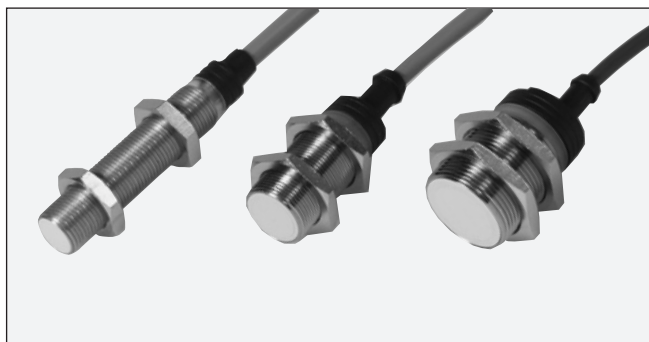


Load Dump Proximity Sensors Inductive Nickel-Plated Brass Housing Types IA, M12, M18 and M30

CARLO GAVAZZI



- Load Dump protection: SAE & ISO
- Sensing distance: 2 to 10 mm
- Flush types
- M12 long housing; M18 & M30 short housing
- Rated operational voltage: 10 - 40 VDC
- Output: DC 200 mA, NPN or PNP
- Make or break switching function
- LED-indication
- Protection: reverse polarity, short circuit, transients
- Cable versions



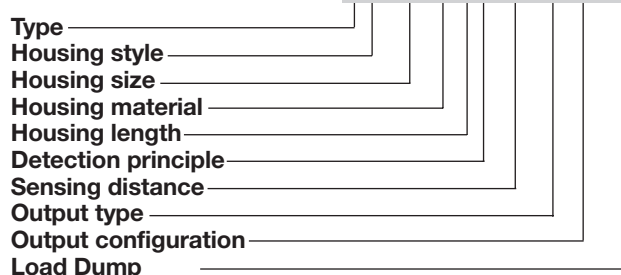
Product Description

A family of Load Dump protected inductive proximity switches in industrial standard nickel-plated brass housings. M12, M18 and M30 types. They are able to handle applications in vehicles that use battery operated

systems and generates high voltage transients. Typical applications: Lift trucks, garbage trucks etc. Output are open collector NPN or PNP transistors. Available with cable only.

Ordering Key

IA12DLF02NOLD



Type Selection

Housing diameter	Connec- tion	Body style	Rated operating distance S_n	Ordering no. NPN Make switching	Ordering no. PNP Make switching	Ordering no. NPN Break switching	Ordering no. PNP Break switching
M12	Cable	Long	2 mm ¹⁾	IA 12 DLF 02 NOLD	IA 12 DLF 02 POLD	IA 12 DLF 02 NCLD	IA 12 DLF 02 PCLD
M18	Cable	Short	5 mm ¹⁾	IA 18 DSF 05 NOLD	IA 18 DSF 05 POLD	IA 18 DSF 05 NCLD	IA 18 DSF 05 PCLD
M30	Cable	Short	10 mm ¹⁾	IA 30 DSF 10 NOLD	IA 30 DSF 10 POLD	IA 30 DSF 10 NCLD	IA 30 DSF 10 PCLD

¹⁾ For flush mounting in metal

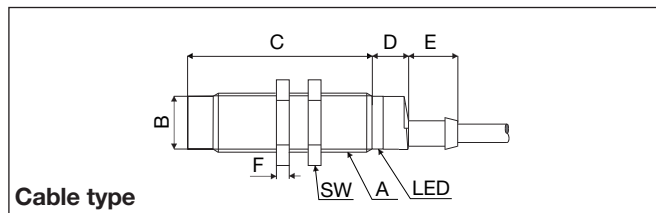
Specifications

Rated operational voltage (U_B)	10 to 40 VDC (ripple incl.)	Repeat accuracy (R)	≤ 5%
Ripple	≤ 10%	Differential travel (H) (Hysteresis)	1 to 15% of sensing dist.
Output current (I_a)	≤ 200 mA @ 50°C (≤ 150 mA @ 50-70°C)	Ambient temperature Operating Storage	-25° to +70°C (-13° to +158°F) -30° to +80°C (-22° to +176°F)
No load supply current (I_o)	IA 12 ≤ 6 mA IA 18 ≤ 6 mA IA 30 ≤ 6 mA	Housing material Body Front Backpart Nuts	Nickel-plated brass Grey thermoplastic polyester PBTP (black polyester) Nickel-plated brass
Voltage drop (U_d)	Max. 2.5 VDC @ 200 mA	Connection Cable	2 m, 3 x 0.3 mm ² , grey PVC,oil proof
Protection	Reverse polarity, short-circuit, transients	Degree of protection	IP 67
Load Dump Protection	SAE J11133-11 and ISO 7637-2 - Test Level 4	Weight (cable/nuts included)	IA 12 .L. 105 g IA 18 .S. 120 g IA 30 .S. 185 g
Transient voltage	1 kV/0.5 J	Tightening torque	IA 12 7.0 Nm (x) 15.0 Nm (y) IA 18 27.5 Nm IA 30 50.0 Nm
Power ON delay (t_v)	50 ms	Approvals	UL, CSA
Operating frequency (f)	IA12 ..F 02 ≤ 800 Hz IA18 ..F 05 ≤ 800 Hz IA30 ..F 10 ≤ 700 Hz	CE-marking	Yes
Indication for output ON	LED, yellow		
Assured operating sensing distance (S_a)	$0 \leq S_a \leq 0.81 \times S_n$		
Effective operating distance (S_r)	$0.9 \times S_n \leq S_r \leq 1.1 \times S_n$		
Usable operating distance (S_u)	$0.9 \times S_r \leq S_u \leq 1.1 \times S_r$		

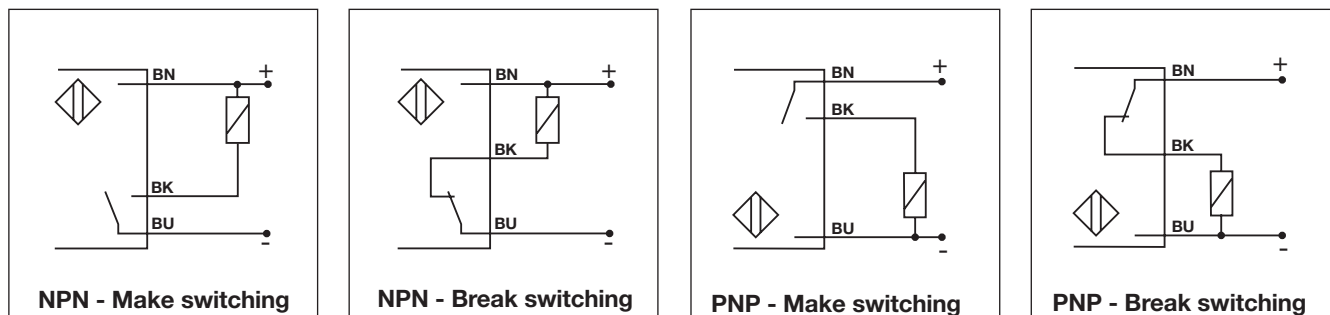


Dimensions

Type	A	B Ø mm	C mm	D mm	E mm	F mm	SW mm
IA 12 DLF 02 .. LD	M12 x 1 x 50	10.7	50	11	5.0	4	17
IA 18 DSF 05 .. LD	M18 x 1 x 30	16.7	30	11.6	15.4	4	24
IA 30 DSF 10 .. LD	M30 x 1.5 x 30	28	30	13.6	15.4	5	36



Wiring Diagrams



Installation Hints

<p><i>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</i></p>	<p><i>Relief of cable strain</i></p> <p>Incorrect</p> <p>Correct</p> <p>The cable should not be pulled</p>	<p><i>Protection of the sensing face</i></p> <p>A proximity switch should not serve as mechanical stop</p>	<p><i>Switch mounted on mobile carrier</i></p> <p>Any repetitive flexing of the cable should be avoided</p>
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Delivery Contents

- Inductive proximity switch IA..
- 2 nuts NPB
- Packaging: plastic bag