

AFE Series

Sensor connector type terminal block

■ Features

- Easy wiring works and significant time saving combined with sensor connector


[wire mount plug(CNE-P□□□, sold separately)]

- Unnecessary wire stripping and specific tools
- Space saving with compact size
- Easy check for operation status and for cable break by adopting LED signal
- 2 ways of mounting (DIN rail, mounting with screws)
- Selectable NPN/PNP input (NPN/PNP selection switch)

※ For sensor connector wire plug (CNE Series), refer to A-2 to 5 pages.

※ It is recommended for I/O cable to use Autonics CJ Series (connector transmission cable). Refer to -1 page.



 Please read "Caution for your safety" in operation manual before using this unit.

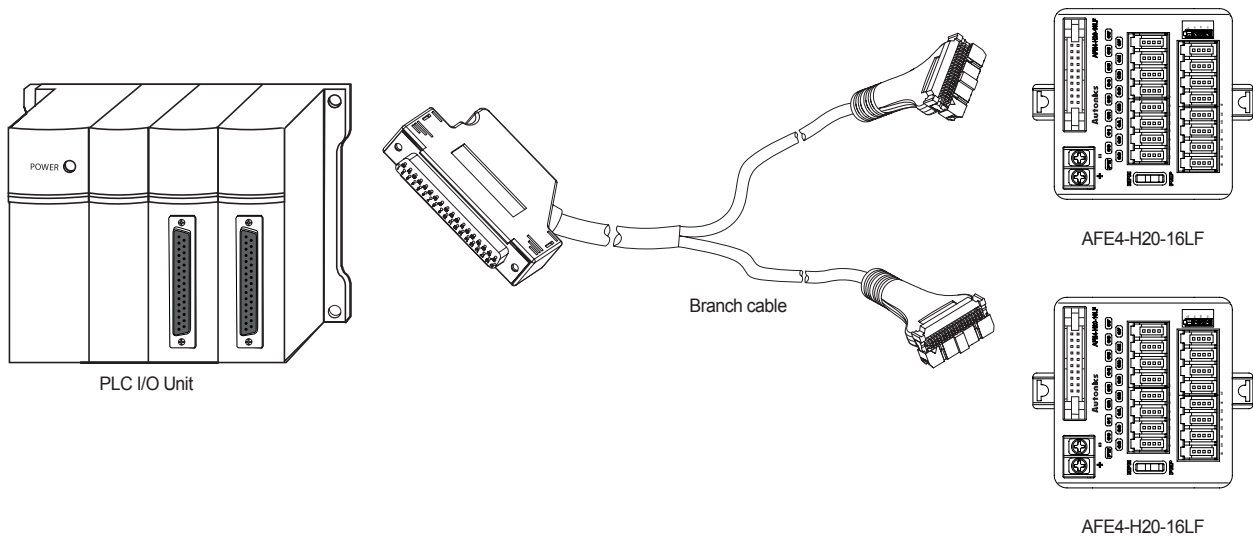


■ Model

Model	Item	Connector type for primary	For secondary		Number of sensor connectors	LED	Case type
			Connector type	Number of connector pins			
AFE4-H20-16LF	Interface terminal block	Sensor connector 4-pin socket	Hirose connector	20-pin	16EA	Yes	Full case type
AFE4-H40-32LF				40-pin	32EA		


■ Example of sensor connector type terminal block connection

- Example of connection AFE4-H20-16LF and 40-point I/O module PLC with branch cable



Sensor Connector Type Terminal Block

Specifications

Model	AFE4-H20-16LF	AFE4-H40-32LF
Power supply	12-24 VDC	
Allowable voltage range	90 to 110% of rated voltage	
Rated current	Max. 1A ※ ¹	
Number of connector pins	20-pin	40-pin
Number of sensor connectors	16EA	32EA
Insulation resistance	Min. 1,000 MΩ (at 500 VDC megger)	
Dielectric strength	600 VAC 50/60 Hz for 1 min.	
Vibration	Mechanical	0.75 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 1 hour
	Malfunction	0.75 mm amplitude at frequency of 10 to 55 Hz(for 1 min.) in each of X, Y, Z directions for 10 min.
Shock	Mechanical	150 m/s ² (15G) in each of X, Y, Z directions for 3 times
	Malfunction	100 m/s ² (10G) in each of X, Y, Z directions for 3 times
Environment	Ambient temperature	-15 to 55 °C, storage : -25 to 65 °C
	Ambient humidity	35 to 85%RH, storage : 35 to 85%RH
Material	CASE, BASE : PC	
Tightening torque	0.7 to 0.8 N·m	
Approval		
Weight※ ²	Approx. 121 g(Approx. 69 g)	Approx. 203 g(Approx. 119 g)

※1: The rated current includes LED current of terminal block.

※2: The weight is with packaging and the weight in parentheses is only unit weight.

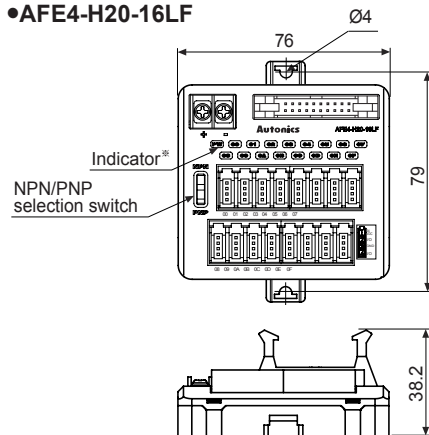
※Environment resistance is rated at no freezing or condensation.

(A)
Sensor connector
(B)
I/O terminal block
(C)
I/O cable
(D)
Remote I/O terminal block

Dimensions

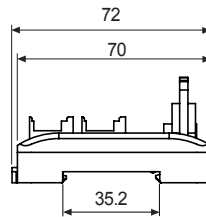
(unit:mm)

•AFE4-H20-16LF

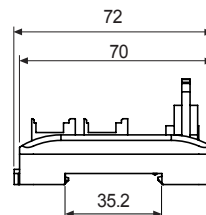
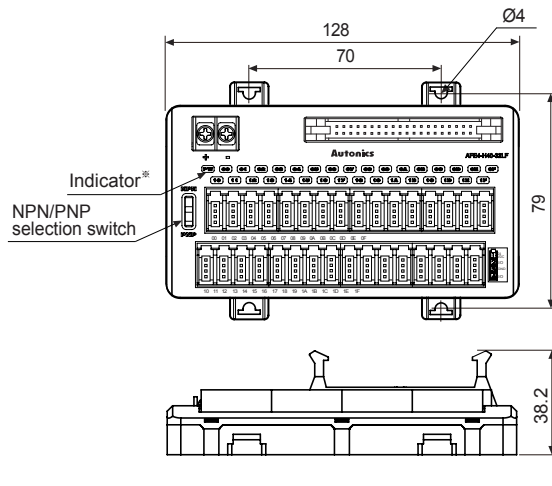


※Factory default of the NPN/PNP selection switch is NPN.

※Indicator(PW: red LED, operation and disconnection: blue LED)



•AFE4-H40-32LF



AFS

AFL/AFR

ACS

AFE

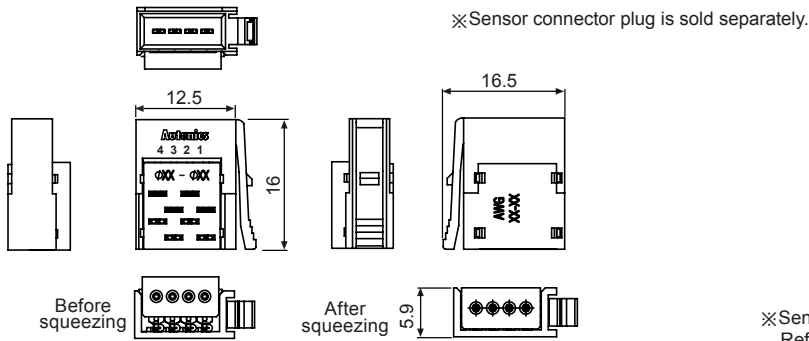
ABS

Relay

AFE Series

■ Specifications of sensor connector wire mount plug

(unit: mm)



※Sensor connector wire plug is sold separately.
Refer to A-2 to 5 pages.

●Cover color and wire specifications for sensor connector wire mount plug

Model	Cover color	Applied wire specifications	
		Normal cross section area (mm ²)	Cover diameter (mm)
CNE-P04-WT	Transparent(WT)	0.05 to 0.08 (AWG30 to 28)	ø 0.6 to 0.8
CNE-P04-YG	Yellow-Green(YG)		ø 0.8 to 1.0
CNE-P04-VT	Violet(VT)		ø 1.0 to 1.2
CNE-P04-RE	Red(RE)	0.13 to 0.21 (AWG26 to 24)	ø 0.8 to 1.0
CNE-P04-YW	Yellow(YW)		ø 1.0 to 1.2
CNE-P04-OG	Orange(OG)		ø 1.2 to 1.6
CNE-P04-GN	Green(GN)	0.32 to 0.5 (AWG22 to 20)	ø 1.0 to 1.2
CNE-P04-BL	Blue(BL)		ø 1.2 to 1.6
CNE-P04-GY	Gray(GY)		ø 1.6 to 2.0

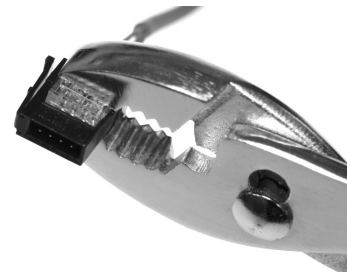
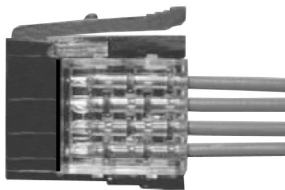
■ How to squeeze sensor connector wire plug

1) Insert wires.

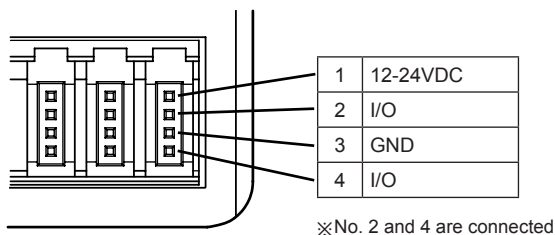
- Check the pin number and insert wires at the insertion part of the cover.
- Check the wires are inserted at the end of cover.

2) Squeeze the connector.

- Insert the cover to the body with tools (press fitting plier, etc).
- Squeeze it with tools at the side direction as below figure.



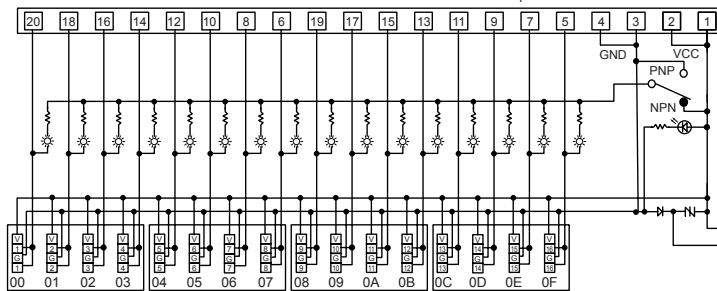
■ Sensor connector socket arrangement



Sensor Connector Type Terminal Block

Connections

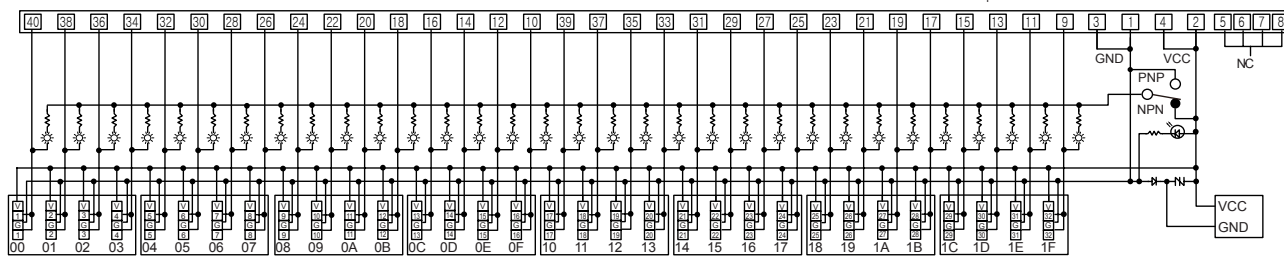
AFE4-H20-16LF



※Hirose connector model : HIF3BA-20PA-2.54DSA

※Hirose connector model : HIF3BA-40PA-2.54DSA

AFE4-H40-32LF



Installations

Mounting to and Removing from DIN rail

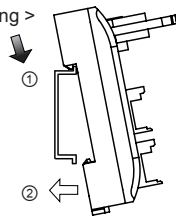
Mounting

- 1) Push the rail locks to the direction "①".
- 2) Hook DIN rail connection onto DIN rail.
- 3) Push the unit down to the direction "②" and then push up the rail locks to the unit body.

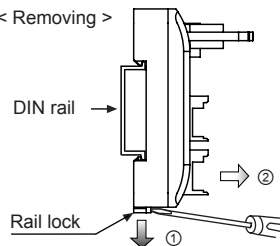
Removing

- 1) Insert a screwdriver into holes of rail lock and pull the lock out to the direction "③".
- 2) Removing the unit by pulling to the direction "④".

< Mounting >

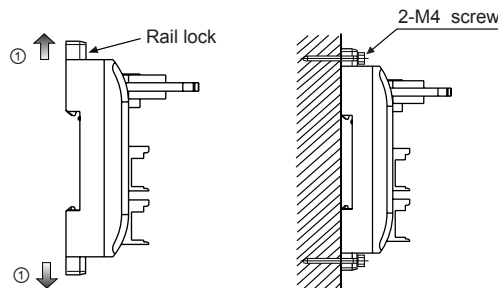


< Removing >



Mounting with screws

- 1) This unit is able to mount on the panel with rail locks.
- 2) It is recommended to use M4×15 mm of spring washer screws and to use flat washers which are diameter Ø 6. The tightening torque should be 0.7 to 1.0 N·m.



Caution for using

1. Use the product within the rated specifications for operating temperature and humidity.
2. Check voltage fluctuations in the power supply within the rated range.
3. When connecting PLC or other controllers, check the polarity of power before wiring.
4. Power wire should be AWG16(1.25 mm²).
5. Do not use NPN output sensor and PNP output sensor simultaneously.
6. Do not use this unit at below places.
 - ① Place where there is severe vibration or impact
 - ② Place where strong alkalis or acids are used
 - ③ Place where there are direct ray of the sun
 - ④ Place where strong magnetic field or electric noise are generated
7. In case of 24VDC signal input, isolated and limited voltage/current or Class2 source should be provided for power supply.
8. Installation environment
 - ① It shall be used indoor.
 - ② Altitude max. 2,000 m
 - ③ Pollution Degree 2
 - ④ Installation Category II

(A) Sensor connector
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(C) I/O cable
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