

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

ALLEN-BRADLEY

2080-LC20-20QWB

20-POINT PROGRAMMABLE CONTROLLER

Used with the applicable Micro820 programmable controllers configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Allen-Bradley Micro820 programmable controllers official technical documentation



Micro800 Programmable Controllers

Micro810 Controller Catalog Numbers 2080-LC10-12AWA, 2080-LC10-12QWB, 2080-LC10-12DWD, 2080-LC10-12QBB

Micro820 Controller Catalog Numbers 2080-LC20-20AWB, 2080-L20E-20AWB, 2080-LC20-20AWBR, 2080-L20E-20AWBR, 2080-LC20-20QWB, 2080-L20E-20QWB, 2080-LC20-20QWBR, 2080-L20E-20QWBR, 2080-LC20-20QBB, 2080-L20E-20QBB, 2080-LC20-20QBBK, 2080-L20E-20QBBK, 2080-LC20-20QBBR, 2080-L20E-20QBBR

Micro850 Controller Catalog Numbers 2080-L50E-24AWB, 2080-L50E-24QWB, 2080-L50E-24QVB, 2080-L50E-24QBB, 2080-L50E-48AWB, 2080-L50E-48QWB, 2080-L50E-48QWBK, 2080-L50E-48QVB, 2080-L50E-48QBB

Micro870 Controller Catalog Numbers 2080-L70E-24AWB, 2080-L70E-24QWB, 2080-L70E-24QWBK, 2080-L70E-24QWBN, 2080-L70E-24QWBNK, 2080-L70E-24QBB, 2080-L70E-24QBBK, 2080-L70E-24QBBN

Expansion I/O Modules Catalog Numbers 2085-IQ16, 2085-IQ16K, 2085-IQ32T, 2085-0V16, 2085-0B16, 2085-IA8, 2085-IM8, 2085-OA8, 2085-OW8, 2085-OW16, 2085-OW16K, 2085-IF4, 2085-IF8, 2085-IF8K, 2085-OF4, 2085-OF4K, 2085-IRT4, 2085-EP24VDC, 2085-ECR, 2085-ECRK

Plug-in Modules Catalog Numbers 2080-IQ4, 2080-0B4, 2080-0V4, 2080-IQ40B4, 2080-IQ40V4, 2080-0W4I, 2080-IF2, 2080-IF2K, 2080-IF4, 2080-OF2, 2080-RTD2, 2080-TC2, 2080-MEMBAK-RTC, 2080-MEMBAK-RTC2, 2080-TRIMPOT6, 2080-MOT-HSC, 2080-DNET20, 2080-SERIALISOL, 2080-SERIALISOLK

Accessories Catalog Numbers 2080-LCD, 2080-USBADAPTER, 2080-REMLCD, 2080-PS120-240VAC, 2080-PSAC-12W, 2080-SD-2GB

Topic	Page
Summary of Changes	2
Micro800 Controller Overview	3, 4
Micro800 Controller Comparison	4
Micro800 Controllers	6
Micro800 Expansion I/O Modules	24
Micro800 Plug-in Modules	36
Micro800 Accessories	47
Additional Resources	52



Micro800 Controller Overview



Micro800™ controllers are designed for low-cost, standalone machines. These small-size programmable logic controllers (PLCs) are available in different form factors based on the number of I/O points that are embedded in the base, with a range of features that are intended to address different requirements. The Micro800 family shares programming environment, accessories, and plug-ins that allow machine builders to personalize the controller for specific capabilities.

Micro810® controllers function as a smart relay with high current relay outputs with the programming capabilities of a micro PLC. The Micro810 controllers come in a 12-point form factor.

Micro820® controllers are designed for smaller standalone machines and remote automation projects. They have embedded Ethernet and serial ports and a microSD™ card slot for data logging and recipe management. These controllers come as 20-point form factors that can accommodate up to two plug-in modules. They also support the Micro800 Remote LCD (2080-REMLCD) module for easier configuration of such settings as IP address and functions as a simple IP65 text display. 2080-L20E-xxx controllers have an embedded USB-C port for programming.

With firmware revision 23.011 or later, Micro820 (2080-L20E) controllers support Class 1 EtherNet/IP™ connection to Kinetix® 5100, PowerFlex® 520-series drives with pre-defined tags and generic profile tags for all other EtherNet/IP devices.

Micro850® expandable controllers are designed for applications that require more digital and analog I/O or higher performance analog I/O. They can support up to four expansion I/O modules. Micro850 controllers include additional communication connection options through an embedded 10/100 Base-T Ethernet port. 2080-L50E-xxx controllers also support additional DF1 protocol modes.

Micro870® controllers offer a higher level of scalability, flexibility, and customization. Designed for large standalone machine applications, the Micro870 controller comes with large memory capacity to enable more modular programs and use of user-defined function blocks. 2080-L70E-xxx controllers also support additional DF1 protocol modes and DNP3 protocol is supported in 2080-L70E-xxxN controllers.

Several Micro850 and Micro870 controllers support basic positioning through embedded pulse train outputs (PTO). These controllers also allow you to configure up to six high-speed counters (HSC), and choose from nine HSC operation modes. HSC is supported on all Micro850 and Micro870 controller catalogs (except 2080-Lxxx-xxAWB). PTO is only supported on Micro850 and Micro870 controller catalog numbers that end in BB or VB.

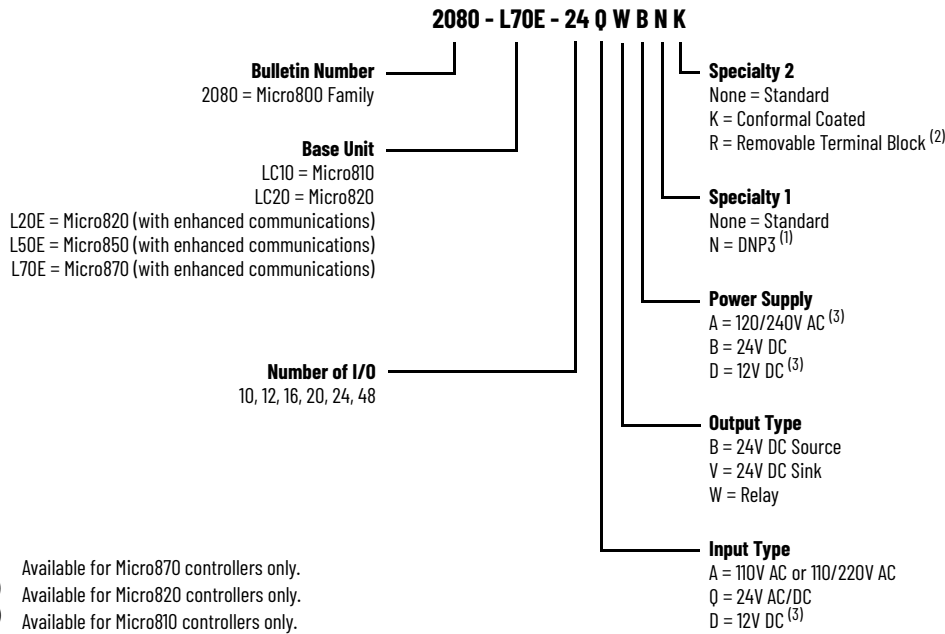
With firmware revision 21.011 or later, Micro850 (2080-L50E) and Micro870 (2080-L70E) controllers support Kinetix 5100 and PowerFlex 520-series drives that are connected using a Class 1 EtherNet/IP connection with predefined instructions and tags, and generic profile tags for all other EtherNet/IP devices.

Micro870 (2080-L70E) controllers with firmware revision 22.011 or later and Micro850 (2080-L50E) controllers with firmware revision 23.011 or later support the PCCC command format, which allows these controllers to communicate using the legacy commands in MicroLogix™ controllers.

With firmware revision 23.011 or later, Micro850 (2080-L50E) and Micro870 (2080-L70E) controllers support the Micro800 Remote LCD (2080-REMLCD) module for easier configuration of such settings as IP address and functions as a simple IP65 text display.

This technical data serves to help you identify the right controller, plug-ins, expansion I/O, and accessories, based on your requirements.

Micro800 Catalog Number Details



Micro800 Controller Comparison

Feature Comparison

Attribute	Micro810	Micro820	Micro850		Micro870
	12-point	20-point	24-point	48-point	24-point
Communication ports, embedded	USB 2.0 (with USB adapter)	USB 2.0 (USB-C, non-isolated) ⁽¹⁾ 10/100 Base-T Ethernet port (RJ45) RS-232/RS-485 non-isolated combo serial	USB 2.0 (USB-B, non-isolated) 10/100 Base-T Ethernet port (RJ45) RS-232/RS-485 non-isolated combo serial		
Embedded digital I/O points ⁽²⁾	12	19	24	48	24
Base analog I/O channels	Four 24V DC digital inputs are shared as 0...10V analog inputs (DC input models only)	One 0...10V analog output Four 24V DC digital inputs can be configured as 0...10V analog inputs (DC input models only) and via plug-in modules	Via expansion I/O and plug-in modules (see page 24 and 36)		
Number of plug-in modules	0	2	3	5	3
Maximum digital I/O ⁽³⁾	12	35	132	192	304
Expansion I/O supported	—	—	All expansion I/O modules (see page 24)		
Ethernet node supported ⁽⁴⁾	—	4	8		
Types of accessories or plug-ins supported	LCD display with backup memory module USB adapter	Most plug-in modules (see page 36 for selection and exceptions)			
Power supply	Embedded 120/240V AC and 12/24V DC options	Base unit has embedded 24V DC power supply, optional external 120/240V AC power supply available			

Feature Comparison (Continued)

Attribute	Micro810	Micro820	Micro850		Micro870
	12-point	20-point	24-point	48-point	24-point
Basic instruction speed	2.5 μ s per basic instruction	0.30 μ s per basic instruction			
Minimum scan/cycle time ⁽⁵⁾	<0.25 ms	<2 ms - 2080-L20E <4 ms - 2080-LC20	<0.25 ms		
Software	Connected Components Workbench™ ⁽⁶⁾				

(1) Available on 2080-L20E controllers only.

(2) See the individual Micro800 controller sections for more information.

(3) For Micro820 controllers, the number of maximum digital I/O assumes 8-point digital I/O plug-ins (for example, 2080-I040B4) are used on all available plug-in slots. For Micro850 and Micro870 controllers, the maximum number of digital I/O supported includes the base, plug-ins, and expansion I/O.

(4) Ethernet nodes are supported on Micro850 (2080-L50E) and Micro870 (2080-L70E) controllers from version 21 onwards.

Ethernet nodes are supported on Micro820 (2080-L20E) controllers from version 23 onwards.

(5) Includes reading and writing I/O, program execution, and communications overhead.

(6) 2080-L50E and 2080-L70E controllers are supported from Connected Components Workbench software version 20 onwards.

2080-L20E controllers are supported from Connected Components Workbench software version 23 onwards.

Micro800 Controllers Programming Comparison (with Connected Components Workbench software)

Attribute	Micro810 12-point	Micro820 20-point	Micro850 24-point	Micro850 48-point	Micro870 24-point
Program steps ⁽¹⁾	2 K	10 K	10 K	10 K	20 K
Data bytes	2 KB	20 KB	20 KB	20 KB	40 KB
IEC 61131-3 languages	Ladder diagram, function block diagram, structured text				
User-defined function blocks	Yes				
Floating point	32-bit and 64-bit				
PID Loop Control	Yes (number limited only by memory)				

(1) Estimated Program and Data size are "typical" – program steps and variables are created dynamically. 1 Program Step = 12 data bytes. The number of bytes per instruction can vary greatly from program to program and from programming language to programming language.

Micro800 Controllers Communication Options

Controller	USB Programming Port	Embedded Serial Port, Serial Port Plug-in				Embedded Ethernet		
		CIP Serial/DF1 ⁽¹⁾	Modbus RTU	ASCII/Binary	DNP3	EtherNet/IP	Modbus TCP	DNP3
Micro810	Yes (with adapter)	No						
Micro820	Yes (with 2080-REMLCD) Yes (embedded USB) ⁽²⁾	Yes	Master/Slave	Yes	No	Yes	Yes	No
Micro850	Yes	Yes ⁽³⁾	Master/Slave	Yes	No	Yes	Yes	No
Micro870	Yes	Yes ⁽³⁾	Master/Slave	Yes	Yes ⁽⁴⁾	Yes	Yes	Yes ⁽³⁾⁽⁴⁾

(1) 2080-LxxE controllers support CIP™ Serial/DF1 Full-Duplex, Half-Duplex, and Radio Modem. All other controllers (except Micro810) support CIP Serial/DF1 Full-Duplex only.

(2) Available on 2080-L20E controllers only.

(3) The 2080-L70E controller supports PCCC format in DF1 modes from Connected Components Workbench software version 22 onwards.

The 2080-L50E controller supports PCCC format in DF1 modes from Connected Components Workbench software version 23 onwards.

(4) Applies to 2080-L70E-xxxN controllers only.

Micro800 Controllers Analog I/O and TC/RTD Comparison

Attribute	Micro810	Micro820	Micro850 (with expansion I/O)	Micro870 (with expansion I/O)
Performance level	Low		High	
Isolation to controller (increased noise immunity)	None		Yes	
Resolution and nominal accuracy	Analog Input: 10-bit, 5% (2% with calibration)		Analog Input: 14-bit input, $\pm 0.1\%$ Analog Output: 12-bit output, 0.133%, current, 0.425% voltage TC: $\pm 0.5... \pm 3.0$ °C ($\pm 0.9... \pm 5.4$ °F) RTD: $\pm 0.2... \pm 0.6$ °C ($\pm 0.36... \pm 1.08$ °F)	
Input update rate and filtering	Update rate only dependent on program scan, limited filtering		8 ms all channels with or without 50/60 Hz filtering	
Recommended maximum shielded cable length ⁽¹⁾	10 m		100 m	

(1) These numbers are guidelines only. Maximum cable length is dependent on the application and other factors such as cable type, installation, required accuracy, sensor, and so on.

Embedded RTC

Attribute	Value
Resolution READ_RTC()	1 sec
Accuracy	±12 sec/month @ 25 °C (77 °F) ±160 sec/month @ 0...55 °C (32...131 °F)
Power off	Supercap — 5 days @ 40 °C (104 °F) or lower Supercap life — 5 years @ 40 °C (104 °F), 14.5 years @ 25 °C (77 °F)

Micro820 Controllers

As one of the smaller controllers in the Micro800 family, the Micro820 controller comes as a 20-point form factor, with seven catalogs available for selection. The Micro820 controller is designed for smaller standalone machines and remote automation projects.

Number and Types of Inputs/Outputs for Micro820 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⁾	REMLCD Support
	120V AC	120/240 V AC	24V DC/ V AC	12V DC	Relay	24V DC Source	24V DC Sink						
2080-LC20-20AWB	8	—	4	—	7	—	—	1	4	—	—	—	Y
2080-L20E-20AWB	8	—	4	—	7	—	—	1	4	—	—	4	Y
2080-LC20-20AWBR	8	—	4	—	7	—	—	1	4	—	—	—	Y
2080-L20E-20AWBR	8	—	4	—	7	—	—	1	4	—	—	4	Y
2080-LC20-20QWB	—	—	12	—	7	—	—	1	4	—	—	—	Y
2080-L20E-20QWB	—	—	12	—	7	—	—	1	4	—	—	4	Y
2080-LC20-20QWBR	—	—	12	—	7	—	—	1	4	—	—	—	Y
2080-L20E-20QWBR	—	—	12	—	7	—	—	1	4	—	—	4	Y
2080-LC20-20QBB	—	—	12	—	—	7	—	1	4	1(PWM)	—	—	Y
2080-L20E-20QBB	—	—	12	—	—	7	—	1	4	1(PWM)	—	4	Y
2080-LC20-20QBBK	—	—	12	—	—	7	—	1	4	1(PWM)	—	—	Y
2080-L20E-20QBBK	—	—	12	—	—	7	—	1	4	1(PWM)	—	4	Y
2080-LC20-20QBRR	—	—	12	—	—	7	—	1	4	1(PWM)	—	—	Y
2080-L20E-20QBRR	—	—	12	—	—	7	—	1	4	1(PWM)	—	4	Y

(1) Maximum number of embedded HSC supported.

(2) For Micro820 (2080-L20E) controllers with firmware revision 23.011 or later.

General Specifications – Micro820 Controllers

Attribute	2080-LC20-20AWB, 2080-L20E-20AWB, 2080-LC20-20AWBR, 2080-L20E-20AWBR	2080-LC20-20QWB, 2080-L20E-20QWB, 2080-LC20-20QWBR, 2080-L20E-20QWBR	2080-LC20-20QBB, 2080-L20E-20QBB, 2080-LC20-20QBBK, 2080-L20E-20QBBK 2080-LC20-20QBRR, 2080-L20E-20QBRR
Number of I/O	20 (12 inputs, 8 outputs)		
Dimension (HxWxD)	90 x 104 x 75 mm (3.54 x 4.09 x 2.95 in.)		
Shipping weight, approx.	0.38 kg (0.83 lb)		

General Specifications - Micro820 Controllers (Continued)

Attribute	2080-LC20-20AWB, 2080-L20E-20AWB, 2080-LC20-20AWBR, 2080-L20E-20AWBR		2080-LC20-20QWB, 2080-L20E-20QWB, 2080-LC20-20QWBR, 2080-L20E-20QWBR		2080-LC20-20QBB, 2080-L20E-20QBB, 2080-LC20-20QBBK, 2080-L20E-20QBBK 2080-LC20-20QBBR, 2080-L20E-20QBBR	
Wire size	For Fixed Terminal Blocks:					
	Wire Type	Min	Max	Description		
	Solid	0.14 mm ² (26 AWG)	2.5 mm ² (14 AWG)	Rated @ 90 °C (194 °F) insulation max		
	Stranded	0.14 mm ² (26 AWG)	1.5 mm ² (16 AWG)			
	For Removable Terminal Blocks:					
	Wire Type	Min	Max	Description		
	Solid and Stranded	0.2 mm ² (24 AWG)	2.5 mm ² (14 AWG)	Rated @ 90 °C (194 °F) insulation max		
	For RS-232/RS-485 Serial Port:					
	Wire Type	Min	Max	Description		
	Solid	0.14 mm ² (26 AWG)	1.5 mm ² (16 AWG)	Rated @ 90 °C (194 °F) insulation max		
Stranded	0.14 mm ² (26 AWG)	1.0 mm ² (18 AWG)				
Wiring category ⁽¹⁾	2 – on signal ports 2 – on power ports 2 – on communication ports					
Wire type	Use copper conductors or shielded cables					
Terminal screw torque	For removable and fixed terminal blocks: 0.5...0.6 N•m (4.4...5.3 lb•in) using a 0.6 x 3.5 mm screwdriver Note: Use a handheld screwdriver to hold down the screws at the side. For RS-232/RS-485 serial port: 0.22...0.25 N•m (1.95...2.21 lb•in) using 0.4 x 2.5 x 80 mm 2-component grip with non-slip grip screwdriver.					
Input circuit type	120V AC – for inputs 4...11 only		24V DC sink/source (standard)			
Output circuit type	Relay			24V DC source (standard and high-speed)		
Power input	24V DC					
Power consumption, max	5.62 W – Without plug-in modules 8.5 W – With plug-in modules					
Power dissipation, max	6 W					
Power supply voltage range	20.4...26.4 V DC, Class 2					
Auxiliary power supply output for thermistor	10V					
I/O rating, input	120V AC 16 mA		24V DC, 8.8 mA			
I/O rating, output	2 A, 240V AC 1 A, 24V DC			24V DC, 1 A per point (Surrounding air temperature 30 °C (86 °F)) 24V DC, 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. 150V (continuous), Reinforced Insulation Type, Input to Aux and Network. Type tested for 60 s @ 3250V DC Output to Aux and Network, Inputs to Outputs. Type tested for 60 s @ 1950V DC Input to Aux and Network.		250V (continuous), Reinforced Insulation Type, 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, 3250V DC Outputs to Aux and Network, Inputs to Outputs.		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.	
Pilot duty rating	C300, R150			—		
Insulation-stripping length	7 mm for removable and fixed terminal blocks 5 mm for RS-232/RS-485 serial port					
Enclosure type rating	None (open-style)					
North American temp code	T4					

(1) Use this Conductor Category information for planning conductor routing. See Industrial Automation Wiring and Grounding Guidelines, publication [1770-4.1](#).

Analog Input Specifications – I-00...I-03

Attribute	Value
Number of inputs	4
Type	Voltage (single-ended)
Data range	0...4095
Input voltage range	0...10V DC
Maximum input	26.4V DC
Input impedance	14.14 k Ω
Resolution	12-bit, 2.44 mV/count
Smoothing	None
Input time constant, typical	1.44 ms
Input filter	2.3 kHz
Isolation	None
Accuracy (25...55 °C) [77...131 °F]	5% of full-scale (2% with calibration)

AC Input Specifications – I-04...I-11 for AWB, AWBR

Attribute	Value
Number of inputs	8
On-state voltage, min	79V AC
On-state voltage, nom	120V AC
On-state voltage, max	125V AC
On-state current, min	5 mA
On-state current, max	16 mA
Input frequency, min	47 Hz
Input frequency, nom	50/60 Hz
Input frequency, max	63 Hz
Off-state voltage, max	20V AC
Off-state current, max	2.5 mA
Inrush current, max	250 mA @ 125V AC
Inrush delay time constant, max	22 ms

Analog Output Specifications

Attribute	Value
Output count range	0...4008
Output type	Voltage
Output voltage range	0...10V
Voltage output maximum load, resistive	>1000 Ω
Accuracy	2% of full-scale for voltage
Resolution	12-bit, 2.495 mV/count
Output update rate (with no output capacitance), max	20 ms
Channel-to-bus isolation	None
Channel-to-channel isolation	None

DC Input Filter Specifications – I-04...I-11 for QWB, QWBR, QBB, QBBK, QBBR

Nominal Filter Setting (ms) Inputs 4 and Higher	Minimum ON Delay (ms)	Maximum ON Delay (ms)	Minimum OFF Delay (ms)	Maximum OFF Delay (ms)
0	0	0.1	0	0.1
8	5	8	5	8
16	10	16	10	16
32	20	32	20	32

DC Input Specifications

Attribute	Non-isolated, Shared with Analog Input (Inputs 00...03)	Isolated (Inputs 04...11) 2080-LC20-20QWB, 2080-L20E-20QWB, 2080-LC20-20QWBR, 2080-L20E-20QWBR, 2080-LC20-20QBB, 2080-L20E-20QBB, 2080-LC20-20QBBK, 2080-L20E-20QBBK, 2080-LC20-20QBBR, 2080-L20E-20QBBR Only
Voltage category	24V DC sink	24V DC sink/source
On-state voltage, nom	12/24V DC	24V DC
On-state voltage range	9.8...26.4V DC	10...26.4V DC @ 65 °C (149 °F) 10...30V DC @ 30 °C (86 °F)
Off-state voltage, max	5V DC	
Off-state current, max	0.5 mA	1.5 mA
On-state current, min	0.75 mA @ 10.8V DC 1.0 mA @ 15V DC	1.8 mA @ 10.8V DC 2.7 mA @ 15V DC
On-state current, nom	2.1 mA @ 24V DC	8.5 mA @ 24V DC
On-state current, max	2.6 mA @ 26.4V	12.0 mA @ 30V DC
Nominal impedance	14.1 k Ω (non-isolated)	3.74 k Ω (isolated)
IEC input compatibility	Type 1	Type 3

DC Output Specifications – QBB, QBBK, QBBR

Attribute	Standard Outputs (0-00...0-05)	High-speed Output (0-06) ⁽¹⁾
User supply voltage, min	10V DC	
User supply voltage, max	26.4V DC	
Load current, min	10 mA	
On-state voltage drop	1V @ max load current 2.5V @ max surge current	1.5V @ max load current
Current ratings per point	0.3 A @ 65 °C (149 °F), max 1.0 A @ 30 °C (86 °F), max 1.0 mA, max leakage	100 mA (high-speed operation) 1.0 A @ 30 °C (86 °F) 0.3 A @ 65 °C (149 °F) (standard operation) 1.0 mA, max leakage
Surge current per point Peak current Surge duration, max Rate of repetition @ 30 °C (86 °F), max Rate of repetition @ 65 °C (149 °F), max	4.0 A 10 ms once each second once every two seconds	
Controller current, max	3 A	—
Turn-on time, max	0.1 ms	0.2 μ s
Turn-off time, max	1.0 ms	2.5 μ s
Response time, max	10 ms	
Frequency rate	—	2%

(1) High-speed output operation is greater than 5 kHz.

Relay Output Specifications – 0-00...0-06 for QWB, QWBR, AWB, AWBR

Attribute	Value
Voltage, min	5V AC/DC
Voltage, max	250V AC
Turn-on time	10 ms
Turn-off time	10 ms
Life	10,000,000 cycles (mechanical) 100,000 cycles (electrical with UL test load)

Relay Contacts Ratings - Micro820 Controllers

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

Auxiliary Power Supply for Thermistor Applications

Attribute	Value
Output voltage, min	9.5V
Output voltage, typical	10.04V
Output voltage, max	10.5V
Output current, typical	10 mA
Output current, max	20 mA

Embedded RTC

Attribute	Value
Resolution	1 sec
Accuracy, typical	±60 sec/month @ 25 °C (77 °F)
Power off	Supercap - 4 days @ 25 °C (77 °F) Supercap life, typical - 5 years @ 40 °C (104 °F), 14.5 years @ 25 °C (77 °F)

Micro850 Controllers

Micro850 controllers are suitable for applications that require more digital and analog I/O or higher performance analog I/O. These controllers can support up to four expansion I/O and come in 24-point and 48-point form factors with an embedded Ethernet port.

Number and Types of Inputs/Outputs for Micro850 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⁾	REMLCD Support ⁽³⁾
	120V AC	120/240 V AC	24V DC/ V AC	12V DC	Relay	24V DC Source	24V DC Sink						
2080-L50E-24AWB	14	—	—	—	10	—	—	—	—	—	—	8	Y
2080-L50E-24QWB	—	—	14	—	10	—	—	—	—	—	4	8	Y
2080-L50E-24QVB	—	—	14	—	—	—	10	—	—	2 (PTO/PWM)	4	8	Y
2080-L50E-24QBB	—	—	14	—	—	10	—	—	—	2 (PTO/PWM)	4	8	Y
2080-L50E-48AWB	28	—	—	—	20	—	—	—	—	—	—	8	Y
2080-L50E-48QWB	—	—	28	—	20	—	—	—	—	—	6	8	Y
2080-L50E-48QWBK	—	—	28	—	20	—	—	—	—	—	6	8	Y
2080-L50E-48QVB	—	—	28	—	—	—	20	—	—	3 (PTO/PWM)	6	8	Y
2080-L50E-48QBB	—	—	28	—	—	20	—	—	—	3 (PTO/PWM)	6	8	Y

(1) Maximum number of embedded HSC supported

(2) For Micro850 (2080-L50E) controllers with firmware revision 21.011 or later

(3) 2080-REMLCD is supported on Micro850 (2080-L50E) controllers with firmware revision 23.011 or later.

General Specifications - Micro850 24-point Controllers

Attribute	2080-L50E-24AWB	2080-L50E-24QWB	2080-L50E-24QVB	2080-L50E-24QBB
Number of I/O	24 (14 inputs, 10 outputs)			
Dimensions (HxWxD)	90 x 158 x 80 mm (3.54 x 6.22 x 3.15 in.)			
Shipping weight, approx.	0.423 kg (0.933 lb)			
Wire size	Wire Type	Min	Max	Description
	Solid and Stranded	0.14 mm ² (26 AWG)	2.5 mm ² (14 AWG)	Rated @ 90 °C (194 °F) insulation max