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Find the *Schneider Electric / Square D SY/MAX Class 8030 EQ5138-G1* at our website: ***Click HERE***

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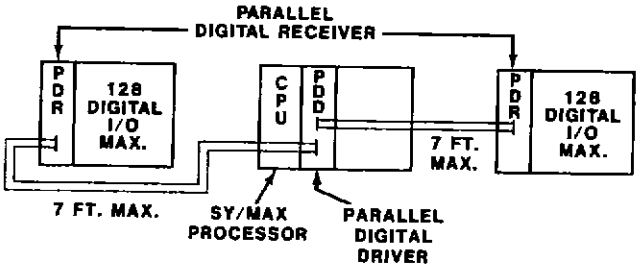
TECHNICAL OVERVIEW

TO-248-02
NOVEMBER, 1986

SY/MAX® CLASS 8030 TYPE EQ5138G1 PARALLEL DIGITAL DRIVER AND TYPE EQ5138G2 PARALLEL DIGITAL RECEIVER INTERFACES

The Class 8030 Type EQ5138G1 Parallel Digital Driver (PDD) and EQ5138G2 Parallel Digital Receiver (PDR) Interface Modules provide a method to configure any SY/MAX processor (Model 300, 400, 500, 600, 700) with local digital I/O. The advantage of using the PDD/PDR system over a local/remote I/O system (Class 8030 CRM210 or 211 and CRM220 or 222) is that the PDD/PDR configuration requires no update time. I/O updating is determined by the SY/MAX processor scan rate and scan method. Note: the Model 500 and 700 processors update I/O as they are scanned; the Models 300, 400 and 600 use an image table that updates I/O at the end of scan. A PDD/PDR system would benefit applications where digital I/O response time is critical.

To establish a PDD/PDR system the PDD module is mounted in the CPU rack (contains SY/MAX processor) and a PDR module is mounted in an adjacent digital I/O rack (referred to as a drop). A single PDD can support two PDR modules. Each PDR can support 128 I/O per drop or 256 I/O maximum per PDD/PDR system. Communication between the PDD and PDR modules is via a 50 conductor detachable ribbon cable.



Parallel Digital Driver/Receiver Configuration



Parallel Digital Driver (PDD)



Parallel Digital Receiver (PDR)

A single SY/MAX processor can support multiple PDD modules in a single CPU rack. The maximum number is dependent on the type of CPU and system configuration. In addition, a SY/MAX processor can support both the PDD/PDR and local/remote I/O system simultaneously, providing maximum I/O flexibility.

SPECIFICATIONS

Environmental

Ambient Temperature	
Operating	0°C to 60°C (32° to 140°F)
Storage	–40°C to 80°C (–40 to 176°F)
Ambient Humidity	5 – 95% non-condensing

Physical

Dimensions (W x H x D)	
EQ5138G1 (PDD - Driver)	1.5 x 12.8 x 6.6 in. (3.81 x 32.5 x 16.76 cm)
EQ5138G2 (PDR - Receiver)	1.5 x 12.8 x 6.6 in. 3.81 x 32.5 x 16.76 cm)
Weight (approximate)	
EQ5128G1 (PDD - Driver)	2.4 lbs. (1.1 kg)
EQ5138G2 (PDR - Receiver)	2.3 lbs. (1.0 kg)

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Electrical

Current Draw On SY/MAX
Power Supply
EQ5138G1
PDD (Driver) . . . . . 875 mA
EQ5138G2
PDR (Receiver) . . . . . 200 mA

Capabilities

PDD (Parallel Digital Driver)
2 channels
1 drop per channel (2 drops maximum per PDD)
128 digital I/O per drop (256 digital I/O maximum per PDD)

PDR (Parallel Digital Receiver)
128 digital I/O maximum

Note: The PDD and PDR only support communication with remote racks containing 4 function and 8 function digital I/O modules. Communication with racks containing 16 function or 32 function digital I/O is not supported. I/O forcing is supported in the Model 400, 600 processor and first 32 registers of the Model 300 processor.

Communication
Method . . . . . Direct parallel access★ to I/O modules

PDD/PDR Channel
Update . . . . . The PDD/PDR requires no update time. I/O updating is determined by the CPU scan rate and scan method★.

Multiple PDDs may be used with any compatible SY/MAX processor. The number depends upon the physical hardware and location of the local digital racks since the maximum cable length from PDD to PDR is 7 feet

★ The Model 300, 400 and 600 processors utilize an I/O image table. I/O updating is performed at the end of scan. The Model 500 and 700 processors utilize real time access methods.

Compatibility With I/O

A. The PDD/PDR interface system is compatible with:
- All 8 point I/O modules.
- All 4 point input modules.
- All 4 point output modules, Series B or later.

B. It is not compatible with a drop containing any of the following:
- Four function I/O Bus Expander/Terminator, Class 8030 Type CRM115/116
- Any register modules or register racks
- Remote Interface

Compatibility With Processors

The PDD/PDR interface system is compatible with all SY/MAX Model 400, 500 600 and 700 processors, as well as Series G Model 300 processors.

Compatibility With Racks

The PDD interface module must be mounted in a register slot of the CPU rack while the PDR interface module is mounted into the CPU slot of an associated digital I/O rack (4 or 8 point).

Rack Compatibility

RACK TYPES	PARALLEL DIGITAL DRIVER	PARALLEL DIGITAL RECEIVER
	Type EQ5138G1	Type EQ5138G2
CRK100, 200	NO	YES*
CRK210, 300 DRK210, 300 GRK110, 210	YES	YES*
HRK100, 150, 200	YES	YES*
RRK100, 200, 300	YES	NO

* It is recommended that when using the Model 300, 400 or 600 processors with a PDD/PDR system, only HRK200 racks be used.

ORDERING INFORMATION

CLASS	TYPE	DESCRIPTION
8030	EQ5138G1	Parallel Digital Driver Module
8030	EQ5138G2	Parallel Digital Receiver Module
8030	CC205	5 Ft. Interconnecting Cable (Order Separately)
8030	CC207	7 Ft. Interconnecting Cable (Order Separately)

For additional information refer to Instruction Bulletin 30598-248-XX.

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