INDUCTIVE SENSORS: HIGH-TEMPERATURE

- ✓ For ambient temperatures of up to **+230 °C**
- ✓ With **integrated electronics**, up to +180 °C
- ✓ With **external electronics**, up to +230 °C
- ✓ Excellent **long-term reliability**

TECHNICAL DATA

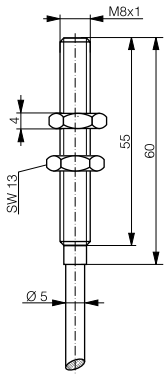
(according to IEC 60947-5-2)	
Housing material	Stainless steel V2A
Degree of protection	IP 67
Max. ripple content	≤ 15 % U_B / ≤ 20 % U_B (amplifier)
No-load supply current	≤ 10 mA / ≤ 5 mA (amplifier)
Leakage current at output	≤ 0,1 mA
Voltage drop, switched state	≤ 2,0 V
Temperature drift % s_r	≤ 15 %
Hysteresis % s_r	see data sheets
Repeat accuracy	≤ 0,02 mm
Short-circuit protection	Built-in
Polarity reversal protection	Built-in
Power-on reset	---

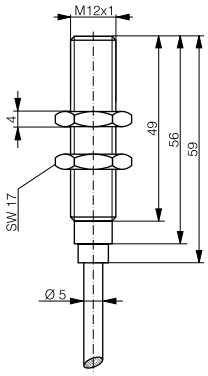
Sensors for ambient temperatures of up to +230 °C with high long-term reliability, even in difficult operating conditions. Models for temperatures of up to +180 °C with integrated electronics; for devices up to +230 °C, electronics are built into a separate housing, and thus removed from the hot area. Particularly suited for

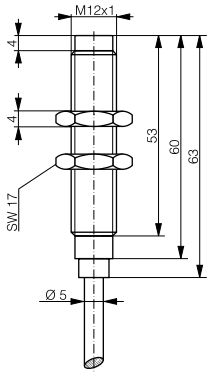
- ✓ **galvanizing**
- ✓ **Paint shops in automotive industry**
- ✓ **glass manufacturing**
- ✓ **brick factories**
- ✓ **bakery machines**
- ✓ **carbon-fiber production**
- ✓ **food processing**

HOUSING SIZE	M8	M12	
OPERATING DISTANCE MM	2	3	4

0 ... +140 °C	0 ... +150 °C	0 ... +150 °C







[1] Non-standard cable lengths and types on request.
[2] see page 133
[3] see page 268

TECHNICAL DATA

Connection [1]	Silicone cable 2 m*	Silicone cable 2 m*	Silicone cable 2 m*
Amplifier	Built-in	Built-in	Built-in
Mounting	Embeddable	Embeddable	Non-embeddable
Max. switching frequency	600 Hz	500 Hz	500 Hz
Wiring [2]	Diagram 1	Diagram 1	Diagram 1
LED	---	---	---
Supply voltage range	10 ... 30 VDC	10 ... 30 VDC	10 ... 30 VDC
Ambient temperature range	0 ... +140 °C	0 ... +150 °C	0 ... +150 °C
Output current	120mA (≤100°C)/80mA (>100°C)	120mA (≤100°C)/70mA (>100°C)	120mA (≤100°C)/70mA (>100°C)
Approvals	CE, RoHS	CE, RoHS	CE, RoHS

PART REFERENCES: (**BOLD:** PREFERRED TYPES)

NPN N.O.	**DW-HD-621-M8-100**	**DW-HD-601-M12-200**	**DW-HD-611-M12-200**
NPN N.C.			
PNP N.O.	**DW-HD-623-M8-100**	**DW-HD-603-M12-200**	**DW-HD-613-M12-200**
PNP N.C.			
Compatible connectors [3]			

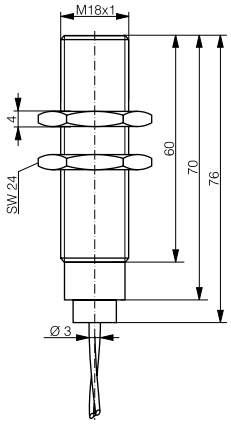
* Teflon cable on request

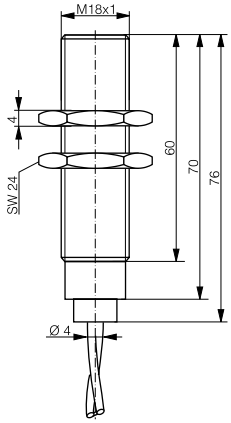
HOUSING SIZE	M18		
OPERATING DISTANCE MM	5	5	8

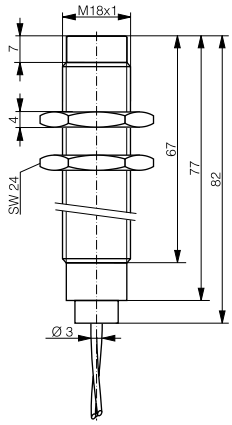
0 ... +180 °C

0 ... +230 °C

0 ... +180 °C







[1] Non-standard cable lengths and types on request.
[2] see page 133
[3] see page 268

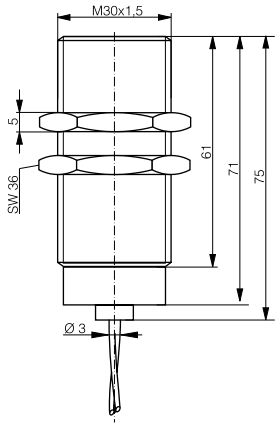
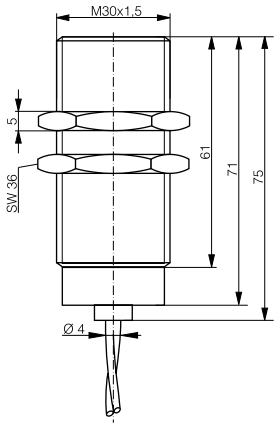
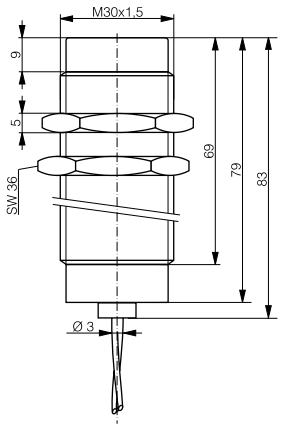
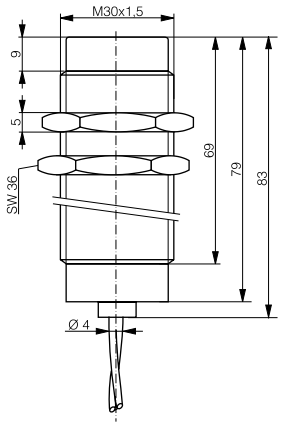
TECHNICAL DATA

Connection [1]	Teflon cable 2 m	Teflon cable 3 m + PUR 2 m	Teflon cable 2 m
Amplifier	Built-in	In cable	Built-in
Mounting	Embeddable	Embeddable	Non-embeddable
Max. switching frequency	400 Hz	300 Hz	400 Hz
Wiring [2]	Diagram 1	Diagram 1	Diagram 1
LED	---	Yellow (amplifier)	---
Supply voltage range	10 ... 30 VDC	10 ... 30 VDC (amplifier)	10 ... 30 VDC
Ambient temperature range	0 ... +180 °C	0 ... +230 °C	0 ... +180 °C
Output current	≤ 150 mA	≤ 200 mA (amplifier)	≤ 150 mA
Approvals	CE, RoHS	CE, RoHS	CE, RoHS

PART REFERENCES: (**BOLD:** PREFERRED TYPES)

NPN N.O.	**DW-HD-601-M18-310**	**DW-HD-601-M18-411**	**DW-HD-611-M18-310**
NPN N.C.			
PNP N.O.	**DW-HD-603-M18-310**	**DW-HD-603-M18-411**	**DW-HD-613-M18-310**
PNP N.C.			
Compatible connectors [3]			

M30

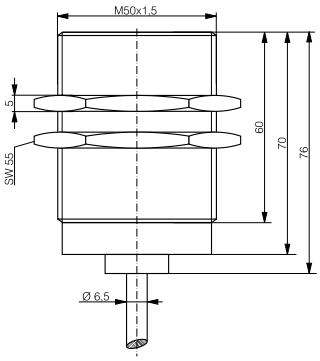
10	10	15	15
0 ... +180 °C	0 ... +230 °C	0 ... +180 °C	0 ... +230 °C
			

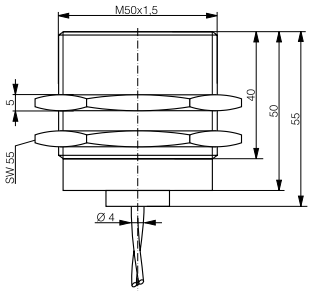
Teflon cable 2 m	Teflon cable 3 m + PUR 2 m	Teflon cable 2 m	Teflon cable 3 m + PUR 2 m
Built-in	In cable	Built-in	In cable
Embeddable	Embeddable	Non-embeddable	Non-embeddable
200 Hz	200 Hz	200 Hz	150 Hz
Diagram 1	Diagram 1	Diagram 1	Diagram 1
---	Yellow (amplifier)	---	Yellow (amplifier)
10 ... 30 VDC	10 ... 30 VDC (amplifier)	10 ... 30 VDC	10 ... 30 VDC (amplifier)
0 ... +180 °C	0 ... +230 °C	0 ... +180 °C	0 ... +230 °C
≤ 150 mA	≤ 200 mA (amplifier)	≤ 150 mA	≤ 200 mA (amplifier)
CE, RoHS	CE, RoHS	CE, RoHS	CE, RoHS

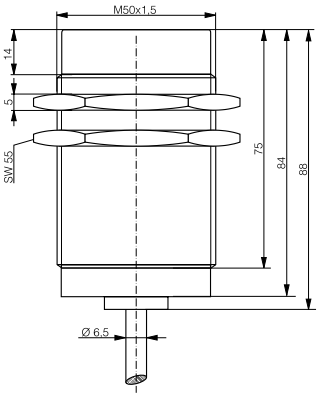
DW-HD-601-M30-310	**DW-HD-601-M30-411**	**DW-HD-611-M30-310**	**DW-HD-611-M30-411**
DW-HD-603-M30-310	**DW-HD-603-M30-411**	**DW-HD-613-M30-310**	**DW-HD-613-M30-411**

HOUSING SIZE	M50		
OPERATING DISTANCE MM	20	20	25

0 ... +180 °C	0 ... +230 °C	0 ... +180 °C







[1] Non-standard cable lengths and types on request.
[2] see page 133
[3] see page 268

TECHNICAL DATA

Connection [1]	Silicone cable 2 m*	Teflon cable 3 m + PUR 2 m	Silicone cable 2 m*
Amplifier	Built-in	In cable	Built-in
Mounting	Quasi-embeddable	Quasi-embeddable	Non-embeddable
Max. switching frequency	100 Hz	150 Hz	100 Hz
Wiring [2]	Diagram 1	Diagram 1	Diagram 1
LED	---	Yellow (amplifier)	---
Supply voltage range	10 ... 30 VDC	10 ... 30 VDC (amplifier)	10 ... 30 VDC
Ambient temperature range	0 ... +180 °C	0 ... +230 °C	0 ... +180 °C
Output current	≤ 150 mA	≤ 200 mA (amplifier)	≤ 150 mA
Approvals	CE, RoHS	CE, RoHS	CE, RoHS

PART REFERENCES: (**BOLD:** PREFERRED TYPES)

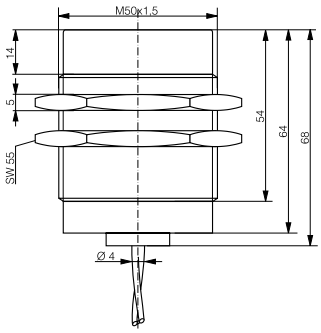
NPN N.O.	**DW-HD-601-M50-300**	**DW-HD-601-M50-411**	**DW-HD-611-M50-300**
NPN N.C.			
PNP N.O.	**DW-HD-603-M50-300**	**DW-HD-603-M50-411**	**DW-HD-613-M50-300**
PNP N.C.			
Compatible connectors [3]			

* Teflon cable on request

M50

25			

0 ... +230 °C



Teflon cable 3 m + PUR 2 m			
In cable			
Non-embeddable			
150 Hz			
Diagram 1			
Yellow (amplifier)			
10 ... 30 VDC (amplifier)			
0 ... +230 °C			
≤ 200 mA (amplifier)			
CE, RoHS			

DW-HD-611-M50-411			
DW-HD-613-M50-411			