

Pluto Ethernet gateways

PROFINET, EtherNet/IP, Modbus TCP, EtherCAT, Sercos III



Pluto Ethernet gateways are compact and fast units providing two-way communication between a Pluto Safety PLC network and another network using an industry Ethernet protocol.

Easy to use

Pluto Ethernet gateways are only 22 mm wide units and can be mounted on a DIN rail. They can be connected anywhere in a Pluto Safety PLC network. All models are equipped with two Ethernet ports that facilitate cascading of several units.

The complementary programming software, Pluto Manager, can be used to configure the gateways and monitor their status. The standard Pluto programming cables are used for the connection between PC and gateway.

Function blocks in Pluto Manager allow to send and receive data through the gateway with no need for complicated programming.

Remote monitoring

Remote monitoring allows the connection to a remote Pluto system via the Internet and a gateway, using Pluto Manager for the monitoring. This function can be used for:

- Support of local maintenance personnel during troubleshooting

Application:

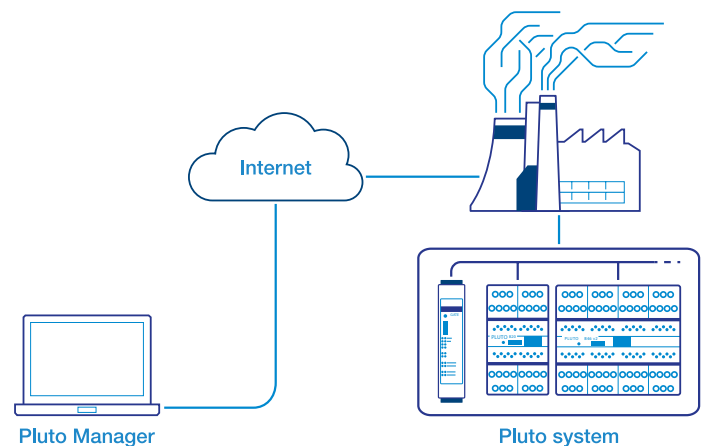
- Bi-directional status information to and from the Pluto safety PLC
- PROFINET, EtherNet/IP, Modbus TCP, EtherCAT, Sercos III
- Remote monitoring

Features:

- Two-way communication
- Compact enclosure
- Dual Ethernet ports
- Fast response time
- Fast startup
- Function blocks

- Regular monitoring of the status of the machine or process
- Follow-up of operational data like number of cycles/day or runtime.

The function is secure since it is not possible to make any change in the Pluto system via the remote connection. The function is disabled at delivery and can only be enabled locally via the PC port.



Remote monitoring

Technical data

Busses	Pluto bus (isolated CAN) Ethernet (isolated)
Pluto safety bus speeds	100, 125, 200, 250, 400, 500, 800 and 1000 kbit/s (automatic speed detection)
PROFINET according to:	- Specification for PROFINET, Version 2.31 - IRT Top ("Red phase") is supported - Minimum cycle time 2 ms for RTC1 and 1 ms for RTC3
EtherNet/IP according to:	According to: - ODVA "CIP Edition 3.2" and "EtherNet/IP Adaption of CIP Edition 1.3" - Minimum RPI of 10 ms
Modbus TCP according to:	- MODBUS Application Protocol Specification, V1.1a, June 4, 2004 - MODBUS Messaging on TCP/IP Implementation Guide, V1.0a, June 4, 2004 - Minimum 500 requests per seconds for one steady open connection with about 1 ms response time - Maximum of 8 client connections.
EtherCAT according to:	- IEC 61158 Part 2-6 Type 12 documents (ETG.1000 V1.0.3) - EtherCAT Protocol Enhancements (ETG.1020 V1.0.0) - Minimum cycle time 500 µs
Sercos III according to:	- Communication Spec. V1.1.2.1.7 (March 30, 2009) - SERCOS Communication Profile V1.1.2.1.1 (March 31, 2009) - Function Specific Profile IO V1.1.2.1.4 (May 11, 2009) - Internet Protocol Services V1.3.1 - 1.2 (February 10, 2011) - Minimum cycle time 500 µs
Additional network servers	(Disabled by default. See manual for cyber security information.)
FTP server	For firmware update
TFTP server	For firmware update
Web server	Status, and firmware update (port 80)
Terminal server (TCP/IP)	Simple server with the same commands as via the serial programming port in the unit.
IP address	
PROFINET	PROFINET Master configuration of units IP address.
EtherNet/IP	Static, DHCP and BOOTP. Set via terminal (PC-port). Default IP address: DHCP
Modbus TCP	Static, DHCP and BOOTP. Set via terminal (PC-port). Default IP address: DHCP
EtherCAT	EtherCAT Master configuration of units IP address
Sercos III	Static, DHCP and BOOTP. Set via terminal (PC-port). Default IP address: 192.168.0.100
Connections	Top, 4-pole terminal for Pluto safety bus (included) Front, PC-port Bottom, 2 Ethernet connections via RJ-45 (screened cable cat. 5e FTP) Bottom, 4-pole terminal for 24 VDC (included)
Status indications	Pluto safety bus status indication via LED (Pluto safety bus)
GATE-PN	PROFINET status indication via LED (SF and BF)
GATE-EIP	EtherNet/IP module status indication via LED (Mod Status), EtherNet/IP network status indication via LED (Net Status)
GATE-MT	Modbus TCP status indication via LED RUN (Connection) and ERR (Error)
GATE-EC	EtherCAT run and error status indication via LED
GATE-S3	SERCOS III statusindikering via LED (S3 Status)
Operating voltage	24 VDC, -15 % to +20 %
Current at 24 VDC	< 200 mA (recommended fuse ≤6 A)
Dimensions (w x h x d)	22.5 x 108 x 114 mm
Installation	35 mm DIN rail
Operating temperature (ambient)	-10°C to + 55°C
Temperature, transport and storage	-25°C to + 55°C
Humidity	EN 60 204-1 50 % at 40°C (ambient 90 % at 20°C)
Enclosure classification	IP20 - IEC 60 529

Note: GATE-MT (or GATE-EIP firmware version 2.13) can be used if the gateway is only used for remote monitoring without being connected to a fieldbus system such as Profinet, EtherCAT or Sercos III.

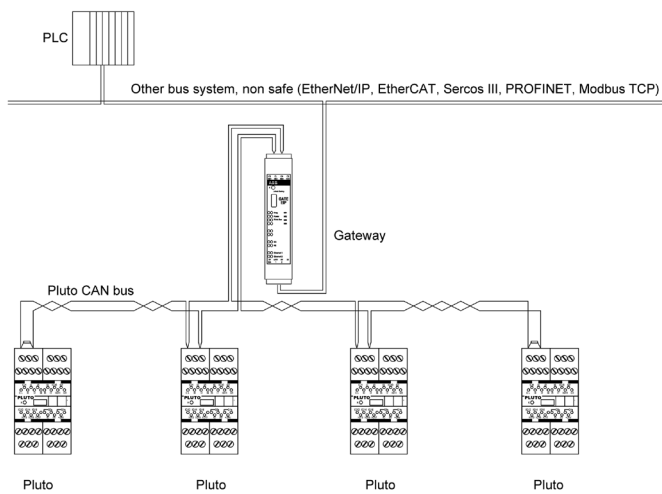
Models and ordering information

GATE-EIP	2TLA020071R9000	Pluto Gateway EtherNet/IP
GATE-EC	2TLA020071R9100	Pluto Gateway EtherCAT
GATE-S3	2TLA020071R9200	Pluto Gateway Sercos III
GATE-PN	2TLA020071R9300	Pluto Gateway PROFINET
GATE-MT	2TLA020071R9400	Pluto Gateway Modbus TCP

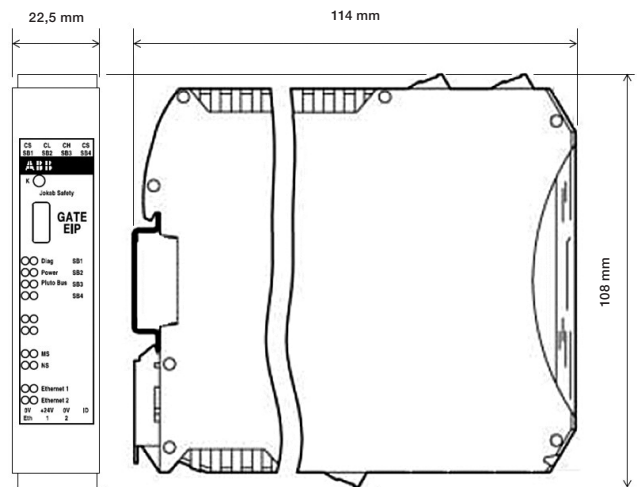
Accessories

Pluto programming cable (serial)	2TLA020070R5600	Cable for connecting a PC serial port to the gateway front connector (PC-port)
Pluto programming cable (USB)	2TLA020070R5800	Cable for connecting a PC USB port to the gateway front connector (PC-port)

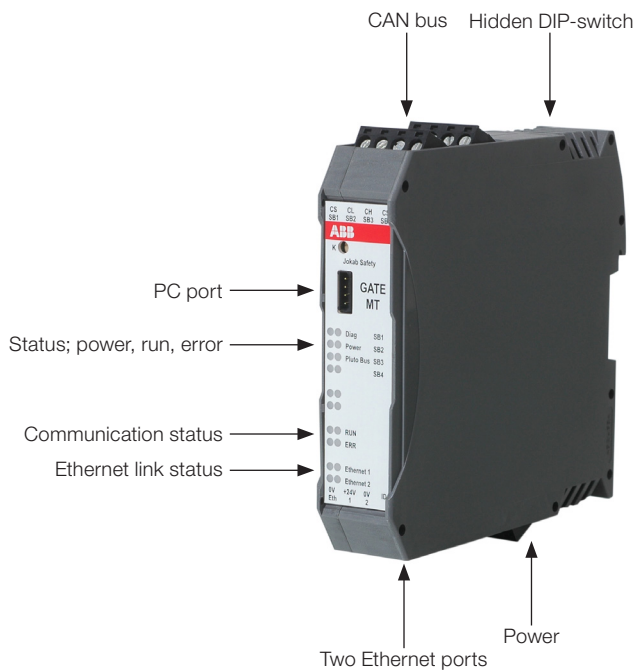
Connection example



Dimensions



Product overview



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