

48 x 96 mm

Features:

- Compact PLC with built-in HMI
- Configurable LED display
- 1 Channel high-speed input (up to 5 kHz)
- RS485 Communication – MODBUS RTU Protocol
- Windows-Based Software for Ladder Programming and HMI Configuration

Technical Specifications

Display Specifications	TWIX-1-230V	TWIX-1-24VDC
Display Type	7 segment LED	
Digits	(4 Red + 4 Red) + 6 Green Digits	
LED bank	4 Red LEDs, 4 Green LEDs	
No. of Keys	5 keys (4 user configurable)	
Digital Input Specifications		
No. of Inputs	6 (Includes 1 Fast Input Channel)	
Input Type	PNP	
Voltage Range	6 - 30V DC	
Input Current	2 mA @ 12V	
Debounce Time	Programmable 1 – 255 ms (Default: 10 ms)	
Isolation (Power ↔ Input)	Yes	
Isolation (CPU ↔ Input)	NO	
Protection against Polarity Inversion	Yes	
Timer Accuracy	0.1% or 1 ms (Whichever Greater)	
Response Time	Typical 1 mSec (Based on ladder scan time) & 100 µSec for fast Input	
Fast Input		
No. of Channels	1 (DI0 & DI1)	
Max Speed	5 kHz	
Operating Mode	Unidirectional / Bidirectional / Quadrature / Dual Uni (5kHz for all) / None	
Analog input specifications		
No. of Channels	1 (TC/RTD)	
Input Type	J, K, T, R, S, C, E, B, N, L, U, W, PLTNL, mVolt (-5 to 65mV), PT100	
Accuracy	TC: ±0.25% ±1°C, RTD: ±0.1% ±1°C @ 25°C	
Resolution	12 Bit	
Conversion Time	100 mSec	
Linearity	0.10%	
Max Non-Destructive Input	AIV= 17V, AII=31mA	
Channel-to-Channel Isolation	NO	
Reverse Polarity Protection	Yes	
Input Impedance	TC - 560KΩ, RTD - 750KΩ	
Digital Output Specifications		
No. of Outputs	4 (NO) type Relay, 1 Common Lines	
Contact Rating	5A @ 250V AC (resistive load), 5A @ 30V DC (resistive load)	
Relay Type	SPST	

Isolation (CPU ↔ Output)	Yes	
Isolation (Output ↔ Output)	NO	
Polarity Inversion Protection	Yes	
Response Time	10 ms	
Mechanical Life	5 Million Operations	
Programming & Memory		
Programming Software	Windows-Based Ladder & HMI Configuration	
Program Memory	112 KB	
Data memory	16 KB	
EEPROM	2 KB	
Upload Memory	Not Available	
Max Objects	2000 (Subject to Memory Availability)	
Min Scan Time	200 µs	
Typical Scan Time	1 ms (Depends on Ladder Logic Complexity)	
Functional Features		
Timer Operational Modes	On Delay, Off Delay, Special Timer (Up / Down), Pulse Timer, 1ms Timer*	
Counter Modes	Up Counter, Down Counter, Up/Down Counter, Special [Up/Down] Counter	
Other Functional Blocks	Totalizer, Rate Totalizer, Analog Input, Scaling, FTC, Hysteresis, PIDT, Rampsoak	
Memory Retention	10 years (2 KB)	
Real-Time Clock (RTC)	NA	
Clock drift	NA	

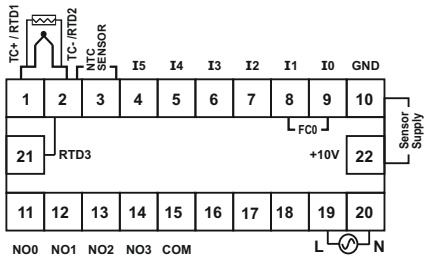
**Limited to 4 Nos*

Communication specifications		
Communication Port	RS485 [Slave]	
Communication Protocol	MODBUS RTU	
Connector	RJ25 Port	
Transmission Mode	Half Duplex	
Transmission Speed	2400, 4800, 9600, 19200, 38400, 57600, 115200 bps	
Data Bits	7 or 8	
Parity	None, Odd, Even, Space, Mark	
Stop Bits	1 or 2	
Environmental Specifications		
Operating Temp.	0°C to 55°C	
Storage Temp.	-20°C to 60°C	
Humidity	10% to 95% RH (Non-condensing)	
Atmosphere	Must be free from Corrosive Gases	
IP rating	IP 50 (Front)	
Mechanical Specifications		
Weight	240 grams	200 grams
Mounting	Panel Mountable	
Dimensions	50 x 98 x 79	
Auxiliary Supply Specifications		
Supply Voltage	With Retention: 180-270V AC @50/60 Hz Without Retention: 90-270V AC @50/60 Hz	DC Input Option: 18 - 30 VDC
Inrush Current	5A	5A
Power Consumption	6 VA	6 W
Polarity Inversion Protection	Yes	
Isolation (Power ↔ Communication)	Yes	
Source Supply Output	10 VDC, 50 mA	NA

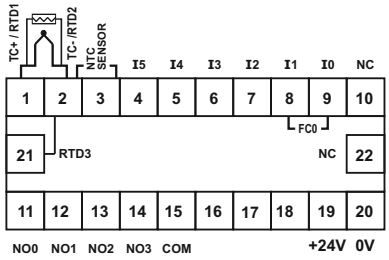
***Note:** A maximum of 25 variables of type VAR_IN_OUT and VAR_OUTPUT (each 32-bit) can be retained when operating at 110V.*

Terminal connection

TWIX-1-230

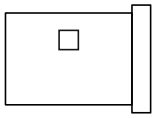


TWIX-1-24VDC

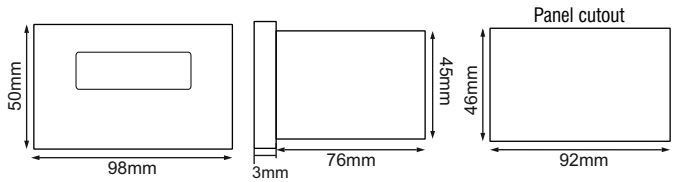


RS485 for downloading and networking

RS485 on side terminal (Communication port 1)



Dimensions (in mm)



Port description

Port 1 (6 Pin Jack)	
Pin	**Description**
1	RS485 Slave +ve
2	-
3	-
4	-
5	-
6	RS485 Slave -ve

Ordering information

Product code	Description
TWIX-1-230V	PLC – 6DI, 4RO, 1AI (TC/RTD) & 230VAC
TWIX-1-24VDC	PLC – 6DI, 4RO, 1AI (TC/RTD) & 24VDC

Accessories (To Be Ordered Separately)

Product Code	Description
Power Supplies	
RPS60-24-CE	60W, 24V/2.5A DIN rail mounted power supply in plastic housing - CE Certified
Cables & Communication Accessories	
AC-USB-RS485-03	Protocol Converter Cable – USB to RS485 (RJ25)
For MODBUS Networking	
AC-USB-RS485-02	Protocol Converter Cable – USB to RS485 (2 wire)
ACH-004-CE-RoHS	Expansion Cable – RJ25 to RJ25 (6Pin)
AC-IOEXP-03-CE-RoHS	Communication Adapter