

353 Process Automation Controller

The Model 353 Process Automation Controller (PAC) is designed for a broad range of process applications. It can serve as an advanced single-loop controller or as a multi-loop controller with complete control functions, including indication, control, logic, or sequencing for a small unit process.

The 353 controller's Ethernet and MODBUS communications enable it to function as an integral element in a plant system. Ethernet (MODBUS TCP/IP protocol) supports peer-to-peer communication. The front configuration port allows connection to a PC for configuration.

The 353 Basic unit provides sufficient analog I/O to support dual loop or cascade control applications. It also supports digital inputs and outputs. The 353 Expanded unit provides complementary I/O for thermocouple, RTD, pulse, and frequency inputs and relay outputs.

The design includes the Modbus RS-485 and Modbus Ethernet communications as standard. Ethernet I/O modules extend the controller I/O density and that allows the user to take advantage of the controller's powerful and versatile control capability.

The Model 353 controller supports function block programming language. It has an extensive library of function blocks for analog process control, Boolean logic, and specialty applications. The controller can be configured either through faceplate or with the iConfig Graphical Configuration software. Loop data is mapped to the Modbus communication registers in accordance with the configured loop application.



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Specifications

Electrical and Environmental

Power Supply

Standard: 120/240 Vac (85 to 264 Vac);
47 to 63 Hz
Optional: 24 Vdc, +20%, -15%

Power Requirements

25 Watts, 40 VA (max.)

2-Wire Transmitter Power

Voltage: 25 Vdc \pm 3V
Current: 120 mA, short circuit protected

Inputs

Analog Inputs (non-isolated)

1-5 Vdc, 4-20 mA with included 250 resistor

Digital Inputs (isolated)

0-1 Vdc OFF, 15-30 Vdc ON

Analog Input, Universal (isolated)

Thermocouple, RTD, Ohms, Slidewire, Millivolt

Digital/Frequency Input, Universal (isolated)

Frequency Range: 0 to 25,000 Hz
Minimum Operating Frequency: 0.05 Hz
ON Voltage: 4-30 Vdc
OFF Voltage: 0-1 Vdc
Input Current: <5 mA @ 30 Vdc

Outputs

Analog Outputs (non-isolated)

4-20 mA into 800 ohms (max.)

Digital Outputs (non-isolated)

Open Collector Transistor
(emitter@station common)
Load Voltage: 30 Vdc (max.)
Load Current: 100 mA (max.)

Relay Outputs (SPDT)

Contact Rating: 5A @ 120 Vac,
2.5 A @ 230 Vac, Resistive Load

	PAC 353 Design B	PAC 353 Design B with Expanded I/O
Analog Input	3	4
Universal Analog Input	0	2
Analog Output	2	3
Discrete Input	3	4
Universal Discrete Input	0	2
Discrete Output	2	2
Relay Output	0	2
Configuration Port	Standard	Standard
MODBUS Interface	Standard	Standard
Ethernet Interface	Standard	Standard
Real-time Clock	Standard	Standard
Removable Configuration Media	Standard	Standard

Siemens Industry, Inc.
3333 Old Milton Parkway
Alpharetta, GA 30005
1-800-964-4114

info.us@siemens.com

www.usa.siemens.com/ia

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