

spirax/sarco

SX27 Process Controller

Description

The SX27 is a simple, effective single loop process controller suitable for basic, single set-point applications. It is a universal input controller with 4-20mA analogue and valve motor drive (VMD) outputs. The SX27 is intended for use with our range of control valves, actuators, positioners and sensors.

Features

Auto-tuning set-up

The controller can automatically select the 'step response' or 'natural frequency' method depending on the process variable's deviation from the set-point.

Continuous adaptive tuning

The controller's self-learning, non-intrusive logic constantly monitors the process and adjusts the PID parameters for optimum performance.

Two output types

The SX27 can be configured with a 4-20mA analogue or valve motor drive output (VMD).

Transmitter power supply

For transmitters requiring 24Vdc, power can be supplied by the controller.

Alarms

There are two programmable relay outputs for deviation, band and process alarms with latch and block features. Two of these alarms are used for VMD output if this control method is used.

Configuration software and memory chip

A software tool is available to assist in the configuration and parameterization. All the data can be saved to a file and stored on a PC. An optional portable memory chip enables a preset configuration to be downloaded to the controller or backed up from the controller.

Approvals

These units are UL and cUL listed and are CE marked.



SX27 general technical data

Mounting arrangement		Panel mounted 1/16 DIN
Power supply		100 to 240 Vac, 50/ 60 Hz -15 to +10% (250V max.)
Electrical connections		Screw connection terminal block
Power consumption		1.6 VA maximum
Front Protection		IP65 (EN60529)
Operating temperature		0 to +50°C, 5 to 90% RH
Universal inputs	RTD	Pt100 2 or 3 wire connection
	Linear mA	4 - 20 mA, 0 - 20 mA, using external shunt resistor 2.5Ω, Ri10 MΩ
	Voltage	0/ 10 to 50 mV, Ri 10 MΩ
	Thermocouples	L, J, T, K, S, custom
Sampling time		500 ms
Accuracy	RTD Pt100 / thermocouples	0.25% ±1 digit @ 25°C ambient
	Linear mA	1.25% ±1 digit @ 25°C ambient
	Linear voltage	0.10% ±1 digit @ 25°C ambient
Number of set points		1

SX27 analogue output technical data

mA control output (OP4)	0/4 - 20 mA 750Ω maximum	
	(15 V maximum)	
	Resolution 12 bit (0.025%)	
	Accuracy 0.1%	
*Relay (OP1)	SPST relay N.O. 2 A/250 Vac	
*Relayor SSR (OP2)	SPST relay N.O. 2 A/250 Vac or SSR 5 V ±10%, 30 mA maximum	
*Relay (OP3)	SPST relay N.O. 2 A/250 Vac	
Auxiliary power supply	Supply for a two wire 4 - 20 mA or three wire, +18 V ±20%, 30 mA maximum for transmitters	

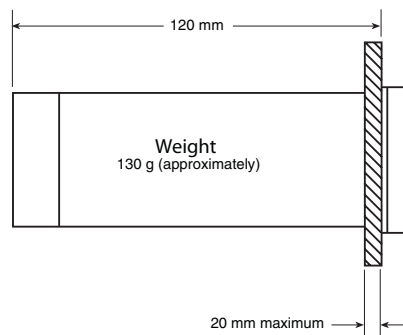
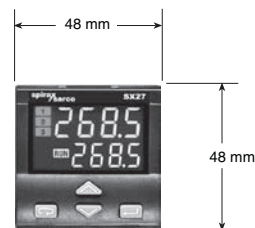
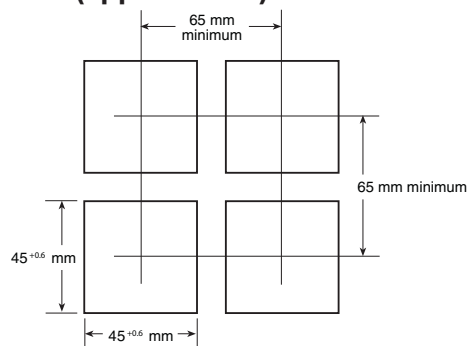
*Only two of the outputs can be used from relays OP1, OP2 or OP3.

SX27 VMD technical data

VMD (OP1, OP3)	2 x SPST relay N.O. 2 A/ 250 Vac	
	Valve travel time: 15 - 600 seconds	
	Valve minimum step: 0.1 to 5.0% of travel	
RelayorSSR (OP2)	SPST relay N.O. 2A/ 250 Vac or SSR 5V ±10%, 30 mA maximum	

Control action

Control parameters	Proportional band	0.5 to 999.9%
	Integral time	0.1 to 100.0 minutes or off
	Derivative time	0.01 to 10.00 minutes or off
	Error band	0.1 to 10%

**Dimensions and Weight
(approximate) in millimetres and grammes****Panel cut-out
(approximate) in mm****Wiring Diagram**