FLEXYS-GT35

PLC - Flexible IO Solution

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	1st IP*	RT	Digital Input
	I1	Digital Input	Direction	2nd IP*	T	Digital Input
FC1	I2	RT	RT	1st IP*	RT	Digital Input
	I3	Digital Input	Direction	2nd 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				
Module	**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	
Module	Voltage Type	Current Type
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	

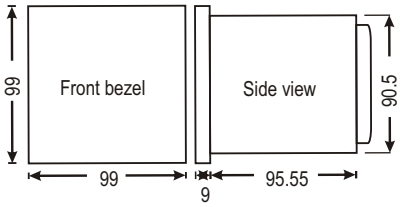
Power Supply	Flexys GT35-230V AC	Flexys GT35-24V DC
Supply Voltage	230V AC	24V DC
Sensor Supply (SS)	10V (100mA)	NA
Power Consumption	13 VA	13 VA
Inrush Current	25A, 1.5ms	25A, 1.5ms
Protection against Polarity Inversions	NA	Yes

General Specification

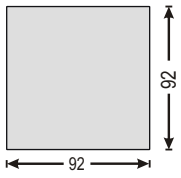
Ambient Operating Temperature	0 to 55°C
Ambient Operating Humidity (Non condensing)	95% RH
Atmosphere	Must be free from Corrosive Gases
Earthing	No
Mounting	Panel Mount
Weight (Without IO cards)	250 gms
Dimensions (in mm)	99 x 95.6 x 90.5 mm

Dimensions (in mm)

Outline Dimensions (in mm)



Panel Cutout (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)