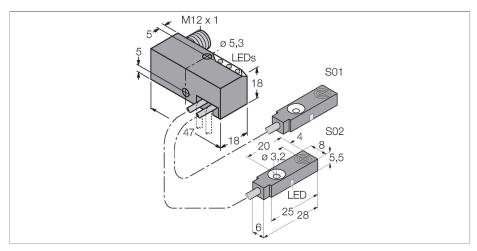


# BI2-Q5.5-0.27-BS-2AP6X3-H1141/S34 Inductive Sensor – Monitoring Kit for Power Clamps



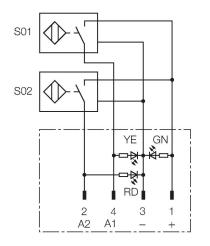
#### Technical data

ID 1613006  Special version S34 Corresponds to:Resistant to magnetic fields  General data  Rated switching distance 2 mm  Mounting conditions Flush  Secured operating distance ≤ (0.81 × Sn) mm  Correction factors St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4  Repeat accuracy ≤ 2 % of full scale  Temperature drift ≤ ±10 %  Hysteresis 315 %  Electrical data  Operating voltage U <sub>8</sub> 1030 VDC  Ripple U <sub>80</sub> ≤ 10 % U <sub>80088</sub> DC rated operating current I <sub>8</sub> ≤ 150 mA  No-load current ≤ 20 mA  Residual current ≤ 0.1 mA  Isolation test voltage 0.5 kV  Short-circuit protection yes/Cyclic  Voltage drop at I <sub>8</sub> ≤ 1.8 V  Wire break/reverse polarity protection Complete  Output function 4-wire, NO contact, PNP  Smallest operating current ≥ 1 mA  Switching frequency 0.03 kHz  Mechanical data  Design Monitoring Kit for Spanners, Q5,5	Туре	BI2-Q5.5-0.27-BS-2AP6X3-H1141/S34
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Rated switching distance       2 mm         Mounting conditions       Flush         Secured operating distance       ≤ (0.81 × Sn) mm         Correction factors       \$137 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4         Repeat accuracy       ≤ 2 % of full scale         Temperature drift       ≤ ±10 %         Hysteresis       315 %         Electrical data       Derating voltage U <sub>8</sub> Operating voltage U <sub>8</sub> 1030 VDC         Ripple U <sub>20</sub> ≤ 10 % U <sub>8 max</sub> DC rated operating current I <sub>8</sub> ≤ 150 mA         No-load current       ≤ 20 mA         Residual current       ≤ 0.1 mA         Isolation test voltage       0.5 kV         Short-circuit protection       yes/Cyclic         Voltage drop at I <sub>8</sub> ≤ 1.8 V         Wire break/reverse polarity protection       Complete         Output function       4-wire, NO contact, PNP         Smallest operating current       ≥ 1 mA         Switching frequency       0.03 kHz         Mechanical data	Special version	
Mounting conditions       Flush         Secured operating distance       ≤ (0.81 × Sn) mm         Correction factors       St37 = 1; Al = 0.3; stainless steel = 0.7; Ms = 0.4         Repeat accuracy       ≤ 2 % of full scale         Temperature drift       ≤ ±10 %         Hysteresis       315 %         Electrical data       Operating voltage Us         Operating voltage Us       1030 VDC         Ripple Uss       ≤ 10 % Userax         DC rated operating current Is       ≤ 150 mA         No-load current       ≤ 20 mA         Residual current       ≤ 0.1 mA         Isolation test voltage       0.5 kV         Short-circuit protection       yes/Cyclic         Voltage drop at Is       ≤ 1.8 V         Wire break/reverse polarity protection       Complete         Output function       4-wire, NO contact, PNP         Smallest operating current       ≥ 1 mA         Switching frequency       0.03 kHz         Mechanical data	General data	
Secured operating distance $\leq (0.81 \times Sn) \text{ mm}$ 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 $315 \%$ Electrical data  Operating voltage $U_8$ $1030 \text{ VDC}$ Ripple $U_{ss}$ $\leq 10 \% U_{bmax}$ DC rated operating current $I_s$ $\leq 150 \text{ mA}$ No-load current $\leq 20 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage $0.5 \text{ kV}$ Short-circuit protection $0.5 \text{ kV}$ Wire break/reverse polarity protection $0.5 \text{ kV}$ Wire break/reverse polarity protection $0.5 \text{ kV}$ Smallest operating current $0.5 \text{ mA}$ Switching frequency $0.00 \text{ kHz}$	Rated switching distance	2 mm
Correction factors $St37 = 1$ ; Al = 0.3; stainless steel = 0.7; $Ms = 0.4$ Repeat accuracy ≤ 2 % of full scale  Temperature drift ≤ ±10 %  Hysteresis 315 %  Electrical data  Operating voltage U <sub>B</sub> 1030 VDC  Ripple U <sub>ss</sub> ≤ 10 % U <sub>Brank</sub> DC rated operating current I <sub>B</sub> ≤ 150 mA  No-load current ≤ 20 mA  Residual current ≤ 0.1 mA  Isolation test voltage 0.5 kV  Short-circuit protection yes/Cyclic  Voltage drop at I <sub>B</sub> ≤ 1.8 V  Wire break/reverse polarity protection Complete  Output function 4-wire, NO contact, PNP  Smallest operating current ≥ 1 mA  Switching frequency 0.03 kHz  Mechanical data	Mounting conditions	Flush
	Secured operating distance	≤ (0.81 × Sn) mm
Temperature drift ≤ ±10 %  Hysteresis 315 %  Electrical data  Operating voltage U <sub>B</sub> 1030 VDC  Ripple U <sub>ss</sub> ≤ 10 % U <sub>Broax</sub> DC rated operating current I <sub>e</sub> ≤ 150 mA  No-load current ≤ 20 mA  Residual current ≤ 0.1 mA  Isolation test voltage 0.5 kV  Short-circuit protection yes/Cyclic  Voltage drop at I <sub>e</sub> ≤ 1.8 V  Wire break/reverse polarity protection Complete  Output function 4-wire, NO contact, PNP  Smallest operating current ≥ 1 mA  Switching frequency 0.03 kHz  Mechanical data	Correction factors	
Hysteresis 315 %  Electrical data  Operating voltage U <sub>B</sub> 1030 VDC  Ripple U <sub>ss</sub> ≤ 10 % U <sub>Bmax</sub> DC rated operating current I <sub>e</sub> ≤ 150 mA  No-load current ≤ 20 mA  Residual current ≤ 0.1 mA  Isolation test voltage 0.5 kV  Short-circuit protection yes/Cyclic  Voltage drop at I <sub>e</sub> ≤ 1.8 V  Wire break/reverse polarity protection Complete  Output function 4-wire, NO contact, PNP  Smallest operating current ≥ 1 mA  Switching frequency 0.03 kHz  Mechanical data	Repeat accuracy	≤ 2 % of full scale
Electrical data  Operating voltage U <sub>B</sub> 1030 VDC  Ripple U <sub>ss</sub> ≤ 10 % U <sub>Bmax</sub> DC rated operating current I <sub>e</sub> ≤ 150 mA  No-load current  ≤ 20 mA  Residual current  ≤ 0.1 mA  Isolation test voltage  0.5 kV  Short-circuit protection  Voltage drop at I <sub>e</sub> ≤ 1.8 V  Wire break/reverse polarity protection  Output function  4-wire, NO contact, PNP  Smallest operating current  ≥ 1 mA  Switching frequency  0.03 kHz  Mechanical data	Temperature drift	≤ ±10 %
Operating voltage U <sub>B</sub> 1030 VDC         Ripple U <sub>ss</sub> ≤ 10 % U <sub>Bmax</sub> DC rated operating current I <sub>e</sub> ≤ 150 mA         No-load current       ≤ 20 mA         Residual current       ≤ 0.1 mA         Isolation test voltage       0.5 kV         Short-circuit protection       yes/Cyclic         Voltage drop at I <sub>e</sub> ≤ 1.8 V         Wire break/reverse polarity protection       Complete         Output function       4-wire, NO contact, PNP         Smallest operating current       ≥ 1 mA         Switching frequency       0.03 kHz         Mechanical data	Hysteresis	315 %
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DC rated operating current I₀ ≤ 150 mA  No-load current ≤ 20 mA  Residual current ≤ 0.1 mA  Isolation test voltage 0.5 kV  Short-circuit protection yes/Cyclic  Voltage drop at I₀ ≤ 1.8 V  Wire break/reverse polarity protection Complete  Output function 4-wire, NO contact, PNP  Smallest operating current ≥ 1 mA  Switching frequency 0.03 kHz  Mechanical data	Operating voltage U <sub>B</sub>	1030 VDC
No-load current       ≤ 20 mA         Residual current       ≤ 0.1 mA         Isolation test voltage       0.5 kV         Short-circuit protection       yes/Cyclic         Voltage drop at I₀       ≤ 1.8 V         Wire break/reverse polarity protection       Complete         Output function       4-wire, NO contact, PNP         Smallest operating current       ≥ 1 mA         Switching frequency       0.03 kHz         Mechanical data	Ripple U <sub>ss</sub>	≤ 10 % U <sub>Bmax</sub>
Residual current       ≤ 0.1 mA         Isolation test voltage       0.5 kV         Short-circuit protection       yes/Cyclic         Voltage drop at I₀       ≤ 1.8 V         Wire break/reverse polarity protection       Complete         Output function       4-wire, NO contact, PNP         Smallest operating current       ≥ 1 mA         Switching frequency       0.03 kHz         Mechanical data	DC rated operating current I <sub>e</sub>	≤ 150 mA
Isolation test voltage       0.5 kV         Short-circuit protection       yes/Cyclic         Voltage drop at I₀       ≤ 1.8 V         Wire break/reverse polarity protection       Complete         Output function       4-wire, NO contact, PNP         Smallest operating current       ≥ 1 mA         Switching frequency       0.03 kHz         Mechanical data	No-load current	≤ 20 mA
Short-circuit protection       yes/Cyclic         Voltage drop at I₀       ≤ 1.8 V         Wire break/reverse polarity protection       Complete         Output function       4-wire, NO contact, PNP         Smallest operating current       ≥ 1 mA         Switching frequency       0.03 kHz         Mechanical data	Residual current	≤ 0.1 mA
Voltage drop at I₀       ≤ 1.8 V         Wire break/reverse polarity protection       Complete         Output function       4-wire, NO contact, PNP         Smallest operating current       ≥ 1 mA         Switching frequency       0.03 kHz         Mechanical data	Isolation test voltage	0.5 kV
Wire break/reverse polarity protection Complete   Output function 4-wire, NO contact, PNP   Smallest operating current ≥ 1 mA   Switching frequency 0.03 kHz   Mechanical data	Short-circuit protection	yes/Cyclic
Output function       4-wire, NO contact, PNP         Smallest operating current       ≥ 1 mA         Switching frequency       0.03 kHz         Mechanical data	Voltage drop at I <sub>e</sub>	≤ 1.8 V
Smallest operating current ≥ 1 mA  Switching frequency 0.03 kHz  Mechanical data	Wire break/reverse polarity protection	Complete
Switching frequency 0.03 kHz  Mechanical data	Output function	4-wire, NO contact, PNP
Mechanical data	Smallest operating current	≥ 1 mA
	Switching frequency	0.03 kHz
Design Monitoring Kit for Spanners, Q5,5	Mechanical data	
	Design	Monitoring Kit for Spanners, Q5,5

#### **Features**

- Power block with two connected sensors and LEDs
- Relocatable block 0°...90°, with cross drilling for flexible cable routing
- ■Plastic, PBT-GF20-V0
- 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

### 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.

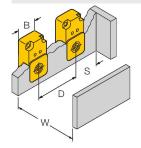


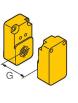
## Technical data

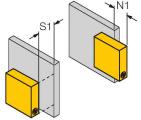
Housing material Plastic, PBT-GF20-V0  Active area material Plastic, PP-GF20  Electrical connection Connector, M12 × 1  Cable quality Ø 2 mm, Gray, Lif9Y-11Y, PUR, 0.27 m  Core cross-section 3 x 0.08 mm²  Litz wire 40 x0.05 mm  Environmental conditions  Ambient temperature -25+70 °C  Vibration resistance 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	Dimensions	47 x 18 x 18 mm
Electrical connection  Cable quality  Ø 2 mm, Gray, Lif9Y-11Y, PUR, 0.27 m  Core cross-section  3 x 0.08 mm²  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	Housing material	Plastic, PBT-GF20-V0
Cable quality Ø 2 mm, Gray, Lif9Y-11Y, PUR, 0.27 m  Core cross-section 3 x 0.08 mm²  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	Active area material	Plastic, PP-GF20
Core cross-section 3 x 0.08 mm²  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	Electrical connection	Connector, M12 × 1
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	Cable quality	Ø 2 mm, Gray, Lif9Y-11Y, PUR, 0.27 m
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	Core cross-section	3 x 0.08 mm²
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	Litz wire	40 x0.05 mm
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	Environmental conditions	
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	Ambient temperature	-25+70 °C
Protection class IP67  MTTF 2283 years acc. to SN 29500 (Ed. 99) 40 °C  Power-on indication LED, Green	Vibration resistance	55 Hz (1 mm)
MTTF  2283 years acc. to SN 29500 (Ed. 99) 40 °C  Power-on indication  LED, Green	Shock resistance	30 g (11 ms)
Power-on indication LED, Green	Protection class	IP67
	MTTF	,
Switching state 2 × LEDs, Yellow/red	Power-on indication	LED, Green
	Switching state	2 × LEDs, Yellow/red

## Mounting instructions

#### Mounting instructions/Description







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

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

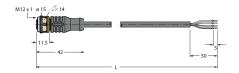
These values apply for mounting in St37.



## Accessories

Dimension drawing Type ID

RKC4.4T-2/TEL 6625013 Connection cable, M12 female



Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval