Micro830® Programmable Logic Controller

Bulletin 2080 Product Profile

Features and Benefits

- Different controller types sharing same form factor and accessories
  - Form factor based on number of I/O points embedded in the base: 10, 16, 24, or 48
- Controllers support:
  - As many as six High-Speed Counter inputs (HSC)
  - High speed input interrupts
  - Embedded USB port for programming and serial port (RS232/485)
  - Modbus RTU protocol (serial port)
  - Plug-in slots to customize according to needs
  - Up to 88 digital I/O points in total with plug-ins on 48-pt controller
- Embedded motion capabilities with up to 3 axes of motion on Transistor Output models provide
  - Up to three 100KHz Pulse Train Outputs (PTO)
  - Single axis moves supported via Motion Function Blocks
  - Motion instructions
  - TouchProbe instruction for registering position of an axis, more precise than using interrupts
- Standard version of Connected Components Workbench software available as a free download
- Wide range of plug-in modules allow you to change the personality of the base unit controller, up to 5 plug-ins for 48pt controller

Flexible Micro PLC with built-in motion

- *Up to three 100KHz PTO for low cost wiring to steppers and servo drives*
- *Motion made easy through Home, MoveVelocity, Move position instructions and graphical configuration of motion parameters*

Machine builders and end users who need a cost-effective control solution for their small applications will benefit from the family of Allen-Bradley® Micro800® programmable controllers and Connected Components Workbench™ software from Rockwell Automation.

The Micro830® controller allows easy incorporation of as many as five plug-in modules. The plug-in modules enable machine builders to personalize the controllers to increase functionality without expanding the product footprint. The new controller family also offers removable terminal blocks (most models) and communication via serial port. Transistor Output models have been enhanced with embedded motion capabilities with up to 3 axes of motion, allowing these controllers to support a wider range of applications.

Connected Components Workbench software is used among the entire Micro800 family of controllers, as well as other component products, such as PanelView Component HMIs and PowerFlex drives. Based on proven Rockwell Automation and Microsoft Visual Studio technology, the new software provides controller programming, device configuration and data sharing with the HMI editor for PanelView Component operator products. In addition, the software supports three standard IEC programming languages: ladder diagram, function block diagram and structured text.

For enhanced security, controller password protection is supported for all Micro800 controllers.

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Bulletin 2080

Catalog Number	Inputs		Outputs			Motion Axis#	HSC*
	110V AC	24V DC/ V AC	Relay	24V Sink	24V Source		
2080-LC30-10QWB	–	6	4	–	–	–	2 HSC
2080-LC30-10QVB	–	6	–	4	–	1 PTO	2 HSC
2080-LC30-16AWB	10	–	6	–	–	–	–
2080-LC30-16QWB	–	10	6	–	–	–	2 HSC
2080-LC30-16QVB	–	10	–	6	–	1 PTO	2 HSC
2080-LC30-24QBB	–	14	–	–	10	2 PTO	4 HSC
2080-LC30-24QVB	–	14	–	10	–	2 PTO	4 HSC
2080-LC30-24QWB	–	14	10	–	–	–	4 HSC
2080-LC30-48AWB	28	–	20	–	–	–	–
2080-LC30-48QBB	–	28	–	–	20	3 PTO	6 HSC
2080-LC30-48QVB	–	28	–	20	–	3 PTO	6 HSC
2080-LC30-48QWB	–	28	20	–	–	–	6 HSC

Micro830	10pt	16pt	24pt	48pt
Base Unit				
Power Supply	Base Unit has embedded 24V DC Power Supply. Optional External 120/240V AC via Cat. No. 2080-PS120-240VAC			
Base Programming Port	Embedded USB 2.0 (non-isolated) Any standard USB printer cable will work			
Base Serial Port	RS-232/485 non-isolated			
Base EtherNet/IP port	None			
Plug-In Slots	2	2	3	5
Base 100 KHz HSC max	2 HSC		4 HSC	6 HSC
I/O				
Digital I/O (In/Out)	10 (6/4)	16 (10/6)	24 (14/10)	48 (28/20)
Analog I/O channels	Via Plug-In Modules			
Maximum Digital I/O	26	32	48	88
Programming				
Software	Connected Components Workbench			
Program Steps (or instructions)	4 Ksteps		10 Ksteps	
Data (bytes)	8 Kbytes		20 Kbytes	
IEC 61131-3 Languages	Ladder Diagram, Function Block, Structured Text			
User Defined Function Blocks	Yes			
Motion Instructions	Yes			
Floating Point Math	32-bit and 64-bit			
PID Loop Control	Yes			
Embedded Serial Port Protocols	Modbus RTU Master/Slave, ASCII, CIP			
Environments				
Certifications	c-UL-us CL1DIV2, CE, C-Tick, KC			
Temperature Range	-20°…65 °C			
Dimensions (HxWxD, mm)	90x100x80	90x100x80	90x145x80	90x230x80

Catalog Number	Plug-in Modules
2080-IQ4	4-pt Digital Input, 12/24VDC, Sink/Source, Type3
2080-OB4	4-pt Digital Output, 12/24VDC, Source
2080-OV4	4-pt Digital Output, 12/24VDC, Sink
2080-OW4I	4-pt Relay Output, Individually Isolated, 2A
2080-IQ4OB4	8-pt Combo: 4-pt Digital Input, 12/24VDC, Sink/Source, Type3, and 4-pt Digital Output, 12/24VDC, Source
2080-IQ4OV4	8-pt Combo: 4-pt Digital Input, 12/24VDC, Sink/Source, Type3, and 4-pt Digital Output, 12/24VDC, Sink
2080-IF2, 2080-IF4	2/4-ch Analog Input, 0-20 mA, 0-10V, non-isolated 12-bit
2080-OF2	2-ch Analog Output 0-20 mA, 0-10V, non-isolated 12-bit
2080-SERIALISOL	RS232/485 isolated serial port
2080-TRIMPOT6	6-ch Trimpot Analog Input
2080-RTD2	2-ch RTD, non-isolated, ±1.0 °C
2080-TC2	2-ch TC, non-isolated, ±1.0 °C
2080-MEMBAK-RTC	Memory Backup and High Accuracy RTC
2080-MOT-HSC	High Speed Counter, 250 KHz, Differential Line Receiver, 1 Digital Output
2080-DNET20	DeviceNet Scanner, 20 Nodes
Catalog Number	**Accessories**
2080-PS120-240VAC	External 120/240V AC power supply

Each Pulse Train Output Axis is shared with 2 HSC inputs so if max number of PTO is configured then number of HSC is zero

* 2-wire High Speed Counter shown, divide by 2 to get number of 4-wire HSCs

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