



EXD-SH2

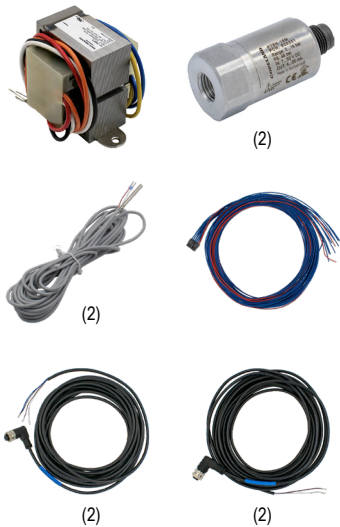
EXD-SH1 & EXD-SH2 Series Temperature & Superheat Controllers & Kits

Stand-alone universal superheat and or temperature controllers for air conditioning units or refrigeration systems. Recommended for use with bi-polar EX Series or CV Series expansion valves.

Features

- EXD-SH1 controls one valve and EXD-SH2 can control two valves in two independent circuits
- Functions as a superheat control, temperature control, low pressure switch and freeze protection
- Self-adapting superheat control function in conjunction with Copeland EX4-8 series valves
- Easy system monitoring with Modbus communication
- Integrated keyboard with two line display
- Self adaptive algorithm eliminates need for setting PID control for individual systems
- Flash key to allow quick upload and download of parameters from one configured controller to another
- Multiple function alarms including low/high superheat alarm
- Electrical connection via plug-in type screw terminals
- Controllers sold separately or in pre-assembled kits (EXD-SH1K and EXD-SH2K)

Parts included in kits



(2) Signifies x2 for EXD-SH2K

Specifications

Supply voltage 24VAC/DC +or-10%, 50/60Hz
 Power consumption..... EXD-SH1 Max. 25 VA / EXD-SH2 Max. 50 VA
 Terminals 1 to 12..... Suitable for 12 poles molex plug
 Terminals 13 to 36..... Suitable for removable screw version; wire size 0.005...0.006 in
 Temperatures..... Storage: -13°F (-25°C) to 140°F (60°C)
 Operating: 32°F (0°C) to 131°F (55°C)
 Humidity..... 20 to 85% R.H. non condensing
 Mounting..... DIN RAIL mounting
 Weight..... 0.71 lbs.
 Housing..... Self-extinguishing ABS
 Protection class..... IP 00
 Agency CE
 Compliance EMC, roHS

Input, output EXD-SH1, EXD-SH2

Description	Specification
Analog input(s): NTC Temperature sensor Analog input: PT1000 Temperature sensor	ECN-N...-49°F (-45°C)...122°F (50°C) sensing range ECN-Z60 sensing range
Analog input(s): 4-20 mA pressure transmitters Analog input(s): 0.5-4.5 V pressure transmitters	PT5N Third party ratio metric pressure transmitters (total error: ≤ 1%)
Digital input(s)	Dry contact, potential free
Digital output(s): Alarm relay(s) Contact closed: During alarm condition Contact open: During normal operation & supply power OFF	Resistive Load 24 VAC/DC, max. 1 A Inductive Load 24 VAC, max. 0.5 A
Communication	RS485 RTU Modbus, two wires
Stepper motor output	Bi-Polar Valves: EX4-8
Refrigerants	R-22; R-134a; R-507; R-404A; R-407C; R-410A; R-124; R-744; R-407A; R-407F; R-23; R-32*; R-1234ze; R-448A; R-449A; R-450A; R-513A

* R-32 is for systems/regions which it does not consider R-32 as potential explosive refrigerant (flammable or low flammable) and PED/CE marking is not required.

EXD-SH1 & EXD-SH2 controllers & kits

Description	Model number	Item number
EXD-SH1 is a Superheat and/or Temperature Controller for a single EX4-8 or CV4-6 valves	EXD-SH1 807855	097175
EXD-SH2 is a Superheat and/or Temperature Controller with Second Circuit Superheat Control for Two EX4-8 or CV4-6 valves	EXD-SH2 807856	097176
EXD-SH1K Superheat and/or Temperature Controller kit for single EX4-8 valve (Kit includes 1 each EXD-SH1, EXV-M60, PT5N-18M, PT4-M60, TP1-NP6, EXD-M03, 90-T40F3). Valve not included.	EXD-SH1K	EXD-SH1K
Superheat and/or Temperature Controller kit for 2 Valves (Kit includes 1 each EXD-SH2, EXD-M03, 90-T50F3 and two of each EXV-M60, PT4-M60, TP1-NP6, PT5N-18M). Valve not included.	EXD-SH2K	EXD-SH2K

EXD-SH1 & EXD-SH2 parts and accessories

Description	Model number	Item number
12 Pin Molex Plug with 3 Meter Cable for EXD-SH1 and EXD-SH2 for Supply Voltage, Temperature Sensor 1 and 2, PT5 Circuit 1 and 2, Vdc and Ground	EXD-M03 807865	097177
Electronic Expansion Valve Cable and Connector	EXV-M60 804665	097741
Pressure Transmitter for applications needed to operate in a vacuum*	PT5N-07M 805350	805350
Pressure Transmitter for refrigerants including R-410A	PT5N-18M 805351	805351
Pressure Transmitter for refrigerants including subcritical R-744*, 435 psi	PT5N-30M 805352	805352
Pressure Transmitter for refrigerants including transcritical R-744*, 725 psi	PT5N-50M 805353	805353
6 Meter Long Plug and Cable Assembly for PT5 Pressure Transmitter	PT4-M60 804805	097717
Electronic Expansion Valve Temperature Sensor with a 6 Meter Cable	TP1-NP6 804490	804490
Transformer 12/208/240 Primary, 24V Secondary 40VA, for 1 circuit	90-T40F3	90-T40F3
Transformer 12/208/240 Primary, 24V Secondary 50VA, for 2 circuits	90-T50F3	90-T50F3

* Not included in kit