



WI180C-EC

Fieldbus modules

INTEGRATION MODULES AND ADAPTERS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
WI180C-EC	6068089

Other models and accessories → www.sick.com/Fieldbus_modules

Detailed technical data

Features

Accessory group	Fieldbus modules
Description	EtherCAT coupler for WLL180T, KTL180 and AOD1. Features: EtherCAT; transmission rates of up to 100 Mbaud; M12 EtherCAT 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
Enclosure rating	IP54
Dimensions (W x H x L)	39 mm x 36.3 mm x 102.35 mm

Certificates

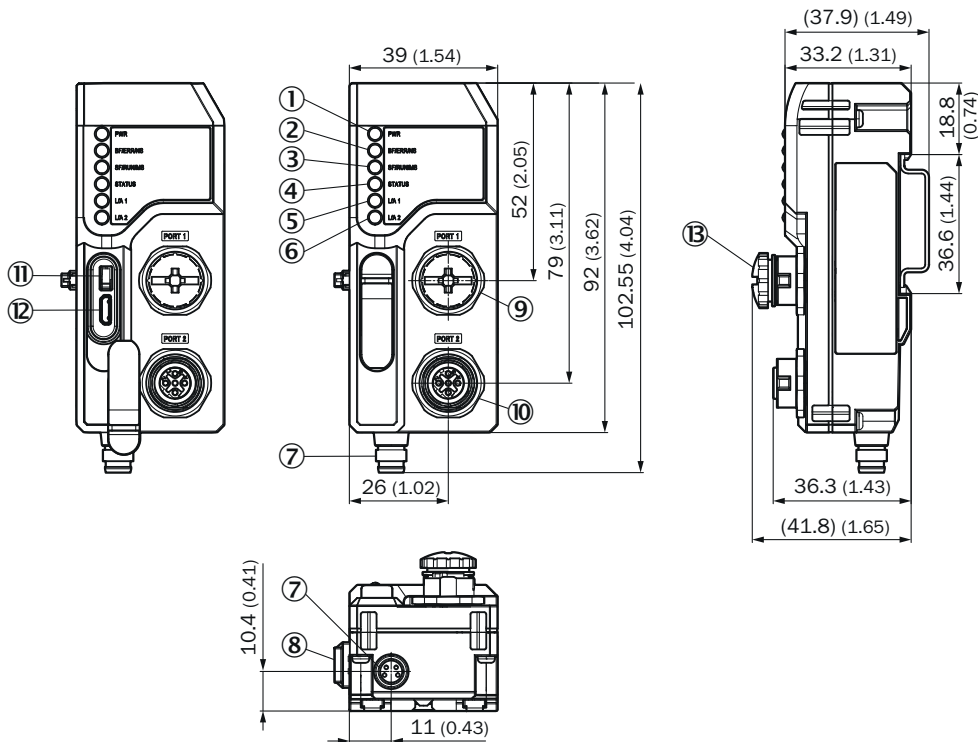
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cRUus certificate	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

Classifications

ECLASS 5.0	27242202
ECLASS 5.1.4	27242602
ECLASS 6.0	27242602
ECLASS 6.2	27242602
ECLASS 7.0	27242602
ECLASS 8.0	27242602

ECLASS 8.1	27242602
ECLASS 9.0	27242602
ECLASS 10.0	27242602
ECLASS 11.0	27242602
ECLASS 12.0	27242602
ETIM 5.0	EC001597
ETIM 6.0	EC001597
ETIM 7.0	EC001597
ETIM 8.0	EC001597
UNSPSC 16.0901	32151705

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)

Technical data

Electrical	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, EtherCAT
EtherCAT	Maximum number of modules to be connected	16
	Transmission speed	100 MBit/s
	Maximum distance between nodes	100 m
	Process data	Depending on selected modules 12 bytes input and 6 bytes output Gateway 8 bytes input and 3 bytes output per module Minimum cycle time: TBD
	Asynchronous data	Service data objects (SDOs) over CANopen-over-EtherCAT (CoE)
	Compliant standard	IEEE802.3u (100Base-Tx)
	Ethernet ports	2
	ESI file	Available on www.sick.com
EMC	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
Product safety	Protection class	3
	Short-circuit protection	in accordance with VDE 0160
Mechanical	Protection category	IP54 ¹
	Sensitivity to vibrations	IEC 60068, 10 – 55 Hz
	Shock resistance	IEC 60068, 500 m/s ² (~50 g)
	Housing material	Polycarbonate
	Dimensions (HxWxD) in mm	39 x 102.55 x 36.3

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

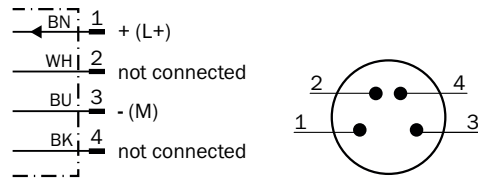
Environmental parameters	Air humidity (operation/storage)	35 – 85 % relative humidity
	Temperature range (storage)	-40 – +70 °C
	Temperature range (Operation, ≤3 connected devices)	-25 – +55 °C ¹
	Temperature range (Operation, ≤8 connected devices)	-25 – +50 °C ¹
	Temperature range (Operation, ≤16 connected devices)	-25 – +45 °C ¹

¹ Temperature ranges valid if no output current on connected devices

Dimensions in mm (inch)

Anschlusschema Cd-416

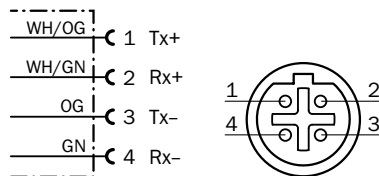
Supply voltage port



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-433

EtherCAT 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

	Brief description	Type	part no.
connectors and cables			
	• Connection type head A: Male connector, M12, 4-pin, straight, D-coded • Connection type head B: Male connector, M12, 4-pin, straight, D-coded • Signal type: PROFINET • Cable: 2 m, 4-wire, CAT5, CAT5e, PVC • Description: PROFINET, shielded	SSL-1204-G02MZ90	6048241
	• Connection type head A: Male connector, M12, 4-pin, straight, D-coded • Connection type head B: Male connector, RJ45, 4-pin, straight • Signal type: PROFINET • Cable: 2 m, 4-wire, CAT5, CAT5e, PVC • Description: PROFINET, shielded	SSL-2J04-G02MZ60	6048244
	• Connection type head A: Female connector, M8, 4-pin, angled, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Uncontaminated zones, Zones with chemicals	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:

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