

# 353 Process Automation Controller



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 latest 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.

# process INSTRUMENTATION

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.

**SIEMENS**

## 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 (maximum)

#### 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 (maximum)

#### Digital Outputs (non-isolated)

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

#### Relay Outputs (SPDT)

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

## PAC 353 Features

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

\*NOTE: Design B released January 2008