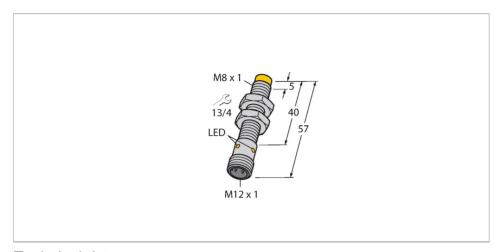


NI4U-EG08-AP6X-H1341/S1589 Inductive Sensor - With WeldGuard™ coating



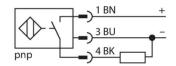
Technical data

ID 46006401 Special version S1589 Corresponds to:With weldguard coating General data Rated switching distance 4 mm Mounting conditions Non-flush Secured operating distance ≤ $(0.81 \times Sn)$ mm Repeat accuracy ≤ 2 % of full scale ≤ $\pm 15 \%$, ≤ -25 °C v ≥ +70 °C Hysteresis 315 % Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{smax} DC rated operating current I _e ≤ 150 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _e ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 200 mT AC field stability 200 mT Secured operating to:With weldguard coating to:With weld to:	Туре	NI4U-EG08-AP6X-H1341/S1589
Coating General data Rated switching distance 4 mm Mounting conditions Non-flush Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale ≤ ± 15 %, ≤ -25 °C v ≥ +70 °C Hysteresis 315 % Electrical data Operating voltage U _s 1030 VDC Ripple U _{ss} ≤ 10 % U _{smax} DC rated operating current I _s ≤ 150 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _s ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 200 mT	ID	46006401
Rated switching distance 4 mm Mounting conditions Non-flush Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale ≤±15 %, ≤-25 °C v ≥ +70 °C Hysteresis 315 % Electrical data Operating voltage U ₈ 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I ₈ ≤ 150 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I ₈ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 200 mT	Special version	•
Mounting conditions Non-flush Secured operating distance ≤ (0.81 × Sn) mm Repeat accuracy ≤ 2 % of full scale ≤± 15 %, ≤ -25 °C v ≥ +70 °C Hysteresis 315 % Electrical data Operating voltage U _B Operating voltage U _B 1030 VDC Ripple U _{es} ≤ 10 % U _{Bmax} DC rated operating current I _B ≤ 150 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I _B ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 200 mT	General data	
Secured operating distance $\leq (0.81 \times Sn) \text{ mm}$ Repeat accuracy $\leq 2 \% \text{ of full scale}$ $\leq \pm 15 \%, \leq -25 \text{ °C V} \geq +70 \text{ °C}$ Hysteresis 315% Electrical data Operating voltage U_B 1030 VDC Ripple U_{BS} $\leq 10 \% U_{Bmax}$ DC rated operating current I_B $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection $yes/Cyclic$ Voltage drop at I_B $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection $yes/Complete$ Output function $3-wire$, NO contact, PNP DC field stability 200 mT	Rated switching distance	4 mm
Repeat accuracy $\leq 2 \%$ of full scale $\leq \pm 15 \%$, $\leq -25 \degree \text{C v} \geq +70 \degree \text{C}$ Hysteresis 315% Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} $\leq 10 \% \text{ U}_{\text{Bmax}}$ DC rated operating current I _e $\leq 150 \text{ mA}$ No-load current $\leq 15 \text{ mA}$ Residual current $\leq 0.1 \text{ mA}$ Isolation test voltage 0.5 kV Short-circuit protection $9 \text{cs}/\text{Cyclic}$ Voltage drop at I _e $\leq 1.8 \text{ V}$ Wire break/reverse polarity protection $9 \text{cs}/\text{Complete}$ Output function 3-wire , NO contact, PNP DC field stability 200 mT	Mounting conditions	Non-flush
$\leq \pm 15 \ \%, \leq -25 \ ^{\circ}\text{C} \ \text{V} \geq +70 \ ^{\circ}\text{C}$ Hysteresis $315 \ \%$ Electrical data $Operating \ \text{voltage U}_{\text{B}}$ $1030 \ \text{VDC}$ Ripple U_{ss} $\leq 10 \ \% \ U_{\text{Bmax}}$ DC rated operating current I_{e} $\leq 150 \ \text{mA}$ No-load current $\leq 15 \ \text{mA}$ Residual current $\leq 0.1 \ \text{mA}$ Isolation test voltage $0.5 \ \text{kV}$ Short-circuit protection $yes/Cyclic$ Voltage drop at I_{e} $\leq 1.8 \ \text{V}$ Wire break/reverse polarity protection $yes/Complete$ Output function $3-wire, \ \text{NO contact, PNP}$ DC field stability $200 \ \text{mT}$	Secured operating distance	≤ (0.81 × Sn) mm
Hysteresis Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection Voltage drop at I _e ✓ 1.8 V Wire break/reverse polarity protection Output function 3-wire, NO contact, PNP DC field stability 200 mT	Repeat accuracy	≤ 2 % of full scale
Electrical data Operating voltage U _B 1030 VDC Ripple U _{ss} ≤ 10 % U _{Bmax} DC rated operating current I _e No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection Voltage drop at I _e ✓ 1.8 V Wire break/reverse polarity protection Output function 3-wire, NO contact, PNP DC field stability 200 mT		≤ ± 15 %, ≤ -25 °C v ≥ +70 °C
Operating voltage U_B 1030 VDC Ripple U_{ss} ≤ 10 % U_{Bmax} DC rated operating current I_e ≤ 150 mA No-load current ≤ 15 mA Residual current ≤ 0.1 mA Isolation test voltage 0.5 kV Short-circuit protection yes/Cyclic Voltage drop at I_e ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 200 mT	Hysteresis	315 %
Ripple Uss ≤ 10 % Ussax DC rated operating current Is ≤ 150 mA No-load current ≤ 15 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 yes/Complete Output function 3-wire, NO contact, PNP DC field stability 200 mT	Electrical data	
DC rated operating current I₀ ≤ 150 mA No-load current ≤ 15 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 yes/Complete Output function 3-wire, NO contact, PNP DC field stability 200 mT	Operating voltage U _B	1030 VDC
No-load current ≤ 15 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 yes/Complete Output function 3-wire, NO contact, PNP DC field stability 200 mT	Ripple U _{ss}	≤ 10 % U _{Bmax}
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 yes/Complete Output function 3-wire, NO contact, PNP DC field stability 200 mT	DC rated operating current I _e	≤ 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 yes/Complete Output function 3-wire, NO contact, PNP DC field stability 200 mT	No-load current	≤ 15 mA
Short-circuit protection Voltage drop at I₀ Wire break/reverse polarity protection Output function DC field stability yes/Cyclic ≤ 1.8 V yes/Complete yes/Complete 200 mT	Residual current	≤ 0.1 mA
Voltage drop at I₀ ≤ 1.8 V Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 200 mT	Isolation test voltage	0.5 kV
Wire break/reverse polarity protection yes/Complete Output function 3-wire, NO contact, PNP DC field stability 200 mT	Short-circuit protection	yes/Cyclic
Output function 3-wire, NO contact, PNP DC field stability 200 mT	Voltage drop at I _e	≤ 1.8 V
DC field stability 200 mT	Wire break/reverse polarity protection	yes/Complete
	Output function	3-wire, NO contact, PNP
AC field stability 200 mT _{ss}	DC field stability	200 mT
	AC field stability	200 mT _{ss}

Features

- ■Threaded barrel, M8 x 1
- Stainless steel, 1.4427 SO
- Factor 1 for all metals
- Protection class IP68
- Resistant to magnetic fields
- ■Extended temperature range
- High switching frequency
- ■DC 3-wire, 10...30 VDC
- ■NO contact, PNP output
- ■M12 x 1 male connector

Wiring diagram





Functional principle

Inductive sensors are designed for wear-free and contactless detection of metal objects. uprox Factor 1 sensors have significant advantages due to their patented ferritecoreless 3-coil system. They detect all metals at the same large switching distance and are resistant to magnetic fields.

Turck WeldGuard sensors for use in welding systems are equipped with a thin coating made of thermosetting plastic. This high-tech coating is resistant to abrasion and withstands mechanical stress.

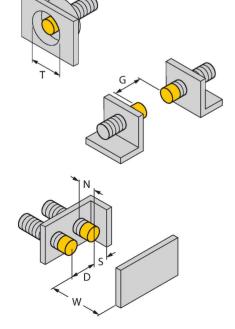


Technical data

Switching frequency	2 kHz
Mechanical data	
Design	Threaded barrel, M8 x 1
Dimensions	57 mm
Housing material	Stainless steel, 1.4427 SO
Active area material	Plastic
Max. tightening torque of housing nut	5 Nm
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-30+85 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow
	°C

Mounting instructions

Mounting instructions/Description



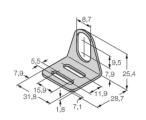
Distance D	4 x B
Distance W	3 x Sn
Distance T	4 x B
Distance S	1.5 x B
Distance G	6 x Sn
Distance N	2 x Sn
Diameter active area B	Ø 8 mm



Accessories

BST-08B 6947210

Mounting clamp for threaded barrel sensors, with dead-stop; material: PA6



MW08

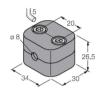
MBS80

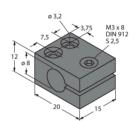
6945008

Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BSS-08 6901322

Mounting clamp for smooth and threaded barrel sensors; material: Polypropylene





Mounting clamp for smooth barrel sensors; mounting block material: Anodized aluminum

69479