

EtherCAT®



ECAT-2016N

EtherCAT SubDevice I/O Module with 16-bit,
1-ch Strain Gauge

ECAT-2016-3

EtherCAT SubDevice I/O Module with 16-bit,
3-ch Strain Gauge

Features

- On the fly processing: EtherCAT
- Powerful MCU handles efficient network traffic
- 2 x RJ-45 bus interface
- Distance between stations up to 100 m (100BASE-TX)
- Support daisy chain connection
- EtherCAT conformance test tool verified
- Removable terminal block connector
- LED indicators
- ECAT-2016N: 1 channel loadcell transducer Input
- ECAT-2016-3: 3 channels loadcell transducer Input



Introduction

The ECAT-2000 is equipped with the EtherCAT protocol and installed by daisy chain connection which permits the flexibility in devices installation and reduces infrastructure and operation costs. All the modules can be deployed in the network topologies such as star, line or ring. The isolation input and output design protects the ECAT-2000 against the harmful interference and environment.

The ECAT-2016N is 1-channels analog input terminal permits direct connection of a resistor bridge. The ECAT-2016-3 is 3 channels analog input terminal permits direct connection of a resistor bridge. Users can obtain the input status via the process data. It has passed and verified by the conformance test tool, therefore eligible EtherCAT Main Device or configuration can manipulate it simply and implement your various applications easily.

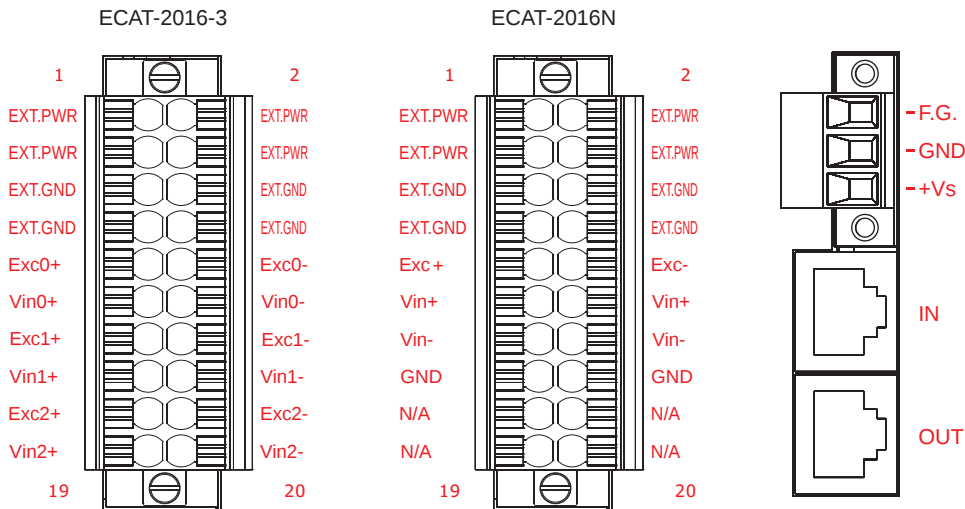
* EtherCAT® is registered trademark and patented technology, licensed by Beckhoff Automation GmbH, Germany.

Hardware Specifications

Model	ECAT-2016N	ECAT-2016-3
Strain Gauge Input		
Channels	1	3
Sensor	Full-Bridge	
Resolution	16-bit	
Accuracy	±0.1% of FSR	
Input Range	±1.25 V, ±600 mV, ±300 mV, ±125 mV, ±80 mV, ±60 mV, ±40 mV, ±30 mV, ±20 mV, ±15 mV, ±10 mV	±10 V, ±5 V, ±2.5 V, ±1.25 V, ±625 mV, ±312 mV, ±200 mV, ±100 mV, ±50 mV, ±25 mV
Sampling Rate	1k Hz per channel	
Input Impedance	20 MΩ	
Individual Channel Configuration	Yes (Range & Filter setting function is not supported)	
Open Wire Detection	No	
Excitation Voltage		
Channel	1	3
Output Voltage	10 V	
Max. Load Current	40 mA	
Power		
Input Voltage Range	+10 ~ +30 VDC	
Power Consumption	4 W Max.	
Mechanical		
Dimensions (W x L x H)	33 mm x 127 mm x 108 mm	
Installation	DIN-Rail Mounting	
Casing	Plastic	
Environment		
Operating Temperature	-25 ~ +75°C	
Storage Temperature	-30 ~ +80°C	
Relative Humidity	10 ~ 90% RH, Non-condensing	

Model	ECAT-2016N	ECAT-2016-3
EMS Protection		
ESD (IEC 61000-4-2)	±4 kV Contact for Each Terminal	
EFT (IEC 61000-4-4)	Signal: 1 KV Class A; Power: 1 KV Class A	
Surge (IEC 61000-4-5)	1 KV Class A	
EtherCAT		
Ports	2 x RJ-45	
Distance Between Stations	100 m Max. (100BASE-TX)	
Data Transfer Medium	Ethernet/EtherCAT cable (Min. CAT5), shielded	
Cycle Time	1 ms	
Distributed Clocks	N/A	

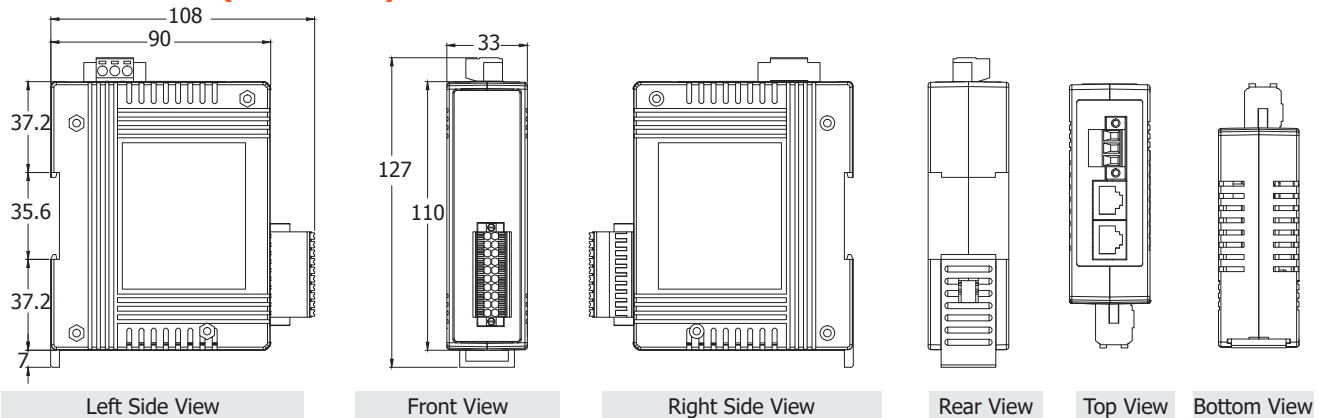
Pin Assignments



Wire Connections



Dimensions (Units: mm)



Ordering Information

ECAT-2016-3 CR	EtherCAT SubDevice I/O Module with 16-bit, 3-ch Strain Gauge (RoHS)
ECAT-2016N CR	EtherCAT SubDevice I/O Module with 16-bit, 1-ch Strain Gauge (RoHS)