



# WI180C-PN

Fieldbus modules

INTEGRATION MODULES AND ADAPTERS

**SICK**  
Sensor Intelligence.



## Ordering information

Type	part no.
WI180C-PN	6068088

Other models and accessories → [www.sick.com/Fieldbus\\_modules](http://www.sick.com/Fieldbus_modules)



## Detailed technical data

### Features

<b>Product segment</b>	Integration modules and adapters
<b>Product</b>	Fieldbus modules
<b>Description</b>	PROFINET coupler for WLL180T, KTL180 and AOD1. Features: PROFINET IRT; transmission rates 10 Mbaud – 100 Mbaud; M12 PROFINET connection; M8 voltage supply connection, 4-pin; full read/write functionality for the process and service data of the connected sensors. See operating instructions for additional information and technical details
<b>Enclosure rating</b>	IP54
<b>Dimensions (W x H x L)</b>	39 mm x 36.3 mm x 102.35 mm

### Classifications

<b>ECLASS 5.0</b>	27242202
<b>ECLASS 5.1.4</b>	27242602
<b>ECLASS 6.0</b>	27242602
<b>ECLASS 6.2</b>	27242602
<b>ECLASS 7.0</b>	27242602
<b>ECLASS 8.0</b>	27242602
<b>ECLASS 8.1</b>	27242602
<b>ECLASS 9.0</b>	27242602
<b>ECLASS 10.0</b>	27242602
<b>ECLASS 11.0</b>	27242602
<b>ECLASS 12.0</b>	27242602
<b>ETIM 5.0</b>	EC001597
<b>ETIM 6.0</b>	EC001597
<b>ETIM 7.0</b>	EC001597

<b>ETIM 8.0</b>	EC001597
<b>UNSPSC 16.0901</b>	32151705

Certificates

<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓
<b>China RoHS</b>	✓
<b>cRUus certificate</b>	✓
<b>Information according to Art. 3 of Data Act (Regulation EU 2023/2854)</b>	✓

### Technical data

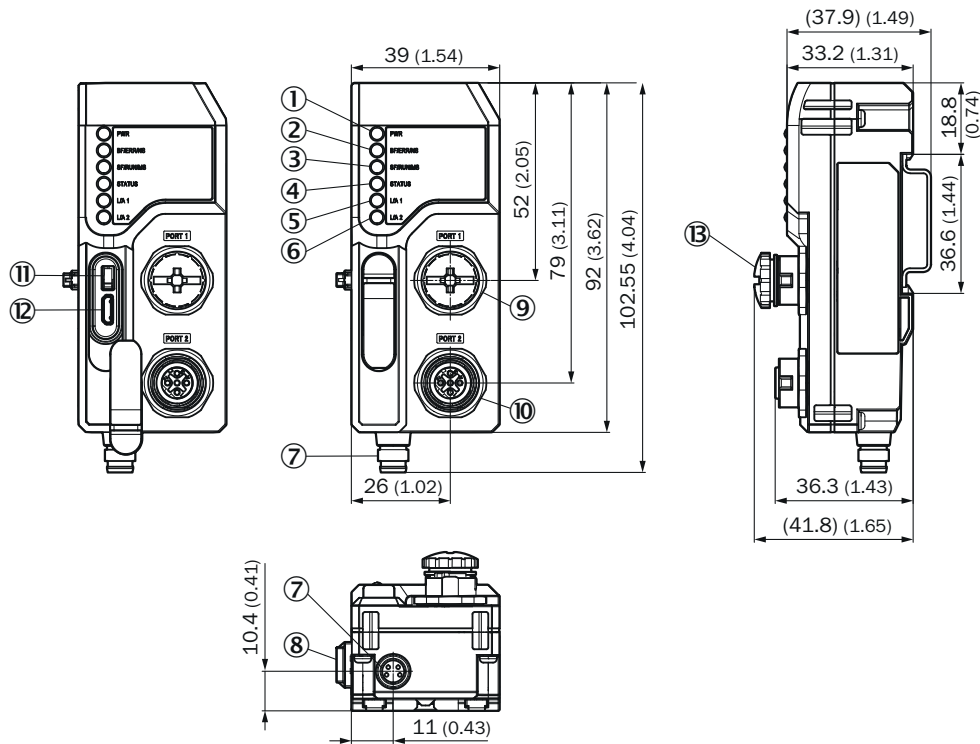
<b>Electrical</b>	Supply voltage	12 – 24 VDC ±10 %
	Power consumption (without connected devices)	3 W
	Switch-on delay	1000 ms
	Switch-on delay (overall system)	2000 ms
	LEDs	PWR, BF/ERR/NS, SF/RUN/MS, STATUS, L/A1, L/A2
	Power supply	Male M8 plug connector, 4-pin
	Other interfaces	Male bus connector, 5-pin, internal system bus 2 x M12 4-pin D-coded, PROFINET
	<b>PROFINET IO</b>	Maximum number of modules to be connected
Transmission speed		100 MBit/s
Maximum distance between nodes		100 m
Process data		Depending on selected modules Max. 44 bytes input, 4 bytes output Min. cycle time 1 ms
Asynchronous data		supported
Compliant standard		IEEE802.3u (100Base-Tx)
Conformance class		Class C (PROFINET IRT)
Netload class		III
Ethernet ports		2
PROFINET features		Media Redundancy (MRP), network diagnostic (MIB/SNMP), topology detection, port diagnostic (Up/Down), connection diagnostic (connection length measurement), I&MO..4, auto device replacement, reduction ratio, openVAS tested
GSD file		available (V2.2, V2.32, V2.33, V2.34)
<b>EMC</b>	Noise immunity (Length of cable ≤30 m)	in accordance with EN 61000-6-2/ EN 61131-2
	Emission	in accordance with EN 55011, class A
<b>Product safety</b>	Protection class	3
	Short-circuit protection	in accordance with VDE 0160
<b>Mechanical</b>	Protection category	IP54 <sup>1</sup>
	Sensitivity to vibrations	IEC 60068, 10 – 55 Hz
	Shock resistance	IEC 60068, 500 m/s <sup>2</sup> (~50 g)
	Housing material	Polycarbonate
	Dimensions (HxWxD) in mm	39 x 102.55 x 36.3
<b>Environmental parameters</b>	Air humidity (operation/storage)	35 – 85 % relative humidity
	Temperature range (storage)	-40 – +70 °C
	Temperature range (Operation, ≤3 connected devices)	-25 – +55 °C <sup>1</sup>
	Temperature range (Operation, ≤8 connected devices)	-25 – +50 °C <sup>1</sup>
	Temperature range (Operation, ≤16 connected devices)	-25 – +45 °C <sup>1</sup>

<sup>1</sup> Valid, if WI180C-PN is connected via internal system bus with modules which fulfill IP54

<sup>1</sup> Temperature ranges valid if no output current on connected devices

### Dimensions in mm (inch)

## Dimensional drawing

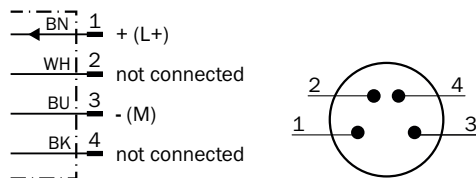


Dimensions in mm (inch)

- ① PWR-LED
- ② BF/ERR/NS-LED
- ③ SF/RUN/MS-LED
- ④ status LED
- ⑤ L/A1-LED
- ⑥ L/A2-LED
- ⑦ Power connection: male connector M8, 4-pin
- ⑧ Bus male connector, 5-pin
- ⑨ D-coded M12 plug connector, 4-pin, PROFINET/Ethernet
- ⑩ D-coded M12 plug connector, 4-pin, PROFINET/Ethernet
- ⑪ factory reset button
- ⑫ Service port (USB, Micro-B)
- ⑬ M12 connector cap (accessory)

## Anschlusschema Cd-416

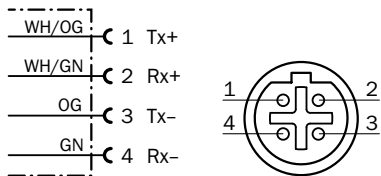
Supply voltage port



Pin	Pin assignment	Wire color	Description
1	L+	Brown	+12 ... 24 VDC
2	n.c.	n/a	Not assigned
3	M	Blue	GND
4	n.c.	n/a	Not assigned

### Anschlusschema Cd-409

PROFINET port 1 and 2 (M12 male connector, 4-pin, D-coded)






M12 (D-coded)

Pin	Pin assignment	Wire color	Description
1	Tx+	White/orange	Send data signal, not inverted
2	Rx+	White/green	Receive data signal, not inverted
3	Tx-	Orange	Send data signal, inverted
4	Rx-	Green	Receive data signal, inverted

### Recommended accessories

Other models and accessories → [www.sick.com/Fieldbus\\_modules](http://www.sick.com/Fieldbus_modules)

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li> <li><b>Connection type head B:</b> Male connector, M12, 4-pin, straight, D-coded</li> <li><b>Signal type:</b> PROFINET</li> <li><b>Cable:</b> 2 m, 4-wire, CAT5, CAT5e, PVC</li> <li><b>Description:</b> PROFINET, shielded</li> </ul>	SSL-1204-G02MZ90	6048241
	<ul style="list-style-type: none"> <li><b>Description:</b> PROFINET, shielded</li> <li><b>Connection type head A:</b> Male connector, M12, 4-pin, straight, D-coded</li> <li><b>Connection type head B:</b> Male connector, RJ45, 4-pin, straight</li> <li><b>Signal type:</b> PROFINET</li> <li><b>Cable:</b> 2 m, 4-wire, CAT5, CAT5e, PVC</li> </ul>	SSL-2J04-G02MZ60	6048244
	<ul style="list-style-type: none"> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Connection type head A:</b> Female connector, M8, 4-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Sensor/actuator cable</li> <li><b>Cable:</b> 5 m, 4-wire, PVC</li> <li><b>Application:</b> Uncontaminated zones, Zones with chemicals</li> </ul>	YG8U14-050VA3XLEAX	2095963

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)