



99 x 95.6 x 90.5 mm

Certifications : **CE RoHS**

Features :

- Flexible Card Selection
- Compact PLC with Built-in HMI
- 3.5" LCD with Resistive Touch
- Windows based User Friendly Software for Ladder Programming and HMI Configuration
- RTC with Time Switch Function
- RS485 based Communication with MODBUS RTU Protocol
- Expandable via IO Expansions
- Serial Printing

Display

| | |
|--------------|-------------------------------|
| Type | TFT |
| Resolution | 320 x 240 Pixels |
| Display Size | 3.5" Diagonal |
| Backlight | LED |
| No. of Keys | 5 Function Keys +1 System Key |

Input Specifications

| | |
|----------------------|------------------------------------------------------------------------------|
| No of Digital Inputs | 4 (Uni) / 2(Bi / Quad) / 4 Standard Digital Input |
| Operating Modes | Unidirectional / Bidirectional / Quadrature / Dual Uni (5kHz for all) / None |

| CH | DI | Mode | | | | |
|-----|----|---------------|-----------|---------------------|----------|---------------|
| | | UNI | BI | QUAD | DUAL UNI | NONE |
| FC0 | I0 | RT | RT | 1 st IP* | RT | Digital Input |
| | I1 | Digital Input | Direction | 2 nd IP* | T | Digital Input |
| FC1 | I2 | RT | RT | 1 st IP* | RT | Digital Input |
| | I3 | Digital Input | Direction | 2 nd IP* | T | Digital Input |

*90° Phase shift signals ; RT - Rate Totalizer, T - Totalizer

Digital Input

| | |
|------------------------------------------------|------------------------------------------|
| No. of Inputs per card | 4/10/14 |
| Input type | DC, PNP |
| Input Voltage Range | 5 - 30V DC |
| Maximum Counting Frequency | 40Hz |
| Response Time | Default 10ms (Based on Ladder Scan Time) |
| Isolation between 230V Power Supply and Inputs | Yes |
| Protection against Polarity Inversion | Yes |

Fast Counter Input (On Power Supply Card only)

Analog Inputs

| Item | Specifications | | | | |
|---------------------------------------|-------------------------------------------------------|-------------------|----------------|----------|-------------------|
| | TC | RTD | Voltage | Current | NTC |
| No of Channels per Card | As per Card Selected | | | | |
| Sensor | J,K,T,R,S,C,E,B,N, L,U,W,Platinel II, mV (-5 to 65mV) | PT100 | 0 - 10V | 0 - 20mA | NTC (-40 to 95°C) |
| Input Impedance in Signal Range | 470kΩ | 470kΩ | 330kΩ | 100Ω | 330kΩ |
| Resolution | 12 Bit | | | | |
| Conversion Time | 100ms | 300ms | 100ms | | |
| Analog Input Error at 25°C | 0.15% of F.S. ±1°C | 0.1% of F.S. ±1°C | ±0.25% of F.S. | | ±2°C |
| Protection against Polarity Inversion | Yes | NA | Yes | Yes | |

Output Specifications

Transistor Output

| | |
|-----------------------------|--------------------------|
| No. of Outputs per Card | 8 |
| Rated Voltage | 18 to 30V DC (External) |
| Response Time | 10ms |
| Short Circuit Protection | Yes |
| Isolation between Outputs | 4kV |
| Reverse Polarity Protection | Yes |
| Output Current | 100mA maximum per Output |

Relay Output

| | |
|---------------------------|---------------------------|
| No of Outputs per Card | 4/8 |
| Response Time | 20ms |
| Isolation between Outputs | 2.5kV |
| Relay Output Rating | 5A @230V AC 5A @30V DC |

Note: 230V Model, supports 1 no. of FL-SC-RO08 / FL-SC-DI04-RO04 Card only

Analog Outputs

| Item | Specifications | |
|--------------------------|------------------------|-------------------------|
| | Voltage Type | Current Type |
| Module | | |
| No. of Channels Per Card | 4 | 4 |
| Range | 0 - 10V | 0 - 20mA |
| Load Limits | RL > 1KΩ | < 800Ω |
| Resolution | 0.0 - 100.0% = 0 - 10V | 0.0 - 100.0% = 0 - 20mA |
| Conversion Time | 100ms | |
| Accuracy at 25°C | ±0.25% of F.S. | |
| Linearity Error | ±0.25% of F.S. | |

- Note :
- 1) 230V Model, supports one **FL-SC-AO04-V** or **FL-SC-AO04-I** Card only
 - 2) In 230V Model, Combination of **FL-SC-RO08** / **FL-SC-DI04-RO04** & **FL-SC-AO04-V** / **FL-SC-AO04-I** Cards are not supported
 - 3) In 230V Model support Combination of **FL-SC-AI03-U-AO02-U** & 2 Nos of **FL-SC-RO08** and does not support Combination of **FL-SC-AI03-U-AO02-U** & **FL-SC-AO04-I** / **FL-SC-AO04-V**
 - 4) 230V Model only support 2 Nos of **FL-SC-AI03-U-AO02-U**

Functional Specifications

| | |
|--------------------------|------------------------------------------------------------------|
| Programming Method | Window based Software for Ladder Programming & HMI Configuration |
| Program Memory | 221KB |
| Data Memory | 32KB |
| Ladder Scan - Cycle Time | 1ms (typical 400µs) |
| Response Time | 1 Ladder Scan |
| Clock Data Retention | 3 Years (Lithium Battery) at 25°C |
| Clock Drift | Max 4 sec / day |

Communication

| | |
|-------------------------|--------------------------------------------------------------------------------------------------|
| Communication Port | RS485 Slave RS485 Master (Modbus RTU Expansion Module (Optional) IO610 series, EXP - FLEX 2M) |
| Communication Protocols | Modbus RTU |
| Connector | RJ25 |
| Transmission Mode | Half Duplex |
| Transmissions Speed | 9600, 19200, 38400, 57600, 115200 bps |
| Data Bits | 7 or 8 |
| Parity | None, Odd, Even, Space, Mark |
| Stop Bits | 1 or 2 |

Functional Features

| | |
|-------------------------|-----------------------------------------------------------------------------|
| Timer Operational Modes | On Delay, Off Delay, Pulse, Special [Up/Down] Timer 1ms Timer |
| Timer Resolution | 1 ms (Accurate only for 1 msec Timer block) |
| Timer Display Format | Sec, Min, Hr, Day, Min.Sec, Hr.Min, Day.Hr, Hr.Min.Sec, Day. Hr.Min.Sec |
| Counter | Up Counter, Down Counter, [Up/Down] Counter, Special Up Down Counter,\ |
| Other Blocks | Array, For next, PIDT, Hysteresis, Scaling, Time switch, Communication, RTC |
| Memory Retention | 10 years (4KB) |
| RTC | Yes |
| *Usage Limit only 4 Nos | |

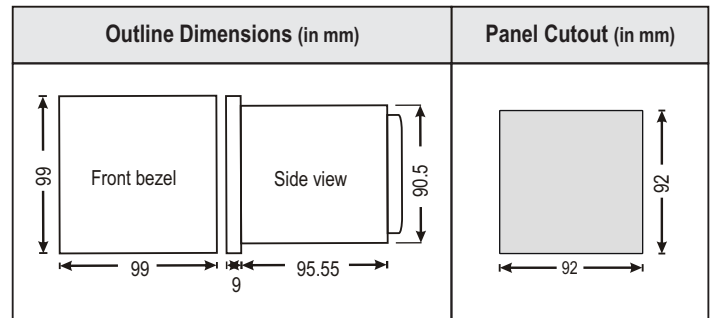
Power Supply

| | Flexys GT35-230V AC | Flexys GT35-24V DC |
|----------------------------------------|---------------------|--------------------|
| Supply Voltage | 230V AC | 24V DC |
| Sensor Supply (SS) | 10V (100mA) | NA |
| Power Consumption | 13 VA | 13 VA |
| Inrush Current | 25A, 1.5ms | 25A, 1.5ms |
| Protection against Polarity Inversions | NA | Yes |

General Specification

| | |
|---------------------------------------------|-----------------------------------|
| Ambient Operating Temperature | 0 to 55°C |
| Ambient Operating Humidity (Non condensing) | 95% RH |
| Atmosphere | Must be free from Corrosive Gases |
| Earthing | No |
| Mounting | Panel Mount |
| Weight (Without IO cards) | 250 gms |
| Dimensions (in mm) | 99 x 95.6 x 90.5 mm |

Dimensions (in mm)



Port Description

| Port 1 (6 Pin Jack) | |
|---------------------|---------------------------|
| Pin | Description |
| 1 | RS485 Slave +ve |
| 2 | RS485 Master +ve |
| 3 | RS485 Master -ve |
| 4 | Proprietary Expansion +ve |
| 5 | Proprietary Expansion -ve |
| 6 | RS485 Slave -ve |

Ordering Information

| Product Code | Description | Description |
|----------------------|------------------------------------------------------------|--------------------|
| FL-GT35-DI04-PS-230V | Flexys GT35 – Power Supply Card – 230VAC, 4 Digital Inputs | CE RoHS |
| FL-GT35-DSP | Flexys GT35 – 3.5" Resistive Touch Screen | CE RoHS |
| FL-GT35-LG-1-0-1 | Flexys GT35 – Logic card – RTC, Modbus Expansion | CE RoHS |
| FL-GT35-DI04-PS-24V | Flexys GT35 – Power Supply Card – 24VDC, 4 Digital Inputs | CE RoHS in Process |

Supported I/O Cards

| Product Code | Description | Certification |
|------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------|
| I/O cards will be common for Flexys Panel TX4 & Flexys Rail | | |
| FL-SC-DI10 | 10 Digital Inputs Card | CE RoHS |
| FL-SC-DI14 | 14 Digital Inputs Card | CE RoHS |
| FL-SC-RO08 | 8 Channel Relay Output Card | CE RoHS |
| FL-SC-TO08 | 8 Channel Transistor Output Card | CE RoHS |
| FL-SC-TO08-1A | 8 Channel Transistor Output Card – 1A | CE RoHS in Process |
| FL-SC-DI04-RO04 | 4 Digital Input, 4 Digital Output Card | CE RoHS |
| FL-SC-AI03-NTC-AI03-I | 3 Channel Analog Input – NTC, 3 Channel Analog Input – Current Card | CE RoHS in Process |
| FL-SC-AI04-RTD | 4 Channel Analog Input Card – RTD (PT-100) | CE RoHS |
| FL-SC-AI04-TC | 4 Channel Analog Input Card – Thermocouple | CE RoHS in Process |
| FL-SC-AIDF04-TC | 4 Channel Differential Analog Input Card – Thermocouple | CE RoHS |
| FL-SC-AI06-V | 6 Channel Analog Input Card – Voltage | CE RoHS |
| FL-SC-AI06-I | 6 Channel Analog Input Card – Current | CE RoHS |
| FL-SC-AI04-U | 4 Channel Analog Input Card – Universal | CE RoHS in Process |
| FL-SC-AO04-V | 4 Channel Analog Output Card – Voltage | CE RoHS |
| FL-SC-AO04-I | 4 Channel Analog Output Card – Current | CE RoHS |
| FL-SC-AI03-U-AO02-U | 3 Channel Analog Input – Universal, 2 Channel Analog Output – Universal Card | CE RoHS in Process |
| FL-SC-LC04 | 4 Channel Loadcell Input Card | CE RoHS in Process |

Accessories

| |
|--------------------------------------------------------------------------------------|
| Accessories for Communication |
| AC-USB-RS485-03 (USB to 6 Pin RJ25 Jack) |
| AC-USB-RS485-02 (USB to 2 Pin Open Wire) |
| Expansion Module Cables & Adapter |
| ACH-004 (6 Pin to 6 Pin RJ25 Jack) for Expansion only (Cable) |
| 1)AC-IOEXP-03 (Port Expansion Adapter) |
| Window-Based Software for Ladder Programming |
| ACD-005 |
| Relay Module |
| 1) RLYMD-1-S4-1CO-24VDC : 4 Channel 1 Change Over Relay module |
| 2) RLYMD-1-S4-2CO-24VDC : 4 Channel 2 Change Over Relay module |
| 3) RLYMD-2-S8-1CO-24VDC : 8 Channel 1 Change Over Relay module |
| 4) RLYMD-2-S8-2CO-24VDC : 8 Channel 2 Change Over Relay module |
| 5) ERLYMD-2-1-S8-1CO-24V : 8 Channel 1 Change Over Communication based Relay Module |
| Power Supply Module |
| RP-3M-2.5A-24V DC, RP-3M-5A-24V DC |
| Expansion Modules on Master RS485 |
| EXP-FLEX 2M : Expansion Module on Master RS485 (I/O same as Flexys I/O cards) |