

High-temperature inductive proximity switches

440 °F



Features

- Sizes M8 to M50, embeddable and non-embeddable, in stainless-steel housings
- For permanent operating temperatures up to 140 °C, 150 °C, 180 °C and 230 °C (280 °F, 300 °F, 350 °F and 440 °F)
- For models up to 180 °C (350 °F), amplifier included in sensor housing
- For 230 °C (440 °F) models, amplifier built into separate housing, and thus removed from the hot area
- Operating distances from 2 mm to 25 mm
- Protection degree of sensor head: IP 67

Benefits

- Good long-term reliability, even under difficult operating conditions
- Compact and robust construction
- Cable length does not influence switching behavior (DC signal), can thus be chosen freely, and without need for adjustment

High-temperature (HT) inductive proximity switches

For demanding applications in high-temperature areas, inductive proximity switches with good long-term reliability have become increasingly popular. Contrinex offers a series of embeddable and non-embeddable HT switches in sizes M8 to M50. The devices have operating distances from 2 to 25 mm, and are respectively suitable for applications up to 140°C, 150°C, 180°C and 230°C (280°F, 300°F, 350°F and 440°F).

The executions for 140°C, 150°C and 180°C (280°F, 300°F and 350°F) feature built-in amplifiers. Connection by means of a 2 m silicone or Teflon cable is standard. Other cable lengths and types are available on request.

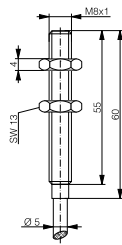
For 230°C (440°F) types, the amplifiers are built into an M12 stainless-steel housing, which is connected by means of a standard 3 m Teflon cable, and thus removed from the hot area. This cable carries a pure DC, rather than a high-frequency signal, and its length can thus be chosen freely, without having a negative influence on the switching behavior of the device, and without the need for adjustment. Connection of the amplifier is by means of a 2 m PUR cable.

All the usual protection functions, such as short-circuit, overload and voltage-reversal protection are built in. Furthermore, the devices feature good protection against environmental influences (IP 67).

M8



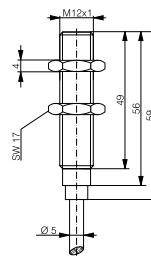
0 ... +140 °C
(+32 ... +280 °F)



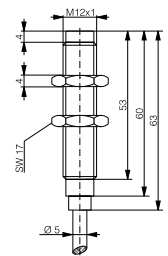
M12



0 ... +150 °C
(+32 ... +300 °F)



0 ... +150 °C
(+32 ... +300 °F)



Technical data

(at 23 °C / 73 °F, 24 VDC)

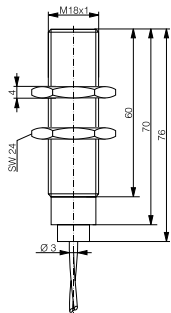
Rated operating distance s_n	2 mm	3 mm	4 mm
Housing material	stainless steel	stainless steel	stainless steel
Connecting cable	silicone 2 m ***	silicone 2 m ***	silicone 2 m ***
Amplifier	built-in	built-in	built-in
Degree of protection	IP 67	IP 67	IP 67
Mounting	embeddable	embeddable	non-embeddable *
Switching frequency	600 Hz	500 Hz	500 Hz
LED	-	-	-
Supply voltage range U_B	10 ... 30 VDC	10 ... 30 VDC	10 ... 30 VDC
Ambient temperature range T_A	0 ... +140 °C (+32 ... +280 °F)	0 ... +150 °C (+32 ... +300 °F)	0 ... +150 °C (+32 ... +300 °F)
Output current	120 mA (≤ 100 °C / ≤ 212 °F) / 80 mA (> 100 °C / > 212 °F)	120 mA (≤ 100 °C / ≤ 212 °F) / 70 mA (> 100 °C / > 212 °F)	120 mA (≤ 100 °C / ≤ 212 °F) / 70 mA (> 100 °C / > 212 °F)
Permissible ripple content	≤ 15 %	≤ 15 %	≤ 15 %
No-load supply current	≤ 10 mA	≤ 10 mA	≤ 10 mA
Output voltage drop	≤ 2 V at 120 mA	≤ 2 V at 120 mA	≤ 2 V at 120 mA
Hysteresis % s_r	3 ... 15 %	3 ... 15 %	3 ... 15 %
Short-circuit protection	built-in	built-in	built-in
Polarity reversal protection	built-in	built-in	built-in
Overload protection	built-in	built-in	built-in
Types			
NPN, N.O.	DW-HD-621-M8-100	DW-HD-601-M12-200	DW-HD-611-M12-200
PNP, N.O.	DW-HD-623-M8-100	DW-HD-603-M12-200	DW-HD-613-M12-200

* see Installation / ** see Cable amplifier / *** Teflon cable on request

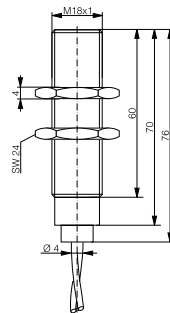
M18



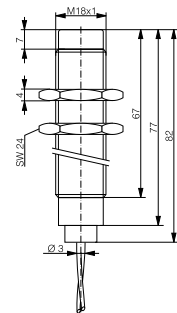
0 ... +180 °C
(+32 ... +350 °F)



0 ... +230 °C
(+32 ... +440 °F)



0 ... +180 °C
(+32 ... +350 °F)



5 mm
stainless steel

Teflon 2 m

built-in

IP 67

embeddable

400 Hz

-

10 ... 30 VDC

0 ... +180 °C (+32 ... +350 °F)

≤ 150 mA

≤ 15 %

≤ 10 mA

≤ 2 V at 150 mA

2 ... 20 %

built-in

built-in

built-in

DW-HD-601-M18-310

DW-HD-603-M18-310

5 mm

stainless steel

Teflon 3 m + PUR 2 m

in cable

IP 67

embeddable

300 Hz

- **

- **

0 ... +230 °C (+32 ... +440 °F)

- **

- **

- **

- **

built-in

built-in

built-in

DW-HD-601-M18-411

DW-HD-603-M18-411

8 mm

stainless steel

Teflon 2 m

built-in

IP 67

non-embeddable *

400 Hz

-

10 ... 30 VDC

0 ... +180 °C (+32 ... +350 °F)

≤ 150 mA

≤ 15 %

≤ 10 mA

≤ 2 V at 150 mA

3 ... 15 %

built-in

built-in





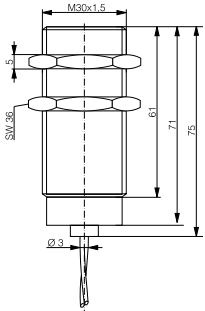
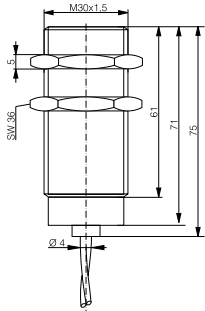
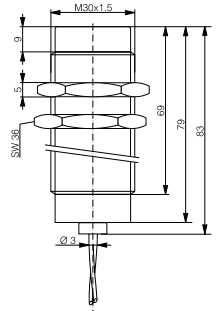
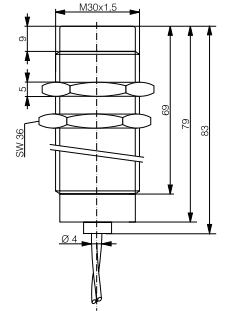
built-in

DW-HD-611-M18-310

DW-HD-613-M18-310





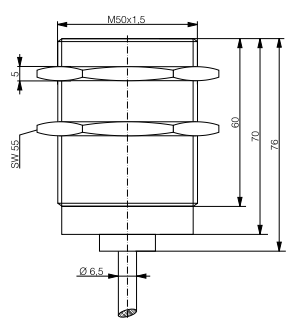
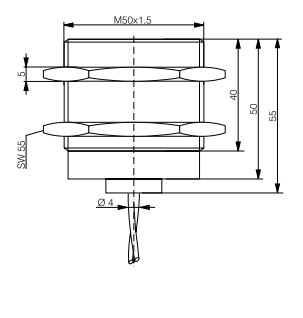
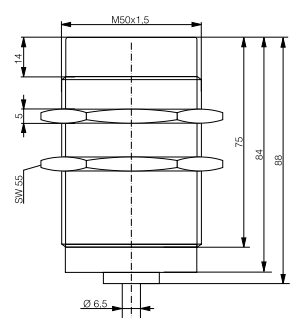
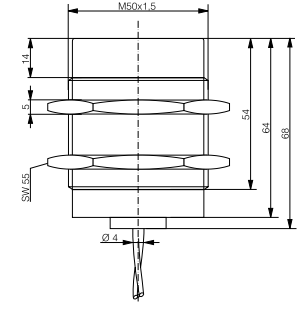
* see Installation / ** see Cable amplifier

M30

			
<p>0 ... +180 °C (+32 ... +350 °F)</p>	<p>0 ... +230 °C (+32 ... +440 °F)</p>	<p>0 ... +180 °C (+32 ... +350 °F)</p>	<p>0 ... +230 °C (+32 ... +440 °F)</p>
			
<p>10 mm stainless steel</p>	<p>10 mm stainless steel</p>	<p>15 mm stainless steel</p>	<p>15 mm stainless steel</p>
<p>Teflon 2 m built-in</p>	<p>Teflon 3 m + PUR 2 m in cable</p>	<p>Teflon 2 m built-in</p>	<p>Teflon 3 m + PUR 2 m in cable</p>
<p>IP 67 embeddable</p>	<p>IP 67 embeddable</p>	<p>IP 67 non-embeddable *</p>	<p>IP 67 non-embeddable *</p>
<p>200 Hz -</p>	<p>200 Hz - **</p>	<p>200 Hz -</p>	<p>150 Hz - **</p>
<p>10 ... 30 VDC 0 ... +180 °C (+32 ... +350 °F) ≤ 150 mA</p>	<p>- ** 0 ... +230 °C (+32 ... +440 °F) - **</p>	<p>10 ... 30 VDC 0 ... +180 °C (+32 ... +350 °F) ≤ 150 mA</p>	<p>- ** 0 ... +230 °C (+32 ... +440 °F) - **</p>
<p>≤ 15 % ≤ 10 mA</p>	<p>- ** - **</p>	<p>≤ 15 % ≤ 10 mA</p>	<p>- ** - **</p>
<p>≤ 2 V at 150 mA 3 ... 15 %</p>	<p>- ** - **</p>	<p>≤ 2 V at 150 mA 3 ... 15 %</p>	<p>- ** - **</p>
<p>built-in built-in built-in</p>	<p>built-in built-in built-in</p>	<p>built-in built-in built-in</p>	<p>built-in built-in built-in</p>
<p>DW-HD-601-M30-310 DW-HD-603-M30-310</p>	<p>DW-HD-601-M30-411 DW-HD-603-M30-411</p>	<p>DW-HD-611-M30-310 DW-HD-613-M30-310</p>	<p>DW-HD-611-M30-411 DW-HD-613-M30-411</p>

* see Installation / ** see Cable amplifier

M50

			
0 ... +180 °C (+32 ... +350 °F)	0 ... +230 °C (+32 ... +440 °F)	0 ... +180 °C (+32 ... +350 °F)	0 ... +230 °C (+32 ... +440 °F)
			
20 mm	20 mm	25 mm	25 mm
stainless steel	stainless steel	stainless steel	stainless steel
silicone 2 m ***	Teflon 3 m + PUR 2 m	silicone 2 m ***	Teflon 3 m + PUR 2 m
built-in	in cable	built-in	in cable
IP 67	IP 67	IP 67	IP 67
quasi-embeddable *	quasi-embeddable *	non-embeddable *	non-embeddable *
100 Hz	150 Hz	100 Hz	150 Hz
-	- **	-	- **
10 ... 30 VDC	- **	10 ... 30 VDC	- **
0 ... +180 °C (+32 ... +350 °F)	0 ... +230 °C (+32 ... +440 °F)	0 ... +180 °C (+32 ... +350 °F)	0 ... +230 °C (+32 ... +440 °F)
≤ 150 mA	- **	≤ 150 mA	- **
≤ 15 %	- **	≤ 15 %	- **
≤ 10 mA	- **	≤ 10 mA	- **
≤ 2 V at 150 mA	- **	≤ 2 V at 150 mA	- **
2 ... 20 %	- **	2 ... 20 %	- **
built-in	built-in	built-in	built-in
built-in	built-in	built-in	built-in
built-in	built-in	built-in	built-in
DW-HD-601-M50-300	DW-HD-601-M50-411	DW-HD-611-M50-300	DW-HD-611-M50-411
DW-HD-603-M50-300	DW-HD-603-M50-411	DW-HD-613-M50-300	DW-HD-613-M50-411

* see Installation / ** see Cable amplifier / *** Teflon cable on request

Cable amplifier*

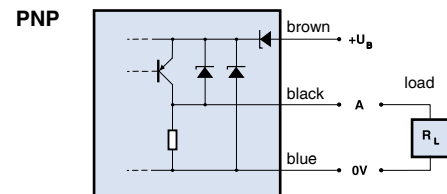
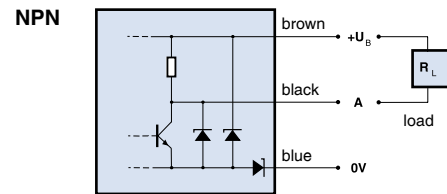
Technical data

(at 23 °C / 73 °F, 24 VDC)

Housing material	stainless steel
Connecting cable	PUR 2 m
Degree of protection	IP 67
LED	yellow
Supply voltage range U_B	10 ... 30 VDC
Ambient temp. range T_A	0 ... +70 °C (+32 ... +158 °F)
Output current	≤ 200 mA
Permissible ripple content	≤ 20 %
No-load supply current	≤ 5 mA
Output voltage drop	≤ 2 V at 200 mA
Hysteresis % s_r	3 ... 15 %
Short-circuit protection	built-in
Polarity reversal protection	built-in
Overload protection	built-in

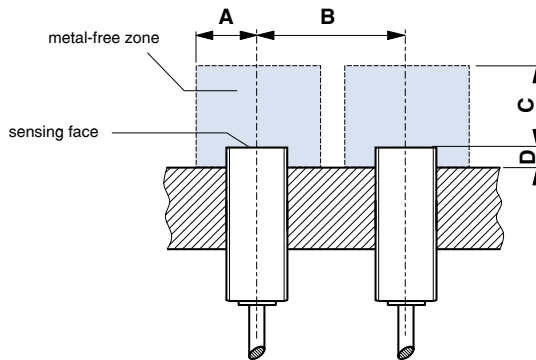
* (DW-HD-60#-M18-411 / DW-HD-6##-M30-411 / DW-HD-6##-M50-411)

Wiring diagrams



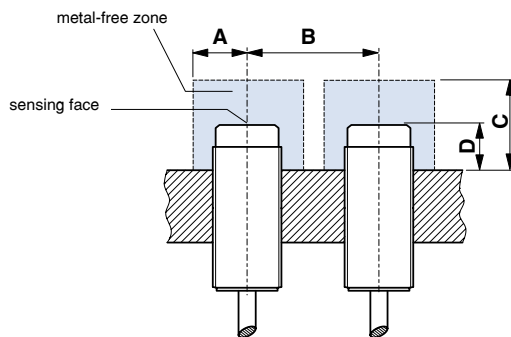
Installation

(quasi-) embeddable



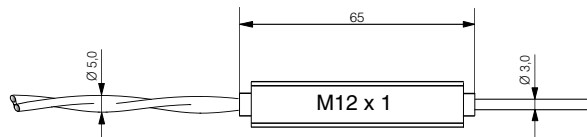
Ø	A	B	C	D
(mm)	(mm)	(mm)	(mm)	(mm)
M8	6	10	6	-
M12	9	20	9	-
M18	14	30	15	-
M30	25	60	30	-
M50	50	150	60	10

non-embeddable



Ø	A	B	C	D
(mm)	(mm)	(mm)	(mm)	(mm)
M12	15	27	16	8
M18	20	50	30	15
M30	40	80	40	20
M50	100	150	60	30

Dimensions of cable amplifier



These devices **must not be used** in applications where the **safety of people** is dependent on their functioning. Terms of delivery and rights to change design reserved.

Your sales agent:

Contrinex Inc.

2 Business Park Road - Old Saybrook, CT 06475 - USA

Tel.: 860 388 3573 - Toll free: 866 289 2899 - Fax: 860 388 3574

Internet: www.contrinex.com - E-mail: info_us@contrinex.com





**INDUSTRIAL
SAFETY SALES INC.**

P.O. Box 126 -- 4112 Sheridan Road
Kenosha, WI 53141
Fax: (262) 652-1388
E-mail: safetysensing@earthlink.net

(262) 652-8660