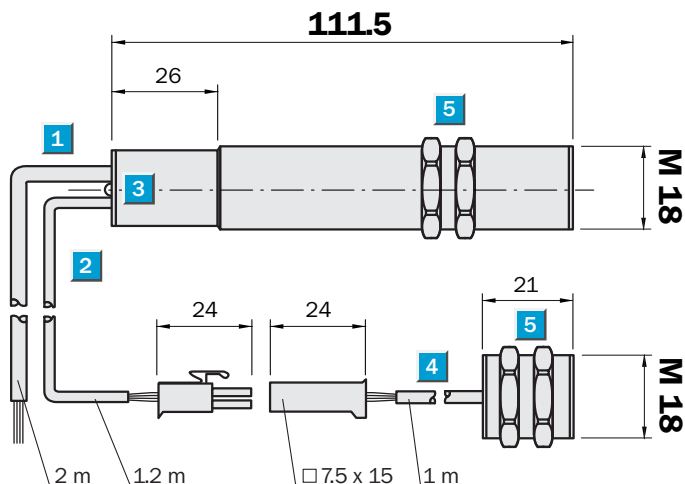
 **Operational area**
40 mm ± 3 mm

Ultrasonic double-sheet detector

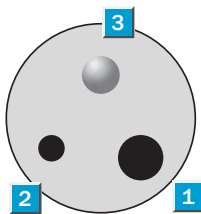
- Double-sheet detection of foils, metal sheets and ultra-fine corrugated cardboards
- Automatic adjustment, no Teach-in necessary
- Color-independent
- Plug & Play
- 2 PNP outputs for double- and mis-fed-sheets

Dimensional drawing



Adjustments possible
UM 18-20012

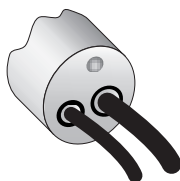
- 1 Connection cable 2 m (receiver)
- 2 Connection cable 1.2 m, 2-pin sender and receiver
- 3 2-color LED indicator, receiver
- 4 Connection cable 1 m, 2-pin sender and receiver
- 5 Fastening nuts, width across 24 mm



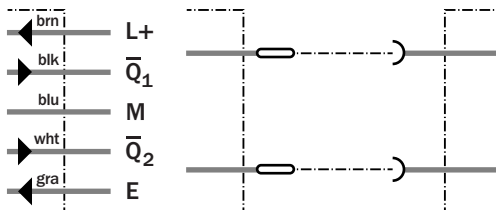
Connection types

UM 18-20012*)
Receiver

Sender



5 x 0,25 mm² 2-pin 2-pin



*) Sender/receiver pair:
Individual components on request



Accessories
Mounting systems

Technical data	UM 18-	20012												
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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

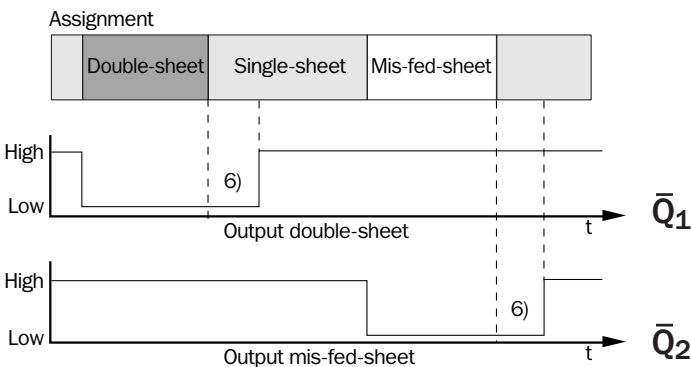
Paper grams per square meter	20 ... 1200 g/m ²	
Metal-laminated sheets and films	≤ 0.4 mm thickness	
Self-adhesive films, metal sheets	≤ 0.3 mm	
Ultra-fine corrugated cardboard		

Supply voltage V_S	12 ... 30 V DC ¹⁾	
Ripple	± 10 %	
Current consumption ²⁾	≤ 45 mA	
Double-sheet switching/Q₁³⁾	PNP, V _S -2 V, I _{max} = 500 mA	
Mis-fed-sheet switching output/Q₂³⁾	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 mm ²	
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	Order information
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	Type	Part no.
	UM 18-20012	6 025 670



6) Off delay