

2085 Micro800™

EXPANSION I/O

HIGHEST DENSITY & BEST PRICE PER POINT!



Catalog numbers:

2085sc-IF8U, 2085sc-OF8, 2085sc-IF16V, 2085sc-IF16C,
2085-IF4XOF4-SC, 2085-OB32-SC, 2085-OV32-SC,
2085-IR8-SC, 2085-IT8-SC, 2085-IT16-SC



About Us



Spectrum Controls is the first company to build licensed, core-technology I/O modules for the Rockwell Automation product line. Our innovative designs incorporate state-of-the-art features with dependable performance. In addition to being a Rockwell Automation Global Encompass Partner, technical support is offered for every I/O module through the Rockwell TechConnect Support program at no additional cost to the customer.

As a leader in I/O for the industrial controls marketplace, our market-driven I/O modules provide a cost-effective solution to complex applications. Universal analog, high-density, analog+HART, and other versatile configuration options are just a few of the advantages of using I/O from Spectrum Controls.



*Fully licensed
Rockwell Automation
technology; Rockwell
TechConnect phone
support included with
your purchase.*

2085 Micro800™ EXPANSION I/O

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8-Channel Universal Analog Input

2085sc-IF8U

- Minimize your price per point with our cost effective universal analog module.
- Flexible universal analog module with best-in-class performance.
- Save rack space for future applications.
- Simplify your installation, and lower your total system costs by standardizing on our price competitive universal I/O.
- Configure via RA CCW Software for Micro800™ family.



Key Specifications

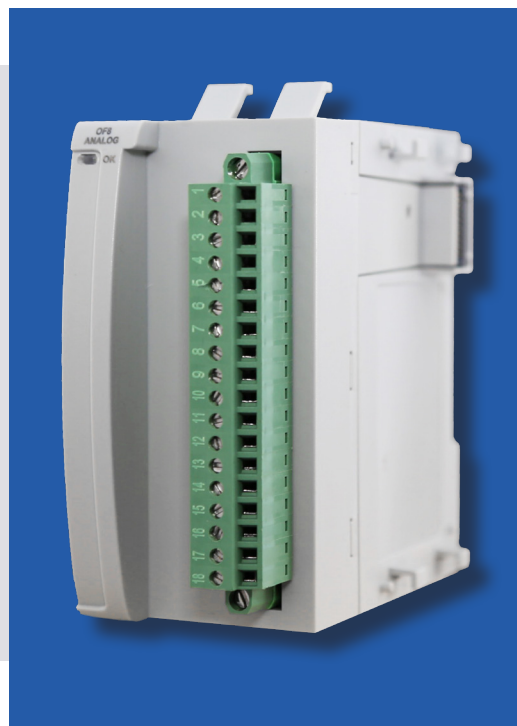
- Supports up to 8 voltage, current, thermocouple, or RTD/resistance inputs.
- Differential inputs provide 10 VDC, channel-to-channel isolation.
- Configurable open circuit detection, CJC's, and 4 data formats.

Specification	Description
Number of Inputs	8 Differential Inputs
Input ranges	Current: 0 - 20 mA, 4 - 20 mA
	Voltage: ± 50 mV, ± 100 mV, 0 - 5 V, 0 - 10 V, ± 10 V
	RTD: 100 Ω , 200 Ω , 500 Ω , and 1000 Ω Pt385 & Pt3916, 100 Ω Ni618 & 120 Ni672, 10 Ω Cu 426, 604 Ω NiFe 518
	Resistance: 0-150 Ω , 0-500 Ω , 0-1000 Ω , 0-3000 Ω
	Thermocouple: Type J, N, T, K, E, S, R, C, B
Resolution	16-bit
Input filters	4 Hz*, 17 Hz*, 62 Hz, 470 Hz (* feature 50/60/Hz rejection)
Update Rate	139ms per channel, 17Hz filter
Power Consumption	94 mA at 5 V, 15 mA at 24 V
Operating Temp. Range	-20 °C to +65 °C

8-Channel High-Density Analog Output

2085sc-OF8

- The highest density analog output available for Micro800™ controllers.
- Minimize your cost per I/O point with our affordable output analog module.
- Save money with a single high-density analog module, instead of multiple low-density I/O modules.
- Lower your overall system costs by standardizing on the highest density analog output available for Micro800™ Controllers.



Key Specifications

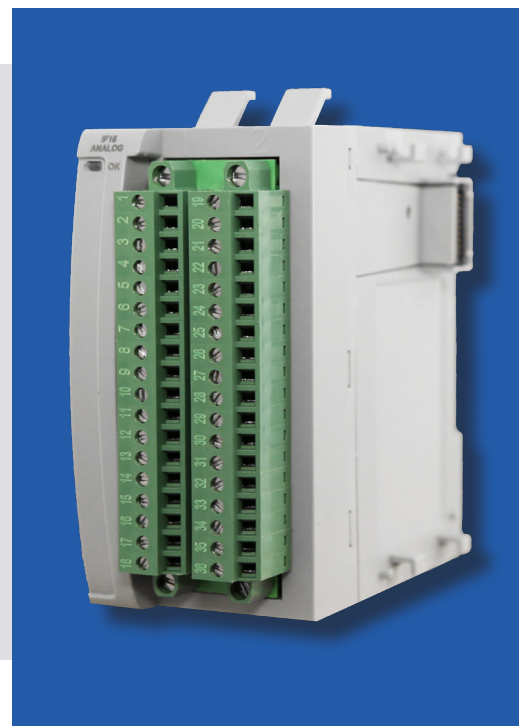
- 8-Channel selectable voltage and current output ranges.
- Configurable open circuit detection, output fault detection and range scaling of output data.
- Supports range alarms with latches.

Specification	Description		
Number of Outputs	8 Outputs		
Output Types	<table><tr><td>0 mA - 20 mA, 4 mA - 20 mA</td></tr><tr><td>0 V to +5 V, 0 V to +10 V, ±10 V</td></tr></table>	0 mA - 20 mA, 4 mA - 20 mA	0 V to +5 V, 0 V to +10 V, ±10 V
0 mA - 20 mA, 4 mA - 20 mA			
0 V to +5 V, 0 V to +10 V, ±10 V			
Resolution	16-bit		
Output Load	50 to 500 Ohm		
Output Impedance	Current Mode: > 1MOhm, Voltage Mode: < 1 Ohm		
Power Consumption	85 mA at 5V, 10 mA at 24V, 195 mA at 24 V Field Power		
Operating Temp. Range	-20 °C to +65 °C		

16-Channel High-Density Analog Input

2085sc-IF16V, 2085sc-IF16C

- Choose between a current or voltage version for high performance analog inputs with up to 16-bit resolution.
- Best price per point value on the Micro800™ platform.
- Designed to expand the local I/O communication capability of the Micro800™ platform.
- Simplify your installation by standardizing on a common I/O.



Key Specifications

- The highest density analog input available for Micro800™ controllers.
- Configurable open circuit detection, range scaling of input data in module, not in the PLC code.
- Supports process alarms with latches.

Specification	Description
Number of Inputs	16 Differential Inputs
Input Types	2085sc-IF16C: 0 mA - 20 mA, 4 mA - 20 mA
	2085sc-IF16V: 0 V to +5 V, 0 V to +10 V, ± 10 V
Resolution	16-bit
Input filters	4.17 Hz*, 16.7 Hz*, 62 Hz, 470 Hz (* feature 50/60Hz rejection)
Update Rate	138ms per channel, 16.7 Hz filter
Power Consumption	100 mA at 5 V, 20 mA at 24 V
Operating Temp. Range	-20 °C to +65 °C

4-Channel Combo Analog Input & Output

2085-IF4XOF4-SC

- Minimize your cost per I/O point with our affordable combo analog module.
- Ideal for applications requiring combination analog inputs and outputs.
- Great for PID closed loop control applications.
- Save money with a single combo analog module, instead of multiple dedicated analog I/O modules.



Key Specifications

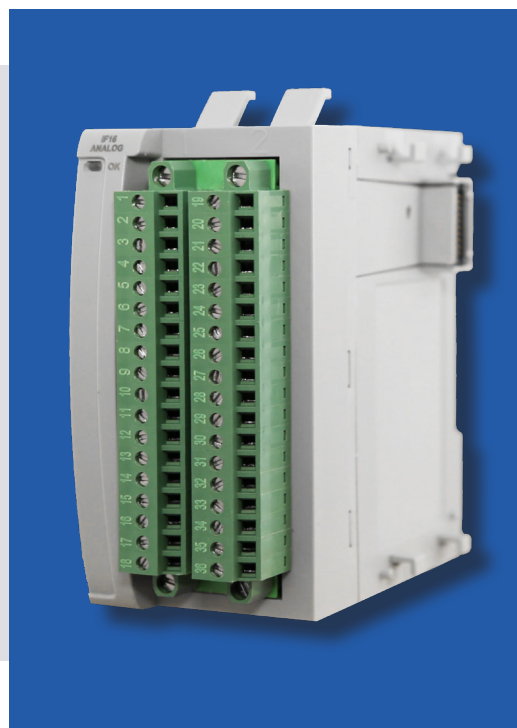
- Save rack space with this high performance input/output module.
- Configurable open circuit/output fault detection.
- Supports range alarms with latches.

Specification	Description
No. of Inputs/Outputs	4 Inputs/4 Outputs
Input/Output Types	0 mA - 20 mA, 4 mA - 20 mA, 0 V to +5 V, 0 V to +10 V, ± 10 V
Resolution	16-bit
Input Filters	4 Hz*, 17 Hz*, 62 Hz, 470 Hz (* feature 50/60Hz rejection)
Input Update Rate	131ms per channel, 17Hz filter
Power Consumption	110 mA at 5 V, 125 mA at 24 V
Operating Temp. Range	-20 °C to +65 °C

32-POINT 24 V Sink/Source Discrete Output

2085-OV32-SC (Sinking), 2085-OB32-SC (Sourcing)

- The highest density discrete outputs for Micro800™ controllers.
- Save space on the Micro800™ expansion bus by consuming only 1 slot.
- Connect up to 8 modules on the eight expansion bus slots of Micro870 controller and 3 on Micro850 controller.
- Choose either sink or source output modules to minimize cost per point.



Key Specifications

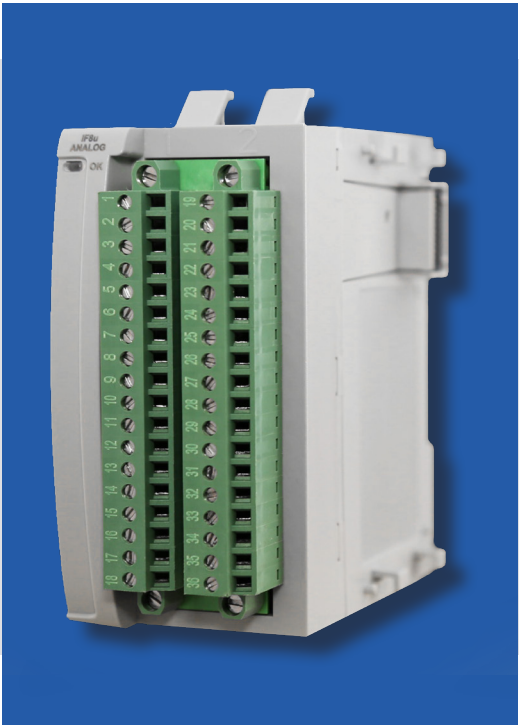
- Available in sink or source operation
- One LED indicator per point
- Report module status including brownout detection
- Group-to-Group Isolation

Specification	Description
Number of Outputs	32 Points (2 isolated groups of 16)
On-State Current	0.5 A maximum steady state (8 A per channel group)
Working Voltage	12/24 VDC (10.5 VDC to 30 VDC)
Output Delay	3 ms
On state voltage drop	Less than 0.5 VDC maximum
Thermal Dissipation	5.5 Watt, maximum (OB32), 4.0 Watt, maximum (OV32)
Power Consumption	Bus Supply: 70 mA at 5 V, 55 mA at 24 V
Operating Temp. Range	-20 °C to +65 °C

8-Channel RTD Analog Input

2085-IR8-SC

- Minimize your cost per I/O point with our affordable RTD analog module.
- High-resolution temperature sensing with best-in-class performance.
- Save rack space for future applications.
- Simplify your installation, and lower your total system costs by standardizing on our price competitive RTD I/O.



Key Specifications

- Supports up to 8 RTD/resistance inputs of 2, 3, or 4 wire.
- Dedicated Res/RTD module provides improved performance with lower long-term drift
- Configurable open circuit detection.

Specification	Description
Number of Inputs	8
Input ranges	<div>12 RTD Types: 100 Ω, 200 Ω, 500 Ω, and 1000 Ω Pt385 & Pt3916, 100 Ω Ni618 & 120 Ni672, 10 Ω Cu 426, 604 Ω NiFe 518</div> <div>4 Resistance Ranges: 0-150 Ω, 0-500 Ω, 0-1000 Ω, 0-3000 Ω</div>
Resolution	16-bit
Input filters	4 Hz*, 17 Hz*, 60 Hz, 470 Hz (* feature 50/60Hz rejection)
Update Rate	139ms* per channel, 17Hz filter, 2 & 4-wire mode. (* periodically 2x this in 3-wire mode)
Power Consumption	94 mA at 5 V, 15 mA at 24 V
Operating Temp. Range	-20 °C to +65 °C
RTD Configurations	2, 3 or 4-wire

8/16-Channel Thermocouple Analog Input

2085-IT8-SC, 2085-IT16-SC

- Minimize your cost per I/O point with our affordable thermocouple analog module.
- High-resolution temperature sensing with best-in-class performance.
- Save rack space for future applications.
- Simplify your installation, and lower your total system costs by standardizing on our price competitive thermocouple I/O.



Key Specifications

- Supports up to 8 or 16 thermocouple inputs.
- Differential inputs provide 10V of channel-to-channel isolation.
- Configurable open circuit detection.

Specification	Description
Number of Inputs	8 or 16 thermocouple
Input ranges	Voltage: ± 50 mV, ± 100 mV
	Thermocouple: Type J, N, T, K, E, S, R, C, B
Resolution	16-bit
Input filters	4 Hz*, 17 Hz*, 60 Hz, 470 Hz (* feature 50/60Hz rejection)
Update Rate	139 ms per channel, 17Hz filter
Power Consumption	100 mA at 5 V, 20 mA at 24 V
Operating Temp. Range	-20 °C to +65 °C

Agency Certifications

UL/cUL Certifications

UL/cUL Listed ANSI ISA 12.12.01 (Class I, Div 2, Groups ABCD).

UL/cUL Listed UL 61010-2-201

FCC Part 15 Class A compliance

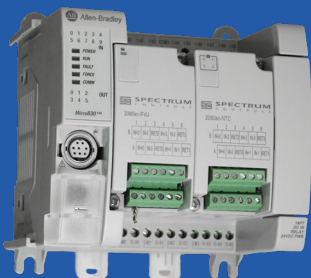
CE Compliant to LV and EMC directives

EN 61010-2-201

EN 61131-2, Programmable Controllers (Clause 8, Zone A & B)

IEC 61000-6-4 (emission) and IEC 61000-6-2 (immunity)

RoHS, REACH



Also check out our Class 2080 Micro800™ Plug-in Modules!

We have plug-ins for BACNet communication, analog inputs for Thermistors, Universal (voltage, current, thermocouple and RTD/ resistance) analog input, a real time clock module with MicroSD memory slot and a High Current Relay Output module.

Please visit www.spectrumcontrols.com for more information!

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