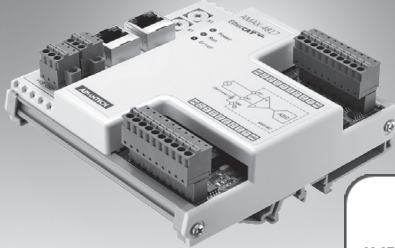


# AMAX-4817

# AMAX-4820

## 8-Channel, 16-Bit Isolated Analog Input EtherCAT Remote I/O Module

## 4-Channel, 16-Bit Isolated Analog Output EtherCAT Remote I/O Module



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AMAX-4817



AMAX-4820



### Features

- Suitable for EtherCAT networks
- 8 x 16-bit analog input channels with 2,500 V<sub>DC</sub> isolation
- Wide common-mode voltage range ( $\pm 275$  V)
- Removable European-type connector
- Supports EtherCAT distributed clocks (DC) mode and SyncManager mode
- 2 x Rotating switches that support up to 256 SubDevice IDs

### Introduction

AMAX-4817 is an industrial-grade remote I/O SubDevice module equipped with the EtherCAT protocol. European-type pluggable terminal blocks facilitate module setup and maintenance, while the compact size and support for DIN-rail mounting ensure easy installation in cabinet configurations. For safe and reliable operation, all of the 8 analog input channels are protected by a 2,500 V<sub>DC</sub> isolation circuit.

### Specifications

#### Communication

- **Interface** EtherCAT
- **Data Transfer Medium** Ethernet/EtherCAT cable (min. CAT 5), shielded
- **Distance Between Modules** Max. 100 m (100BASE-TX)
- **Communication Cycle Time** 100  $\mu$ s (guarantees all channel data are updated)
- **Data Transfer Rates** 100 Mbps

#### Analog Input

- **Channels** 8
- **Resolution** 16 bits
- **Input Voltage Range** 0 – 10 V,  $\pm 10$  V
- **Common-Mode Voltage Range**  $\pm 275$  V
- **Measurement Error**  $\leq \pm 0.1\%$
- **Isolation Protection** 2,500 V<sub>DC</sub>
- **Conversion Time** 40  $\mu$ s for all channels

Note: Because the analog sampling rate exceeds the communication cycle time, the maximum polling rate will be limited by the communication cycle time = 10 kS/s for each channel.

#### General

- **Connectors** 2 x 10-pin terminal block (I/O), 3.81 mm  
1 x 3-pin screw terminal block (power), 3.81 mm  
2 x RJ-45 (EtherCAT)
- **Dimensions** 120 x 120 x 40 mm (4.72 x 4.72 x 1.57 in)
- **Operating Temperature** -20 – 60 °C (-4 – 140 °F)
- **Storage Temperature** -40 – 70 °C (-40 – 158 °F)
- **Storage Humidity** 5 – 95% RH (non-condensing)
- **Power Supply** 10 – 30 V<sub>DC</sub>
- **Power Consumption** Typical 160 mA @24 V; Max. 190 mA @24 V

### Ordering Information

- **AMAX-4817-B** 8-ch, 16-bit isolated AI EtherCAT remote I/O module
- **96PSD-A40W24-MM** DIN rail A/D 100 – 240 V, 40 W, 24 V

### Features

- Suitable for EtherCAT networks
- 4 x 16-bit analog output channels with 2,500 V<sub>DC</sub> isolation
- Multiple voltage and current output ranges
- Removable European-type connector
- Supports EtherCAT distributed clocks (DC) mode and SyncManager mode
- 2 x Rotating switches that support up to 256 SubDevice IDs

### Introduction

AMAX-4820 is an industrial-grade remote I/O SubDevice module equipped with the EtherCAT protocol. European-type pluggable terminal blocks facilitate module setup and maintenance, while the compact size and support for DIN-rail mounting ensure easy installation in cabinet configurations. For safe and reliable operation, all of the 4 analog output channels are protected by a 2,500 V<sub>DC</sub> isolation circuit.

### Specifications

#### Communication

- **Interface** EtherCAT
- **Data Transfer Medium** Ethernet/EtherCAT cable (min. CAT 5), shielded
- **Distance Between Modules** Max. 100 m (100BASE-TX)
- **Communication Cycle Time** 100  $\mu$ s (guarantees all channel data are updated)
- **Data Transfer Rates** 100 Mbps

#### Analog Output

- **Channels** 4
- **Resolution** 16 bits
- **Output Voltage Range** 0 – 5 V, 0 – 10 V,  $\pm 5$  V,  $\pm 10$  V
- **Output Current Range** 0 – 20 mA, 4 – 20 mA
- **Load** > 1 k $\Omega$  (voltage output)  
< 625  $\Omega$  (current output)
- **Output Error**  $\leq \pm 0.1\%$
- **Isolation Protection** 2,500 V<sub>DC</sub>
- **Conversion Time** 40  $\mu$ s for all channels

#### General

- **Connectors** 1 x 10-pin terminal block (I/O), 3.81 mm  
1 x 3-pin screw terminal block (power), 3.81 mm  
2 x RJ-45 (EtherCAT)
- **Dimensions** 120 x 120 x 40 mm (4.72 x 4.72 x 1.57 in)
- **Operating Temperature** -20 – 60 °C (-4 – 140 °F)
- **Storage Temperature** -40 – 70 °C (-40 – 158 °F)
- **Storage Humidity** 5 – 95% RH (non-condensing)
- **Power Supply** 10 – 30 V<sub>DC</sub>
- **Power Consumption** Typical 160 mA @24 V; Max. 190 mA @24 V

### Ordering Information

- **AMAX-4820-B** 4-ch, 16-bit isolated AO EtherCAT remote I/O module
- **96PSD-A40W24-MM** DIN rail A/D 100 – 240 V, 40 W, 24 V