

ControlWave[®] PAC Digital Input / Output Modules

The Digital Input (DI), Digital Output (DO), and Digital Input/Output (DI/O) modules provide the ControlWave PAC with the ability to monitor and control various digital input and digital output field signals. The following DI and DO modules are available for the ControlWave PAC:

- 16 or 32 Digital Inputs module
- 16 or 32 Digital Outputs module
- 16 Digital Outputs module with Read Back

All I/O modules have surge protection that meets IEEE C37.90-1978 and IEC 801-5 specifications.

16 or 32 Digital Inputs Module

The 16 or 32 Digital Input modules provides the ControlWave PAC with 16 or 32 non interrupting inputs. DIs are individually selectable for either internally or externally powered operation. Dry contact DI operations utilize the internal 21 Vdc internal loop supply. Each DI is protected with a surge suppressor. DI input filtering is 30 ms (contact bounce).

The DIs are equipped with per point LED status indicators. Both local and remote termination wiring options are available

16 or 32 Digital Outputs Module

The 16 or 32 Digital Outputs module provides the ControlWave PAC with 16 or 32 DOs. Each DO is optically isolated open source MOSFET with surge suppression that is capable of handling 500 mA at 31 V. The DOs support a maximum frequency of 20 Hz.

16 Digital Outputs Module with Read Back

The 16 Digital Outputs module with Read Back provides the ControlWave PAC with 16 DOs. The DO is optically isolated open source MOSFET with surge suppression that is capable of handling 500 mA at 31 V. The DOs support a maximum frequency of 20 Hz.

Local or Remote Terminations

I/O modules available are factory configured for either local terminations that consist of one 40-point terminal block assemblies or remote terminations that consist of 4 DIN-rail mountable terminal block mass termination headers. Terminations are pluggable and accept a maximum wire size of 14 AWG (American Wire Gauge).

I/O modules are designed to maximize usability while minimizing installation, maintenance, and system downtime costs. A pull down door provides front panel wiring terminal access for technicians. The bezel and the terminations can be easily removed from the I/O module to make wiring even easier.

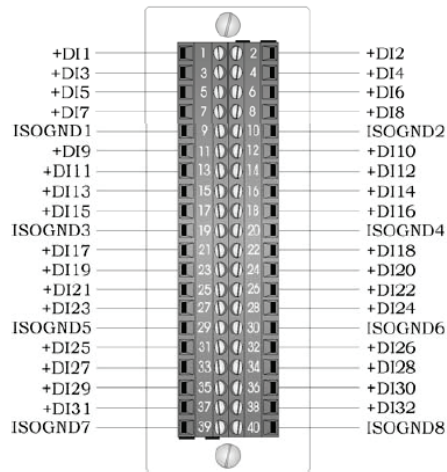
Remote terminations provide a convenient alternative to the standard direct connect termination. Remote terminations allow a concentration of electrical connections from one or more controllers to be located in a single area. For more information on remote terminations or terminal blocks, refer to *Product Data Sheet CWPAC*.



Digital Input Module

ControlWave PAC 16 or 32 Digital Inputs Module

Field Wiring Terminals



Inputs

Quantity	16 or 32 non-interrupting inputs
Type	Selectable internally or externally powered dry contact
Connector	Terminal block or remote termination
Voltage Range	24 Vdc nominal 21 Vdc internal loop supply
Input Current	5 mA nominal
Optical Isolation	1500 Vdc field input to logic
Surge Suppression	500 Vdc MOV to chassis 31 Vdc transorb between signal and isolated ground
Input Filtering	30 ms time constant (contact bounce)
Status Indication	LED per point status and module OK/FAIL LED

Power

Input Voltage Range	Powered from backplane
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Physical

Dimensions	177.8 mm H x 46.2 mm W x 165.1 mm D (7 in. H x 1.82 in. W x 6.5 in. D)
Weight	0.50 kg (1.1 lb)
Wiring	Up to 14 American Wire Gauge (AWG) local termination or optional remote termination

Environmental

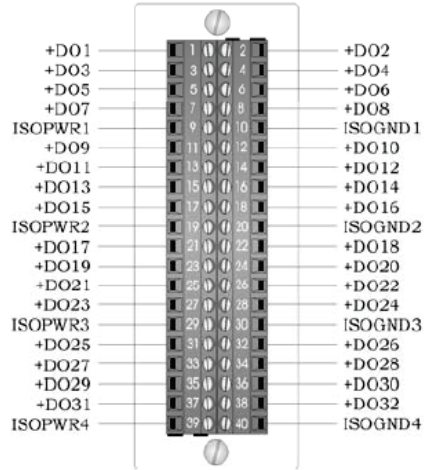
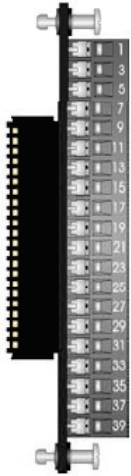
Same as the ControlWave PAC in which it is installed

Approvals

Same as the ControlWave PAC in which it is installed

ControlWave PAC 16 or 32 Digital Outputs Module

Field Wiring Terminals



Outputs

Quantity	16 or 32
Type	Solid-state open source MOSFET
Connector	Terminal block or remote termination
Voltage Range	10–31 Vdc
Maximum Operating Frequency	20 Hz
Current Sink Load Capability	500 mA at 31 Vdc
Electrical Isolation	1500 Vdc
Surge Suppression	500 MOV to chassis 31 Vdc transorb between signal and isolated ground
Status Indicator	LED per point status and module OK/FAIL LED
Fail Safe	Configurable as Fail State OFF or Hold Last Value

Power

Input Voltage Range	Powered from backplane
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Physical

Dimensions	177.8 mm H x 46.2 mm W x 165.1 mm D (7 in. H x 1.82 in. W x 6.5 in. D)
Weight	0.50 kg (1.1 lb)
Wiring	Up to 14 American Wire Gauge (AWG) local termination or optional remote termination

Environmental

Same as the ControlWave PAC in which it is installed

Approvals

Same as the ControlWave PAC in which it is installed

ControlWave PAC 16 Digital Outputs Module with Read Back (for redundant I/O systems only)

Outputs	
Quantity	16
Type	Solid-state open source MOSFET
Connector	Terminal block or remote termination
Voltage Range	10–31 Vdc
Maximum Operating Frequency	20 Hz
Current Sink Load Capability	500 mA at 31 Vdc
Electrical Isolation	1500 Vdc
Surge Suppression	500 MOV to chassis. 31 Vdc transorb between signal and isolated ground
Status Indicator	LED per point status and module OK/FAIL LED
Fail Safe	Configurable as Fail State OFF or Hold Last Value
Power	
Input Voltage Range	Powered from backplane
Physical	
Dimensions	177.8 mm H x 46.2 mm W x 165.1 mm D (7 in. H x 1.82 in. W x 6.5 in. D)
Weight	0.63 kg (1.4 lb)
Wiring	Up to 14 American Wire Gauge (AWG) local termination or optional remote termination
Environmental	
Same as the ControlWave PAC in which it is installed	
Approvals	
Same as the ControlWave PAC in which it is installed	

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