Micro830 16-Point Controllers

General – 2080-LC30-16AWB, 2080-LC30-16QWB, 2080-LC30-16QVB

Attribute	2080-LC30-16AWB	2080-LC30-16QWB	2080-LC30-16QVB
Number of I/O	16 (10 inputs, 6 outputs)		
Dimensions HxWxD	90 x 100 x 80 mm (3.54 x 3.94 x 3.15 in.)		
Shipping weight, approx.	0.302 kg (0.666 lb)		
Wire size	0.14…2.5 mm^2 (26…14 AWG) solid copper wire or 0.14…1.5 mm^2 (26…14 AWG) stranded copper wire rated @ 90 °C (194 °F) insulation max		
Wiring category(1)	2 – on signal ports 2 – on power ports		
Wire type	Use Copper Conductors only		
Terminal screw torque	0.6 Nm (4.4 lb-in.) max (using a 2.5 mm (0.10 in.) flat-blade screwdriver)		
Input circuit type	120V AC	12/24V sink/source (standard) 24V sink/source (high-speed)	
Output circuit type	Relay		12/24V DC sink transistor (standard and high-speed)
Event input interrupt support	Yes		
Power consumption	7.88 W		
Power supply voltage range	20.4…26.4V DC Class 2		
I/O rating	Input 120V AC, 16 mA Output 2 A, 240V AC, general use	Input 24V DC, 8.8 mA Output 2 A, 240V AC, general use	Input 24V DC, 8.8 mA Output 24V DC, 1 A per point (Surrounding air temperature 30 °C) 24V DC, 0.3 A per point (Surrounding air temperature 65 °C)
Isolation voltage	250V (continuous), Reinforced Insulation Type, Outputs to Aux and Network, Inputs to Outputs 2080-LC30-16AWB: Type tested for 60 s @ 3250V DC I/O to Aux and Network, Inputs to Outputs 2080-LC30-16QWB: 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 60s @ 720 V DC, I/O to Aux and Network, Inputs to Outputs
Pilot duty rating	C300, R150		–
Insulation stripping length	7 mm (0.28 in.)		
Enclosure type rating	Meets IP20		
North American temp code	T4		

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

Inputs

Attribute	120V AC Input (2080-LC30-16AWB only)	High-Speed DC Input (2080-LC30-16QVB and 2080-LC30-16QWB only) (Inputs 0…3)	Standard DC Input (2080-LC30-16QVB and 2080-LC30-16QWB only) (Inputs 4…9)
Number of Inputs	10	4	6
Input group to backplane isolation	Verified by the following dielectric tests: 1,400V AC for 2 s 132V working voltage (IEC Class 2 reinforced insulation)	Verified by the following dielectric tests: 1,414V DC for 2 s 75V DC working voltage (IEC Class 2 reinforced insulation)	
Voltage category	110V AC	24V DC sink/source	
On-state voltage range	79…132V AC 47…63 Hz	16.8…26.4V DC	10…26.4V DC
Off-state voltage, max	20V AC	5V DC	
Off-state current, max	1.5 mA		
On-state current, min	5 mA @ 79V AC	5.0 mA @ 16.8V DC	1.8 mA @ 10V DC
On-state current, nom	12 mA @ 120V AC	7.66 mA @ 24V	6.15 mA @ 24V
On-state current, max	16 mA @ 132V AC	12.0 mA @ 30V DC	
Nominal impedance	12 kΩ @ 50 Hz 10 kΩ @ 60 Hz	3 kΩ	3.74 kΩ
Inrush current, max	250 mA @ 120V AC	—	
Turn on time/ Turn off time, max (without filtering)	ON: 1 ms OFF: 8 ms	ON: 3.2 µs OFF: 0.6 µs	ON: 33 µs…0.1 ms OFF: 22 µs…0.02 ms
IEC input compatibility	Type 3		
AC input filter setting	8 ms for all embedded inputs (In Connected Components Workbench, go to the Embedded I/O configuration window to reconfigure the filter setting for each input group)		

Isolated AC Inputs (2080-LC30-16QWB, 2080-LC30-16QVB) (Inputs 0…3)

Attribute	Value
On-state voltage, nom	12/24V AC @ 50/60 Hz
Off-state voltage, min	4V AC @ 50/60 Hz
Operating frequency, nom	50/60 Hz

Outputs

Attribute	Relay Output (2080-LC30-16AWB, 2080-LC30-16QWB only)	Hi-Speed Output (2080-LC30-16QVB only) (Outputs 0…1)	Standard Output (2080-LC30-16QVB only) (Outputs 2…5)
Number of outputs	6	2	4
Output voltage, min	5V DC, 5V AC	10.8V DC	10V DC
Output voltage, max	125V DC, 265V AC	26.4V DC	26.4V DC
Load current, min	10 mA	10 mA	10 mA

Outputs

Attribute	Relay Output (2080-LC30-16AWB, 2080-LC30-16QWB only)	Hi-Speed Output (2080-LC30-16QVB only) (Outputs 0…1)	Standard Output (2080-LC30-16QVB only) (Outputs 2…5)
Load current, max	2.0 A	100 mA (high-speed operation) 1.0 A @ 30 °C 0.3 A @ 65 °C (standard operation)	1.0 A @ 30 °C 0.3 A @ 65 °C (standard operation)
Surge current, per point	Refer to Relay Contacts Ratings on page 173	4.0 A every 1 s @ 30 °C; every 2 s @ 65 °C(1)	
Current, per common, max	5 A	—	—
Turn on time/ Turn off time, max	10 ms	2.5 µs	ON: 0.1 ms OFF: 1 ms

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

Relay Contacts Ratings

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				

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, non-operating	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% non-condensing
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): DIN mount: 25 g PANEL mount: 45 g
Emissions	CISPR 11 Group 1, Class A