For Signal Acquisition at the Machine Level

Passive M8/M12 sensor/actuator boxes are placed close to the process and acquire signals at the machine level. They can be used under very harsh environmental conditions and establish the connection between sensors/actuators and the controller via molded or detachable cables. Use of standardized pluggable connections supports sensor and actuator plug & play, while the use of trunk cables replaces the individual wiring of I/O signals to automation components in the control cabinet. Cabling is well-organized and minimized.

Signal Acquisition in Exceptionally Harsh Conditions

WAGO's sensor/actuator boxes with molded cable (72 hours at 1 m water depth) have an extremely robust design and meet both IP67 and IP68 protection standards. This design makes them ideal for applications where signals must be recorded in extreme environments (temperature, shock, vibration) without a control cabinet. They're also excellent alternatives when the use of an active IP67 I/O system would not be cost-effective due to a low signal count or the simple signal conditions (only digital signal acquisition/output).

Plug-&-Play Connection Technology

The IP67 sensor/actuator boxes with a removable connecting cable (M16 or M23 pluggable connector) are ideal for areas where frequent easy disconnection and reconnection are required (e.g., transport, modification, service).

Fixed Trunk Cable

The IP68 sensor/actuator boxes with molded cables are preferred when challenging cable paths do not allow the use of preassembled M16/M23 cables.

Extreme Mechanical Performance

A system/machine is exposed to severe mechanical and thermal influences. It is important to process its signals despite severe vibrations and shocks. The sensor/actuator boxes are used at the machine level. Full encapsulation safeguards system operation, so that even extreme vibration and temperature loads do not degrade signal acquisition and power supply via the connecting cable to the controller or other automation components located in the non-critical control cabinet area.

Flexible Assembly

The sensor/actuator boxes can be mounted directly on the machine. Extensive engineering ensures compliance with standardized specifications from CNOMO guidelines regarding the spacing of assembly drill holes that are often used in passive distribution boxes or sensor/actuator boxes. An optional adapter is available that can be used to mount two modules seamlessly side by side. This has the advantage of maintaining a defined distance for proper routing of the sensor/actuator cables and of avoiding contamination points.

Advantages:

- Rugged, simple and compact extension for IP20 automation components
  - For stricter requirements on environmental conditions
  - For plug-and-play connector technology when needed
  - For simpler cable installation in the form of trunk cables
- High-quality PUR connection cables (drag chains compatible, halogen-free)
- Fully encapsulated (resistance and leak-proof)
- Flange sockets (metal design)
- Surrounding air temperature (operation): -25 … +80°C
- Status LEDs

Sensor/Actuator Boxes
Item Number Key

Explanation of item number key's components

Series

Item No.: 757-abc/x00-0yy

a: Design
- 1: M12 sensor/actuator box with M23 connector
- 2: M12 sensor/actuator box with cable connector
- 3: M8 sensor/actuator box with M16 connector
- 4: M8 sensor/actuator box with cable connector

b: Number of M8/M12 connectors
- 4: 4 ea.
- 6: 6 ea.
- 8: 8 ea.
- 0: 10 ea.

c: Pole number
- 3: 3-pole
- 4: 4-pole
- 5: 5-pole

x00: Status LEDs
- 100: Without status LEDs

0yy: Length of connecting cable
- 002: 2 m
- 005: 5 m
- 010: 10 m
- 025: 25 m

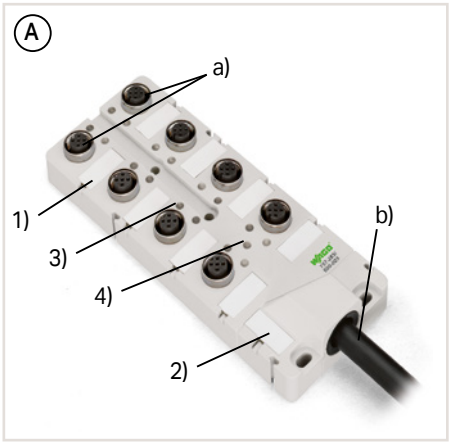
Standards and Rated Conditions

General Specifications	
Electrical Data	
Contact resistance (max.)	10 mΩ
Supply voltage	10 … 30 VDC
Current carrying capacity (signal connections)	2 A
Current carrying capacity (supply connections)	9 A (M12) or 6 A (M8)
Signal characteristic	PNP
Mechanical Data	
Protection type	
Sensor/actuator boxes with cable connection	IP68 (72 hours at 1 m water depth)
Sensor/actuator boxes with M16/M23 connection	IP67
Surrounding air temperature (operation)	-25 … +80 °C
Mounting	Screw mount
Mounting position	Any
Vibration resistance	5g per IEC 60068-2-6
Shock resistance	49g per IEC 60068-2-27
Material Data	
Housing material	PA 66 (UL 94 V0); RAL 7035; silicon and halogen free
Encapsulation	Fully encapsulated with conformal coating (UL 94 V0)
Connecting cable	Suitable for drag chains

Approvals

Overview of the approvals in the item comparison in Section 11, Technical Section, or online at www.wago.com

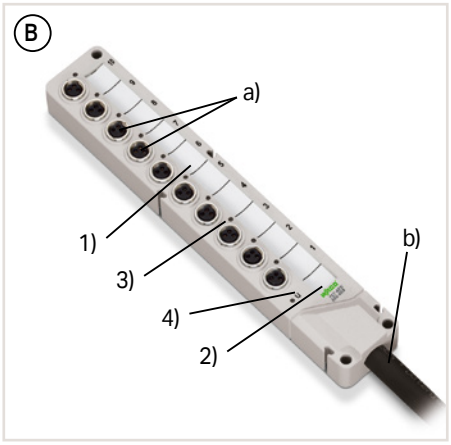
Sensor/Actuator Boxes
Interfaces and Types



(1) Sensor/actuator marking
(2) Module marking
(3) LED status indicator (by channel), yellow
(4) LED operating indicator module, green

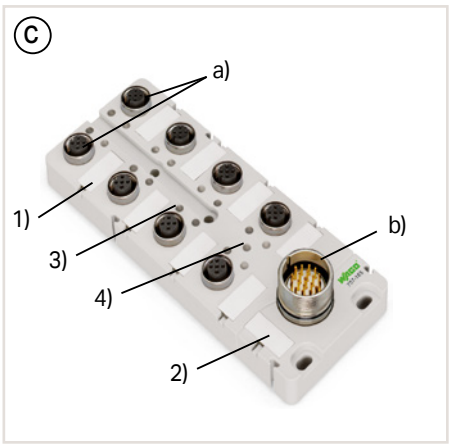
Housing design (A)

- M12 sensor/actuator box with cable connection
- Sensor/actuator M12 sockets (a)
- Connection technology (trunk cable): Fixed connecting cable (b)



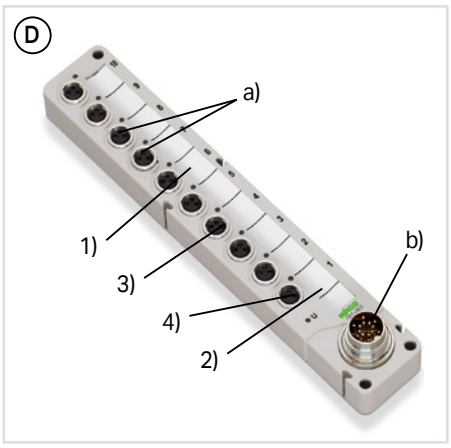
Housing design (B)

- M8 sensor/actuator box with cable connection
- Sensor/actuator M8 sockets (a)
- Connection technology (trunk cable): Fixed connecting cable (b)



Housing design (C)

- M12 sensor/actuator box with M23 connector
- Sensor/actuator connections M12 (a)
- Connection technology (trunk cable): M23 plug (b)

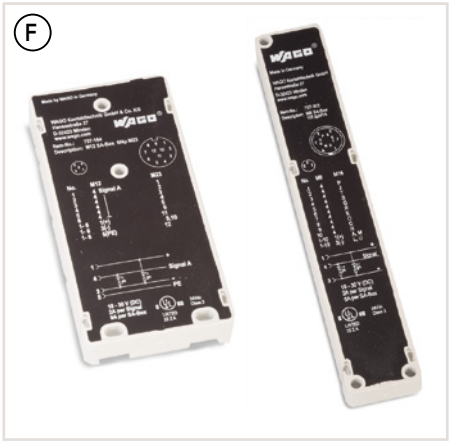


Housing design (D)

- M8 sensor/actuator box with M16 connector
- Sensor/actuator connections M8 (a)
- Connection technology (trunk cable): M16 plug (b)

Spacer module (E)

- Optional accessory
- For seamless assembly of two side-by-side sensor/actuator boxes
- Defined distance for proper cable connection
- Covers contamination points
- W x H x D (mm):
  10-way: 20 x 16 x 175
  8-way: 20 x 16 x 152
  6-way: 20 x 16 x 123
  4-way: 20 x 16 x 117



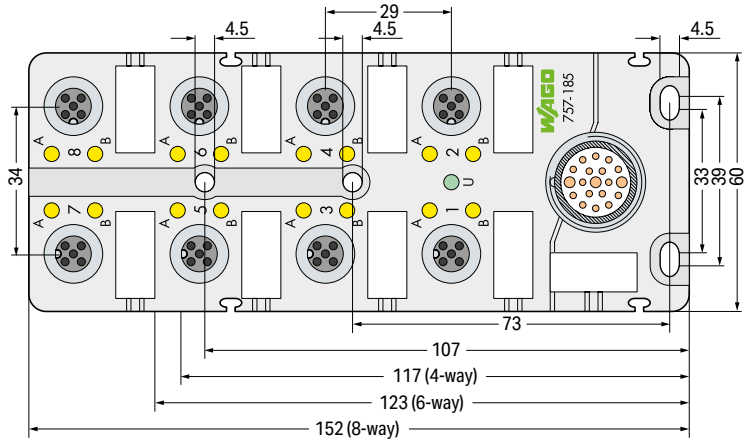
Protection class (F)

- All modules are fully encapsulated
- IP67/68 protection class
- Printing on back of module details pin assignment

Sensor/Actuator Boxes
Interfaces and Types

Dimensions and Mounting Dimensions of M12 Sensor/Actuator Boxes

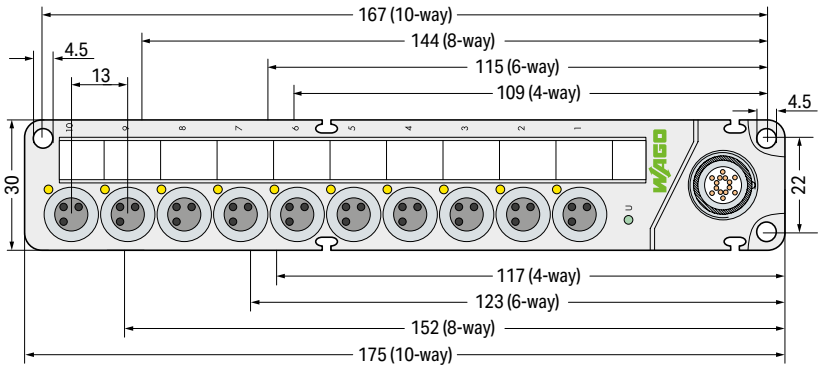
The dimensions also apply to M12 sensor/actuator boxes with cable connection.



Dimensions in mm

Dimensions and Mounting Dimensions of M8 Sensor/Actuator Boxes

The dimensions also apply to M8 sensor/actuator boxes with cable connection.



Dimensions in mm

Dimensions:

Depth of M12 sensor/actuator boxes or M8 sensor/actuator boxes