

Pluto Gateway

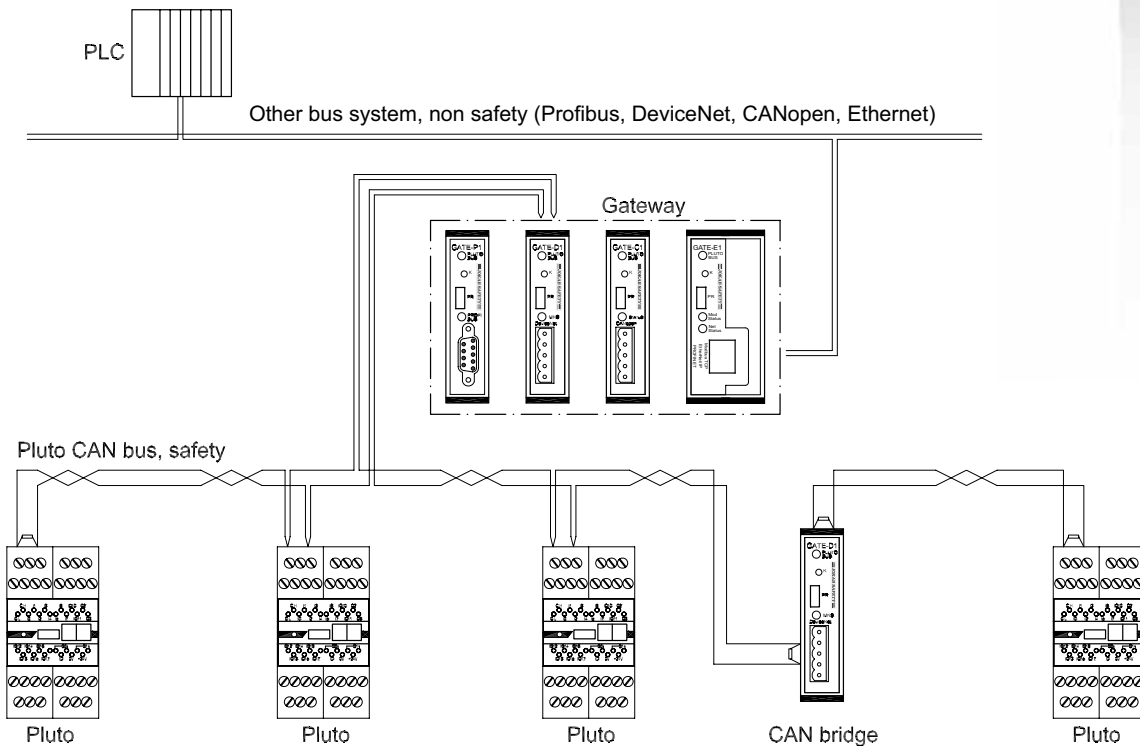
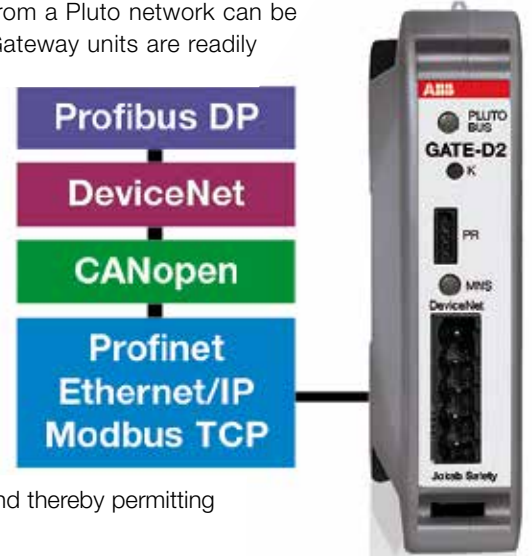
Inspired by industry

The key difference between Pluto safety PLC and conventional safety PLCs is that while conventional controllers use a “supervisor-subordinate” methodology, the Pluto safety PLC uses an “all-supervisor” concept. Since all Plutos are “supervisor” units, they can see each others’ inputs and outputs.

Using this concept, each Pluto can make decisions about its own immediate safety environment enabling simple communication and easy alterations of the safety system. With the use of Pluto Gateway, information from a Pluto network can be transferred to and from other bus systems for status and diagnostic information. Gateway units are readily available for a number of different bus systems—i.e. Profibus, CANOpen, DeviceNet, Profinet, Ethernet/IP and Modbus TCP.

Unique design

- The Pluto Gateway is a compact unit, mounted on a DIN rail, that can be connected anywhere in a Pluto databus
- Unit has a common interface with Pluto (i.e. the same cabling) and the Pluto Manager PC program can be used for servicing
- Ready-made function blocks for programming Pluto, which—via a Pluto Gateway— send and receive data from the supervisory System
- GATE-D2 and GATE-C2 types, which use a CAN databus on both sides, can also be used as CAN bridges where it is required to split a Pluto databus into several sections— useful when long databus cables are needed
- Built-in filter function makes it possible to block data that is not required for use on the other side of the bridge, reducing the databus loading in the other sections and thereby permitting longer databus cables



Pluto Gateway for four different bus systems.

Profibus DP

Data from Pluto

Via Profibus, a supervisory PLC system can have access to the I/O and other variables in a Pluto Safety PLC. Global data in a Pluto safety PLC are accessible via Profibus modules in the Gateway, one module for each Pluto unit. Local data in Pluto units can be read by using an additional data area and an additional data block together with the PLC codes in the supervisory system.

Data to Pluto

Via a Profibus, a supervisory PLC system can transmit non-safety-related information to a Pluto safety PLC. A total of 64 Boolean values and 8 different 16-bit registers can be transmitted. Function blocks for these functions are available in Pluto Manager.



CANopen

Data from Pluto

Via CANopen, a supervisory PLC system can have access to the I/O and other variables in a Pluto Safety PLC. Global data in a Pluto safety PLC are accessible via CANopen PDO messages. Local data in Pluto units can be read via CANopen SDO messages together with the PLC codes in the supervisory system.

Data to Pluto

Via CANopen, a supervisory PLC system can transmit non-safety-related information to a Pluto safety PLC. A total of 64 Boolean values and 8 different 16-bit registers can be transmitted (via CANopen PDO or SDO messages). Function blocks for these commands are available in Pluto Manager.

Pluto Bridge

A GATE-C2 can also be used as a CAN bridge when it is required to divide a Pluto databus into several sections. This is particularly useful when long databus cables are needed. A built-in filter function makes it possible to block data that is not required for use on the other side of the bridge. This reduces the databus loading in the other sections and permits longer databus cables.



DeviceNet

Data from Pluto

Via DeviceNet, a supervisory PLC system can have access to the I/O and other variables in a Pluto Safety PLC. Global and local data in a Pluto safety PLC are available by mapping a DeviceNet scanner or by using explicit messages.

Data to Pluto

Via DeviceNet, a supervisory PLC system can transmit non-safety-related information to a Pluto Safety PLC.

A total of 64 Boolean values and 8 different 16-bit registers can be transmitted (via DeviceNet "implicit" or "explicit" messages). Function blocks for these commands are available in Pluto Manager.

PLC Bridge

A GATE-D2 can also be used as a CAN bridge when it is required to divide a Pluto databus into several sections. This is particularly useful when long databus cables are needed. A built-in filter function makes it possible to block data that is not required for use on the other side of the bridge. This reduces the databus loading in the other sections and permitting longer databus cables.



Ethernet

Protocol

Ethernet GATE-E2 handles the status from and to Pluto safety PLCs via Ethernet protocol — Profinet, Ethernet/IP, Modbus TCP and a simple binary protocol that uses TCP/IP. For IP-address configuration, etc. there is a simple web server and a terminal server.

Data from Pluto

Via one of the Ethernet protocols, a supervisory PLC system can have access to the I/O and other variables in a Pluto Safety PLC. Global data in a Pluto safety PLC are accessible via the usual I/O transfer in the respective protocol. Local data in Pluto units can be read by special commands together with the PLC codes in the supervisory system.

Data to Pluto

Via the Ethernet Gateway, a supervisory PLC system can transmit non-safety-related information to a Pluto safety PLC. A total of 64 Boolean values and 8 different 16-bit registers can be transmitted. Function blocks for these commands are available in Pluto Manager.



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