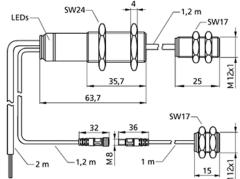


dbk+4/M12/3BEE/M18 E+S

scale drawing

detection zone



2 x npn

working range

papers with weights of 20 - 600 g/m², 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 9 - 30 V d.c., reverse polarity protection

voltage ripple ± 10 %

Leerlaufstromaufnahme ≤ 50 mA

type of connection 2 m PUR cable, 7 x 0.25 mm²

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/M12/3BEE/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 - 40 mm; optimal: 20 mm $\pm 2 \text{ mm}$

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/M12/3BEE/ 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

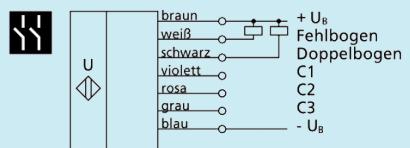
particularities

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

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

[documentation \(download\)](#)

pin assignment



order no.

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