CONNECTORS AND CABLE SETS

FOR VALVES WITH INTEGRATED ELECTRONICS

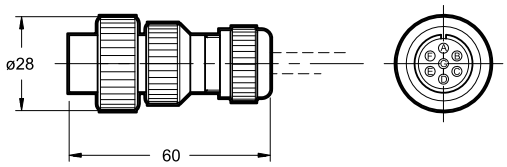
MATING CONNECTORS FOR MAIN CONNECTION

1 - FOR K11 CONNECTION - 6 PIN+PE

name: EX7S/L/10 **code: 3890000003**

metal connector 6-poles + PE, female, IP67

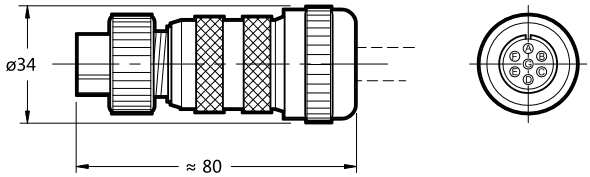
standard:	MIL-C-5015-G (EN 175201-804)
suitable cables:	Ø11 mm; up to 20 metres length
wire sizes:	cross section 1 mm²
contacts:	either solder or crimp
shield arranged:	yes



name: EX7S/L/10/4015 **code: 3890000012**

metal connector 6-poles + PE, female, IP67

standard:	MIL-C-5015-G (EN 175201-804)
suitable cables:	Ø18 mm, up to 40 metres length
conductor size:	from 0.75 to 1.5 mm²
contacts:	crimp contacts (included)
shield arranged:	yes

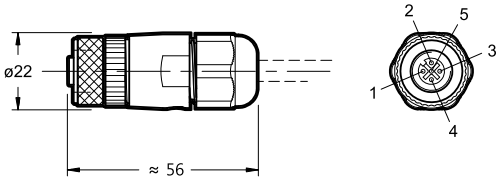


2 - FOR K12 CONNECTION - M12 5 PIN

name: EC5S/M12L/10 **code: 3491001001**

M12 connector, 5-poles, code A, female, IP65/67
glass filled plastic

standard:	IEC 61076-2-101
suitable cables:	Ø9 mm, up to 20 metres length
conductor size:	0.75 mm²
contacts:	screw contacts
shield:	yes

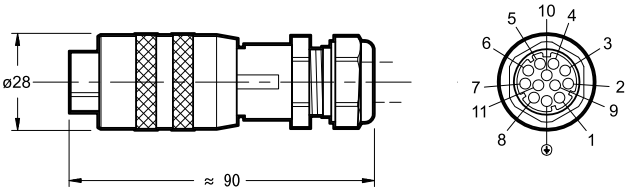


3 - FOR K16 CONNECTION - 11 PIN+PE

name: EX12S/L/10 **code: 3890000004**

Metal connector 11 poles + PE, shielded

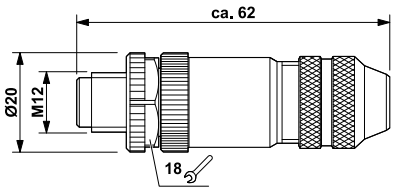
standard:	DIN 43651 (EN 175201-804)
suitable cables:	Ø15 mm up to 10 metres length
conductor size:	max 0.5 mm²
contacts:	crimp contacts



4 - MATING CONNECTORS FOR FIELDBUS COMMUNICATION

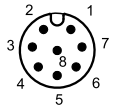
We offer metal connectors IEC 61076-2-101, shielded, with screw connection, IP 67, for fieldbus communication EtherCAT, Ethernet/IP, Profinet and Powerlink.

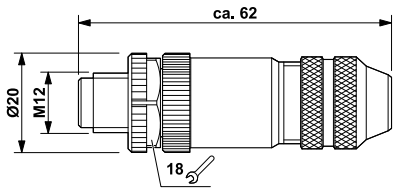
name: EX4P/M12DL/10 **code 3890000009**
connector M12 D 4 pin; external cable diameter 4 ÷ 6 mm
(X2, X3) male



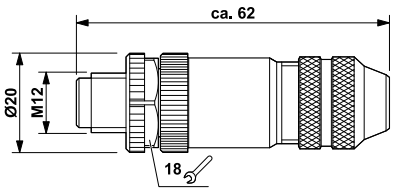
5 - TRANSDUCER MATING CONNECTORS

name: EX8P/M12AL/10 **code 3890000011**
connector for digital sensor type SSI / Encoder M12 A 8 pin
external cable diameter 6 ÷ 8 mm
(X7) male





name: EX4P/M12AL/10 **code 3890000010**
connector for analogue sensor M12 A 4 pin
external cable diameter 4 ÷ 6 mm
(X4) male



6 - PROTECTIVE CAPS FOR M12 CONNECTIONS

The use of caps is recommended to protect unused M12 electrical connections and to guarantee the declared IP degree of the valves.

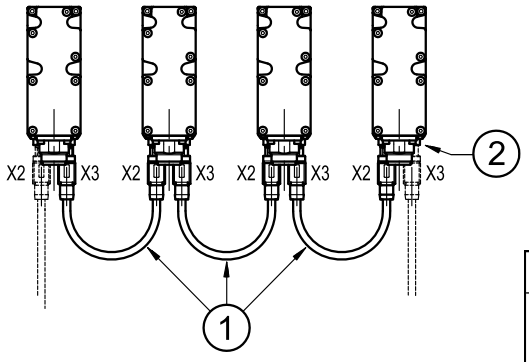
cap for female connection code **0672218**
cap for male connection code **0238914**

7 - CABLE SETS

We can supply cable sets for fieldbus communication connections X3 to X2 and sensor cables for X7 and X4 ports on request.

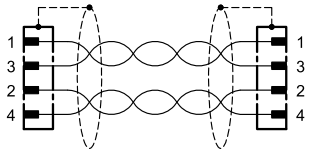
All cables are PUR halogen-free.

These molded cables are equipped with 'speed connect' connectors that allow a smaller overall than conventional connectors.

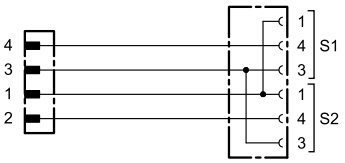
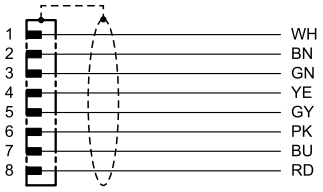


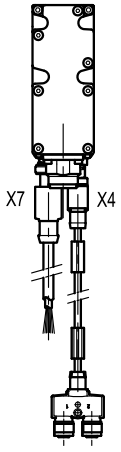
1	Network cable
2	Termination cap, or protective cap, or outgoing connection to other devices or (return) cable to the PLC

7.1 - Fieldbus cables X3 to X2

Fieldbus type	Cable description	Circuit diagram
Ethernet: EtherCAT Ethernet/IP Profinet Powerlink	Network cable, Ethernet CAT5 (100 Mbps), shielded. cable length: 0.5 m Plug straight M12 code D - plug straight M12 code D, IP67 ambient temperature: -25 ÷ 85 °C	
code: 3890001003		

7.2 - Sensor / actuator cables

Sensor type	Cable description	Circuit diagram
Analogue (X4) **code: 3890001004**	Sensor/actuator cable cable length: 0.6 m Plug straight M12 code A - double socket straight M12 code A IP65 / IP67 ambient temperature: -25 ÷ 90 °C	
Digital SSI / Encoder (X7) **code: 3890001005**	Sensor/actuator cable, shielded, cable length: 3 m Plug straight M12 code A - free cable end, unwired ambient temperature: -25 ÷ 90 °C	

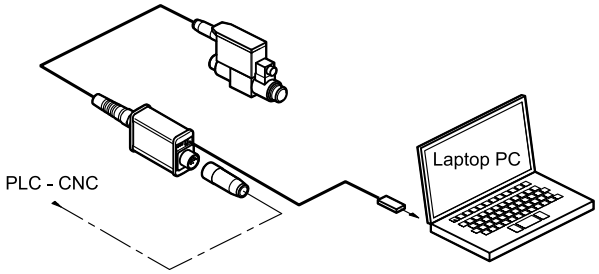


LINPC-USB*

TEST DEVICE FOR VALVES WITH INTEGRATED ELECTRONICS

SERIES 31

OPERATING PRINCIPLE



— The kit contains a test device with embedded cable to connect on the valve side, a USB cable for PC connection and a galvanic isolator. The dedicated software is available for download from our web site.

— The devices are suitable for troubleshooting and functional testing of Duplomatic proportional valves for open loop (type G, GH) and closed loop (type J, JH), series 20, 30-33, and for IO-Link or CANBus valves type L and JL.

— The software allows to check settings, diagnostics and permits to modify the standard parameter settings made in factory, adapting it to your system.

— No additional power supply is required: the devices use the supply source coming from the system cable.

TECHNICAL CHARACTERISTICS

Power supply	V DC	24 (19 ÷ 30)
Current consumption	mA	50
Valve side connection: LINPC-USB5 LINPC-USB7 LINPC-USB12		5 poles M12 6 poles + PE type MIL-C-5015-G (DIN 43563) 11 poles + PE (DIN 43651)
PC side connection		USB 2.0 cable
Electromagnetic compatibility (EMC)		according to 2014/30/EU EN 61000-6-4 (emissions) EN 61000-6-2 (immunity)
Housing dimensions	mm	104x63x40 + 2000 outgoing cable
Operating temperature range	°C	-20 / +60
Protection degree		IP 20

1 - IDENTIFICATION CODE

LIN	PC	-	USB		/	31

Serial communication protocol type LINbus

Device

Computer interface type

Series number

For connection type:
5 = 5 poles M12 (valves type GL and JL series 10)
7 = 6 poles + PE (valves type G and J series 20, 30, 31, 32 and 33)
12 = 11 poles + PE (valves type GH and JH series 31, 32 and 33)

2 - DESCRIPTION

The device acts as interface between the PC and the valve on-board electronics. It allows the customization of the parameters via software and diagnostics and troubleshooting, by means of the internal monitors available in the software (EBC for series 30, 31, 32and 33; EWMPC for series 20).

The kit includes:

- test device with embedded cable to be connected to the valve
- USB Cable 2.0 A - Male to Micro B (3 m).
- Galvanic isolator USB 2.0

WARNING! The LINPC USB connector is not galvanically isolated. Always use the galvanic isolator supplied with the kit.

Software and user manual are available for download at www.duplomatic.com. More details on device operation are available in the Software Manual.

The EBC software is compliant with Windows OS 7, 8 and 10.

3 - NOTES OF USE

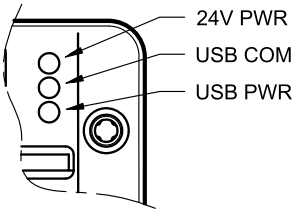
By connecting the LINPC device to a valve the monitor signal is cut-off to allow LINbus communication (pin 4 in LINPC-USB5, pin F in LINPC-USB7, pin 6 in LINPC-USB12).

This function can be managed via software.

For bench use, always make sure that the wiring in use corresponds to that of the valve to be connected.

The use of USB cables longer than 3 meters leads to a decline in communication quality. It is recommended to use the cable supplied with the kit.

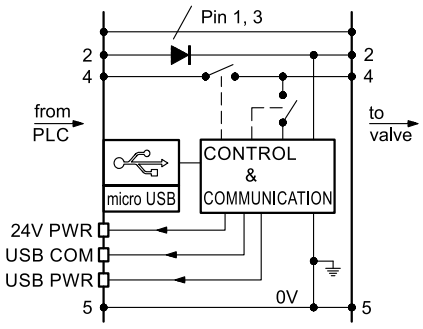
4 - LED



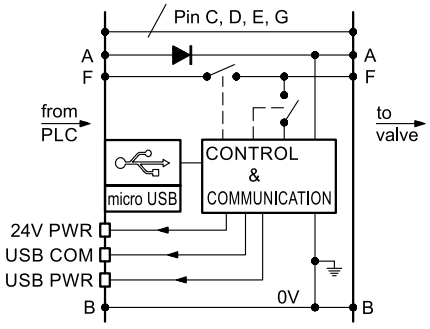
function	description
24V PWR (24V powered)	Main power supply 24V green indicates the device is powered by 24 V source coming from the system.
USB COM	USB communication red = [TX] transmission green = [RX] receiving
USB PWR (USB powered)	USB supply yellow indicates that the USB section is powered.

5 - BLOCK DIAGRAMS

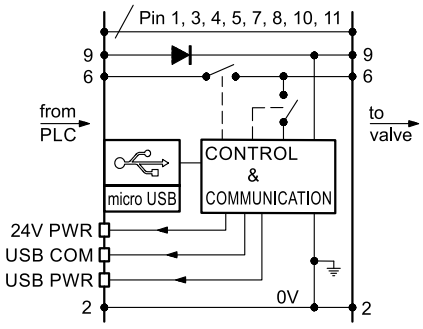
LINPC-USB5



LINPC-USB7

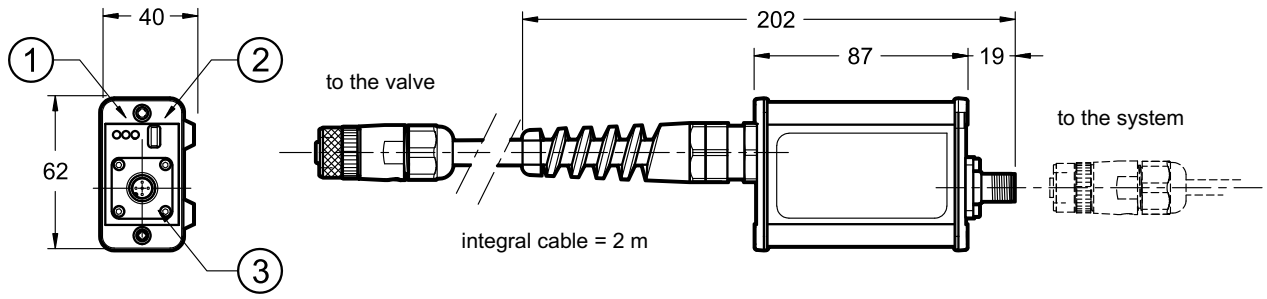


LINPC-USB12



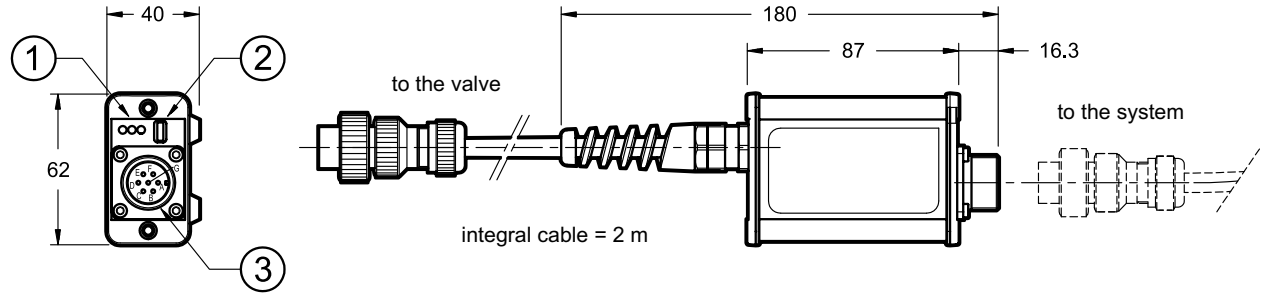
6 - OVERALL DIMENSIONS

6.1 - LINPC-USB5



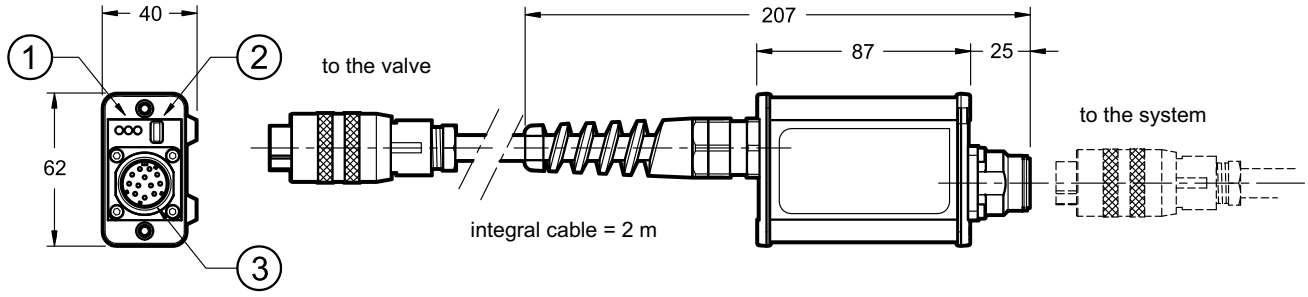
1	LED
2	USB micro B socket (cable included - length = 3 m)
3	Main connection 5 poles M12

6.2 - LINPC-USB7



1	LED
2	USB micro B socket (cable included - length = 3 m)
3	Main connection 6 poles + PE

6.3 - LINPC-USB12



1	LED
2	USB micro B socket (cable included - length = 3 m)
3	Main connection 11 poles + PE