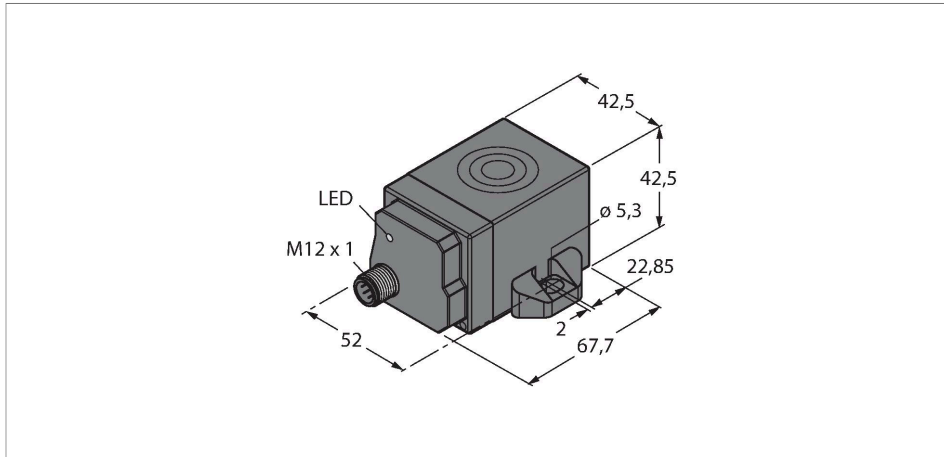


NI50U-Q42TWD-VP6X-H1141

Inductive Sensor – For the Food Industry



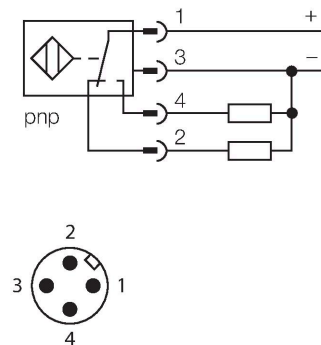
Features

- Rectangular, height 42.5 mm
- Active face on top
- Plastic, PA12-GF30
- Factor 1 for all metals
- Resistant to magnetic fields
- Auto-compensation protects against pre-damping
- Partially embeddable
- Extended temperature range
- High protection class IP69K for harsh environments
- Protection against all common acidic and alkaline cleaning agents
- Laser engraved label, permanently legible
- Suitable for applications in the food industry
- DC 4-wire, 10...30 VDC
- Changeover contact, PNP output
- M12 x 1 male connector

Technical data

Type	NI50U-Q42TWD-VP6X-H1141
Ident. no.	1538306
Rated switching distance	50 mm
Mounting conditions	Non-flush, partially embeddable
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Repeat accuracy	$\leq 2\%$ of full scale
Temperature drift	$\leq \pm 10\%$ $\leq \pm 20\%$, $\leq -25\text{ °C}$ v $\geq +70\text{ °C}$
Hysteresis	3...15 %
Ambient temperature	-40...+100 °C
Operating voltage	10...30 VDC
Residual ripple	$\leq 10\% U_{ss}$
DC rated operational current	$\leq 200\text{ mA}$
No-load current	$\leq 20\text{ mA}$
Residual current	$\leq 0.1\text{ mA}$
Isolation test voltage	$\leq 0.5\text{ kV}$
Short-circuit protection	yes / Cyclic
Voltage drop at I_o	$\leq 1.8\text{ V}$
Wire breakage/Reverse polarity protection	yes / Complete
Output function	4-wire, Complementary contact, PNP
Switching frequency	0.25 kHz
Design	Rectangular, Q42
Dimensions	67.7 x 42.5 x 42.5 mm
Housing material	Plastic, PA12-GF30, Black

Wiring diagram

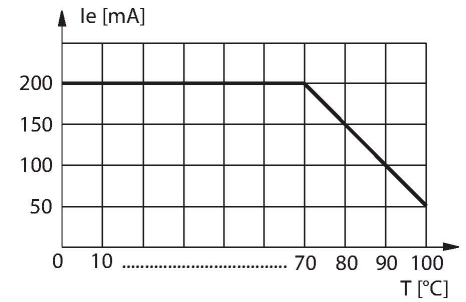


Functional principle

The inductive sensors for the food industry are absolutely tight and resistant to cleaning agents and disinfectants. The stainless steel connector and the proven housing materials ensure durability and ruggedness.

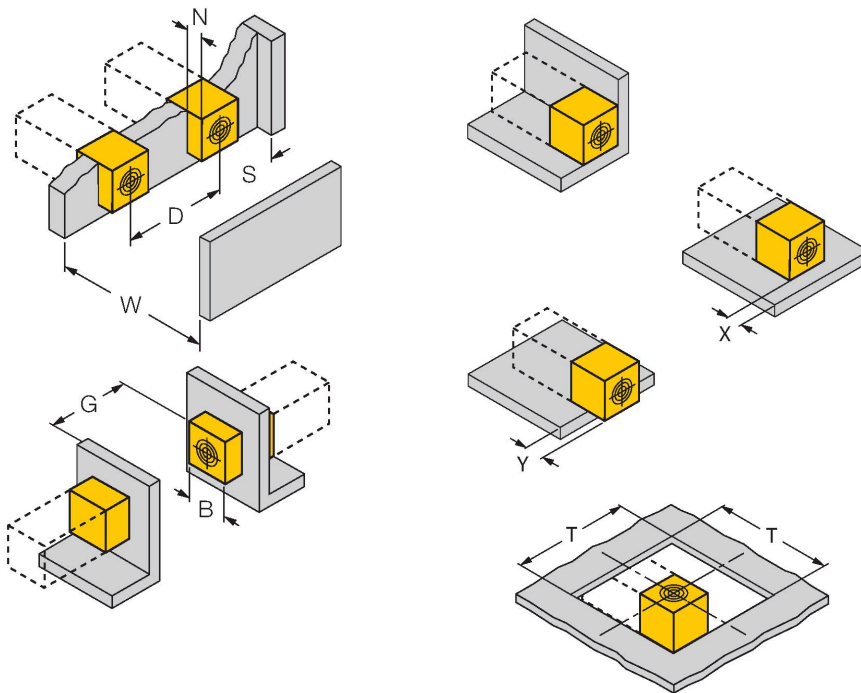
Technical data

Active area material	Plastic, PA12-GF30, black
Plug adapter	metal, 1.4404 (AISI 316L)
Tightening torque fixing screw	4 Nm
Electrical connection	Connector, M12 × 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 / IP69K
MTTF	874 years acc. to SN 29500 (Ed. 99) 40 °C
Switching state	LED, Yellow



Mounting instructions

Mounting instructions/Description



Distance D	6 x B
Distance W	3 x Sn
Distance S	1.5 x B
Distance G	6 x Sn
Width active area B	42 mm

up to 2-side flush mounting possible
 1-side flush mounting: Sr = 30 mm; D = 240 mm
 2-side flush mounting: Sr = 25 mm; D = 240 mm

Recessed mounting in metal:

x = 10 mm: Sr = 20 mm
 x = 20 mm: Sr = 20 mm
 x = 30 mm: Sr = 20 mm
 x = 40 mm: Sr = 20 mm

Protruded mounting:

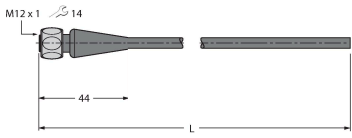
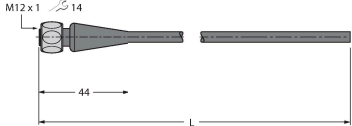
y = 10 mm: Sr = 40 mm
 y = 20 mm: Sr = 50 mm
 y = 30 mm: Sr = 50 mm
 y = 40 mm: Sr = 50 mm

Mounting position in aperture plate:

T = 150 mm

The values stated relate to a 1 mm thick steel plate.

Wiring accessories

Dimension drawing	Type	Ident. no.	
	RKH4.4-2/TFE	6934473	Connection cable, M12 female, straight, 4-pin, stainless steel coupling nut, cable length: 2 m, jacket material: PVC, gray, temperature range -25...+80 °C; other cable lengths and designs available, see www.turck.com
	RKH4.4-2/TFG	6933086	Connection cable, M12 female, straight, 4-pin, stainless steel coupling nut, cable length: 2 m, jacket material: TPE, gray, temperature range -40...+105 °C; other cable lengths and designs available, see www.turck.com