Submittal Data

TCS Basys Controls

SZ1143b

General Purpose Controller

SUPERTROL™
Communicating Controls

Description

The SZ1143b is a microprocessor-based general purpose controller designed for use in a wide variety of applications: general control, remote setpoint control, general input reset ratio control and differential input (i.e. temperature, pressure, humidity, etc.) control.

The SZ1143b features:

- Stand-alone or network operation
- Two 4 to 20 mA analog inputs suitable for a broad variety of transducers
- Two digital inputs for switches, alarms, clocks, etc.
- One 4-20 mA modulating output
- Two relay outputs
- One relay output configurable to work with analog input one or two
- Adjustable P+I+D control on modulating output
- Adjustable offsets and differentials on relay outputs
- Application sequences include:
  - Humidification
  - Dehumidification
  - Dew Point Control
  - Differential Temperature
  - Differential Pressure
  - Static Pressure
  - Hot or Chilled Water
  - Hot or Chilled Water Reset

Specifications

General

Accuracy: +/- 0.5%
Programming: EIA RS485 interface
Display: 32-character LCD
Communications: RS485, half duplex
Memory backup: Non-volatile EEPROM, no battery required

Environmental

Operating temperature: 32 to 131°F (0 to 55°C)
Operating humidity: 0 to 100% RH, non-condensing
Storage temperature: 14 to 140°F (-10 to 60°C)

Electrical

Supply voltage: 24 VAC +/- 20%
Inputs: Two 4-20 mA analog and two digital (dry contact)
Outputs: One 4-20 mA DC analog and two digital (SPST dry contact, 24 VAC @ 1 A)
Analog input impedance: 250Ω
Max. load resistance (analog output): 600Ω
Common mode rejection: 100 db @ 60 Hz
Power consumption: 5 VA max.

Specifications subject to change without notice.

Specification Suggestions

General purpose controllers shall be microprocessor-based with suitable I/O points to execute the required operation sequences. General purpose controllers shall be of the low voltage type.

General purpose controllers shall have not less than four different modes of operation. Control options shall include fully adjustable reset control, differential input control, single input control and remote setpoint control. Relay outputs shall have fully configurable offsets and differentials. 4-20mA modulating outputs shall provide a fully adjustable proportional + integral + derivative control.

The RS485 communications jack shall be accessible, without requiring the removal of the housing. General purpose controllers must support non-volatile memory, so that in the event of power loss, all programmed operating parameters shall be unaffected without the use of battery backup. All control functions shall continue in the event of a communications failure.

General purpose controllers shall provide both remote and local communications in accordance with EIA RS485 standards. All firmware communications protocol and command codes shall be published, open and non-proprietary. General purpose controllers shall be model SZ1143b as manufactured by TCS/Basys Controls.

Ordering Information

Part #	Description
SZ1143b	General purpose controller with 1 analog output and 2 relay outputs

	SZ1143b Accessories
TS/TX Series	Temperature sensors and transmitters
TH Series	Relative humidity transmitters
TD/TL Series	Differential pressure transducers
PC Series	Carbon dioxide sensors
PD Series	Differential pressure switches
PO Series	Occupancy sensor
PR Series	Encased relays
PS Series	Current switches
PT Series	Control transformers

Dimensions   Note: inches [mm]

SZ1143b