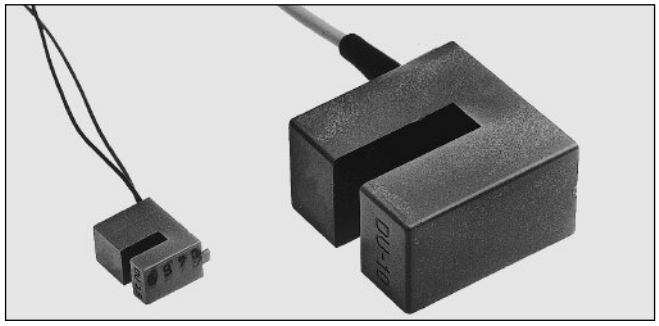
Proximity Sensors Inductive
ABS Housing
Type DU, Fork-shaped



- **Fork-shaped ABS housing**
- **Slot sizes: 3.5, 5, 6, 10 mm**
- **Power supply: 8.2 VDC (NAMUR)**
  24 VDC (NPN)
- **Output: NAMUR (DIN 19234)**
  Transistor NPN, normally open
- **Protection: Reverse polarity (NPN version)**
- **2 m cable**

Product Description

Special fork-shaped proximity switch. Slot sizes 3.5, 5, 6 or 10 mm. With transistor NPN or made in accordance with NAMUR DIN 19234. Sturdy ABS housing.

Ordering Key

DU 10 E

Type
Slot size
Output type

Type Selection

Slot size mm	Ordering no. NAMUR	Ordering no. Transistor NPN Normaly open
3.5	**DU 3.5**	
5	**DU 5**	
6	**DU 6**	**DU 6 E**
10	**DU 10**	**DU 10 E**

Specifications

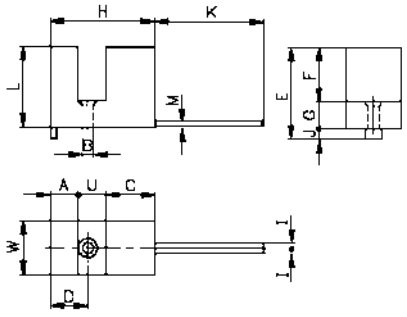
	NAMUR	Transistor NPN
Rated operational volt. (U_e) (U_B)	8.2 VDC 7 to 9 VDC (6 to 35 VDC, all specifications not observed in extended supply range)	24 VDC 21.6 to 26.4 VDC (ripple incl.)
Self-inductance	≤ 500 µH	-
Self-capacitance	≤ 120 nF	-
Ripple	-	≤ 10%
Rated operational current (I_e)	-	≤ 200 mA
No-load supply current (I_o)	Activated: ≤ 1 mA Not activated: ≥ 3 mA Max.: 9.35 mA	≤ 15 mA
Voltage drop (U_d)	-	**DU 6 E** ≤ 2.0 V at max. load **DU 10 E** ≤ 1.0 V at max. load
Protection	None	Reverse polarity
Transient voltage	≤ 1 kV/0.5 J (prepared)	≤ 1 kV/0.5 J (prepared)
Power ON delay	None	None
Frequency of operating cycles (f)	**DU 3.5** 2000 Hz **DU 6** 2000 Hz **DU 5** 1500 Hz **DU 10** 1000 Hz	**DU 6 E** 2000 Hz **DU 10 E** 1000 Hz
Size of test object (height x length x width)	**DU 3.5** 10 x 10 x 0.5 mm **DU 5** 10 x 10 x 0.5 mm **DU 6** 16 x 16 x 1 mm **DU 10** 16 x 20 x 1 mm	**DU 6 E** 16 x 16 x 1 mm **DU 10 E** 16 x 20 x 1 mm

Specifications (cont.)

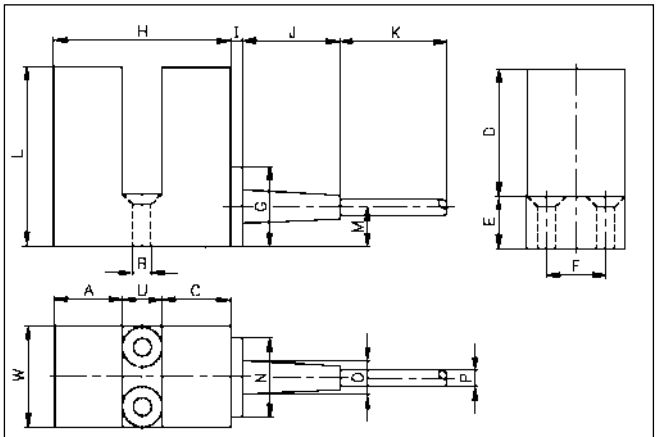
	NAMUR	Transistor NPN
Repeat accuracy (R)	≤ 10%	≤ 10%
Effective operating dist. (S_r)	0.9 x S_n ≤ S_r ≤ 1.1 x S_n	0.9 x S_n ≤ S_r ≤ 1.1 x S_n
Usable operating dist. (S_u)	0.8 x S_r ≤ S_u ≤ 1.2 x S_r	0.8 x S_r ≤ S_u ≤ 1.2 x S_r
Ambient temperature Operating Storage	 -20° to +60°C (-4° to +140°F) -25° to +70°C (-13° to +158°F)	 -20° to +60°C (-4° to +140°F) -25° to +70°C (-13° to +158°F)
Degree of protection	IP 67 (Nema 1, 3, 4, 6, 13)	IP 67 (Nema 1, 3, 4, 6, 13)
Housing material	Blue ABS	Blue ABS
Cable	**DU 3.5** 2 m, 2 x 0.1 mm² (2 wires) **DU 5** 2 m, 2 x 0.1 mm² (2 wires) **DU 6** 2 m, 2 x 0.25 mm² **DU 10** 2 m, 2 x 0.25 mm² grey PVC, oil proof	**DU 6 E** 2 m, 3 x 0.25 mm² **DU 10 E** 2 m, 3 x 0.25 mm² grey PVC, oil proof
Weight (cable included)	**DU 3.5** 17 g **DU 6** 72 g **DU 5** 17 g **DU 10** 116 g	**DU 6 E** 72 g **DU 10 E** 116 g
CE-marking	Yes	Yes

Dimensions

Type	U mm	L mm	H mm	W mm	A mm	B Ø mm	C mm	D mm	E mm	F mm	G mm	I mm	J mm	K mm	M mm	N mm	O Ø mm	P Ø mm
DU 3.5	3.5	15	19.2	10.2	5	2	10.5	6.85	17	10	5	Ø 1.1	2	2000	1			
DU 5	5	15	19.2	10.2	5	2	9	6.85	17	10	5	Ø 1.1	2	2000	1			
DU 6	6	30	26.8	16.4	10	2.3	10.1	20	10	11	15.25	2.2	17	2000	9	12.5	6.5	4.2
DU 10	10	45	44.5	25.6	17	4.5	17	32	13	15	20	2.95	24	2000	10	20	8.5	4.1

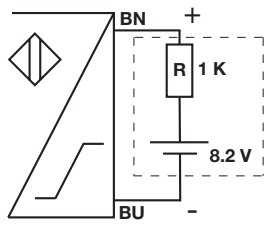


DU 3.5 - DU 5

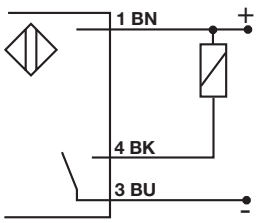


DU 6 - DU 10

Wiring Diagrams



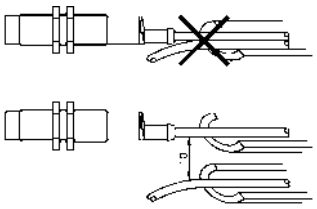
NAMUR



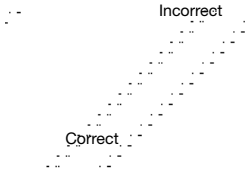
NPN - Normaly open

Installation Hints

To avoid interference from inductive voltage/ current peaks, separate the prox. switch power cables from any other power cables, e.g. motor, contactor or solenoid cables

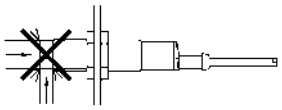


Relief of cable strain



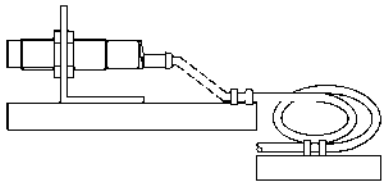
The cable should not be pulled

Protection of the sensing face



A proximity switch should not serve as mechanical stop

Switch mounted on mobile carrier



Any repetitive flexing of the cable should be avoided

Power Supplies

Power supplies VAC: > SS 110.
Power supplies VDC: > SS 130/140.

NAMUR, Amplifier Relay

> SD 110/210.
> SD 170/270.

Refer to Technical Information.