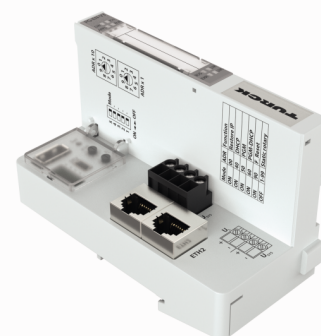
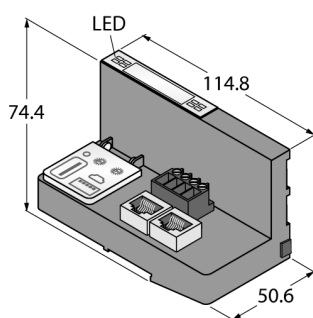


CODESYS 3 Programmable Gateway for the BL20 I/O System

Multiprotocol Ethernet Gateway for PROFINET, EtherNet/IP and Modbus TCP with WebVisu License

BL20-PG-EN-V3-WV



Type	BL20-PG-EN-V3-WV
ID	6827398

Supply voltage	24 VDC
System power supply	24 VDC/5 VDC
Field supply	24 VDC
Admissible range	18...30 VDC
Nominal current from module bus	≤ 200 mA
Max. field supply current	8 A
Max. system supply current	1.3 A
Voltage supply connection	Screw terminals

Fieldbus addressing	Rotary switch, PGM, DHCP
Fieldbus connection technology	RJ45 port

PLC data	
Programming	CODESYS V3
Released for CODESYS version	V 3.5.12.10
Programming languages	IEC 61131-3 (IL, LD, FBD, SFC, ST)
Application tasks	5
Programming interface	Ethernet, USB
Processor	ARM, 32 Bit
Cycle time	< 1 ms for 1000 IL commands (without I/O cycle)
Real time clock	yes
Program memory	20000 kByte
Data memory	60000 kByte
Input data	4 kByte
Output data	4 kByte
Non-volatile memory	16 kByte

Transmission rate	10/100 Mbps; full/half duplex; auto negotiation; auto crossing
Web server	192.168.1.254 (Default)
Service interface	Ethernet, mini USB

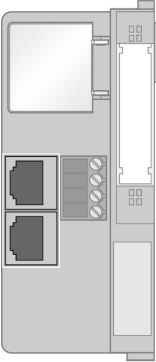
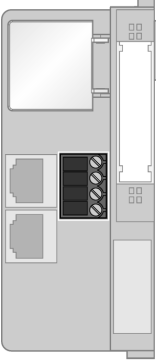
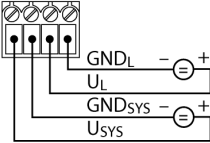
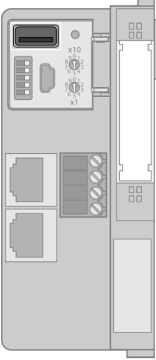
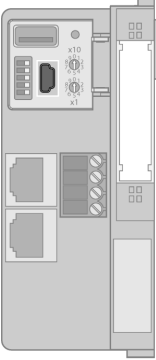
- CODESYS V3 PLC Runtime
- CODESYS WebVisu license
- CODESYS OPC UA server/client
- IIoT gateway for Turck Cloud
- PROFINET device
- EtherNet/IP device
- Modbus TCP master/slave
- Protection class IP20
- LEDs for display of PLC status, supply voltage, group and bus faults
- 2 × RJ45 Ethernet ports
- Switched or dual MAC mode
- 10 Mbps/100 Mbps

Functional principle

The programmable BL20 gateways can be used as an autonomous PLC or as a decentral PLC in a network interconnection for fast signal preprocessing.

BL20 gateways are the head component of a BL20 station. The BL20 extension modules communicate over the internal module bus with the gateway and can be configured independently of the fieldbus protocol.

Modbus TCP	
Addressing	Static IP, DHCP
Supported function codes	FC1, FC2, FC3, FC4, FC5, FC6, FC15, FC16, FC23
Input Data Size	max. 1024 register
Input register start address	0 (0x0000 hex)
Output Data Size	max. 1024 register
Output register start address	0 (0x0000 hex)
Ethernet/IP	
Addressing	acc. to EtherNet/IP specification
Device Level Ring (DLR)	not supported
Input Data Size	248 INT
Output Data Size	248 INT
PROFINET	
Addressing	DCP
Conformance class	B (RT)
MinCycleTime	1 ms
Diagnostics	acc. to PROFINET alarm handling
Topology detection	supported
Automatic addressing	supported
Media Redundancy Protocol (MRP)	not supported
Input Data Size	max. 512 BYTE
Output Data Size	max. 512 BYTE
Dimensions (W x L x H)	
Dimensions (W x L x H)	50.6 x 114.8 x 74.4 mm
Approvals	CE
Ambient temperature	-20...+60 °C
Storage temperature	-25...+70 °C
Relative humidity	15...95 % (internal), level RH-2, no condensation (when stored at 45 °C)
Vibration test	Acc. to EN 61131
Shock test	Acc. to IEC 60068-2-27
Drop and topple	Acc. to IEC 60068-2-31
Electromagnetic compatibility	Acc. to EN 61131-2
Protection class	IP20
MTTF	147 years acc. to SN 29500 (Ed. 99) 20 °C
Included in delivery	
Included in delivery	2 x end brackets BL20-WEW-35/2-SW, 1 x end plate BL20-ABPL

	Ethernet Ports The RJ45 Ethernet ports are used as interface for configuration, programming, and fieldbus communication. The gateway can be operated as a master or slave on a PROFINET, EtherNet/IP™ or Modbus TCP network. Ethernet Cordset (Example): RJ45-RJ45: RJ45S RJ45S 441-2M Ident no. U-06842 RJ45-M12 receptacle RJ45S FKSDDED 441-2M Ident. no. U3-00229	Pin Assignment  1 = TX + 2 = TX - 3 = RX + 4 = n.c. 5 = n.c. 6 = RX - 7 = n.c. 8 = n.c.
	Power Supply The BL20 system is supplied via two 24VDC voltage groups. System supply U_{sys} U_{sys} supplies power to the sensor supply (V_{sens}) and the internal system supply, which includes Ethernet communication and the back-plane bus that communicates with any connected I/O modules. Field supply U_L U_L supplies power to the outputs of any connected I/O modules. Power Cordset (Example): M12: RK 4.4T-2 Ident. no. U2172 7/8": RKM 40-2M Ident. no. U2043	Pin Assignment  Field supply System supply
	USB Host Port Storage media can be connected to the USB host port, please observe the instructions in the user manual.	Pin Assignment  1 = 5 VDC 2 = D - 3 = D + 4 = GND
	USB Device Port The USB device port can be used as a programming and service interface.	Pin Assignment  1 = 5 VDC 2 = D - 3 = D + 4 = n.c. 5 = GND