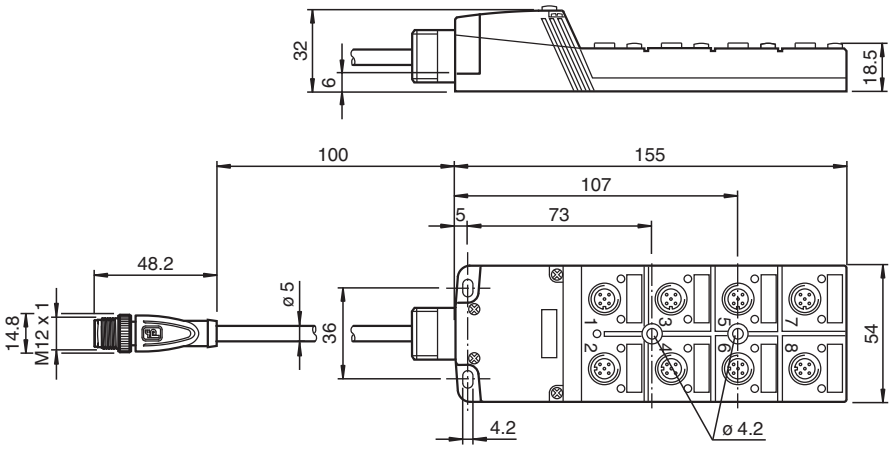
WIS module secondary

NDS-F146-8E2-V1

- 8 channels
- 8 sensor inputs
- Fast, flexible installation/separation

Inductive transmitter system

Dimensions



Technical Data

Nominal ratings		
Number of signal channels		8
Signal transfer direction		from secondary side to primary side
Sensor supply voltage		12 V ± 10 % , overload and short-circuit resistant
Ripple		≤ 5 %
Transfer power		max. 2.5 W (1.5 W at 5 mm)
Load step		≤ 100 mA
Functional safety related parameters		
$MTTF_d$		465 a
Mission Time (T_M)		20 a
Diagnostic Coverage (DC)		0 %
Input		
Number		8
Input type		Input for sensor signals
Connectable sensor types		DC, 3-wire , PNP (switched high)
Input current		≤ 1 mA
Internal resistor		≥ 15 kΩ

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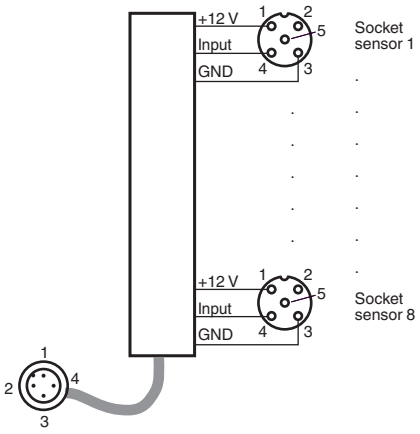
Technical Data

Compliance with standards and directives		
Directive conformity		
EMC Directive 89/336/EEC		EN 61000-6-2:2001, EN 61000-6-4:2001, EN 50295:1999
Standard conformity		
Standards		EN IEC 60947-5-2
Approvals and certificates		
CCC approval		CCC approval / marking not required for products rated ≤36 V
Ambient conditions		
Ambient temperature		0 ... 50 °C (32 ... 122 °F)
Storage temperature		-25 ... 85 °C (-13 ... 185 °F)
Mechanical specifications		
Degree of protection		IP65
Material		
Housing		PA 66-FR
Installation		screw mounting
Mass		140 g
General information		
Note		Maximum cable length between WIS module and WIS transmitter must not exceed 5 m.

Connection



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Function

Functional description

A WIS (**w**ireless **i**nductive **s**ystem) inductive transfer system always consists of the following four components:

- WIS primary module
- WIS primary transmitter
- WIS secondary transmitter
- WIS secondary module

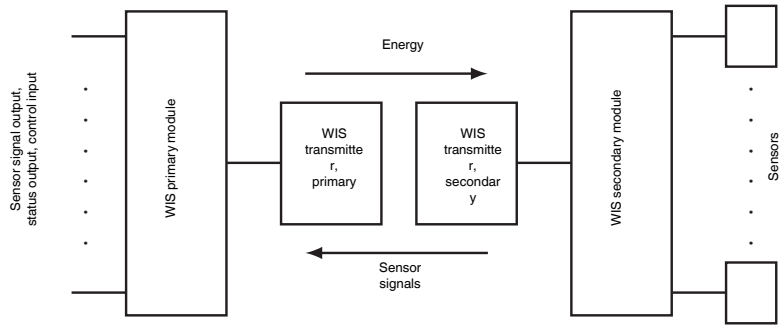
The WIS primary module is installed in the stationary component and is connected to a downstream control (i.e., PLC). The WIS primary transmitter connected to the WIS primary module. The WIS secondary transmitter and the WIS secondary module that is connected to it are installed in the moveable part of the component. The WIS secondary module disposes of connection capabilities for several sensors. If the two transmitters are located in front of each other within the system range, then electric power is transferred from the primary side to the secondary side. The sensors attached to the WIS secondary module are now supplied with electric energy and begin to operate. The sensor output signals are transmitted in the opposite direction from the secondary side to the primary side and are separately available on the WIS promary module output terminals for further processing by the equipment control. The sensor signal status is also displayed by LEDs that correspond to the sensor channels.

A separate output signal Tx on the WIS primary module indicates the communication status. A high signal indicates communication between the WIS transmitters. This is also indicated by a glowing LED Tx.

Power transfer and communication in the system can be activated and deactivated on the WIS primary module with the EN input .

Input signal on EN	Function
+ UB (24 V DC)	Transfer activated
GND or open.	Transfer deactivated

Function schematic



The sum of the currents of all sensors attached to the WIS secondary module must not be greater than the maximum transferable current. This is calculated by dividing the transferable power by the 12 V provided by the transmitters.

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