Output Specifications – Micro850 Controllers

Attribute	AWB, QWB(K)	QVB, QBB	
	Relay Output	High-speed Output	Standard Output
Output voltage, min	5V DC, 5V AC	10.8V DC	10V DC
Output voltage, max	125V DC, 265V AC	26.4V DC	
Load current, min	10 mA		
Load current, max	2.0 A	100 mA (high-speed operation) 1.0 A @ 30 °C (86 °F) 0.3 A @ 65 °C (149 °F) (standard operation)	1.0 A @ 30 °C (86 °F) 0.3 A @ 65 °C (149 °F) (standard operation)
Surge current, per point	See Relay Contacts Ratings - Micro850 Controllers on page 20	4.0 A every 1 s @ 30 °C (86 °F); every 2 s @ 65 °C (149 °F) (1)	
Current, per common, max	5 A	—	
Turn-on time, max	10 ms	2.5 µs	0.1 ms
Turn-off time, max	10 ms	2.5 µs	1.0 ms

(1) Applies for general-purpose operation only. Does not apply for high-speed operation.

Relay Contacts Ratings - Micro850 Controllers

Maximum Volts	Amperes		Amperes Continuous	Volt-Amperes	
	Make	Break		Make	Break
120V AC	15 A	1.5 A	2.0 A	1800V A	180V A
240V AC	7.5 A	0.75 A			
24V DC	1.0 A		1.0 A	28V A	
125V DC	0.22 A				

Micro870 Controllers

Micro870 controllers are designed for large standalone machine applications and come with great memory capacity to enable more modular program and user-defined function blocks. These controllers are capable of communicating on various networks and with devices through EtherNet/IP, Serial, and USB ports.

Number and Types of Inputs/Outputs for Micro870 Catalogs

Catalogs	Inputs				Outputs			Analog Out 0...10V DC	Analog In 0...10V (shared with DC In)	PTO/PWM Support	Embedded HSC Support (1)	Ethernet Nodes (2)
	120V AC	120/240 V AC	24V DC/ V AC	12V DC	Relay	24V DC Source	24V DC Sink					
2080-LC70-24AWB	14	–	–	–	10	–	–	–	–	–	–	0
2080-L70E-24AWB	14	–	–	–	10	–	–	–	–	–	–	8
2080-LC70-24QWB	–	–	14	–	10	–	–	–	–	–	4	0
2080-L70E-24QWB	–	–	14	–	10	–	–	–	–	–	4	8
2080-LC70-24QWBK	–	–	14	–	10	–	–	–	–	–	4	0
2080-L70E-24QWBK	–	–	14	–	10	–	–	–	–	–	4	8
2080-L70E-24QWBN	–	–	14	–	10	–	–	–	–	–	4	8
2080-L70E-24QWBNK	–	–	14	–	10	–	–	–	–	–	4	8
2080-LC70-24QBB	–	–	14	–	–	10	–	–	–	2 (PTO/PWM)	4	0
2080-L70E-24QBB	–	–	14	–	–	10	–	–	–	2 (PTO/PWM)	4	8
2080-LC70-24QBBK	–	–	14	–	–	10	–	–	–	2 (PTO/PWM)	4	0
2080-L70E-24QBBK	–	–	14	–	–	10	–	–	–	2 (PTO/PWM)	4	8
2080-L70E-24QBBN	–	–	14	–	–	10	–	–	–	2 (PTO/PWM)	4	8

(1) Maximum number of embedded HSC supported.
(2) For Micro870 (2080-L70E) controllers with firmware revision 21.011 or later.

General Specifications – Micro870 Controllers

Attribute	2080-LC70-24AWB 2080-L70E-24AWB	2080-LC70-24QWB, 2080-LC70-24QWBK, 2080-L70E-24QWB, 2080-L70E-24QWBK	2080-L70E-24QWBN 2080-L70E-24QWBNK	2080-LC70-24QBB, 2080-LC70-24QBBK, 2080-L70E-24QBB, 2080-L70E-24QBBK	2080-L70E-24QBBN
Number of I/O	24 (14 inputs, 10 outputs)				
Dimensions (HxWxD)	90 x 157 x 80 mm (3.54 x 6.22 x 3.15 in.)				
Shipping weight, approx.	0.47 kg (1.04 lb)				
Wire size	**Min**: 0.2 mm^2 (24 AWG) – **Max**: 2.5 mm^2 (14 AWG) – Solid and Stranded – Rated @ 90 °C (194 °F) insulation max				
Wiring category[1] [2]	2 – on signal ports 2 – on power ports 2 – on communication ports				
Wire type	Use copper conductors only				
Insulation-stripping length	7 mm (0.28 in.)				
Terminal screw torque	0.4…0.5 N•m (3.5…4.4 lb•in) using a 0.6 x 3.5 mm screwdriver. Use a handheld screwdriver to hold down the screws at the side.				
Input circuit type	12/24V sink/source (standard) 24V sink/source (high-speed)				
Output circuit type	Relay			24V DC source (standard and high-speed)	
Power consumption, max	8 W – without plug-in modules and expansion I/O modules 28 W – with plug-in modules and expansion I/O modules				
Power supply voltage range	21.4…26.4V DC Class 2, or Limited Voltage Limited Current Source (LVLC)				
I/O rating, input	120V AC, 16 mA	24V, 8.8 mA 24V AC, 50/60 Hz, 8.8 mA			
I/O rating, output	2 A, 240V AC, 50/60 Hz, General Use 5 A, 24V0 AC, 50/60 Hz, Resistance			24V DC, Class 2, 1 A per point (Surrounding air temperature 30 °C (86 °F)) 24V DC, Class 2, 0.3 A per point (Surrounding air temperature 65 °C (149 °F))	
Isolation voltage	250V (continuous), Reinforced Insulation Type, Output to Aux and Network, Inputs to Outputs. Type tested for 60 s @ 3250V DC Output to Aux and Network, Inputs to Outputs. 150V (continuous), Reinforced Insulation Type, Input to Aux and Network. Type tested for 60 s @ 1950V DC, Inputs to Aux and Network.	250V (continuous), Reinforced Insulation Type, Output to Aux and Network, Inputs to Outputs. Type tested for 60 s @ 3250V DC Output to Aux and Network, Inputs to Outputs. 50V (continuous), Reinforced Insulation Type, Input to Aux and Network. Type tested for 60 s @ 720V DC, Inputs to Aux and Network.		50V (continuous), Reinforced Insulation Type, I/O to Aux and Network, Inputs to Outputs. Type tested for 60 s @ 720V DC, I/O to Aux and Network, Inputs to Outputs.	
DNP3 support	–	–	Yes. SAV2 and SAV5	–	Yes. SAV2 and SAV5
Pilot duty rating	C300, R150			–	
Enclosure type rating	None (open-style)				
North American temp code	T4				

(1) Use this Conductor Category information for planning conductor routing. See publication 1770-4.1, Industrial Automation Wiring and Grounding Guidelines.
(2) Use this Conductor Category information for planning conductor routing as described in the appropriate System Level Installation Manual.

Input Specifications – Micro870 Controllers

Attribute	AWB	QWB(K), QWBN, QBB(K), QBBN	
	120V AC Input	**High-speed DC Input**	**Standard DC Input**
Input group to backplane isolation	–	Verified by one of the following dielectric tests: • 720V DC for 2 s • 50V DC working voltage (IEC Class 2 reinforced insulation)	
Voltage category	–	24V sink/source 24V AC, 50/60 Hz	
On-state voltage range	79…132V AC	16.8…26.4V DC @ 65 °C (149 °F) 16.8…30.0V DC @ 30 °C (86 °F)	10…26.4V DC @ 65 °C (149 °F) 10…30.0V DC @ 30 °C (86 °F)
Off-state voltage, max	20V AC	5V DC	
Off-state current, max	2.5 mA @ 120V AC	1.5 mA	
On-state current, min	5 mA	5.0 mA @ 16.8V DC	1.8 mA @ 10V DC
On-state current, nom	–	7.6 mA @ 24V DC	6.15 mA @ 24V DC