Screwless Interface Terminal Block

Line-up

▣ Features

- New 20-pin models are available on the AFL series (AFL-H20-□)
- Screwless push-in type connection for simple and easy connection
- Slim and compact design with 5mm terminal pitch
- Ideal for connector type PLCs and dedicated controller I/O
- DIN rail mount and screw mount methods

※Autonics I/O cable CJ Series is recommended.
Refer to I/O cable of I/O terminal block catalogue.

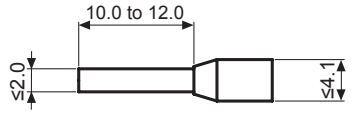
⚠ Please read "Safety considerations" in operation manual before using.

▣ Model

Model	Item	Terminal type	Connector type	No. of connector pins	Connector	Indicator (LED)	Input logic
AFL-H20	Interface terminal Block	Screwless	Hirose connector	20	XG4A-2031	None	None
AFL-H20-LN						LED indicator	NPN
AFL-H20-LP							PNP
AFL-H40				40	HIF3BA	None	None
AFL-H40-LN						LED indicator	NPN
AFL-H40-LP							PNP
AFL-H50				50	HIF3BB	None	None
AFL-H50B							

▣ Crimp Terminal Specifications

● End Sleeve (ferrule terminal) crimp terminals



(unit: mm)

※Applicable wire: AWG22-16 (0.30 to 1.25mm²)

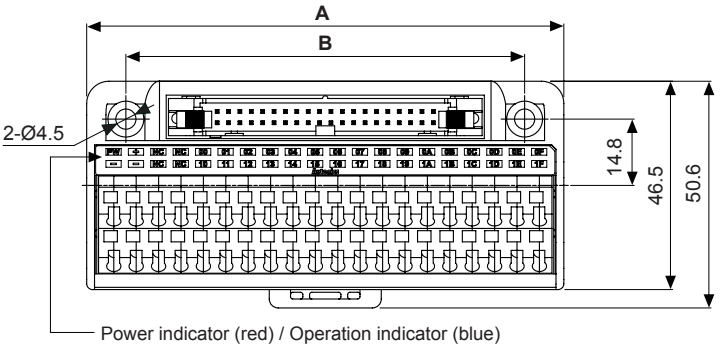
▣ Specifications

Model		AFL-H20	AFL-H40	AFL-H50	AFL-H50B	AFL-H20-LN AFL-H20-LP	AFL-H40-LN AFL-H40-LP
Power supply		≤125VDC⎓, 125VAC~ 50/60Hz※1				24VDC⎓±10%	
Rated current		≤1A					
Terminal type		Screwless					
No. of terminals		20	40	50		16※2	32※3
Terminal pitch		5.0mm					
Connector type		XG4A-2031	HIF3BA		HIF3BB	XG4A-2031	HIF3BA
Indicator		—				Power indicator: Red LED Operation indicator: Blue LED	
Applicable wire	Solid wire	Ø0.3 to Ø1.2mm					
	Stranded wire※4	AWG22-16 (0.30 to 1.25mm²)					
Stripped wire length		8 to 10mm					
Insulation resistance		≥1,000MΩ (at 500VDC megger)					
Dielectric strength		600VAC 50/60Hz for 1 minute					
Vibration		0.75mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours					
Shock		150m/s² (approx. 15G) in each X, Y, Z direction for 3 times					
Environment	Ambient temp.	-15 to 55℃, storage: -25 to 65℃					
	Ambient humi.	35 to 85%RH, storage: 35 to 85%RH					
Material		CASE: Polycarbonate, BASE: Polycarbonate					
Tightening torque		—					
Protection structure		IP20(IEC standard)					
Approval							
Weight※5		Approx. 86.2g (approx. 48.5g)	Approx. 156g (approx. 89g)	Approx. 177g (approx. 110g)		Approx. 86.3g (approx. 48.6g)	Approx. 158g (approx. 91g)

※1: Please connect to a load using the same power supply. Connecting to a load from a different power supply may cause safety issues.
※2: Among 20 terminals, 16 terminals are available for I/O and 4 terminals are LED power.
※3: Among 40 terminals, 32 terminals are available for I/O and 8 terminals are LED power and N·C (Not Connect) terminals.
※4: When using stranded wire, use end sleeve (ferrule terminal) crimp terminals.
※5: The weight includes packaging. The weight in parenthesis is for unit only.
※Environment resistance is rated at no freezing or condensation.

▣ Dimensions

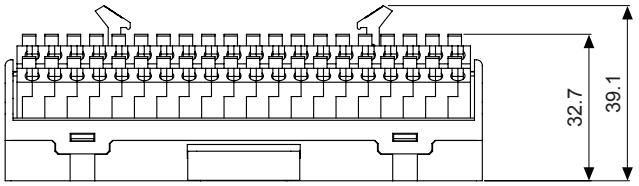
(unit: mm)

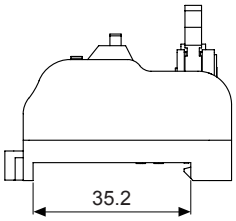


※Dimensions are for AFL-H40-□.

Model	A	B
AFL-H20-□	57.5	53
AFL-H40-□	106.5	89
AFL-H50□	131.5	102

Power indicator (red) / Operation indicator (blue)
(applied model: AFL-H20-LN(P), AFL-H40-LN(P))





▣ Installation

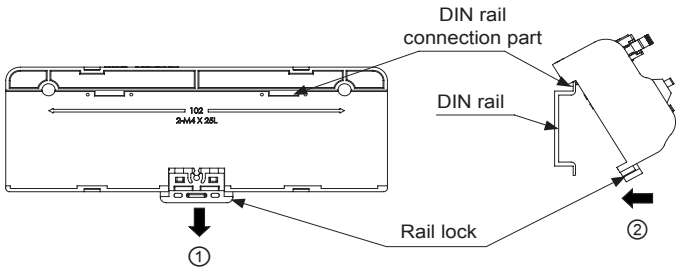
1. Mounting and Removing from DIN rail

● Mounting

1)Pull the rail lock towards direction ①.

2)Attach the DIN rail connection part onto the DIN rail.

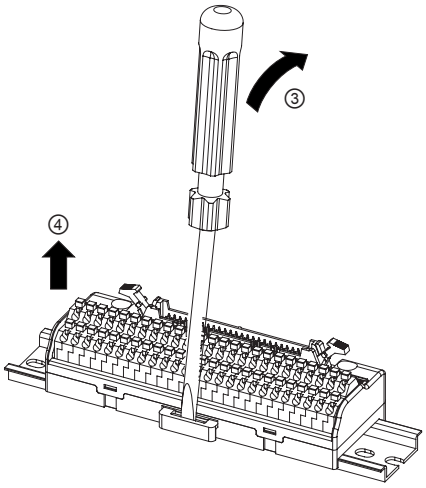
3)Push the unit towards direction ②, then push the rail lock in to lock into position.



● Removal

1)Insert a screwdriver into the rail lock hole and pull it towards direction ③.

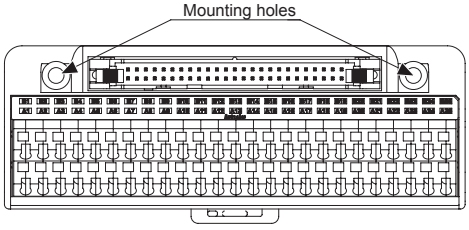
2)Remove the unit by pulling the unit towards direction ④.



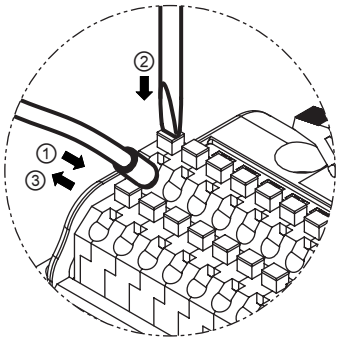
2. Mounting with screws

1)The unit can be mounted on panels using the mounting holes next to the hirose connector.

2)M4×25mm spring washer screws are recommended for installation. When using flat washers, use Ø8mm diameter washers. The tightening torque should be between 0.7 to 1.0N·m



▣ Connecting Crimp Terminals



● Connection

1) Push the end sleeve (ferrule terminal) crimp terminal towards direction ① to complete the connection.

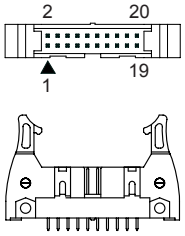
● Removal

1) Press and hold the catch above the terminal in direction ② with a flat-head screwdriver.
2) Pull and remove the end sleeve (ferrule terminal) crimp terminal towards direction ③.

▣ Connections

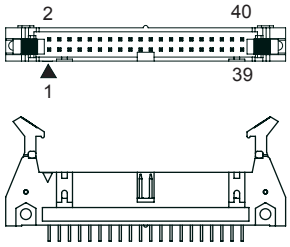
● AFL-H20-□

※Omron connector Model
: XG4A-2031



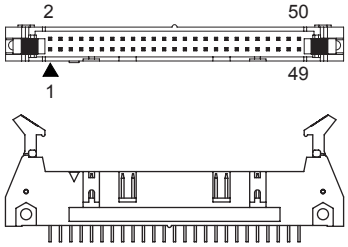
● AFL-H40-□

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



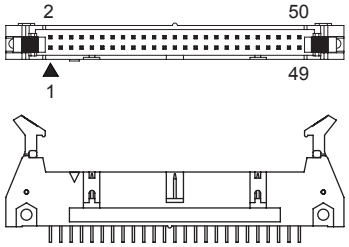
● AFL-H50

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



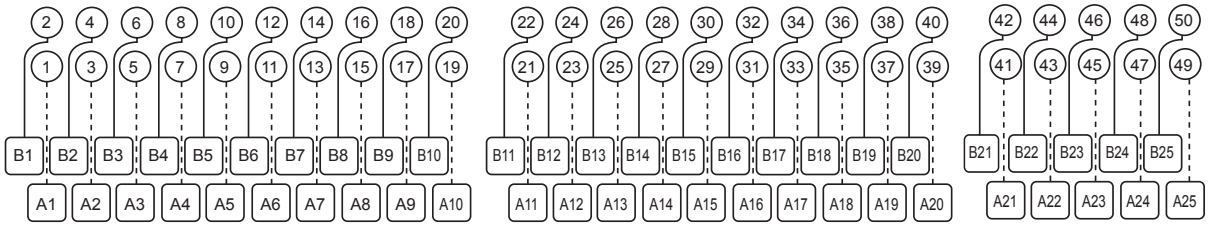
● AFL-H50B

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

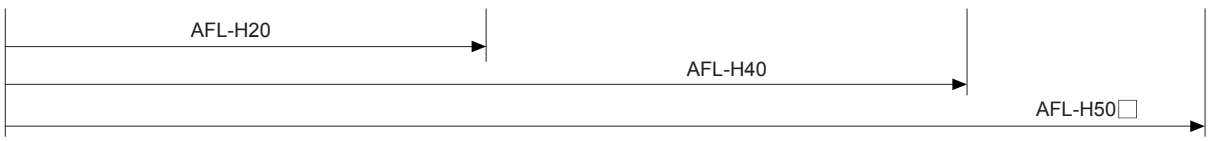


● AFL-H20 / AFL-H40 / AFL-H50□

Connector

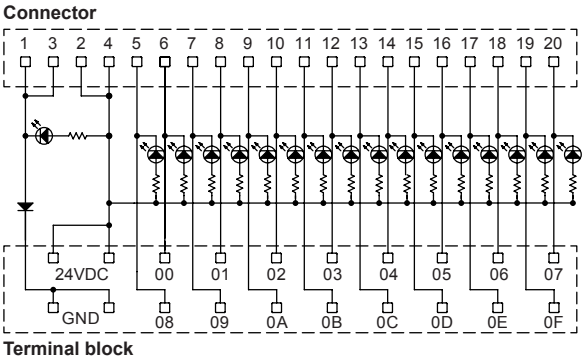


Terminal block

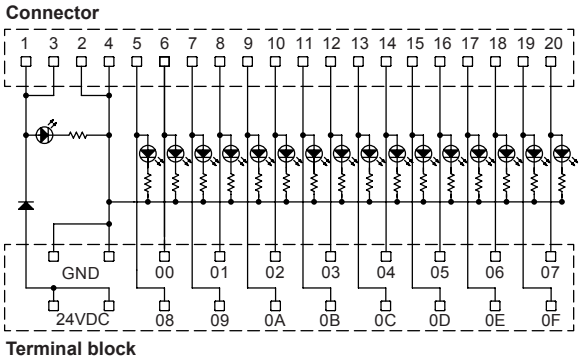


▣ Connections

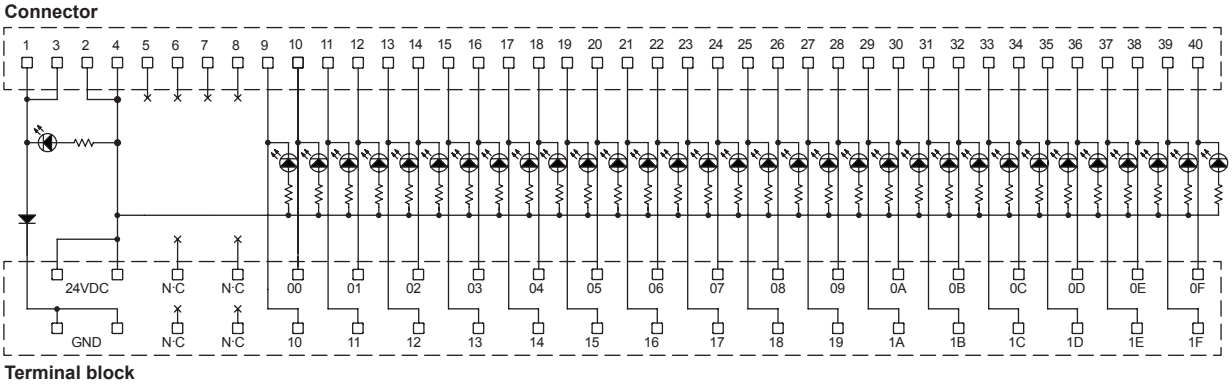
● **AFL-H20-LN**



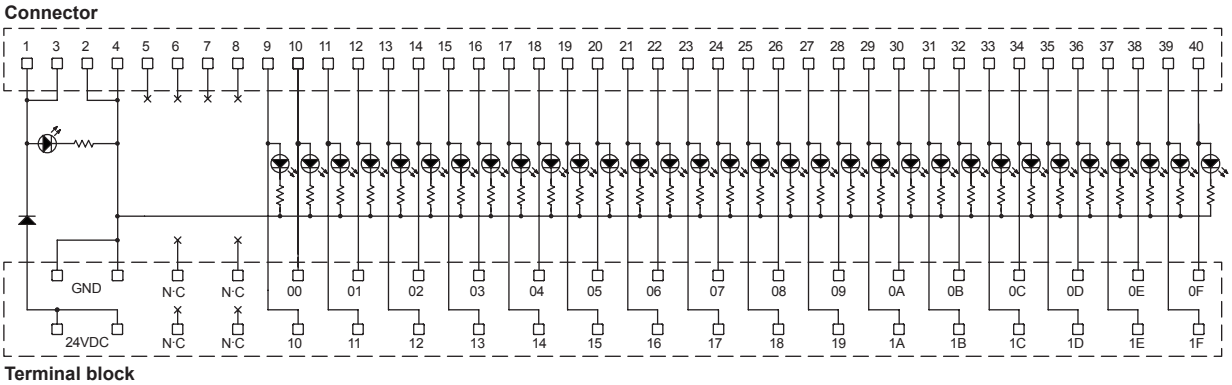
● **AFL-H20-LP**



● **AFL-H40-LN**



● **AFL-H40-LP**



▣ Cautions During Use

1. Use the unit within the rated environment of specification.
2. Supply power within the rated allowable voltage range.
3. Check the polarity of power before connecting PLC or other controllers.
4. When connecting the power input, use Solid wire: Ø0.3 to Ø1.2mm, Stranded wire: AWG22-16 (0.30 to 1.25mm^2).
   For using crimp terminals, refer to '▣ Crimp Terminal Specifications'.
5. Do not connect wire or remove connector while connected to a power source.
6. Do not use the unit at below places.
   ① Environments with high vibration or shock.
   ② Environments where strong alkalis or acids are used.
   ③ Environments with exposure to direct sunlight.
   ④ Near machinery which produce strong magnetic force or electric noise.
7. This unit may be used in the following environments.
   ① Indoor ② Altitude max. 2,000m
   ③ Pollution degree 2 ④ Installation category II