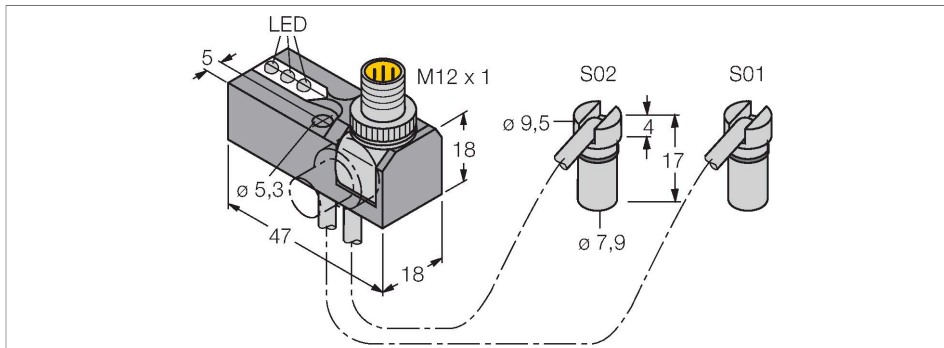


# NI2-BTM-0.16-BDS-2AP6X3-H1141/S34

## Inductive Sensor – Monitoring Kit for Power Clamps



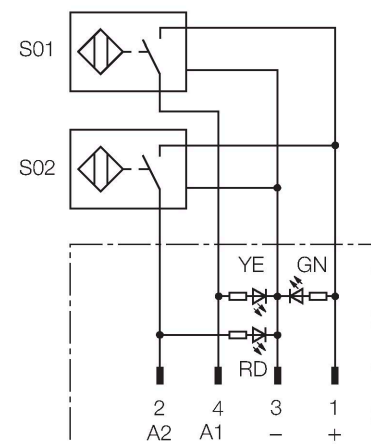
### Features

- Rectangular, height 18 mm
- Plastic, PP GR-20
- Mounting instructions and minimum distances acc. to BTM specification must be observed when mounted in metal
- Blind hole: Ø 10 mm ; depth 4 mm
- Resistant to magnetic fields (weld-resistant), for DC and AC fields up to 100 mT
- 2 x NO contact, PNP output
- DC 4-wire, 10...30 VDC

### Technical data

Type	NI2-BTM-0.16-BDS-2AP6X3-H1141/S34
ID	1650120
Special version	S34 Corresponds to: Weld-field immune proximity sensors
<b>General data</b>	
Rated switching distance	2 mm
Mounting conditions	Non-flush
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Correction factors	St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4
Repeat accuracy	$\leq 2$ % of full scale
Temperature drift	$\leq \pm 10$ %
Hysteresis	3...15 %
<b>Electrical data</b>	
Operating voltage $U_B$	10...30 VDC
Ripple $U_{as}$	$\leq 10$ % $U_{Bmax}$
DC rated operating current $I_o$	$\leq 200$ mA
No-load current	$\leq 15$ mA
Residual current	$\leq 0.1$ mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes/Thermal
Voltage drop at $I_o$	$\leq 1.8$ V
Wire break/reverse polarity protection	Complete
Output function	4-wire, NO contact, PNP
Smallest operating current	$\geq 1$ mA
Switching frequency	0.03 kHz

### Wiring diagram



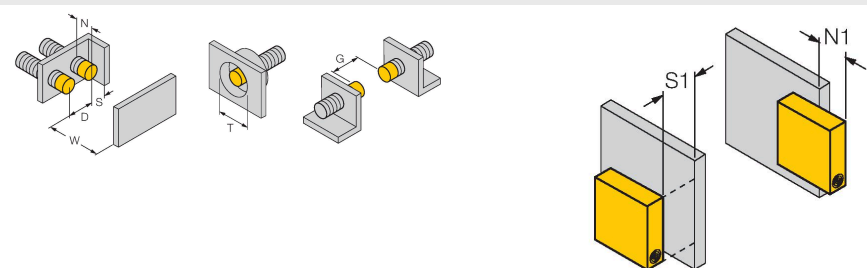
### Functional principle

TURCK offers special monitoring kits, consisting of two miniature sensors, as a convenient solution for "Open/Closed" detection on pneumatic power clamps. This product line provides almost unlimited combination possibilities, comprising four different power blocks and over 40 different modular sensor types.

Technical data

Mechanical data	
Design	Monitoring kit for power clamps, BTM
Dimensions	47 x 18 x 18 mm
Housing material	Plastic, PP GR-20
Active area material	Plastic, PP GR-20
Electrical connection	Connector, M12 × 1
Cable quality	Ø 2 mm, Gray, Lif9Y-11Y, PUR, 0.16 m
Core cross-section	3 x 0.08 mm <sup>2</sup>
Litz wire	40 x0.05 mm
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	2283 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Switching state	2 × LEDs, Yellow/red

Mounting instructions

Mounting instructions/Description													
	<table><tr><td>Distance D</td><td>3 x B</td></tr><tr><td>Distance W</td><td>3 x Sn</td></tr><tr><td>Distance S</td><td>1.5 x B</td></tr><tr><td>Distance G</td><td>6 x Sn</td></tr><tr><td>Distance N</td><td>2 x Sn</td></tr><tr><td>Width active area B</td><td>6.5 mm</td></tr></table>	Distance D	3 x B	Distance W	3 x Sn	Distance S	1.5 x B	Distance G	6 x Sn	Distance N	2 x Sn	Width active area B	6.5 mm
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Distance G	6 x Sn												
Distance N	2 x Sn												
Width active area B	6.5 mm												

Please note, non-flush mounting of this sensor is obligatory.

The following conditions allow semi-flush mounting:

N1 = 0 mm and S1 = 1 mm or  
N1 = 1 mm and S1 = 0 mm  
These values apply for mounting in aluminium

N1 = 0 mm and S1 = 5 mm or  
N1 = 5 mm and S1 = 0 mm  
These values apply for mounting in St37.

N12-BTM-0.16-BDS-2AP6X3-H1141/S34 02/21/2025 14-28 | technical changes reserved