Flexys IO Card

Digital Inputs



Features:

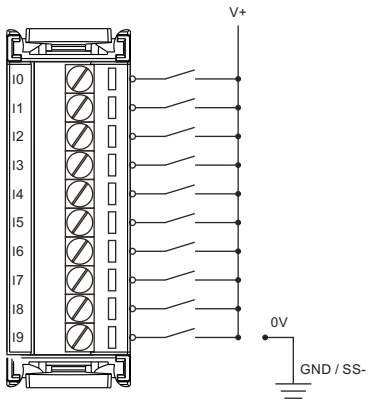
- **Plug-in Module**
- **Flexible I/O Card selection for customized applications**
- **Easy integration and replacement across all Flexys Series modules**
- **Equipped with spring-clamp terminals for secure and tool-free wiring**
- **Windows-Based Software for configuration in Ladder Programming**

Technical specifications

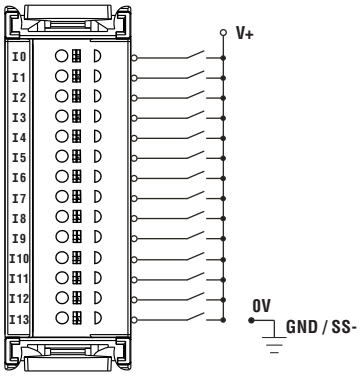
Input specifications	FL-SC-DI10-CE-RoHS	FL-SC-DI14-CE-RoHS
No. of inputs	10	14
Input type	PNP	
Voltage Range	7-30V DC	
Input current	5.5mA @24V	
Debounce Time	Programmable 1 - 255 ms (Default: 10 ms)	
Isolation (Power ↔ Input)	Yes	
Isolation (CPU ↔ Input)	No	
Protection against Polarity Inversion	Yes	
Timer Accuracy	0.1% or 2 ms (Whichever Greater)	
Response Time	Typical 10m Sec (Based on ladder scan time)	
Environmental Specifications		
Operating Temp	0°C to 55°C	
Storage Temp	-20°C to 70°C	
Humidity	10% to 95% RH (Non-condensing)	
IP rating	Terminals: IP20	
Mechanical Specifications		
Weight	45 grams	
Mounting	Pluggable	
Terminal	Pluggable, Spring fit	
Dimensions in mm (WHD)	22 x 65 x 95	
Auxiliary Supply Specifications		
Supply Voltage	Self Powered	

Terminal connection

FL-SC-DI10-CE-RoHS



FL-SC-DI14-CE-RoHS



Ordering information

Product code	Description	Certification
FL-SC-DI10-CE-RoHS	Flexys IO - 10 Digital Input Card	CE RoHS
FL-SC-DI14-CE-RoHS	Flexys IO - 14 Digital Input Card	CE RoHS

Flexys IO Card

Digital Outputs



Features:

- **Plug-in Module**
- **Flexible I/O Card selection for customized applications**
- **Easy integration and replacement across all Flexys Series modules**
- **Equipped with spring-clamp terminals for secure and tool-free wiring**
- **Windows-Based Software for configuration in Ladder Programming**

Technical specifications

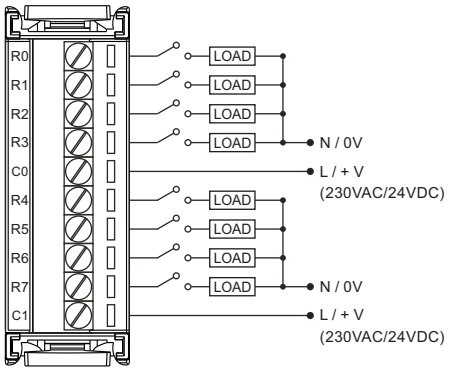
Input specifications	FL-SC-RO08-CE-RoHS	FL-SC-TO08-CE-RoHS
No. of Outputs	8 (NO) type Relay, 2 Common Lines)	8 Transistorized
Contact / Output Rating	5A @ 250V AC (resistive load), 5A @ 30V DC (resistive load)	100mA @ 24V DC (current sourcing output), 18–30V DC (External Supply)
Relay / Output Type	SPST	PNP (Source)
Isolation (CPU ↔ Output)	2.5 kV	
Isolation (Output ↔ Output)	NA	No
Short Circuit Protection	–	Yes
Polarity Inversion Protection	–	Yes
Response Time	20 ms	10 ms
Mechanical Life	5 Million Operations	–
Nominal Load	–	240Ω (likely referring to the typical load resistance)
Breaking Current	–	110mA (maximum current that can be interrupted)
Environmental Specifications		
Operating Temp	0°C to 55°C	
Storage Temp	-20°C to 70°C	
Humidity	10% to 95% RH (Non-condensing)	
IP rating	Terminals: IP20	
Mechanical Specifications		
Weight	45 grams	
Mounting	Pluggable	
Terminal	Pluggable, Spring fit	
Dimensions in mm (WHD)	22 x 65 x 95	
Auxiliary Supply Specifications		
Supply Voltage	Self Powered	

Note :

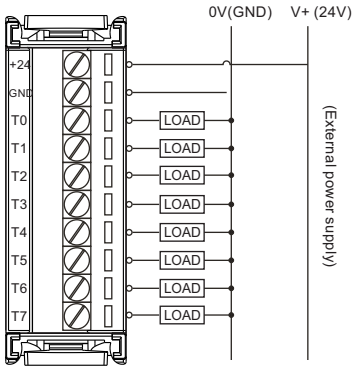
1. Refer to the IO card and base module compatibility guidelines to ensure effective and valid IO card combinations.
2. Use of RO and AO cards are limited in 230VAC variants. Mixed usages for RO/AO limits are auto-managed in Selpro settings or refer to product manual for details

Terminal connection

FL-SC-RO08-CE-RoHS



FL-SC-TO08-CE-RoHS



Ordering information

Product code	Description	Certification
FL-SC-RO08-CE-RoHS	Flexys IO - 8 Channel Relay Output Card	CE RoHS
FL-SC-TO08-CE-RoHS	Flexys IO - 8 Channel Transistor Output Card	CE RoHS

Flexys IO Card

Analog Inputs



Features :

- Plug in module
- Flexible I/O Card Selection for customized applications
- Easy integration and replacement across all Flexys Series modules
- Equipped with spring-clamp terminals for secure and tool-free wiring
- Windows-Based Software for configuration in Ladder Programming

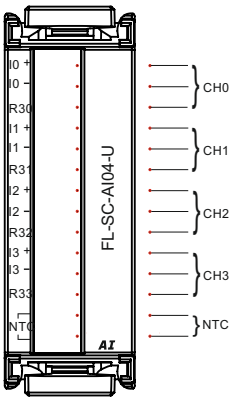
Technical specifications

Analog Input specifications	FL-SC-AI04-U	FL-SC-AI06-V-CE-RoHS	FL-SC-AI06-V-CE-RoHS	FL-SC-AI06-V/I	FL-SC-AI06-V/I-ISO
No. of channels	4 Channels	6 Inputs			
Input Type	J, K, T, R, S, C, E, B, N, L, U, W, PLTNL, mVolt (-5 to 65mV), 0-10V, 0-20mA, RTD (Jumper selectable)	0-10V	0-20mA	0-10V / 0-20mA (Jumper selectable)	
Accuracy	0.25% ± 1°C (TC), 0.1% ±1°C (RTD) at 25°C, ±0.25% of FS. ±1 count for AI's, ±2°C for NTC				
Resolution	12 bit				
Conversion Time	TC - 100ms, RTD - 300ms, 0-10V - 100ms, 0-20mA - 100ms, Loadcell - 100ms				
Linearity	0.10%				
Max Non-Destructive Input	AIV= 17V, AII=31mA				
Isolation (Power ↔ Input)	Yes				
Isolation (CPU ↔ Input)	No				
Channel-to-Channel Isolation	No				
Reverse Polarity Protection	TC - Yes, RTD - N/A, 0-10V - YES, 0-20mA - YES, NTC - YES				
Input Impedance	TC - >330KΩ, RTD - >510KΩ, 0-10V - >330KΩ, 0-20mA - >100Ω				
Environmental Specifications					
Operating Temp	0°C to 55°C				
Storage Temp	–20°C to 70°C				
Humidity	10% to 95% RH (Non-condensing)				
IP rating	Terminals: IP20				
Mechanical Specifications:					
Weight	45 gm				
Mounting	Pluggable				
Terminal	Pluggable, Spring fit				
Dimensions in mm (WHD)	22 x 65 x 95				
Auxiliary Supply Specifications					
Supply Voltage	Self Powered				

Note :
1. Refer to the IO card and base module compatibility guidelines to ensure effective and valid IO card combinations.
2. Use of RO and AO cards are limited in 230V AC variants. Mixed usages for RO/AO limits are auto-managed in Selpro settings or refer to product manual for details

Terminal connection

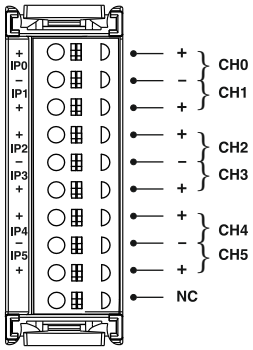
FL-SC-AI04-U

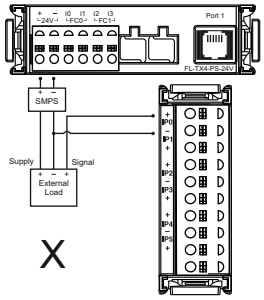


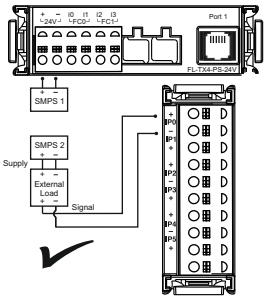


Jumper selection		
Item	Specifications	Jumper No.
TC/RTD	Short Pin 1 & Pin 2	JP1,JP2,JP3,JP4 for CH0, CH1, CH2,CH3 respectively
Current	Short Pin 2 & Pin 3	
Voltage	Short Pin 4 & Pin 5	

FL-SC-AI06-V-CE-RoHS / FL-SC-AI06-I-CE-RoHs / FL-SC-AI06-V/I / FL-SC-AI06-V/I-ISO







Ordering information

Product code	Description	Certification
FL-SC-AI04-U	Flexys IO – 4 Channel Analog Input Card – Universal (Jumper Selectable)	CE RoHS in process
FL-SC-AI06-V-CE-RoHS	Flexys IO – 6 Channel Analog Input Card - Voltage	CE RoHS
FL-SC-AI06-I-CE-RoHs	Flexys IO – 6 Channel Analog Input Card - Current	CE RoHS
FL-SC-AI06-V/I	Flexys IO – 6 Channel Analog Input Card - Voltage/Current	CE RoHS
FL-SC-AI06-V/I-ISO	Flexys IO – 6 Channel Analog Input Card - Voltage/Current (Isolated)	CE RoHS

Flexys IO Card

FL-SC-AI04-TC-CE-RoHS



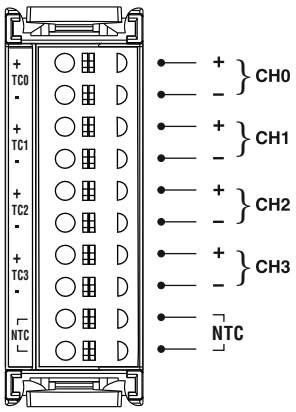
Features :

- Plug in module
- Easy to connect & replace in Flexys GT35, Flexys rail, Flexys panel TX4 & EXP FLEX 2M
- Configured via selpro software
- Spring type pluggable terminals

Technical specifications

Input specifications	
No. of channels	4 channels
Sensor type	J,K,T,R,S,C,E,B,N,L,U,W, PLATINEL II, MILLIVOLT(5 to 65mV)
Measurement range	As per sensor selection
Type of input	Non - differential
Temperature resolution	0.1°C
Input impedance in signal range	≥330 kΩ
Accuracy	0.25% of full scale ±1°C
Non linearity	0.25% of full scale ±1°C
Non linearity	0.1% of full scale ±1°C
Protection against polarity inversion	NA
Channel isolation	No
General specifications	
Ambient operating temperature	0°C to 55°C
Humidity	95%
Ambient storage temperature	-20°C to 70°C
Weight	40 gms

Terminal connection



Ordering information

Product code	Description	Certification
FL-SC-AI04-TC-CE -RoHS	4 Channel - analog inputs card - thermocouple	CE RoHS

Flexys IO Card

Analog Outputs



Features:

- Plug in module
- Flexible I/O Card selection for customized applications
- Easy integration and replacement across all Flexys Series modules
- Equipped with spring-clamp terminals for secure and tool-free wiring
- Windows-Based Software for configuration in Ladder Programming

Technical specifications

Input specifications	FL-SC-AO04-V-CE-RoHS	FL-SC-AO04-I-CE-RoHS
No. of channels	4	
Output range	0-10V DC	0-20mA DC
Resolution	10 Bit	
Load Limit	0-10V DC ≥ 1kΩ	0-20mA <= 500Ω
Digital Resolution	0.0-100.0% = 0–10.000V DC	0.0–100.0% = 0–20.000mA
Conversion Time	100ms	
Isolation (CPU ↔ Output)	No	
Isolation (Output ↔ Output)	No	
Output Error @ 25°C	±0.25% of Full Scale	
Linearity	0.10%	
Environmental Specifications		
Operating Temp	0°C to 55°C	
Storage Temp	-20°C to 70°C	
Humidity	10% to 95% RH (Non-condensing)	
IP rating	Terminals: IP20	
Mechanical Specifications		
Weight	45 grams	
Mounting	Pluggable	
Terminal	Pluggable, Spring fit	
Dimensions in mm (WHD)	22 x 65 x 95	
Auxiliary Supply Specifications		
Supply Voltage	Self Powered	

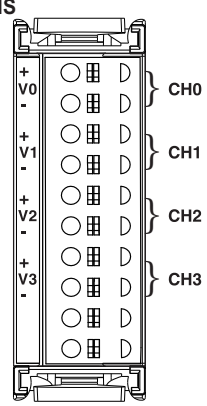
Note :

1. Refer to the IO card and base module compatibility guidelines to ensure effective and valid IO card combinations.

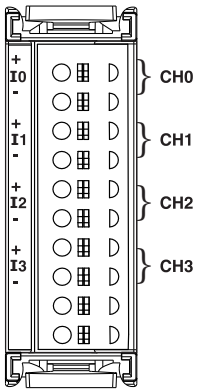
2. Use of RO and AO cards are limited in 230VAC variants. Mixed usages for RO/AO limits are auto-managed in Selpro settings or refer to product manual for details

Terminal connection

FL-SC-AO04-V-CE-RoHS



FL-SC-AO04-I-CE-RoHS



Ordering information

Product code	Description	Certification
FL-SC-AO04-V-CE-RoHS	4 Channels Analog Output Card-Voltage	CE RoHS
FL-SC-AO04-I-CE-RoHS	4 Channels Analog Output Card-Current	CE RoHS



Features:

- Plug-in Module
- Flexible I/O Card Selection for customized applications
- Easy integration and replacement across all Flexys Series modules
- Equipped with spring-clamp terminals for secure and tool-free wiring
- Windows-Based Software for configuration in Ladder Programming

Technical specifications

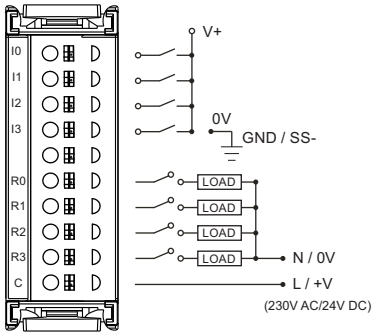
Digital Input Specifications	FL-SC-DI04-RO04-CE-RoHS	FL-SC-AI03-NTC-AI03-I	FL-SC-AI01-AO01-V/I	FL-SC-AI03-U-AO02-U
No. of Inputs	4	–		
Input Type	PNP	–		
Voltage Range	7 - 30V DC	–		
Input Current	5.5mA @24V	–		
Debounce Time	Programmable 1 - 255 ms (Default: 10 ms)	–		
Isolation (Power ↔ Input)	Yes	–		
Isolation (CPU ↔ Input)	No	–		
Protection against Polarity Inversion	Yes	–		
Timer Accuracy	0.1% or 2 ms (Whichever Greater)	–		
Response Time	Typical 10 mSec (Based on ladder scan time)	–		
Analog Input Specifications				
No. of Channels	–	6	1	3
Input Type	–	3 - NTC, 3 - 0-20mA	0-10V / 0-20mA (Jumper selectable)	J, K, T, R, S, C, E, B, N, L, U, W, PLTNL, mVolt (-5 to 65mV), 0-10V, 0-20mA, RTD (Jumper selectable)
Accuracy	–	0.25% ± 1°C (TC), 0.1% ±1°C (RTD) at 25°C, ±0.25% of FS. ±1 count for AI's, ±2°C for NTC		
Resolution	–	12 bit		
Conversion Time	–	TC - 100ms, RTD - 300ms, 0-10V - 100ms, 0-20mA - 100ms, NTC - 100ms		
Linearity	–	0.10%		
Max Non-Destructive Input	–	AIV= 17V, AII=31mA		
Isolation (Power ↔ Input)	–	Yes		
Isolation (CPU ↔ Input)	–	No		
Channel-to-Channel Isolation	–	No		
Reverse Polarity Protection	–	TC - Yes, RTD - N/A, 0-10V - YES, 0-20mA - YES, NTC - YES		
Input Impedance	–	TC - >330KΩ, RTD - >510KΩ, 0-10V - >330KΩ, 0-20mA - >100Ω, NTC - >2KΩ		

Digital Output Specifications			
No. of Outputs	4 (NO) type Relay, 1 Common Lines)	–	
Contact / Output Rating	5A @ 250V AC (resistive load), 5A @ 30V DC (resistive load)	–	
Relay / Output Type	SPST	–	
Isolation (CPU ↔ Output)	2.5 kV	–	
Isolation (Output ↔ Output)	NA	–	
Short Circuit Protection	–	–	
Polarity Inversion Protection	–	–	
Response Time	20 ms	–	
Mechanical Life	5 Million Operations	–	
Analog Output Specifications			
No. of Channels	–	1	2
Output Range	–	0–10 V DC / 0-20 mA DC	
Resolution	–	10 Bit	
Load Limit	–	0-10V DC ≥ 1 kΩ, 0-20mA <= 500 Ω	
Digital Resolution	–	0.0-100.0% = 0-10.000V DC, 0.0-100.0% = 0-20.000mA	
Conversion Time	–	100 ms	
Isolation (CPU ↔ Output)	–	NO	
Isolation (Output ↔ Output)	–	NO	
Output Error @ 25°C	–	±0.25% of Full Scale	
Linearity	–	0.10%	
Environmental Specifications			
Operating Temp	0°C to 55°C		
Storage Temp	-20°C to 70°C		
Humidity	10% to 95% RH (Non-condensing)		
IP rating	Terminals: IP20		
Mechanical Specifications			
Weight	45 grams		
Mounting	Pluggable		
Terminal	Pluggable, Spring fit		
Dimensions in mm (WHD)	22 x 65 x 95		
Auxiliary Supply Specifications			
Supply Voltage	Self Powered		

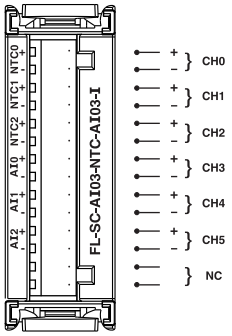
Note:
1. Refer to the IO card and base module compatibility guidelines to ensure effective and valid IO card combinations.
2. Use of RO and AO cards are limited in 230VAC variants. Mixed usages for RO/AO limits are auto-managed in Selpro settings or refer to product manual for details

Terminal connection

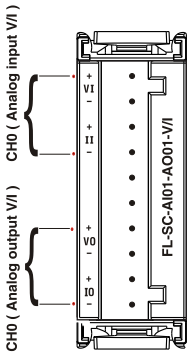
FL-SC-DI04-RO04-CE-RoHS



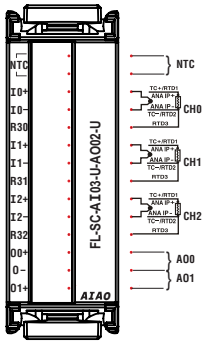
FL-SC-AI03-NTC-AI03-I



FL-SC-AI01-AO01-V/I



FL-SC-AI03-U-AO02-U



Ordering information

Product code	Description	Certification
FL-SC-DI04-RO04-CE-RoHS	Flexys IO - 4 Digital Input & 4 Digital Output Card	CE RoHS
FL-SC-AI03-NTC-AI03-I	Flexys IO - 3 Channel Analog Inputs - NTC, 3 Channel Analog Inputs - Current Card	CE RoHS
FL-SC-AI01-AO01-V/I	Flexys IO - 1 Channel Analog Inputs, 1 Channel Analog Output (Voltage/Current)	CE RoHS
FL-SC-AI03-U-AO02-U	Flexys IO - 3 Channel Analog Input - Universal, 2 Channel Analog Output - Universal Card (Jumper Selection)	CE RoHS

Flexys IO Card

FL-SC-LC04



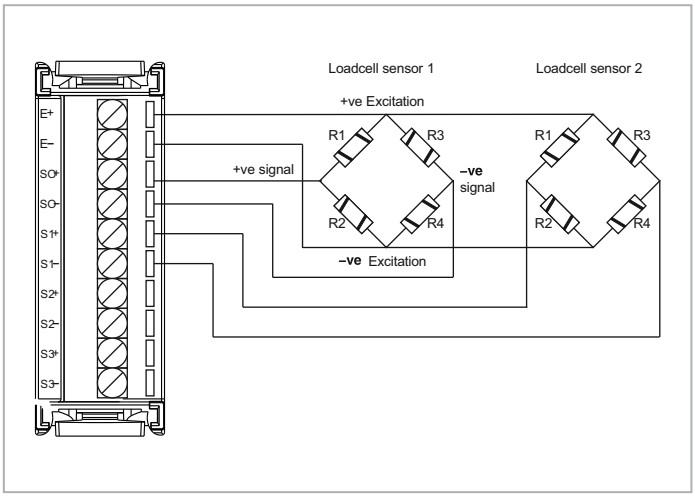
Features :

- Plug in module
- Easy to connect & replace in flexys GT35, Flexys rail, Flexys panel TX4 & EXP FLEX 2M
- Configured via selpro software
- Spring type pluggable terminals

Technical specifications

Electrical specifications	
No. of channels	4 channels
Measurement range	±19.5mV, ±39mV, ±1.25V, ±2.5V
Excitation output voltage	5V DC ±10%
Type of input	Differential
Digital resolution	24 bits
Applicable sensor type	4 Wire
Input offset drift	100nV/°C
Temperature coef. span	±2.5ppm/°C
Linearity error	±0.05% full scale
Gain error	0.1%
Gain drift	3ppm/°C
Conversion time	50ms to 400ms (User configurable)
Permitted load cell resistance	350Ω
Common mode rejection @50/60 Hz	50ms to 400ms (User configurable)
General specifications	
Ambient operating temperature	0 °C to 55 °C
Humidity	95%
Ambient storage temperature	-20 °C to 70 °C
Weight	40 gm

Terminal connection



Ordering information

Product code	Description	Certification
FL-SC-LC04	4 channel loadcell input card	CE RoHS in process