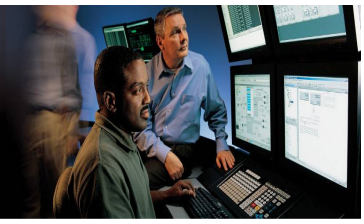
Honeywell

Technical Information

Series 8 Profibus Gateway Module Specification



S803-160-110
Release 110
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Detailed Specifications, Modules, and Capacities – Profibus Gateway Module

Parameter		Specification
Input / Output Model		8C-IP0102, PROFIBUS Gateway ASSY, Coated 8U- IP0102, PROFIBUS Gateway ASSY, Uncoated
IOTA (64pt) PWA		8C-TPOXA1, Coated 8U-TPOXA1, Uncoated
Supervisory network type		Series 8 PGM is a standard FTE node.
Voltage Rating		24 VDC
Module current rating		430 mA
Temperature	Operating Temperature	0 to 60 ℃
	Storage temperature	-40 to 85 ℃
Series 8 PGM mounting		Mounts on the standard Series 8 mounting assembly (on an IOTA) and must mount in a standard Series 8 cabinet.
Series 8 PGM power and grounding		Must use the standard Series 8 power system.
PROFIBUS DP (V0) supported?		Yes – including standard and extended status bytes.
PROFIBUS DP (V1) supported?		PGM acts as a DP Master Class-2 device for FDM. FDM uses vendor provided DTMs to enable DPV1 messaging over the DP network. Profidrive DSB has some V1 capabilities (see users manual).
Module Removal and Insertion Under Power		Supported
PROFIBUS DP (V2) supported?		Not supported in release R110.
DP network media redundancy		Supported using 3rd party Redundancy Link Modules (like ABB RLM and Siemens Y Link).
DP Slave device redundancy		DP network can include redundant slaves. PGM has no V1 capability with respect to Slave redundancy. FDM may be able to manage this using vendor supplied DTMs.
PROFIBUS PA and PA devices supported?		Yes, using 3rd party PA to DP converters/couples.
Asset Management?		Yes- Using Honeywell FDM. PGM acts as a Master Class-2 device allowing FDM to access the DP network and DP Slaves. FDM utilizes DTMs to communicate with DP slaves.
Simulation supported?		No simulation capabilities for R110.
HART over PROFIBUS support		Yes – Using FDM and Slaves that support HART devices.
Agency certifications		CE FM Class I, Division 2, Group A, B, C, D; T4 Class I, Zone 2 AEx/ Ex nA II C T4 CSA Class I, Division 2, Group A, B, C, D; T4 Class I, Zone 2, Ex nA II C T4

PGM Capacities and Limits

Capacity Item	Limit or Constraint
Maximum number of Series 8 PGMs per Server (or redundant server pairs)	80 redundant or non-redundant.
Maximum number of Series 8 PGMs per C300. Note: for R110 a given PGM can be assigned to one and only one C300 (or redundant pair). No other peer connections are allowed.	4 PGMs or redundant pairs (8 DP networks)
Maximum number of DP networks per PGM	2
Address range per DP network.	0-125
Maximum number of Slaves and Masters per DP network (DP Stations). Note: per RS485 standard, maximum number of devices per a given electrical segment is 32. Repeaters are required to achieve the maximum of 125.	Theoretical max is 125 but other factors (like memory/latency time) will govern the actual max implemented on a given project.
Maximum number of DSB blocks per PGM Note: A DSB (Device Support Block) is used to represent one slave on the DP network.	250
Maximum number of different DSB (Slave) types per PGM. Note: A DSB (Device Support Block) is used to represent one slave on the DP network.	20
Maximum number of different PDC types per DSB	16

PGM Configuration Options

PGM2 Configuration Specifications	
PROFIBUS Communication Profiles Supported	DP (only) – PGM2 is DP Master Class-1
PROFIBUS Baud Rates Supported1	12 Mbps, 6 Mbps, 3 Mbps, 1.5 Mbps, 500 Kbps, 187.5 Kbps, 93.75 Kbps, 19.2 Kbps, 9.6 Kbps
Support for Multi-Master Configurations	Yes
Support for PROFIBUS Slave Diagnostics	Yes
Valid PROFIBUS Station address range2	0 - 127
Number of PROFIBUS Networks per PGM2	2
Maximum Input Data Size per PGM2 PROFIBUS Network (all slave stations). For DP V0 input data.	3.5K Bytes per DP network
Note 1 – Each PROFIBUS Network per PGM2 may be configured with a different Baud Rate. Any change to the PGM2 Baud Rate may require restart of all PB slave devices. Note 2 – Some PROFIBUS Station Addresses are reserved for special purposes as follows: Address 0 is Master class 2 default address Address 1 is reserved for master class 1 (PGM2) Address 2 is reserved for slave with changeable address Address 126 is reserved for slave with changeable address Address 127 is reserved for broadcast messages Addresses 3 – 125 are reserved for PROFIBUS slaves	

2.2. Series 8 PGM & Control Processor Integration

C300 Integration

Refer to Figure 4 - Series 8 PGM and C300 Integration (Local Configuration)and Figure 5 - Series 8 PGM and C300 Integration (Remote Configuration) below, which show the PGM is a standard FTE node and interfaces to the C300. The figure shows a redundant configuration, but the PGM can also be implemented in a non-redundant configuration by using only one PGM.

Figure 4 - Series 8 PGM and C300 Integration (Local Configuration)depicts a typical local configuration. Both the C300 and PGMs are in the same cabinet complex and use the same

Figure 5 - Series 8 PGM and C300 Integration (Remote Configuration) depicts a typical remote configuration. The C300 is in one cabinet and PGM is in another cabinet. In this case the PGM is remote from the C300 (or local to the process equipment).

Important Note: Differences for end-to-end response time between local and remote configurations is negligible. Recovery time from FTE fault difference is significant – rough numbers are a few hundred msecs (local) vs. a few seconds (remote).

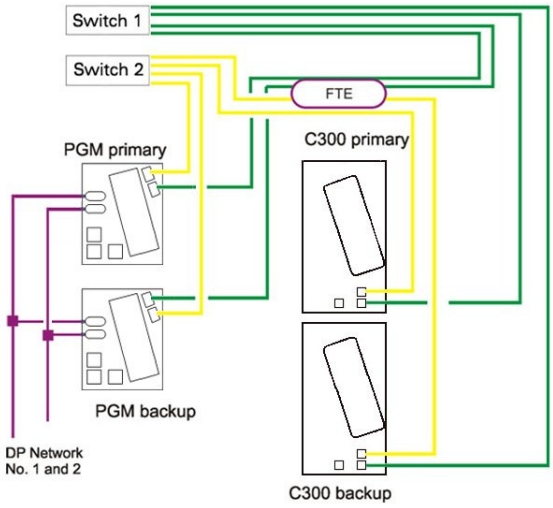

Figure 4 - Series 8 PGM and C300 Integration (Local Configuration)

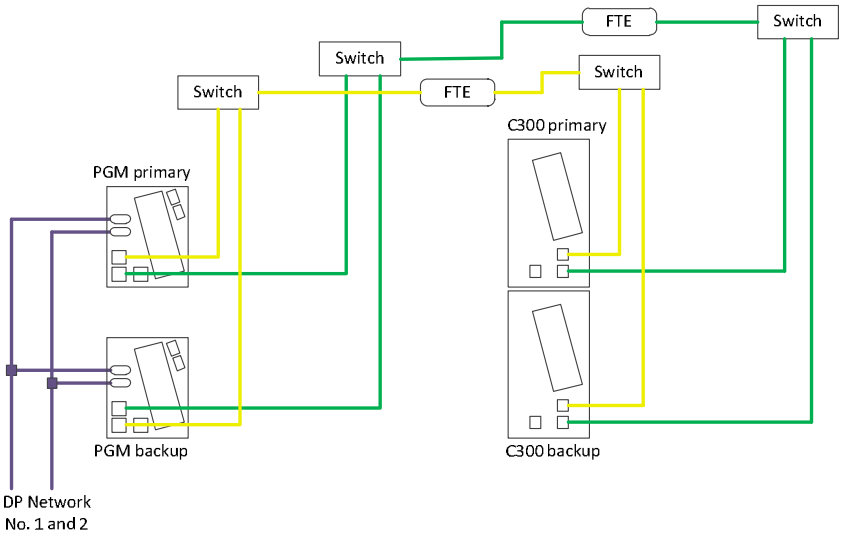

Figure 5 - Series 8 PGM and C300 Integration (Remote Configuration)