



70 x 90 x 66.4mm

## FEATURES

- PLC with built-in HMI
- 2 Line x 8 character LCD display
- RS485 based communication with MODBUS RTU protocol

## SPECIFICATIONS

Display	2 x 8 LCD (Green back-light)
No. of Keys	5 ( 4-user configurable)
Supply Voltage	24V DC (18 ~ 30V DC)

## FUNCTIONAL SPECIFICATIONS (CPU)

Programming Language	Windows based user friendly SELPRO software for ladder logic programming.
Memory	Program Memory : 240 kB
	Data Memory : 32 kB
	EEPROM Memory : 1 kB
Scan Time	Typical 2ms
Function Blocks	Timer On delay, Timer Off delay, Pulse Timer, Special Timer, Up/Down Counter etc.
Minimum Running Variables Retention	160 bytes (Full Load)

## DIGITAL INPUTS

\*1 = 90° Phase shift signals

Number of Digital Inputs	10+2 (Volt configure)					
Operating Modes (user configurable)	Unidirectional / Bidirectional / Quadrature / Dual Unidirectional / None					
Channel	DI	MODE				
		UNI	BI	QUAD	DUAL UNI	None
FC0	DI0	Rate Totalizer	Rate Totalizer	1st input*1	Rate Totalizer	Digital Input
	DI1	Digital Input	Direction	2nd input*1	Totalizer	Digital Input
Operating Range	5 ~ 30V DC					
Input current	3 mA @24V					
Action Level	Level 1 ➔ Level 0	<3V DC				
	Level 0 ➔ Level 1	≥5V DC				
Response Time	Digital Input mode	Typical 2ms (based on ladder scan time)				
	Fast Input mode	100µsec				
Input Impedance	7.5 kΩ					
Debounce Time	0 ~ 255 ms (Default = 10 ms)					
Maximum counting Frequency (Fast Input)	5kHz					
Protection against polarity Inversions	Yes					

ANALOG SECTION	DIGIX-2-1-0-24V
No. of Channels	2
Sensor Type	Voltage (0-10V) (S/W Selectable)
Resolution	12 bit
Input impedance in signal range	330 kΩ
Analog input error at 25°C	0.25% of full scale ± 1°C
Conversion Time	100ms
Protection against polarity inversion	Yes
Channel isolation	No

## COMMUNICATION

Communication Port	Series	DIGIX-2-1-0-24V
	2 PIN Terminal	RS485 Slave
	2 PIN Terminal	RS485 Master
Communication Protocol	MODBUS RTU	
Baud Rate	9600, 19200, 38400, 57600, 115200 (user configurable via software and hardware) Default = 19200 (Preferred ladder downloading at 19200)	

## RELAY OUTPUTS

Number of Relay Outputs	8
Output Type	NO contact type
Output Current	5A @28VDC (Resistive) 5A @240VAC (Resistive)
Response Time	10ms
Life Expectancy	500000
Isolation	No

## SAFETY PRECAUTIONS

This manual is meant for personnel involved in wiring installation, operation and routine maintenance of the equipment.

All safety related conditions, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure operator and instrument safety. Any misuse may impair the protection provided by the equipment.

**CAUTION** : Read complete instructions prior to installation and operation of the unit.

**CAUTION** : Risk of electric shock.

## INSTALLATION INSTRUCTIONS

### CAUTION

1. This equipment, being built-in-type, normally becomes a part of the main control panel and the terminals do not remain accessible to the user after installation.
2. Conductors must not come in contact with the internal circuitry of the equipment else it may lead to a safety hazard that may endanger life or cause electrical shock to the operator.
3. Circuit breaker or mains switch must be installed between the power source and supply terminals to facilitate power 'ON' or 'OFF' function.
4. The equipment shall not be installed in environmental conditions other than those specified in this manual.
5. Thermal dissipation of equipment is met through ventilation holes provided on housing of equipment. Obstruction of these ventilation holes may lead to a safety hazard.
6. The output terminals shall be loaded strictly as per the values / range specified by the manufacturer.

### ELECTRICAL PRECAUTIONS DURING USE

Electrical noise generated by switching of inductive loads can create momentary disruption, erratic display, latch up, data loss or permanent damage to the instrument.

### To reduce noise :

Use of Selec make Snubber across load is recommended.

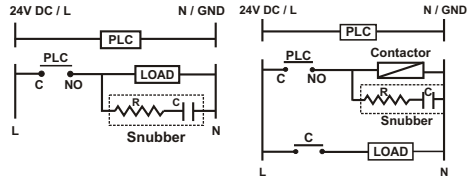
Snubber Part no. : SNUBBER

**NOTE** : Below mentioned diagram is applicable only for 230V relay outputs.

### Typical Connections For Loads :

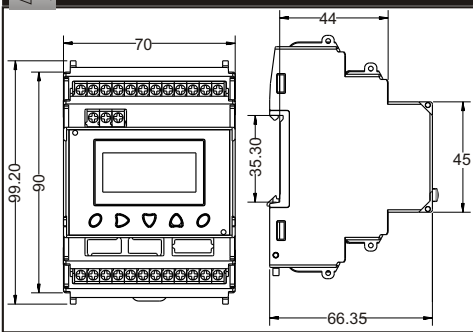
For load current < 0.5A

For bigger loads use interposing relay / contactor



**NOTE :** Use snubber as shown above to increase life of internal relay.  
Use separate shielded wires for inputs.

### MECHANICAL INSTALLATION



### CAUTION

The equipment in its installed state must not come in proximity to any heating sources, caustic vapors, oils, steam or other unwanted process by products.

### MAINTENANCE

- To avoid blockage of ventilation holes, clean the equipment regularly using a soft cloth.
- Do not use Isopropyl alcohol or any other organic Solvents for cleaning.

### WIRING INSTRUCTIONS

### CAUTION

- To prevent risk of electric shock, power supply to the equipment must be kept OFF while wiring.
- Terminals and electrically charged parts must not be touched when the power is ON.
- Wiring shall be done strictly according to the terminal layout provided in the operating manual.
- To eliminate electromagnetic interference use short wire with adequate ratings and twists of equal size.
- The power supply connection cable must have a cross section of 1sq.mm or greater and insulation capacity of at least 1.5KV.

### FUNCTIONAL DETAILS

DIGIX-2-1-0-24V is a PLC with built in HMI. The user can configure the product using SELPRO software. **SELPRO has two sections :**

- Ladder logic programming section
- Selec Machine Interface, used for configuration of HMI.

For details of the software, please refer to the software user manual.

### PANEL MOUNTING

Fig. 1

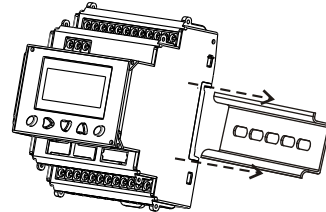
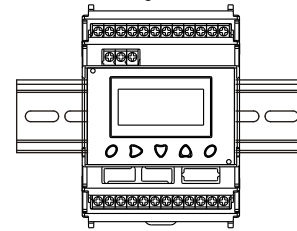
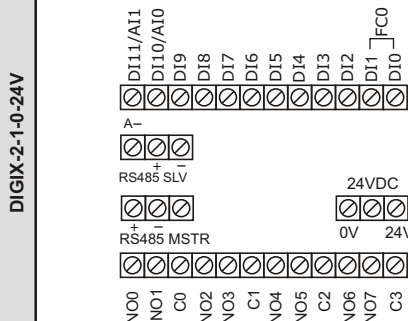


Fig. 2



- Snap the controller onto the Din Rail as shown in fig. 1 above.
- When properly mounted, the controller is squarely situated on the Din-rail shown in Fig. 2. above

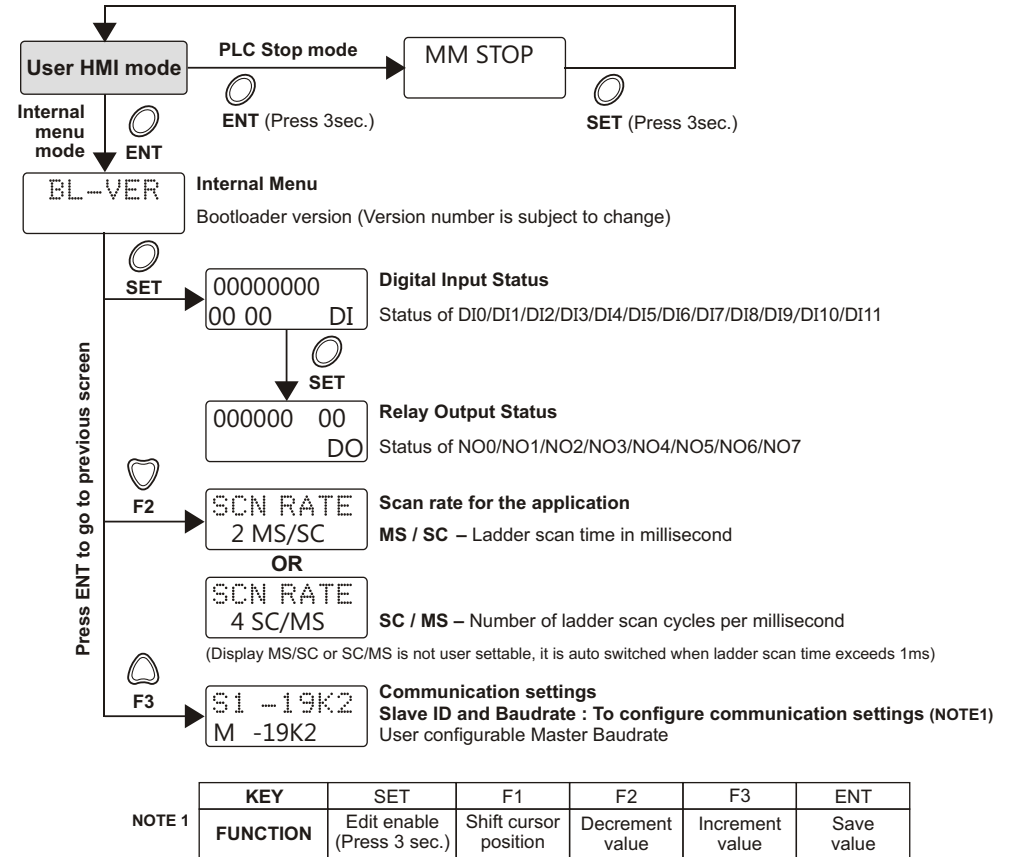
### WIRING DIAGRAM



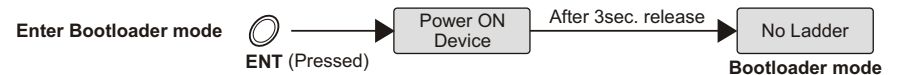
### ENVIRONMENTAL CONDITIONS

Operating Temperature	0 to 55°C
Storage Temperature	-20 to 70°C
Humidity (non-condensing)	95%
Mounting	Din Rail Mounted
Weight	Approx. 350 gms

### MENU DESCRIPTION



**NOTE 2 :** To adjust STOP bit of Communication settings, refer SELPRO software project setting



### ORDER CODE INFORMATION

Product	RS485 Master	RTC
DIGIX-2-1-0-24V	Yes	—

### ACCESSORIES (To be ordered separately)

ORDER CODE	DESCRIPTION
AC-USB-RS485-03	USB to RS485 cable (6 pin jack for downloading)
AC-USB-RS485-02	USB to RS485 cable (2 pin open wire)
ACH-004	RJ25 (6-pin) cable
AC-IOEXP-02	Port Expansion adapter

**Note :** \* Along with ACH-004 & AC-IOEXP-02 for networking

### ? SERVICE DETAILS

This device contains no user serviceable parts and requires special equipment and specialized engineers for repair.

Please contact service center for repair on the following numbers : **Tel. No. :** + 91-7498077172 ; **Email :** service@selec.com

**NO WARRANTY ON UNIT DAMAGED DUE TO WRONG**

(Specifications are subject to change, since development is a continuous process.)

### Selec Controls Pvt. Ltd., India

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