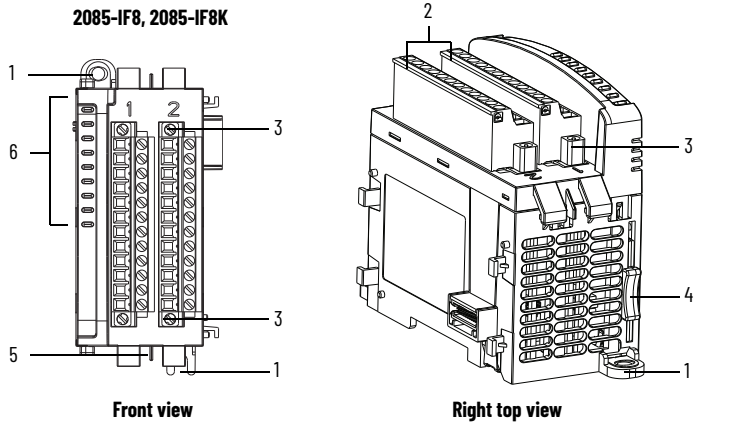
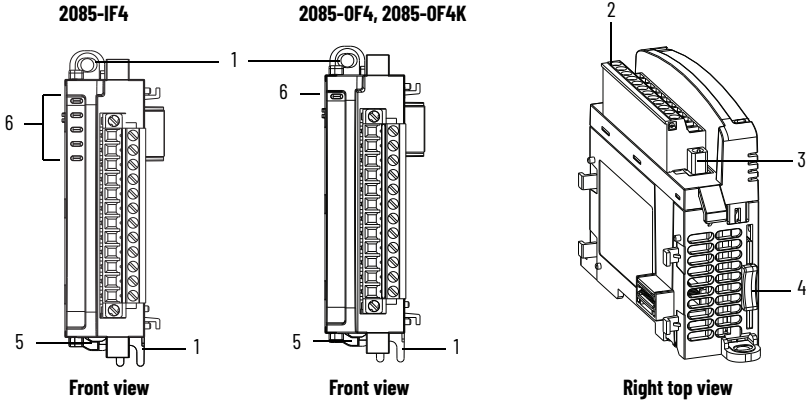


## Overview

The Micro800™ expansion I/O is a modular I/O that complements and extends the capabilities of Micro850® and Micro870® controllers. These expansion I/O modules interface with the controllers using an I/O expansion port.

### I/O Module Overview



### Module Description

Description		Description	
1	Mounting screw hole / mounting foot	4	Module interconnect latch
2	Removable Terminal Block (RTB)	5	DIN rail mounting latch
3	RTB hold down screws	6	I/O status indicator



This equipment is sensitive to electrostatic discharge (ESD).  
Follow ESD prevention guidelines when handling this equipment.

# Specifications

## General Specifications

Attribute	2085-IF4	2085-OF4, 2085-OF4K	2085-IF8, 2085-IF8K	
Number of I/O	4		8	
Dimensions HxWxD	28 x 90 x 87 mm (1.1 x 3.54 x 3.42 in.)		44.5 x 90 x 87 mm (1.75 x 3.54 x 3.42 in.)	
Shipping weight, approx.	140 g (4.93 oz)	200 g (7.05 oz)	270 g (9.52 oz)	
Bus current draw, max	5V DC, 100 mA 24V DC, 50 mA	5V DC, 160 mA 24V DC, 120 mA	5V DC, 110 mA 24V DC, 50 mA	
Wire size		<b>Min</b>	<b>Max</b>	
	Solid	0.34 mm <sup>2</sup> (22 AWG)	2.5 mm <sup>2</sup> (14 AWG)	Copper wire rated @ 90 °C (194 °F), or greater, 1.2 mm (3/64 in.) insulation max
	Stranded	0.20 mm <sup>2</sup> (22 AWG)	2.5 mm <sup>2</sup> (14 AWG)	
Wiring category <sup>(1)</sup>	2 - on signal ports			
Wire type	Shielded			
Terminal screw torque	0.5...0.6 N•m (4.4...5.3 lb•in) <sup>(2)</sup>			
Power dissipation, total	1.7 W	3.7 W	1.75 W	
Enclosure type rating	None (open-style)			
Status indicators	1 green health indicator 4 red error indicator	1 green health indicator	1 green health indicator 8 red error indicators	
Isolation voltage	50V (continuous), Reinforced Insulation Type, channel to system. Type tested @ 720V DC for 60 s			
North American temp code	T4A		T5	

- (1) Use this Conductor Category information for planning conductor routing. See Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).
- (2) RTB hold down screws should be tightened by hand. They should not be tightened using a power tool.

## Input Specifications

Attribute	2085-IF4	2085-IF8, 2085-IF8K
Number of inputs	4	8
Resolution	14 bits (13 bits plus sign bit)	
Voltage	1.28 mV/cnt unipolar; 1.28 mV/cnt bipolar	
Current	1.28 µA/cnt	
Data format	Left justified, 16 bit 2 s complement	
Conversion type	SAR	
Update rate	<2 ms per enabled channel without 50 Hz/60 Hz rejection, <8 ms for all channel 8 ms with 50 Hz/60 Hz rejection	
Step response time up to 63%	4...60 ms without 50Hz/60 Hz rejection - depends on number of enabled channel and filter setting 600 ms with 50 Hz/60 Hz rejection	
Input current terminal, user configurable	4...20 mA (default) 0...20 mA	
Input voltage terminal, user configurable	±10V 0...10V	
Input impedance	Voltage terminal >1 MΩ Current terminal <100 Ω	
Absolute accuracy	±0.10% Full Scale @ 25 °C	
Accuracy drift with temp	Voltage terminal - 0.00428 % Full Scale/ °C Current terminal - 0.00407 % Full Scale/ °C	

**Input Specifications (Continued)**

Attribute	2085-IF4	2085-IF8, 2085-IF8K
Calibration required	Factory calibrated. No customer calibration supported.	
Overload, max	30V continuous or 32 mA continuous, one channel at a time.	
Channel diagnostics	Over and under range or open circuit condition by bit reporting	

**Output Specifications**

Attribute	2085-OF4, 2085-OF4K
Number of outputs	4
Resolution	12 bits unipolar; 11 bits plus sign bipolar
Voltage	2.56 mV/cnt unipolar; 5.13 mV/cnt bipolar
Current	5.13 $\mu$ A/cnt
Data format	Left justified, 16-bit 2 s complement
Step response time up to 63%	2 ms
Conversion rate, max	2 ms per channel
Output current terminal, user configurable	0 mA output until module is configured 4...20 mA (default) 0...20 mA
Output voltage terminal, user configurable	$\pm$ 10V 0...10V
Current load on voltage output, max	3 mA
Absolute accuracy	
Voltage terminal	0.133% Full Scale @ 25 °C or better
Current terminal	0.425 % Full Scale @ 25 °C or better
Accuracy drift with temp	Voltage terminal - 0.0045% Full Scale/ °C Current terminal - 0.0069% Full Scale/ °C
Resistive load on mA output	15...500 $\Omega$ @ 24V DC

**Environmental Specifications**

Attribute	Value
Temperature, operating	IEC 60068-2-1 (Test Ad, Operating Cold), IEC 60068-2-2 (Test Bd, Operating Dry Heat), IEC 60068-2-14 (Test Nb, Operating Thermal Shock): -20...+65 °C (-4...+149 °F)
Temperature, surrounding air, max	65 °C (149 °F)
Temperature, nonoperating	IEC 60068-2-1 (Test Ab, Unpackaged Nonoperating Cold), IEC 60068-2-2 (Test Bb, Unpackaged Nonoperating Dry Heat), IEC 60068-2-14 (Test Na, Unpackaged Nonoperating Thermal Shock): -40...+85 °C (-40...+185 °F)
Relative humidity	IEC 60068-2-30 (Test Db, Unpackaged Damp Heat): 5...95% noncondensing
Vibration	IEC 60068-2-6 (Test Fc, Operating): 2 g @ 10...500 Hz
Shock, operating	IEC 60068-2-27 (Test Ea, Unpackaged Shock): 25 g
Shock, nonoperating	IEC 60068-2-27 (Test Ea, Unpackaged Shock): 25 g - for DIN rail mount 35 g - for panel mount
Emissions	IEC 61000-6-4
ESD immunity	IEC 61000-4-2: 6 kV contact discharges 8 kV air discharges