



WI180C-EC

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
WI180C-EC	6068089

Other models and accessories → www.sick.com/

Detailed technical data

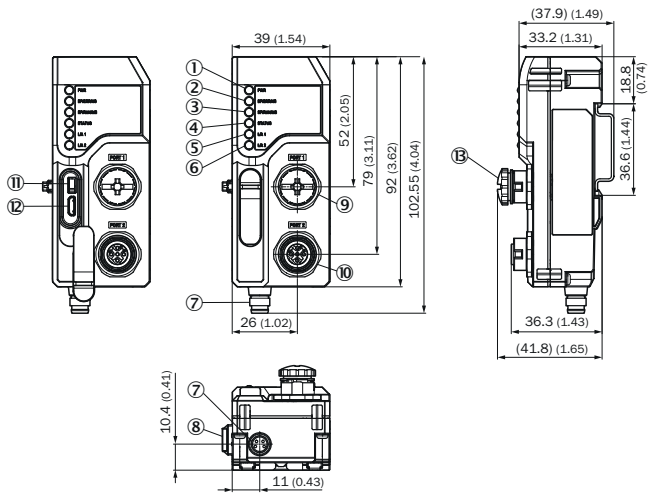
Technical specifications

Accessory family	Fieldbus modules
Enclosure rating	IP54
Dimensions (W x H x L)	39 mm x 36.3 mm x 102.35 mm
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

Classifications

ECl@ss 5.0	27242202
ECl@ss 5.1.4	27242602
ECl@ss 6.0	27242602
ECl@ss 6.2	27242602
ECl@ss 7.0	27242602
ECl@ss 8.0	27242602
ECl@ss 8.1	27242602
ECl@ss 9.0	27242602
ECl@ss 10.0	27242602
ECl@ss 11.0	27242602
ETIM 5.0	EC001597
ETIM 6.0	EC001597
ETIM 7.0	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
EtherCAT	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
	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

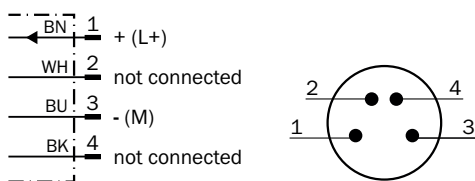
Environmental parameters	Air humidity (operation/storage)	35 - 85 % relative humidity
	Temperature range (storage)	-40 - +70 °C
	Temperature range (Operation, ≤3 connected devices)	-25 - +55 °C ¹
	Temperature range (Operation, ≤8 connected devices)	-25 - +50 °C ¹
	Temperature range (Operation, ≤16 connected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

¹ Temperature ranges valid if no output current on connected devices

Anschlusschema

Cd-416

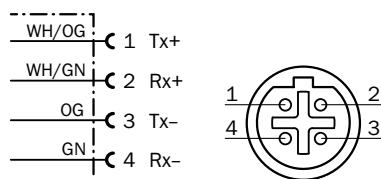
Supply voltage port



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

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/

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M8, 4-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YG8U14-050VA3XLEAX	2095963
	Head A: male connector, M12, 4-pin, straight, D-coded Head B: male connector, M12, 4-pin, straight, D-coded Cable: PROFINET, PVC, shielded, 2 m	SSL-1204-G02MZ90	6048241
	Head A: male connector, M12, 4-pin, straight, D-coded Head B: male connector, RJ45, 4-pin, straight Cable: PROFINET, PVC, shielded, 2 m	SSL-2J04-G02MZ60	6048244

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