AMAX-3285IO

Advanced 8-axis EtherCAT Motion Slave Modules with 16DI/16DO Expansion

Features

- Max. 5 MHz, 8-axis pulse output
- Encoder input is 10 MHz for 4xAB mode, 2.5 MHz for CW/CCW mode
- BoardID is switchable
- Easily visible LED indicators on board to do diagnosis
- Direct wire to servo drive to save terminal board space while installation
- Horizontal installation for for servo or stepping motor driver
- Suitable for DIN-rail mounting
- Programmable interrupt
- Memory buffer (10K points) for trajectory planning which is designed in DSP
- 2-axis position compare triggering up to 100 KHz, and memory buffer is up to 100 K points
- Position latch
- Supports gantry mode by semi-closed loop pulse train control
- RDY/LTC-dedicated input channels & SVON/CMP/CAM-DO/ERC-dedicated
- Output channels are switchable for general input and output purposes

Introduction

AMAX-3285IO provides the ability to connect step motor drives and servo motor drives with CW/CCW and Pulse/Direction interfaces to EtherCAT networks controlled by Advantech EtherCAT master PCI-1203. AMAX-3285IO has open frame designs for horizontal placement and an interface connector mounted on the board. With a to-servo-drive transfer cable, it can be conveniently connected to Mitsubishi J3/J4, Yaskwaw Sigma V/7, and Panasonic A4/A5 servos. AMAX-3285IO is an 8-axis EtherCAT motion slave module that supports motion interpolation, axes synchronization, and continuous contouring. Advantech also provides a common motion API library, graphical utility, and user-friendly examples to reduce the programming load and facilitate easy configuration and diagnosis.

Specifications

Pulse-Type Motion Control

- **Motor Driver Support** — Pulse-type servo
- **Number of Axes** — 8
- **Max. Output Speed** — 5 Mpps
- **Step Count Range** — ±134, 217, 728
- **Pulse Output Type** — OUT/DIR, CW/CCW
- **Position Counter** — ±134, 217, 728
- **Home Modes** — 16 home mode + home motion defined by CiA402
- **Velocity Profiles** — T-Curve, S-Curve
- **Local I/O**

  General Input Signal
  Input voltage: 24Vdc Max.
  Input delay: 100us Max. (isolation delay)
  Signal:
  - EMG (emergency stop)
  - ORG, LMT+, LMT-
  - INPOS (in position signal)
  - LTC (counter latch)
  - RDY (servo ready)
  - ALARM (servo alarm)

  General Output Signal
  Output voltage: Open collect 24Vdc Max
  Output delay: 100us Max. (isolation delay)
  Sink current: 100mA per channel
  Signal:
  - CMP (position compare in range output)
  - SVON (servo on)
  - RALM (reset driver alarm)
  - ERC (counter clear signal)

  General Purpose I/O: 16DI/16DO (terminal block)

Encoder Interface

- **Input Type** — A/B phase, CW/CCW
- **Counts per Enc. Cycle** — x1, x2, x4 (AB phase only)
- **Input Range** — Low: 0 ~ 0.5V / High: 3.5 ~ 7V
- **Isolation Protection** — 2,500 V_{RMS}
- **Max. Input Frequency** — 10 MHz @ 4xAB

General

- **Bus Type** — EtherCAT
- **Certification** — CE, FCC Class A
- **Connectors**
  - 2 x RJ-45 for communication port
  - 1 x Terminal block (4P) for power
  - 1 x Terminal block (2P) for +5V output
  - 8 x DB-26 connector by transfer cable to servo drives
  - 8 x Terminal block (16P) for home, Limit, LTC, CMP and extra 16DI/16DO
- **Dimensions (L x W x H)** — 255 x 141 x 60 mm (5.6 x 4.3 x 2.4")
- **Power Consumption** — 15W MAX (625mA @ 24V)
- **Power Input** — $24V_{DC}$ ± 10%
- **Humidity** — 5 ~ 95% RH, non-condensing (IEC 60068-2-3)
- **Operating Temperature** — 0 ~ 60°C (32 ~ 140°F)

Ordering Information

- **AMAX-3285IO-AE** — Advanced 8-axis EtherCAT Motion Slave Modules with 16DI/16DO Expansion

Accessories

- **PCL-20153PA5-S2E** — 50-pin cable to Panasonic A4/A5 servo, 2 m
- **PCL-20153YS5-S2E** — 50-pin cable to Yaskawa Sigma V/7 servo, 2 m
- **PCL-20153MJ3-S2E** — 50-pin cable to Mitsubishi J3/J4 servo, 2 m
- **PCL-20153DA2-S2E** — 50-pin cable to Delta A2 servo, 2 m

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All product specifications are subject to change without notice.