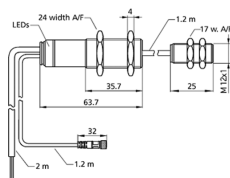


# dbk+4/Empf/M12/3CDD/ M18

## scale drawing



## detection zone



2 x pnp

working range	papers with weights of 20 - 600 g/m <sup>2</sup> , Washi, metal-laminated sheets and films up to 0.2 mm thick, self-adhesive films
design	cylindrical M12 with a swapped-out ultrasonic transducer
operating mode	double sheet control
particularities	receiver for ultrasonic double sheet control distance between transmitter and receiver can be selected swapped-out ultrasonic transducer M12

## ultrasonic -specific

means of measurement	pulse operation with amplitude evaluation
transducer frequency	500 kHz
blind zone	5 mm in front of transmitter and receiver

## electrical data

operating voltage U <sub>B</sub>	20 - 30 V d.c., reverse polarity protection
voltage ripple	± 10 %
Leerlaufstromaufnahme	≤ 50 mA
type of connection	2 m PUR cable, 7 x 0.25 mm <sup>2</sup>
transmitter cable	1 m PUR cable with M8 initiator plug to the transmitter, 1.2 m PVC cable to the swapped out receiver

# dbk+4/Empf/M12/3CDD/ M18

## outputs

output 1	double sheet output npn: $I_{\max} = 200 \text{ mA}$ ( $U_B - 2V$ ) NOC/NCC adjustable, short-circuit-proof
output 2	missing sheet output pnp: $I_{\max} = 200 \text{ mA}$ ( $U_B - 2V$ ) NOC/NCC adjustable, short-circuit-proof
response time	< 500 $\mu\text{s}$ in trigger mode, 2.5 ms in free-run mode
delay prior to availability	< 300 ms

## inputs

description	< $-U_B + 18 \text{ V}$ : logic 1; > $-U_B + 13 \text{ V}$ or control input open: logic 0
input 1	control input
input 2	control input
input 3	control input

## housing

transmitter/receiver spacing	20 - 40 mm; optimal: 20 mm $\pm$ 2 mm
permissible angular deviation	$\pm 45^\circ$ from the perpendicular to the sheet
material	brass sleeve, nickel-plated, plastic parts, PBT, PA
ultrasonic transducer	polyurethane foam, epoxy resin with glass contents
max. tightening torque of nuts	M18: 15 Nm, M12: 3 Nm
class of protection to EN 60529	IP 65
operating temperature	+5°C to +60°C
storage temperature	-40°C to +85°C
weight	140 g

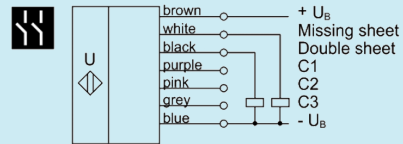
## technical features/characteristics

controls	control input
scope for settings	working range selection via control inputs Teach-in via control inputs LCA-2 with LinkControl
indicators	1 x Duo-LED; green: working / red: double sheet / flashing red: missing sheet
particularities	receiver for ultrasonic double sheet control distance between transmitter and receiver can be selected swapped-out ultrasonic transducer M12

# dbk+4/Empf/M12/3CDD/ M18

[documentation \(download\)](#)

pin assignment



order no.

**dbk+4/Empf/M12/3CDD/ M18**