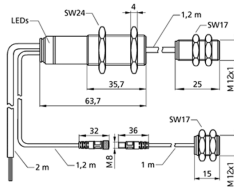


dbk+4/M12/3CDD/M18 E+S

scale drawing



detection zone



2 x pnp

working range	papers with weights of 20 - 600 g/m ² , 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	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 _B	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 ²
transmitter cable	am Empfänger: 1,2 m PUR-Kabel, am Sender: 1 m PUR-Kabel, mit M8 Rundsteckverbinder; zum ausgelagerten Empfangswandler: 1,2 m PVC-Kabel

dbk+4/M12/3CDD/M18 E+S

outputs

output 1	double sheet output npn: $I_{\max} = 200 \text{ mA}$ ($U_B - 2\text{V}$) NOC/NCC adjustable, short-circuit-proof
output 2	missing sheet output pnp: $I_{\max} = 200 \text{ mA}$ ($U_B - 2\text{V}$) NOC/NCC adjustable, short-circuit-proof
response time	< 500 μs 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	160 g
further versions	single transmitter/receiver
further versions	dbk+4/Sender/ M12/K1 dbk+4/Empf/M12/3CDD/ M18

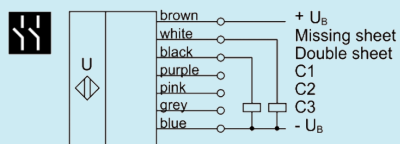
technical features/characteristics

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	distance between transmitter and receiver can be selected swapped-out ultrasonic transducer M12

dbk+4/M12/3CDD/M18 E+S

[documentation \(download\)](#)

pin assignment



order no.

dbk+4/M12/3CDD/M18 E+S