SAMBA™

Features:

HMI

- Size: 3.5", 4.3", 7"
- High quality color touchscreen
- Multi-language display
- Built-in Alarm Screens

PLC

- I/O options include digital, analog, and high speed
- Auto-tune PID, up to 2 independent loops
- Recipe programs and data logging via data tables
- Function Blocks

Communication

Built-in ports

- 1 Mini USB for programming for 4.3" & 7"models, 1 RS232 for 3.5" model

Add-on ports

- 1 Serial/Ethernet
- 1 CANbus

Protocols

- MODBUS TCP
- SNMP V1
- CANopen, UniCAN, CANlayer2
- BACnet, KNX and M-Bus via gateway
- FB Protocol: for any 3rd party protocol

Advanced Communications

- E-mail & SMS
- 3G Modem support
- Remote access utilities

Full-function PLC with built-in, full-color touch screen and built-in I/O configuration.
Great look, incredible price.

SAMBA 3.5"

SAMBA 4.3"

SAMBA 7"

	SAMBA		
Part Number	According to model (See Built-in I/O configurations table below)		
I/O Options			
Total supported I/Os	22		
Built-in	According to model (See Built-in I/Os table below)		
I/O Expansion	-		
Remote I/O Expansion	Use EX-RC1 adapters to further extend the number of I/Os[1]		
COM Modules	Fit up to 1 CANbus, 1 RS232/RS485[2] or 1 Ethernet		
Program			
Application Memory	Application Logic: 80KB • Images: 1.5 MB • Fonts: 320 KB	Application Logic: 192KB • Images: 3 MB • Fonts: 320 KB	Application Logic: 192KB • Images: 8 MB • Fonts: 512 KB
Scan Time	15µS per 1K of typical application		
Memory Operands	512 coils, 256 registers, 32 long integers (32-bit), 32 double words (32-bit unsigned), 24 floats, 32 timers (32-bit), 16 counters. Additional non-retainable operands: 64 X-bits, 32 X-integers, 16 X-long integers, 16 X-double words (32-bits unsigned)		
HMI Panel			
Color Touchscreen	Resistive, Analog		
Viewing Area Width x Height (mm)	72 x 54.5	96.7 x 55.5	153.7 x 86.7
Cut Out Width x Height (mm)	92 X 92	122.5 X 91.5	193 X 125
Resolution	320 X 240 (QVGA)	480 X 272	800 x 480 (WVGA)
Keys	Displays virtual keyboard when the application requires data entry		
Environment			
Protection	IP66 / NEMA4X when panel mounted		
Operating Temperature	32°F to 122°F (0 to 50°C)		
Standards	UKCA, UL, CE, EAC, UL Hazardous Locations, Class I, Division 2[2]		
General			
Battery	7 years typical at 77°F (25°C), battery back-up for RTC and system data, including variable data		
Clock	Real-time clock functions (date and time)		

[1] EX-RC1: via CANbus. Integrate standard Unitronics I/O modules at distances of up to 1000m. Refer to website for more information.
[2] For a list of relevant models, contact Unitronics.

Samba™ models - Built-in I/O configurations

		Inputs[1]				Outputs				Operating Voltage
Part Number	Summary	Digital[2]	HSC/Shaft-encoder[2]	Analog	Temperature Measurement	Transistor[3]	PWM/HSO[3]	Relay	Analog	
SM35-J-R20 SM43-J-R20 SM70-J-R20	**10** Digital, **2** D/A Inputs[4], **8** Relay Outputs	**12**	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	—	—	**8**	—	24VDC
SM35-J-T20 SM43-J-T20 SM70-J-T20	**10** Digital, **2** D/A Inputs, **8** Transistor Outputs	**12**	**3** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 10-bit	—	**8** pnp	**7** 0.5kHz	—	—	24VDC
SM35-J-RA22 SM43-J-RA22 SM70-J-RA22	**12** Digital, **1** HSC/Shaft-encoder, **2** AI , **2** PT100/TC, **8** Relay, **2** AO	**12**	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 12/14-bit	**2** PT100/TC	—	—	**8**	2 0-10V, 4-20mA, 12-bit	24VDC
SM35-J-TA22 SM43-J-TA22 SM70-J-TA22	**12** Digital, **1** HSC/Shaft-encoder, **2** AI, **2** PT100/TC, **8** Transistor, **2** AO	**12**	**1** 30kHz, 32-bit	**2** 0-10V, 0-20mA, 4-20mA 12/14-bit	**2** PT100/TC	**8** pnp	**5** 0.5kHz	—	0-10V, 4-20mA, 12-bit[2]	24VDC

[1] In some models certain inputs are adaptable via wiring and software settings, and can function as digital or analog.
Adapting requires input pins. This reduces the number of digital inputs.
Pin requirements: Each analog input requires 1 pin.
Example: SM35-J-R20 offers 12 digital inputs. Implementing 2 analog inputs requires 2 pins, leaving 10 pins free.

[2] The total number of digital inputs listed includes high-speed and adaptable inputs.

[3] The total number of digital outputs listed includes high-speed outputs.

[4] When selecting NPN for the digital inputs, the 2 Analog inputs cannot be used.