POWER/NETWORK MODULE
(EtherCAT)

MODEL **R80NECT1**

BEFORE USE ....

Thank you for choosing us. Before use, please check contents of the package you received as outlined below.
If you have any problems or questions with the product, please contact our sales office or representatives.

■ PACKAGE INCLUDES:

Power/network module ....(1)
Protective cover ....(1)

■ MODEL NO.

Confirm Model No. marking on the product to be exactly what you ordered.

■ INSTRUCTION MANUAL

This manual describes necessary points of caution when you use this product, including installation, connection and basic maintenance procedures.
For detailed explanations to operate this product, please refer to Model R80NECT1 Operating Manual (EM-7022-B).
The operating manual (EM-7022-B) is downloadable at our web site.

POINTS OF CAUTION

■ CONFORMITY WITH EU DIRECTIVES

• The equipment must be mounted inside a panel of a metal enclosure.
• The actual installation environments such as panel configurations, connected devices, connected wires, may affect the protection level of this unit when it is integrated in a panel system. The user may have to review the CE requirements in regard to the whole system and employ additional protective measures* to ensure the CE conformity.
  * For example, installation of noise filters and clamp filters for the power source, input and output connected to the unit, etc.

■ POWER INPUT RATING & OPERATIONAL RANGE

• Locate the power input rating marked on the product and confirm its operational range as indicated below:
  DC Power supply: 24V DC rating
    24V DC ± 10%, approx. 12W
    (@ internal power max. current 1.6 A)
  Excitation supply (excitation for I/O module):
    24V DC ± 10%, operational current 10 A
  (From power supply/excitation supply connector, via connector for internal bus, supplied to each I/O module. Power output current consumption must be under operational current.)

■ GENERAL PRECAUTIONS

• Before you remove or mount the unit, turn off the power supply for safety.

■ ENVIRONMENT

• Indoor use.
• When heavy dust or metal particles are present in the air, install the unit inside proper housing with sufficient ventilation.
• Do not install the unit where it is subjected to continuous vibration. Do not subject the unit to physical impact.
• Environmental temperature must be within -10 to +55°C (14 to 131°F) with relative humidity within 30 to 90% RH in order to ensure adequate life span and operation.

■ WIRING

• Do not install cables close to noise sources (relay drive cable, high frequency line, etc.).
• Do not bind these cables together with those in which noises are present. Do not install them in the same duct.

■ AND ....

• The unit is designed to function as soon as power is supplied, however, a warm up for 10 minutes is required for satisfying complete performance described in the data sheet.

INSTALLATION

Internal power supply/communication is connected via each module's connector, therefore no backplane base is required, however, hot-swapping of modules is not possible.
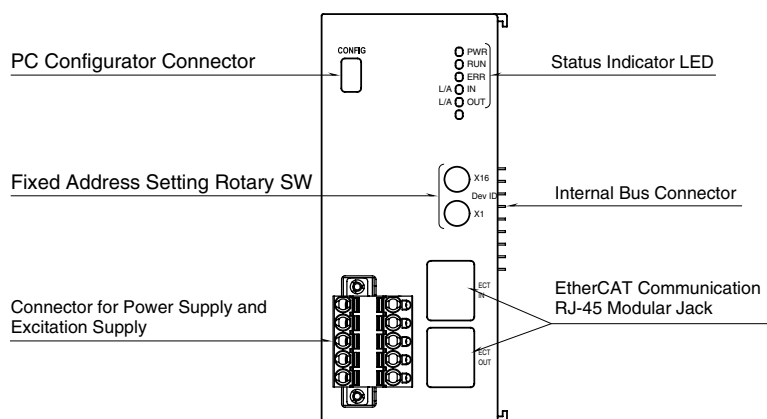
■ HOW TO MOUNT THE MODULE ON DIN RAIL

Hook
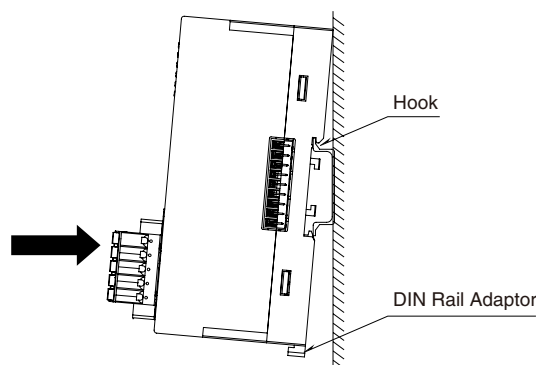
DIN Rail Adaptor

Position the upper hook at the rear on the DIN rail and push in the lower. When removing the module, push down the DIN rail adaptor utilizing a flat-blade screwdriver and pull.

Ether CAT®

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

COMPONENT IDENTIFICATION

PC Configurator Connector

CONFIG

PWR
RUN
ERR
L/A IN
L/A OUT

Status Indicator LED

Fixed Address Setting Rotary SW

X16
Dev ID
X1

Internal Bus Connector

Connector for Power Supply and Excitation Supply

ECT IN

ECT OUT

EtherCAT Communication RJ-45 Modular Jack

■ STATUS INDICATOR LED

ID	FUNCTION	COLOR	STATUS	
PWR	Main unit internal power	Green	Off	Error
			On	Normal
RUN	Device state	Green	Off	INIT
			Blinking	PRE-OPERATIONAL
			Single Flash	SAFE-OPERATIONAL
			On	OPERATIONAL
ERR	Error	Red	Off	No error
			Blinking	Invalid Configuration
			Single Flash	Local error
			On	Application Controller failure
L/A IN	IN port status	Green	Off	No Link
			Flickering	Link and activity
			On	Link without activity
L/A OUT	OUT port status	Green	Off	No Link
			Flickering	Link and activity
			On	Link without activity

Blinking	200ms-On, 200ms-Off
Single Flash	200ms-On, 1000ms-Off
Flickering	50ms-On, 50ms-Off

■ FIXED ADDRESS

For R80NECT1, fixed address mode using ID selector is supported. Fixed address 1 to 255 can be used by combining with two rotary switches which have address 0 to F. When fixed address is not used, set the ID selector to 0. (Factory setting: 0)

Address Setting (x16)

Address Setting (x1)
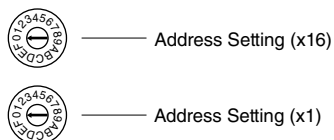
■ POWER SUPPLY, EXCITATION SUPPLY CONNECTOR ASSIGNMENT

Printed-circuit board connector (Phoenix Contact)
  Unit side connector: MSTBV2,5/5-GF-5,08AU
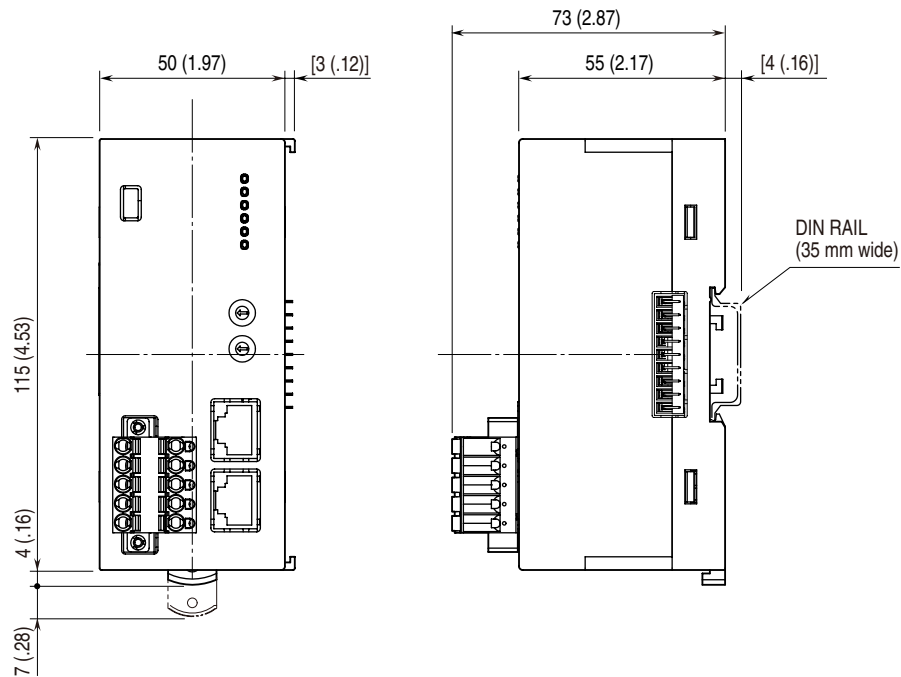 **Cable side connector**: TFKC2,5/5-STF-5,08AU

PIN No.	ID	FUNCTION
1	24V	Power supply 24V DC
2	0V	Power supply 0V DC
3	+	Excitation supply 24V DC
4	–	Excitation supply 0V DC
5	FE1	Grounding

TERMINAL CONNECTIONS

Connect the unit as in the diagram below.
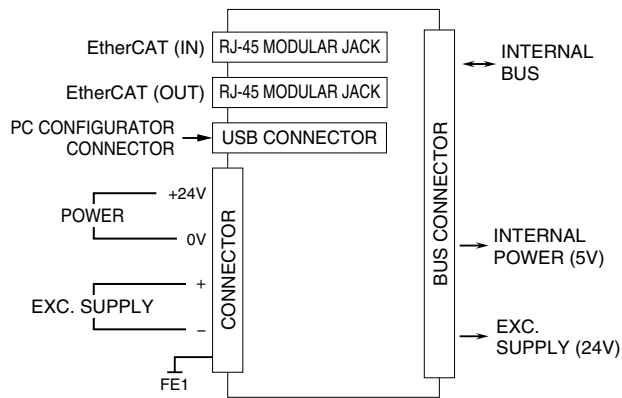
■ **EXTERNAL DIMENSIONS unit: mm (inch)**
 • **UNIT**

50 (1.97) [3 (.12)]

73 (2.87)

55 (2.17) [4 (.16)]

DIN RAIL
(35 mm wide)

115 (4.53)

4 (.16)

7 (.28)

 • **PROTECTIVE COVER**

5 (.20)

50 (1.97)

115 (4.53)
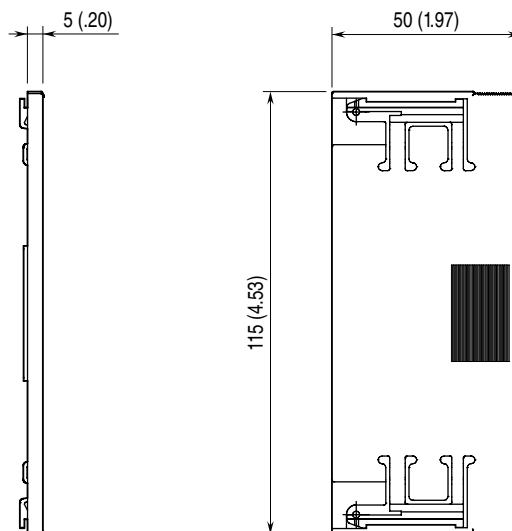
■ **CONNECTION DIAGRAM**

WIRING INSTRUCTIONS

■ **TENSION CLAMP TERMINAL**

Applicable wire size: 0.2 – 2.5 mm^2
Stripped length: 10 mm
Recommended solderless terminal
AI0,25-10YE 0.25 mm^2 (Phoenix Contact)
AI0,34-10TQ 0.34 mm^2 (Phoenix Contact)
AI0,5-10WH 0.5 mm^2 (Phoenix Contact)
AI0,75-10GY 0.75 mm^2 (Phoenix Contact)
AI1-10RD 1.0 mm^2 (Phoenix Contact)
AI1,5-10BK 1.5 mm^2 (Phoenix Contact)
AI2,5-10BU 2.5 mm^2 (Phoenix Contact)