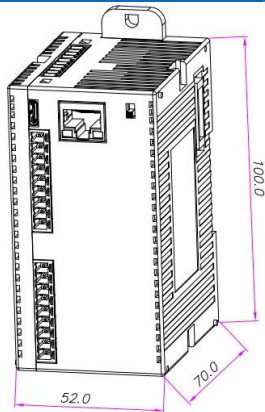


## FL055-0806R-V2



**FL055-0806R-V2:** Is base PLC model from FlexiLogics family. It has inbuilt 8 digital inputs and 6 digital Relay type outputs with 2 serial ports, one USB Type C, one Ethernet port. This model can be expanded up to 14 I/O modules.

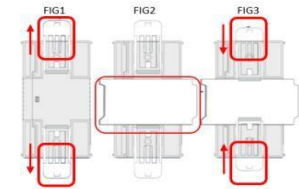
### PRODUCT DIMENSIONS



<b>Power Supply</b>	24VDC ( $\pm 20\%$ ), 110mA
<b>Isolation</b>	Non-Isolated
<b>Memory</b>	
<b>Total Program Memory</b>	8 MB + 2 MB (Application+ Ladder/Logic)
<b>Program Capacity</b>	50K Steps
<b>Keep Memory Registers</b>	10752 WORDS (FRAM)
<b>Communication Ports</b>	
<b>COM1 (RJ45)</b>	RS232, for Programming & Communication
<b>COM2 (Open terminals)</b>	2-wire RS485 for Communication
<b>Ethernet* (FL055 only)</b>	10/100Mbps, for Upload/Download/Communication
<b>USB</b>	1 x USB Type C
<b>Expansions</b>	
<b>Expansion IO capacity</b>	14 Expansions modules.
<b>Local IO Specification</b>	
<b>Number of Inputs</b>	8 Inputs [Bi-directional type]
<b>Input Design</b>	According to the EN 61131-2 type 1
<b>ON Voltage</b>	Minimum : 15VDC, Maximum: 30VDC
<b>OFF Voltage</b>	Minimum : -3VDC, Maximum: 5VDC
<b>Nominal Input</b>	24VDC, 5mA typical
<b>Isolation</b>	Optically isolated from internal circuit High isolation voltage (BV= Greater than 1.5KV)
<b>Input Impedance</b>	4.8k $\Omega$
<b>High Speed Channels Single Phase Counter</b>	High Frequency 200kHz: 4 Pairs (X0-X1, X2-X3, X4-X5 & X6-X7) or Low Frequency 25kHz: 4 (X2,X4,X6,X8)
<b>Quadrature Channels</b>	Frequency 200kHz: 4 (Pair X0-X1, X2-X3, X4-X5 & X6-X7)
<b>Max. Input Count</b>	4294967295 (32 Bit)
<b>Number of Outputs</b>	6 (Relay type)
<b>ON Output Voltage</b>	Min ON: 22VDC (Voltage across load) Max. ON: 30VDC (Voltage across load)
<b>Nominal Output Voltage</b>	24VDC
<b>Nominal Output Current</b>	2A typical per channel
<b>Nominal Load Max.</b>	12 $\Omega$ /48W (resistive) @24VDC
	115 $\Omega$ /460W (resistive) @230VAC
	640VA (inductive)@24VDC
	360VA (inductive)@230VAC

<b>Environment &amp; Approvals</b>	
<b>Operating Temperature</b>	0 to 55°C
<b>Storage Temperature</b>	-30 to 85°C
<b>Humidity</b>	10 to 90% (Non-Condensing)
<b>Shock Circuit Protection</b>	25g, 11ms, Half Sine wave, 3 mutually perpendicular axes
<b>Vibration</b>	5 to 150Hz, displacement of 0.3mm (peak to peak), 3G, 3 mutually perpendicular axes
<b>Approvals</b>	CE, RoHS, REACH and UKCA

### PANEL MOUNTING



**FIG-1:** Pull up the sliders (highlighted) provided with the unit towards outward direction as shown.

**FIG-2:** Rest the unit on the DIN rail plate.

**FIG-3:** Press the highlighted connector into the downward direction to lock it same connector from the downside of the product press upward direction. Locking connector helps the two units (FL base & expansion) to hold each-other properly on the DIN rail plate.

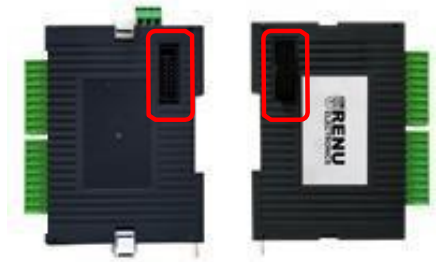


FIG-4

**FIG-4:** Two slots to grip the locking connector are provided on the case highlighted by RED circle, pulled the connector.

**FIG-5:** Lock connector provided with base module unit as shown to the Expansion module.

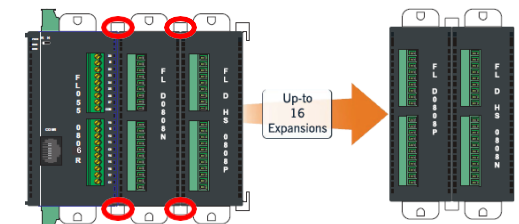
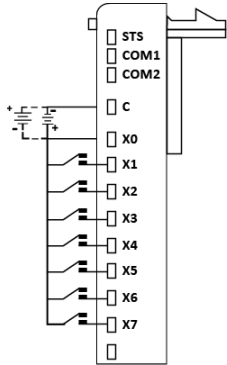


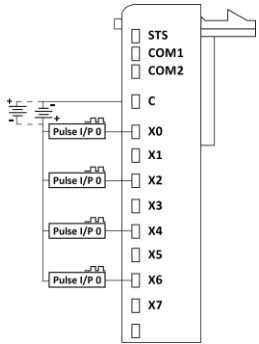
FIG-5

## WIRING DIAGRAM

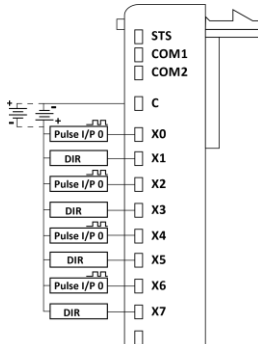
### Digital Inputs



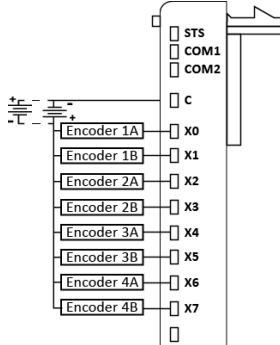
### HSC Input: Single Phase Counter



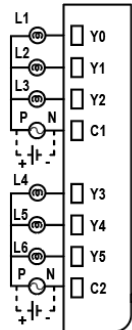
### HSC Input: Single Phase Two I/P Counter



### Quadrature Inputs



### Digital Outputs



## GETTING STARTED

User should follow the given sequence to configure and use any FlexiLogics series unit:

1. Install FlexiSoft® Software.
2. Create "New" project, select product FL055-0808R-V2 or FL005-0808R-V2.
3. Connect USB or Serial cable to the device.
4. Download Firmware i.e. driver in unit.
5. Download application and ladder.
6. Now FL unit is ready for application.
7. User can configure expansion models attached to FL055-0806R-V2 or FL005-0806R-V2 by FlexiSoft®.

## COMMUNICATION

### COM1 (RJ45): RS232 for Programming/ Communication

Pin number	Signal
1	232 TXD
2	232 RXD
3	GND
4	NC
5	NC
6	NC
7	NC
8	NC

### COM2: 2-wire RS485 for Communication

Pin number	Signal
1	TX+/RX+
2	TX-/RX-
3	GND

For communication between PLC and HMI on COM Port 2, Pin description is as follows:

Signal	Pin number	Signal
A (TX+ / RX+)	1	TX+
B (TX- / RX-)	4	RX-
GND	5	GND and Shield
	8	TX-
	9	RX+

[Note: Short Pin No. 1 & 4 and 8 & 9]

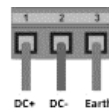
### For FL055-V2 model only

Factory set Static IP: 192.168.0.252

Subnet Mask: 255.255.255.0

### Grounding

The optimum method for grounding electronic equipment is to ground it separately from other high-power systems, to ground more than one unit of electronic equipment with a single-point ground. The grounding marked terminal (see below) is provided on the unit.



[Note: Do not use a ground that has an unstable impedance, such as painted screws or ground subject to vibration.]

## STATUS LED (STS)

Firmware	Application	Switch State	Error state	Green LED	Red LED	LED State
Download	Download	X	X	OFF	ON	RED ON
Not Present	X	X	X	Blink	Blink	RED & GREEN alternate
Present	Not Present	X	X	OFF	Blink	RED 1s ON 1s OFF
Present	Present	RUN	No Error	ON	OFF	GREEN ON
Present	Present	RUN	ERROR	OFF	Blink	RED 0.25s ON 0.25s OFF
Present	Present	HALT	No Error	Blink	OFF	GREEN 1s ON 1s OFF
Present	Present	HALT	ERROR	Blink	OFF	GREEN 0.25s ON 0.25s OFF

## WARNINGS

- WARNING: DO NOT REMOVE OR REPLACE WHILE BE FREE OF IGNITABLE CONCENTRATIONS OF FLAMMABLE SUBSTANCES.
- This equipment is suitable for use in Class I, Division 2, Groups A, B, C & D or non-hazardous locations only.
- WARNING – EXPLOSION HAZARD – Do not disconnect equipment unless power has been removed or the area is known to be non-hazardous.
- WARNING – EXPLOSION HAZARD - Substitution of components may impair suitability for Class I, Division 2.
- A recommendation for the user to periodically inspect the sealed devices used, for any degradation of properties and replace if degradation is found.

## REVISION HISTORY

Rev.	Description	Date
1.4	Specification updated	09/06/2025
1.3	Specification table updated	05/12/2024
1.2	Updated Wiring Diagram	27/10/2023
1.1	Updated Specifications	14/09/2022
1.0	First Draft	05/08/2022

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