PDM_{NT}

EtherCAT® 4 Axis Pulse-Direction Interface & Laser Control Module

> Four axis Pulse Direction interface Module for EtherCAT network

> Open loop control of Servo or Step motor drives with Pulse/ Direction interface

> High frequency programmable pulse rate for triggering lasers

> Up to 4M pulses per second

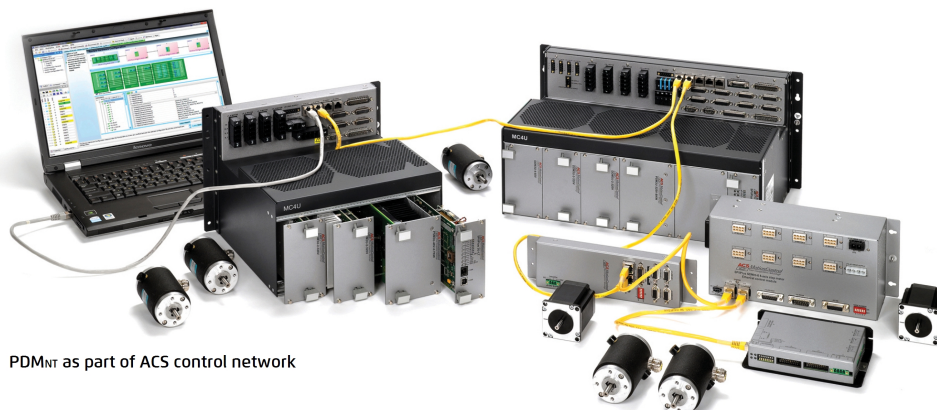> Eight digital inputs and eight digital outputs

> Laser control

The PDM_{NT} provides the ability to add up to four step motor and servo motor drives with Pulse/Dir interface to an EtherCAT network using any of ACS' EtherCAT masters.

Each of the dive interfaces consists of Pulse/Dir, limit switches, enable and fault feedback.

The maximum pulse rate is 4MHz.

The module can also be used by a SPiiPlus EtherCAT master to control Laser generators with a dynamically programmable pulses. The following modes are supported:

– Real-time varying duty cycle (=PWM), with a programmable constant frequency

– Real-time varying frequency with programmable constant pulse width (P/D like)

– Real-time varying frequency with programmable constant duty cycle

PDM_{NT} as part of ACS control network

ACS MOTION CONTROL

Specifications

Control supply

Control supply input voltage: 24Vdc ± 10%

Max. input power: 5.5W

Input current: <0.25A

Pulse/Direction Interface

Four pairs (one pair per axis)

Type: Differential, RS422 compatible,

Max. Pulse rate: 4 MHz (4,000,000 pulses per second)

Pulse Width: Min. 120 ns, Max. 50 μS

Digital I/O

The Digital I/O are powered by 5Vdc or 24Vdc external source

Safety Inputs

Eight, two per axis

Type: Single-ended, opto-isolated. Configurable by the user as either source (default) or sink, 5 Vdc ±10% or 24 Vdc ±20%

Max. input current <14 mA

Digital Inputs

Eight General purpose inputs:

Type: 5Vdc or 24Vdc, single-ended, sink or source (default), opto-isolated.

Input circuit current: <14mA

Certifications
CE: Yes
EMC: EN61326-1

Digital Outputs

Eight General purpose outputs:

Type: 5Vdc or 24Vdc, single ended, sink or source (default), optoisolated, 50mA per output and 400mA for all outputs.

Laser Interface

Pulse differential output, RS422

Fault input, Opto-isolated, 2-terminal

Enable output, Opto-isolate, 2-terminal

Pulse frequency: 9Hz to 1.181Mhz

Pulse width: 6.67ns to 111ms

Duty cycle: 0 to 100%

Environment

Operating range: 0 to + 40°C

Storage and transportation range: -25 to +60°C

Humidity (operating range): 5% to 90% non-condensing

Communication

Two EtherCAT ports, In and Out, RJ45 connector.

Dimensions

264 H x 75 W x 25 D (mm^3)

Panel or DIN rail mounted

Ordering options

PDMnt-4-08-08-00-00-1:

EtherCAT Pulse/Dir interface Module, 4 axes, 8/8 digital I/O.

PDMnt-4-08-08-00-00-1L:

EtherCAT Pulse/Dir interface Module, 4 axes, 8/8 digital I/O.

Supporting Laser control.

ACS
MOTION CONTROL