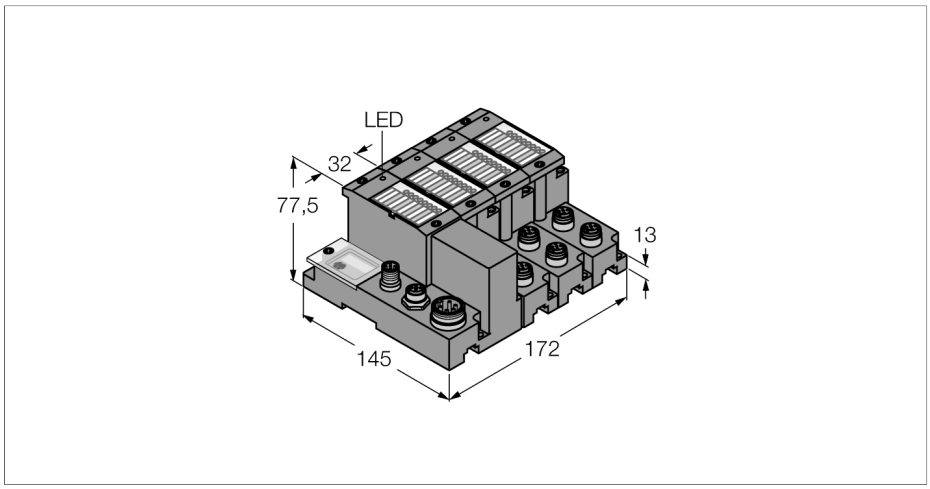
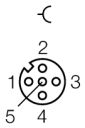
Programmable set for Ethenet/IP in IP67
TI-BL67-PG-EIP-6



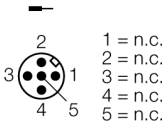
- **CoDeSys-programmable acc. to IEC 61131-3**
- **Cable max. 50 m between interface and read/write head**
- **10/100 Mbps**
- **Male M12 x 1, 4-pin, reverse-keyed, for fieldbus connection**
- **One male 7/8", 5-pin, for power supply**
- **LEDs for display of supply voltage, group and bus errors as well as status and diagnostics**
- **Connection of up to 6 read/write heads via BL ident M12 extension cables**
- **Mixed operation of HF and UHF read/write heads**

Type	TI-BL67-PG-EIP-6
Ident-No.	1545071
Number of channels	6
Dimensions (W x L x H)	172 x 145 x 77.5 mm
Supply voltage	24 VDC
max. system supply current $I_{mb\ (5V)}$	1.3, A
max. sensor supply I_{sens}	4 A electronically limited current supply electronically limited current supply
Max. load current I_o	10 A
Admissible range	18…30 VDC
Fieldbus transmission rate	10/100 Mbps
Fieldbus addressing	rotary switch, BOOTP, DHCP, IO-ASSISTANT
Service interface	RS232 interface (PS/2 socket)
Fieldbus connection technology	Female connector, M12 x 1, 4-pole, D-coded
Voltage supply connection	5-pole male 7/8" connector
PLC data	
Programming	CoDeSys V2.3
Released for CoDeSys version	V 2.3.6.4
Programming languages	IEC 61131-3 (IL, LD, FBD, SFC, ST)
Application tasks	1
Number of POUs	1024
Programming interface	RS232 interface, Ethernet
Processor	RISC, 32 bit
Cycle time	< 1 ms for 1000 IL commands (without I/O cycle)
Program memory	512
Data memory	512
Input data	4
Output data	4
Non-volatile memory	16
Transmission rate	115.2 kbps
Cable length	50 m
Electrical isolation	isolation of electronics and field level via opto-couplers
Connection technology	M12
Simultaneity factor	1
Sensor supply	0.5 A per channel, short-circuit proof

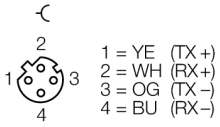
Wiring diagram



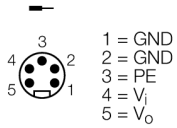
Without function



Ethernet



Power supply



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Operating temperature	-40…+70 °C
Temperature derating	
> 55 °C Circulating air (Ventilation)	no limitation
> 55 °C Steady ambient air	Isens < 3A, Imb < 1A
Storage temperature	-40 … +85 °C
Relative humidity	5 to 95% (internal), Level RH-2, no condensation (at 45 °C storage)
Vibration test	acc. to EN 61131
Extended vibartion resistance	
Extended vibartion resistance	VN 02-00 and higher
- up to 5 g (at 10 to 150 Hz)	For mounting on DIN rail no drilling according to EN 60715, with end bracket
- up to 20 g (at 10 to 150 Hz)	For mounting on base plate or machinery Therefore every second module has to be mounted with two screws each.
Shock test	acc. to IEC 68-2-27
Drop and topple	acc. to IEC 68-2-31 and free fall to IEC 68-2-32
Electro-magnetic compatibility	acc. to EN 61131-2
Protection class	IP67

Functional principle

The pin resp. signal assignment results from the combination with an electronic module. You find the pin configuration and the wiring diagrams on the data sheet of the corresponding electronic module.

BL67 base modules are connected to the right of the gateway, using two screws for each module. A DIN rail is not required. This way, a compact and stable unit is built. The unit can now be mounted on a DIN rail or directly on the machine.

The field devices are connected to the base modules which are available with different connection technology (M8, M12, M23 and 7/8“).

Note

Further technical data like temperature range are determined by the electronic modules and can be found on the data sheets.

BL67 electronic modules are plugged on the purely passive base modules which in turn are connected to the field devices. The separation of connection level and electronics simplifies maintenance considerably. Flexibility is enhanced because the user can choose between base modules with different connection technologies.

The electronic modules are completely independent of the higher level fieldbus through the use of gateways.

The programmable BL67 gateways can be used as an independent PLC or as a member in a PLC network for fast signal preprocessing.

BL67 gateways are the head component of a BL67 station. The BL67 electronic modules communicate via the internal module bus with the gateway and can be configured independently of the fieldbus protocol.

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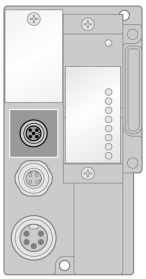
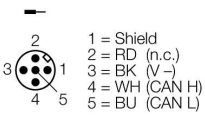
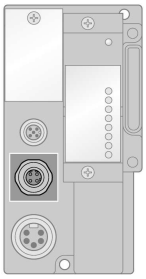
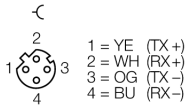
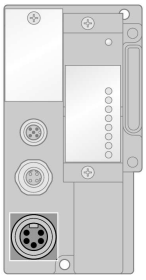
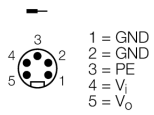
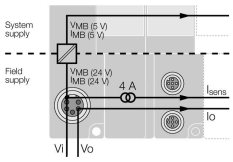
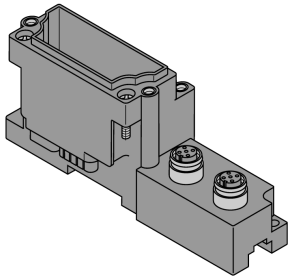
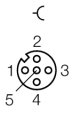
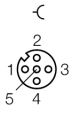
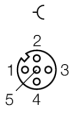
Pin configuration and supply concept

	CANopen (master/slave) The CoDeSys programmable gateways can also be operated as CANopen master or as CANopen slave. Both functions are stored in the library and can be loaded to the gateway together with the CoDeSys application. Connected CANopen subscribers are not supplied by the BL67 system. External power supply is required.	Pin assignment  1 = Shield 2 = RD (n.c.) 3 = BK (V –) 4 = WH (CAN H) 5 = BU (CAN L)
	EtherNet/IP™ slave The M12-D coded Ethernet port is used as interface for configuration and fieldbus communication. The gateway can be operated as a slave at Plus or PC based systems with EtherNet/IP™ scanner (master).	Pin assignment  1 = YE (TX+) 2 = WH (RX+) 3 = OG (TX–) 4 = BU (RX–)
	Power supply Double-tuned power supply of the BL67 system. System power supply V_i V_i is for the internal system supply at the backplane bus($V_{MB(5V)}$) and for the 4A short-circuit limited sensor supply (V_{sens}). Load voltage V_o V_o for output supply, limited to max.10A.	Pin assignment  1 = GND 2 = GND 3 = PE 4 = V_i 5 = V_O voltage supply 

Compatible base modules

Dimension drawing	Type	Pin configuration
	BL67-B-2M12 6827186 2 x M12, 5-pole, female, a-coded	Connectors …/S2500  1 = BN (+) 2 = BK (Data) 3 = BU (GND) 4 = WH (Data) 5 = shield Connectors …/S2501  1 = BN (+) 2 = WH (Data) 3 = BU (GND) 4 = BK (Data) 5 = shield Connectors …/S2503  1 = RD (+) 2 = BU (Data) 3 = BK (–) 4 = WH (Data) 5 = shield

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LED display

LED	color	status	description
D		OFF	Error report or diagnostics active.
	RED	ON	Failure of MODBUS communication Check if more than 2 adjacent electronic modules are pulled. Relevant modules are located between gateway and this module.
	RED	FLASHING (0.5 Hz)	Upcoming module diagnostics
RW0 / RW1		OFF	No tag, diagnostics disabled
	GREEN	ON	Tag available
	GREEN	FLASHING (2 Hz)	Data exchange with tag enabled
	RED	ON	Read/write head fault
	RED	FLASHING (2 Hz)	Short-circuit in the supply line of read/write head

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I/O Data Mapping

INPUT	BYTE	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Channel 0	n								
	n+1								
Channel 1	n+2								
	n+3								
OUTPUT	**BYTE**	**Bit 7**	**Bit 6**	**Bit 5**	**Bit 4**	**Bit 3**	**Bit 2**	**Bit 1**	**Bit 0**
Channel 0	m								
	m+1								
Channel 1	m+2								
	m+3								

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