

EtherCAT Sensor Communications Unit that Simplifies Sensor Setting Management

- Transmit ON/OFF signals and detection amounts to a host PLC without a program (PDO communication function).
- Supports operations such as reading, writing, and teaching threshold values and function settings (by way of the SDO communication function).
- Supports wire saving by requiring only the wiring necessary to connect the communication cable to the amplifier placed next to the E3X-ECT and to connect the power supply to the E3X-ECT.
- Supports connection 30 pcs amplifier (max).



Refer to the *Fiber Sensors Technical Guide*.

For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

Ordering Information

EtherCAT Sensor Communications Unit

Name	Internal circuit power supply	Power Supply Voltage	Model
EtherCAT Sensor Communications Unit	Supplied along with communications power	24 VDC	E3X-CRT

Applicable Sensor Amplifier Units

Unit	Characteristic	Connection Method	Power Supply	Model
Standard fiber amplifier unit	General-purpose fiber amplifier unit with simple settings and operation	Connect to a communications unit Only by connector	Supplied along with a power supply connector.	E3X-HD0
2CH fiber amplifier unit	Two-channel fiber amplifier unit to which two fibers can be connected			E3X-MDA0
Laser sensor amplifier unit	Laser sensor amplifier unit to which three types of beam laser sensors can be connected			E3C-LDA0
Proximity sensor amplifier unit	Proximity sensor amplifier unit on which highly accurate sensitivity settings can be made easily			E2C-EDA0

Note: Amplifier settings limitation: The super-high-speed mode of the amplifier's response time cannot be used.

Ratings and Specifications

Communications power	14 to 26.4 VDC (supply from communication connector)
Power supply wattage and current	2.4 W (max.) (Not include sensors current) 100 mA (max.) 24 VDC (Not include sensors current)
Communication method	EtherCAT
Functions	DC (synchronous) mode, Free run mode, PDO communications,*1 SDO communications, Sensor error output
Indicators	L/A IN indicator (yellow), L/A OUT indicator (yellow), PWR indicator (green), RUN indicator (green), ERROR indicator (red), and SS (Sensor Status) indicator (green/red)
Vibration resistance	10 to 150 Hz with double amplitude of 0.7 mm, or 50 m/s ² 80 min each in X, Y, and Z directions
Shock resistance	150 m/s ² 3 times each in X, Y, and Z directions
Dielectric strength	500 VAC 50/60 Hz 1 minute
Insulation resistance	20MΩ min.
Ambient operating temperature	0 to 55°C (with no icing or condensation) *2 The temperature is limited by the number of connected Fiber Amplifier Units.
Ambient operating humidity	25% to 85% (with no condensation)
Storage temperature	-30 to 70°C (with no icing or condensation)
Storage humidity	25% to 85% (with no condensation)
Mounting method	35-mm DIN track-mounting
Accessories	Power supply connector, connector cover, End Plates for DIN track, and Instruction manual
Weight (packed state/unit only)	Approx. 220 g/Approx. 95 g

*1. Data Size Assignable to the PDO (Process Data Object): There is a maximum data size that can be assigned. The maximum size is 36 bytes.

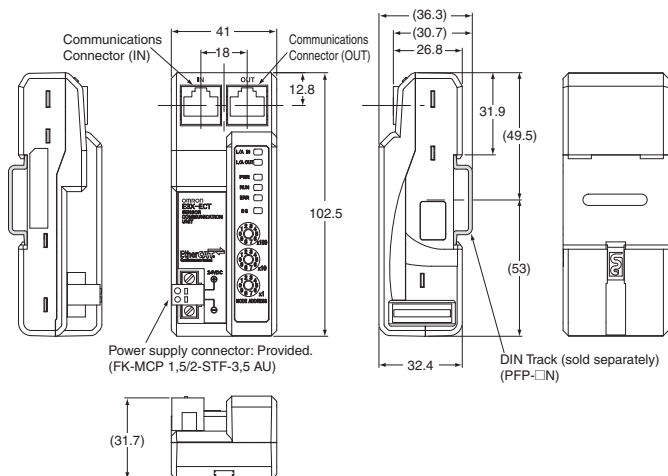
*2. Temperature Limitations Based on Number of Connected Fiber Amplifier Units:

- Groups of 1 to 2 Amplifiers: 0 to 55°C,
- Groups of 3 to 10 Amplifiers: 0 to 50°C,
- Groups of 11 to 16 Amplifiers: 0 to 45°C,
- Groups of 17 to 30 Amplifiers: 0 to 40°C

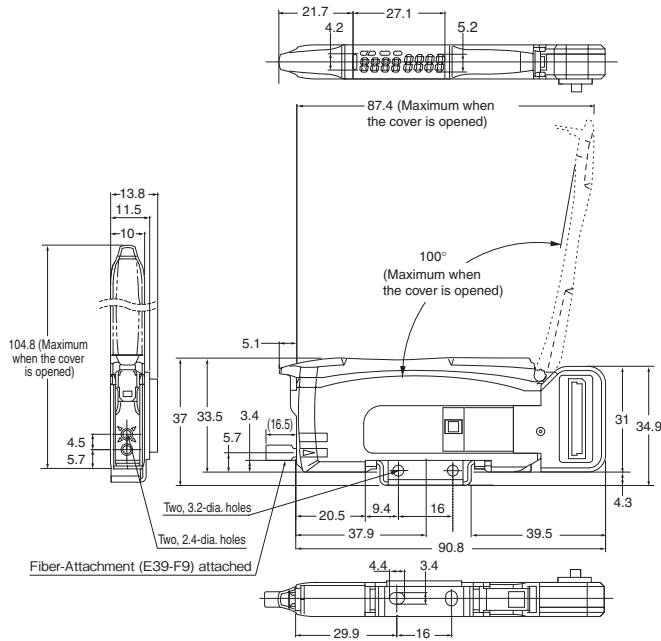
Dimensions

Tolerance class IT16 applies to dimensions in this data sheet unless otherwise specified.

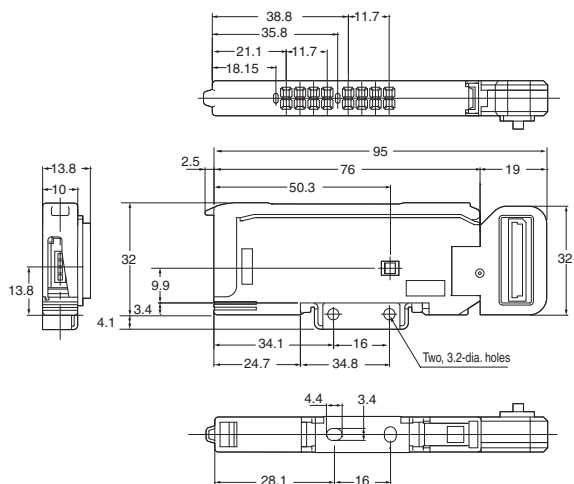
E3X-ECT



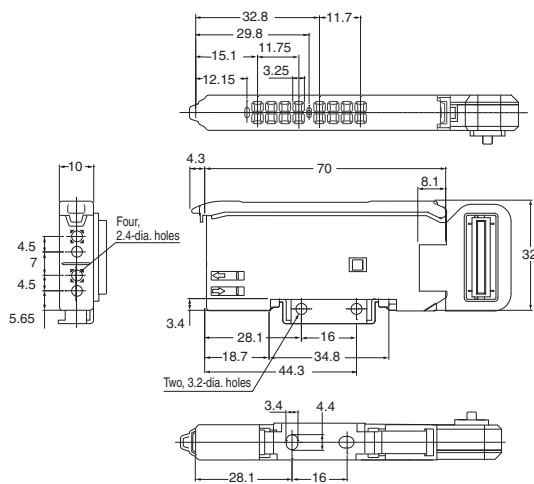
E3X-HD0



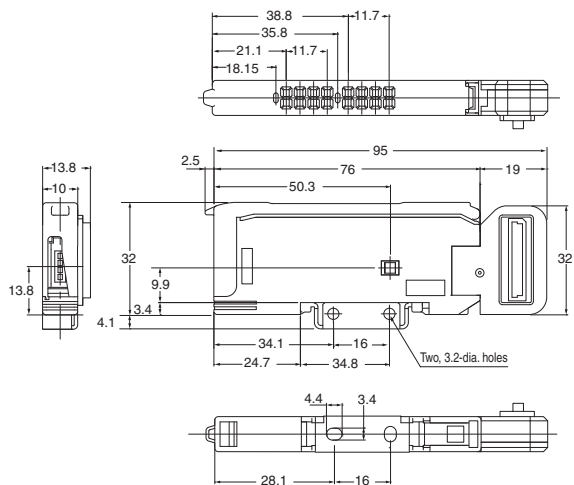
E3C-LDA0



E3X-MDA0



E2C-EDA0



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