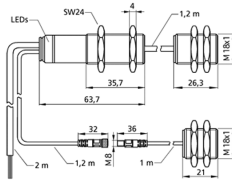


dbk+4/M18/3BEE/M18 E+S

scale drawing

detection zone



2 x npn

working range	papers with weights of 20 - 2,000 g/m ² , Washi, metal-laminated sheets and films up to 0.4 mm thick, self-adhesive films, sheet metals up to 0.3 mm thick, fine corrugated card, wafers, PCBs
design	cylindrical M18 with a swapped-out ultrasonic transducer
operating mode	double sheet control
particularities	distance between transmitter and receiver can be selected swapped-out ultrasonic transducer

ultrasonic -specific

means of measurement	pulse operation with amplitude evaluation
transducer frequency	400 kHz
blind zone	7 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/M18/3BEE/M18 E+S

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 npn: $I_{\max} = 200 \text{ mA}$ ($-U_B+2V$) NOC/NCC adjustable, short-circuit-proof
response time	< 500 μs in trigger mode, 2.5 ms in free-run mode
delay prior to availability	< 750 ms

inputs

description	< $-U_B+6 \text{ V}$: logic 1; > $-U_B+10 \text{ V}$ or control input open: logic 0
input 1	control input
input 2	control input
input 3	control input

housing

transmitter/receiver spacing	20 - 60 mm; optimal: 40 mm \pm 3 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	15 Nm
class of protection to EN 60529	IP 65
operating temperature	+5°C to +60°C
storage temperature	-40°C to +85°C
weight	165 g
further versions	single transmitter/receiver
further versions	dbk+4/Sender/M18/K1 dbk+4/Empf/M18/3BEE/ M18

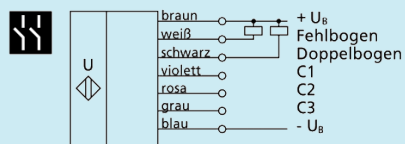
technical features/characteristics

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

dbk+4/M18/3BEE/M18 E+S

[documentation \(download\)](#)

pin assignment



order no.

dbk+4/M18/3BEE/M18 E+S