selec

OP674-V0



1	EATURES
	RS485 based communication with MODBUS RTU protocol

DIGIX-1-0-0-24VDC-B

Operating Instructions

SPECIFICATIONS			
No. Of LED	16 (RED)		
Supply Voltage	24 VDC (±10%)		

FUNCTIONAL SPECIFICATIONS (CPU)			
Programming Language	Windows based user friendly SELPRO software for ladder logic programming.		
	Program Memory : 112 kB		
Memory	Data Memory : 16 kB		
	EEPROM Memory : 1 kB		
	VAR_INOUT & VAROUTPUT TYPE Variables : - Max 120 bytes retention		
Scan Time	Typical 2ms		
Function Blocks	Timer On delay, Timer Off delay, Pulse Timer, Special Timer, Up/Down Counter etc.		
Memory Retention	10 Years		

DIGITAL INPUTS	* ¹ = 90 [°] Phase shift signals						
Number of Digital Inputs			8 (Including 2 Fast Input)				
Operating Modes (user configurable)			Unidirectional / Bidirectional / Quadrature / Dual Unidirectional / None				
Channel	DI	MODE					
	DI	UNI	BI	QUAD	DUAL UNI	None	
500	DIO	Rate Totalizer	Rate Totalizer	1st input*1	Rate Totalizer	Digital Input	
FC0	DI1	Digital Input	Direction	2nd input *1	Totalizer	Digital Input	
Operating Range			5 ~ 30V DC				
Input current			2 mA @12V				
Action Level		1 <table-cell-rows> Level 0</table-cell-rows>	<3V DC				
Action Level	Leve	0 ➡ Level 1	≥5V DC				
Response Time		al Input mode	Typical 2ms (based on ladder scan time)				
nesponse nine	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				

RELAY OUTPUTS					
Number of Relay Outputs		5			
Output Type		NO contact type			
Output Current		5A @28VDC (Resistive) 5A @240VAC (Resistive)			
Response Time		10ms			
Life Expectancy		30000 operation at full load			
Isolation		No			
Existence of common points between channels		COM0 for NO0, NO1 COM1 for NO2, NO3, NO4			
COMMUNICATION					
Communication Port	Jack	RS485 Slave			
Communication Protocol Baud Rate		MODBUS RTU			
		9600, 19200, 38400, 57600, 115200 (user configurable via software and hardware) Default = 19200 (Preferred ladder downloading at 19200)			
ENVIRONMENTAL CONDITIONS	ENVIRONMENTAL CONDITIONS				
Operating Temperature		0 to 55°C			
Storage Temperature		-20 to 70°C			
Humidity (non-condensing)		95%			
Mounting		Din Rail Mounted			
Weight		220 gms			

A 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.

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

AUTION : Risk of electric shock.

INSTALLATION INSTRUCTIONS

A 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 :



NOTE: Use snubber as shown above to increase life of internal relay.



Fig. 1 GND Fig. 2 -0-0-0-0-0-0-0-0-0 00000000 \square 00000000 -0-0-0-0-0-0-0-0-0-45 1. Snap the controller onto the Din Rail as shown in fig. 1 above. 2. When properly mounted, the controller is squarely situated on the Din-rail shown in Fig. 2. above

PIN

1

2

3

4

5

6

WIRING DIAGRAM

DESCRIPTION

RS485+ (Slave)

RS485- (Slave)

DI7 DI6 DI5 DI4 DI3 DI3 DI2 DI1

ଠାଠାଠାଠାଠାଠାଠାଠାଠାଠାଠ

PANEL MOUNTING

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

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

WIRING INSTRUCTIONS

CAUTION

- 1. To prevent risk of electric shock, power supply to the equipment must be kept OFF while wiring.
- 2. Terminals and electrically charged parts must not be touched when the power is ON.
- 3. Wiring shall be done strictly according to the terminal layout provided in the operating manual.
- 4. To eliminate electromagnetic interference use short wire with adequate ratings and twists of equal size.
- 5. 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-1-0-0-24VDC-B is a PLC built with LED configuration. The user can configure the product using SELPRO software.

SELPRO has two section :

- 1. Ladder logic programming section
- 2. Selec Machine Interface, used for configuration of LED.

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



MENU DESCRIPTION

ACCESSORIES (To be ordered separately)				
DESCRIPTION				
i cable downloading)				
5 cable (2 pin open wire				
cable				
n adapter				
AC-IOEXP-03 Port Expansion adapter				

Note: * Along with ACH-004 & AC-I0EXP-03 for networking

? SERVICE DETAILS

LED WINDOW

10 0 0 0 0 0 0 C

1 2 3 4 TX RX PWR

Digital Input Status

Digital Output Status

Communication Status

Bootloader mode

Except than PWR LED

Status of DO0/DO1/DO2/DO3/DO4

Status of transmit / receive (blinking)

Blinking LED indicates BL version 11.3-1

Status of DI0/DI1/DI2/DI3/DI4/DI5/DI6/DI7

Ň DI

RO

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 POWER SUPPLY.

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

Selec Controls Pvt. Ltd., India

Factory Address : EL-27/1, Electronic Zone, TTC Industrial Area, MIDC, Mahape, Navi Mumbai - 400 710, INDIA, Tel. No. : +91-22-41 418 419/430 | Fax No. : +91-22-28471733 Toll free : 1800 227 353 (BSNL/MTNL Subscribers only) Website : www.selec.com | Email : sales@selec.com

Doc. name :OP INST DIGIX-1-0-0-24VDC-B OP674-V01 (Page 2 of 2)