Temperature & superheat controllers & kits

EXD-SH1, EXD-SH2

Simplified ordering and installation with kits that include everything you need in one box.

Multi-function control

Superheat control, temperature control, low pressure switch, freeze protection

EXD-SH2 can control two valves in independent circuits

For use with Copeland EX and CV series valves

Simple installation

Kits include all components needed for setup in one box

Integrated keyboard with two line display eliminates need for additional components

Electrical connection via plug-in type screw terminals

Self adaptive algorithm eliminates need for setting PID control for individual systems

Easy system monitoring

Connect via Modbus to monitoring systems including Copeland's E2 system controller

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(2) Signifies x2 for EXD-SH2K

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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
Operating: 32°F to 131°F
Storage: -13°F to 140°F
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, EAC

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...122°F 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 ratiometric pressure transmitters (total error: ≤ 1%)"
Digital input(s)	Dry contact, potential free
Digital output(s): Alarm relay(s) Contact is closed: During alarm condition Contact is open: During normal operation and 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
Controllers	Superheat and/or temperature controller for a single EX4-8 or CV4-7 valves	**EXD-SH1 807855**	**097175**
	Superheat and/or temperature controller with second circuit superheat control for two EX4-8 or CV4-7 valves	**EXD-SH2 807856**	**097176**
Controller kits	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 second circuit superheat control for two EX4-8 valves (kit includes 1 each EXD-SH2, EXD-M03, 90-T50F3 and 2 of each PT4-M60, TP1-NP6, EXV-M60, PT5N-18M). **Valve not included.**	**EXD-SH2K**	**EXD-SH2K**

EXD-SH1 / EXD-SH2 parts & accessories

Description	Model number	Item number
12 pin molex plug with 3 meter cable for supply voltage to EXD-SH1 and EXD-SH2	**EXD-M03 807865**	**097177**
Electronic expansion valve cable and connector, 6 meter	**EXV-M60 804665**	**097741**
Pressure transmitter able to operate in a vacuum*	**PT5N-07M 805350**	**805350**
Pressure transmitter for refrigerants including R-410A	**PT5N-18M 805351**	**805351**
Pressure transmitter including R-744*	**PT5N-30M 805352**	**805352**
Plug and cable assembly for pressure transmitter, 6 meter	**PT4-M60 804805**	**097717**
Temperature sensor - ultra low temp*	**ECN-Z60 807826**	**807826**
Temperature sensor std. cable, 6 meter	**TP1-NP6 804490**	**804490**
Transformer for 1 circuit	**90-T40F3**	**90-T40F3**
Transformer for 2 circuits	**90-T50F3**	**90-T50F3**

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