


AFL/AFR Series

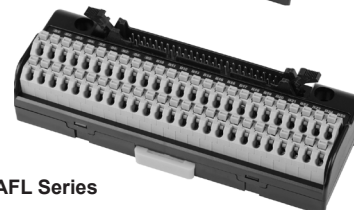
Interface terminal block

■ Features

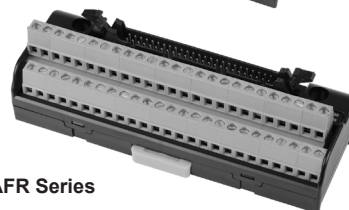
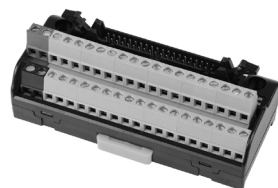
- Effective space saving with slim structure
- Easy connecting method for saving wiring time and maximizing user convenience
 - AFL: Screwless Type of one touch method
 - Spring structure helps to be resistant to vibration, and not loosened for a long time use, constant wiring strength regardless of job skills
 - AFR: Rising Clamp Type as easy wiring
- Small interface terminal as terminal pitch 5mm
- Suitable for connector type PLC and the dedicated controller Input/Output
- 2 ways of mounting (DIN rail, mounting with screw)

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

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

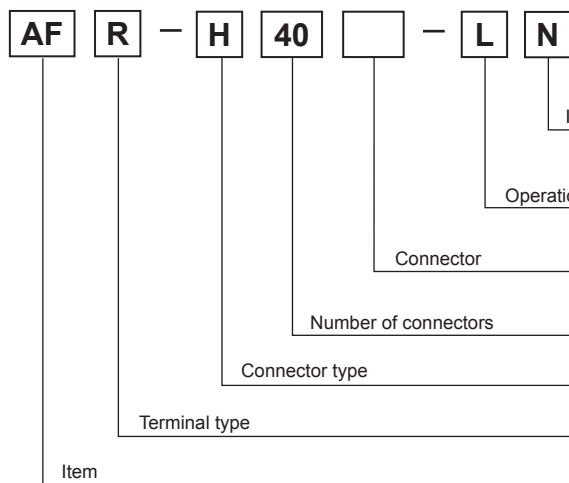


AFL Series



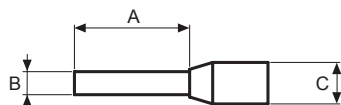
AFR Series

■ Ordering information



No-mark	None
N	NPN
P	PNP
No-mark	None
L	LED indicator
No-mark	HIF3BA
B	HIF3BB
40	40-pin
50	50-pin
H	Hirose
L	Screwless
R	Rising clamp
AF	Interface terminal block

■ Applied crimp terminal




(unit: mm)

		A	B	C	Applied wire
End Sleeve(ferrule terminal) crimp terminal	AFL	10 to 12.0	Max. 2.0	Max. 4.1	AWG22-16(0.30 to 1.25mm ²)
	AFR	6.0 to 8.0			

※Use the UL certified crimp terminal.

Interface Terminal Block

Specifications

Model	AFL-H40	AFL-H50	AFL-H50B	AFL-H40-LN AFL-H40-LP	AFR-H40	AFR-H50	AFR-H50B	AFR-H40-LN AFR-H40-LP
Rated voltage	Max. 125VDC, 125VAC 50/60Hz			24VDC ±10%	Max. 125VDC, 125VAC 50/60Hz			24VDC ±10%
Rated current	Max. 1A							
Terminal type	Screwless				Rising Clamp			
No. of terminals	40EA	50EA		32EA* ¹	40EA	50EA		32EA* ¹
Terminal pitch	5.0mm							
Connector type	HIF3BA		HIF3BB	HIF3BA			HIF3BB	HIF3BA
Operation indicator	—			Blue LED	—			Blue LED
Applied cable	Solid wire	Ø0.3 to Ø1.2mm						
	Stranded wire* ²	AWG 22-16(0.30 to 1.25mm ²)						
Stripped wire length	8 to 10mm				6 to 8mm			
Insulation resistance	Min. 1,000MΩ (at 500VDC megger)							
Dielectric strength	600VAC 50/60Hz for 1 min.							
Vibration	0.75mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y, Z directions for 2 hours							
Shock	150m/s ² (approx. 15G) 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: PC, BASE: PC							
Tightening torque	-				0.5 to 0.6N·m			
Protection	IP20							
Approval								
Weight* ³	Approx. 156g (approx. 89g)	Approx. 177g (approx. 110g)		Approx. 158g (approx. 91g)	Approx. 183g (approx. 116g)	Approx. 210g (approx. 143g)		Approx. 185g (approx. 118g)

*1: Among 40 terminals, 32 terminals are available for I/O and 8 terminals are LED power and N:C(Not Connect) terminals.

*2: When using stranded wire, use End Sleeve(ferrule terminal) crimp terminals.

*3: The weight is with packaging and the weight in parentheses is only unit weight.

*Environment resistance is rated at no freezing or condensation.

How to wire crimp terminals

1. For screwless type terminal block, wiring and removing End Sleeve(Ferrule Terminal) crimp terminals

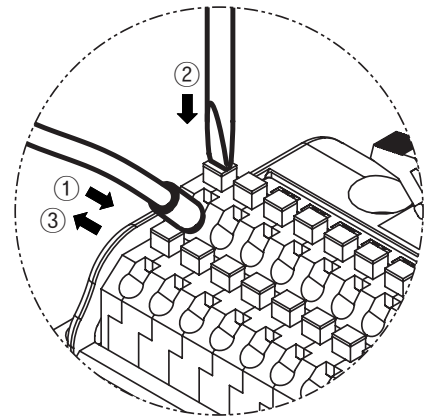
• Wiring

1) Push an End Sleeve(ferrule terminal) crimp terminal to the ① direction and it is wired.

• Removing

1) Press an upper groove with a flat head driver to the ② direction.

2) Remove an End Sleeve(ferrule terminal) crimp terminal to the ③ direction.



2. For rising clamp type terminal block, wiring and removing End Sleeve(ferrule terminal) crimp terminals

• Wiring

1) Rotate a screw to the ① direction (CCW) by using a flat head driver at an upper groove.

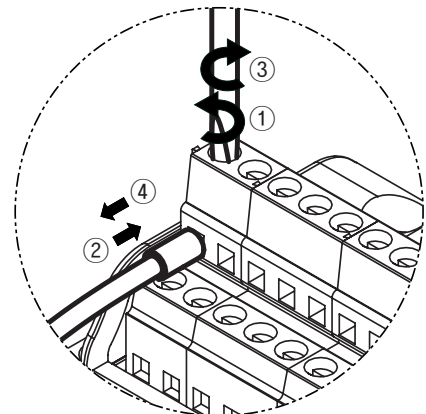
2) Push an End Sleeve(ferrule terminal) crimp terminal to the ② direction.

3) Rotate the screw to the ③ direction (CW) by using a flat head driver at an upper groove. Tightening torque should be 0.4 to 0.6N·m.

• Removing

1) Rotate a screw to the ① direction (CCW) by using a flat head driver at an upper groove.

2) Remove an End Sleeve(ferrule terminal) crimp terminal to the ④ direction.



(A)
Sensor
connector

(B)
I/O terminal
block

(C)
I/O cable

(D)
Remote I/O
terminal block

AFS

AFI/AFR

ACS

AFE

ABS

Relay

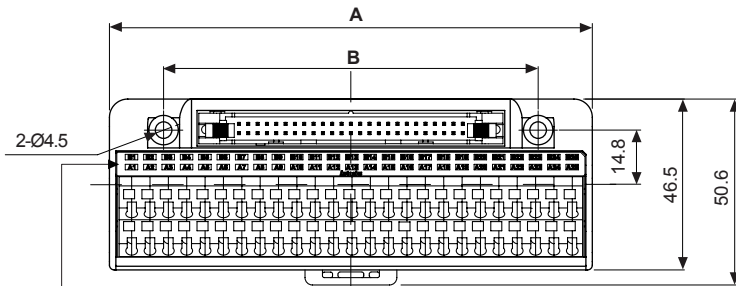
AFL/AFR Series

Dimensions

● AFL-H40(-LN(P))/AFL-H50(B)

● AFR-H40(-LN(P))/AFR-H50(B)

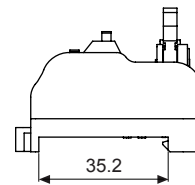
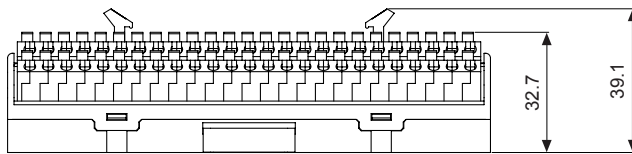
(unit: mm)



※Dimensions are for AFL Series.

	AFL-H40(-LN(P))	AFL-H50(B)
A	106.5	131.5
B	89	102

※Operation indicator(blue): When signal is input at the terminal and connector, the relevant indicator turns ON. (applied model: AFL-H40-LN(P), AFR-H40-LN(P))



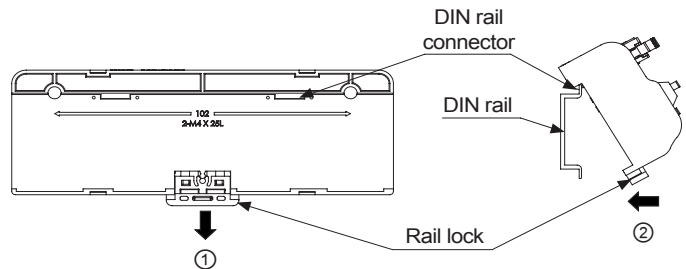
Installation

1. Mounting to and removing from DIN rail.

※This example figures are AFL Series.

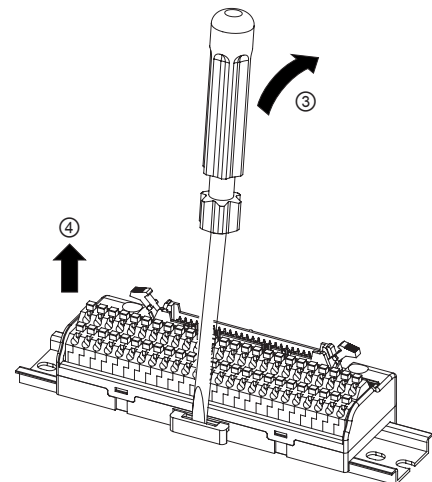
● Mounting

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



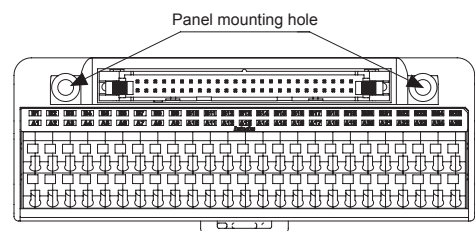
● Removing

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



2. Mounting to panel

- 1) This unit is able to mount on the panel with mounting holes next to Hirose connector.
- 2) It is recommended to use M4×25mm of spring washer screws and to use flat washers which are diameter $\varnothing 8$. The tightening torque should be 1.0 to 1.5N·m.

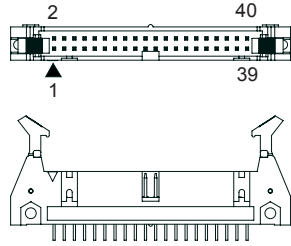


Interface Terminal Block

Wire connections

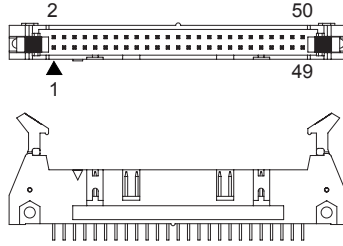
● AFL-H40(-LN(P)) / AFR-H40(-LN(P))

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

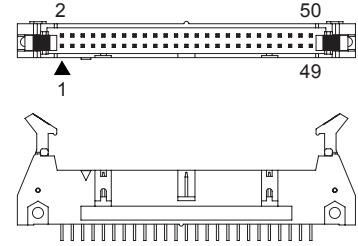


● AFL-H50(B) / AFR-H50(B)

※Hirose connector model :
HIF3BA-50PA-2.54DSA



※Hirose connector model:
HIF3BB-50PA-2.54DSA



(A)
Sensor
connector

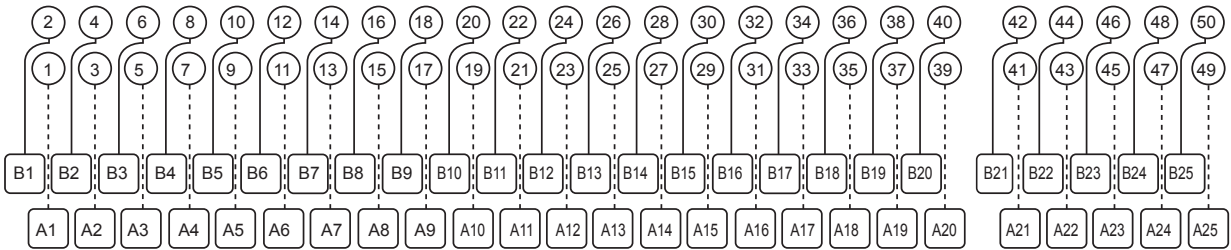
(B)
I/O terminal
block

(C)
I/O cable

(D)
Remote I/O
terminal block

● AFL-H40 / AFL-H50(B) / AFR-H40 / AFR-H50(B)

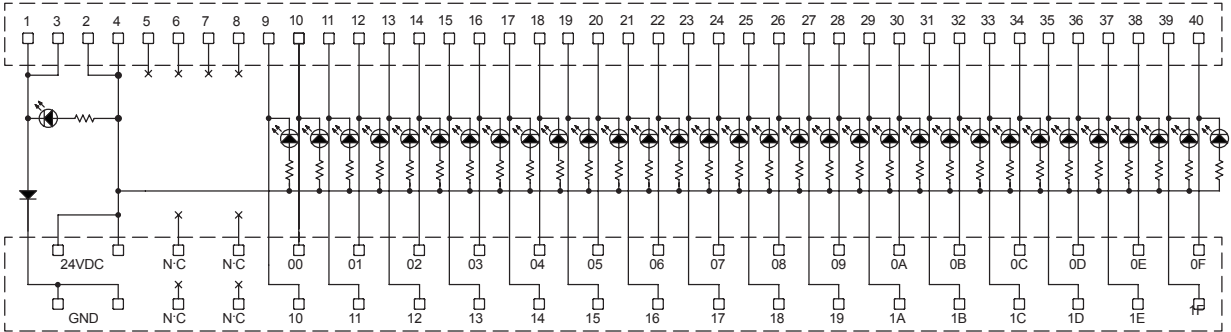
Connector



Terminal block

● AFL-H40-LN / AFR-H40-LN

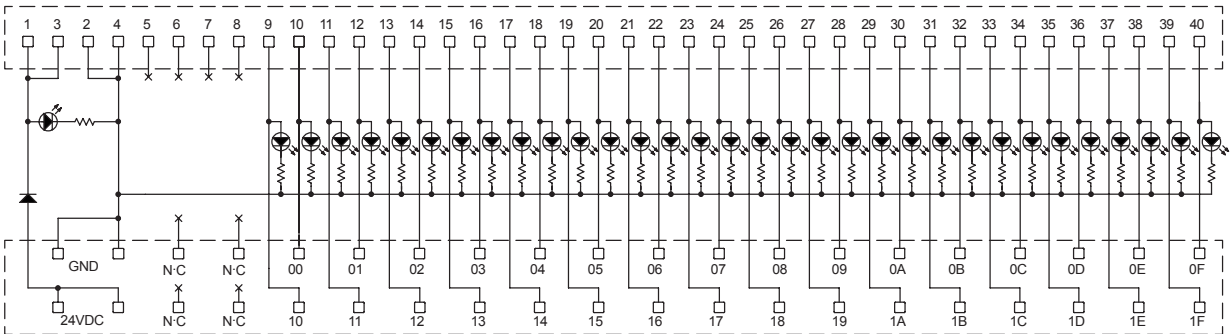
Connector



Terminal block

● AFL-H40-LP / AFR-H40-LP

Connector



Terminal block

AFS

AFL/AFR

ACS

AFE

ABS

Relay

■ Caution for using

1. This unit shall not be used beyond specified temperature or humidity range.
2. Maintain voltage fluctuations in the power supply within specified range.
3. When connecting PLC or other controllers, check the polarity of power before wiring.
4. Use the rated applied wire and use the appropriate crimp terminals for the rated wire.
5. Turn OFF the power supply before wiring or removing connectors.
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. Installation environment.
 - ① It shall be used indoor
 - ② Altitude Max. 2,000m
 - ③ Pollution Degree 2
 - ④ Installation Category II