

SE1 – electrothermal actuators

100 Nm | 140 Nm



The appearance of the product may differ from the illustration. Technical specifications are subject to change.

TECHNICAL SPECIFICATION

SERIA SE1

Electrothermal actuator SE1 is used to control zone and fan-coil valves in HVAC systems. SE1 is suitable to drive VFX valve bodies series.

When actuators is not energized the valves are normally closed on direct way. Two action types are available: On-Off and modulating 0... 10 $V_{\text{DC}}.$

On request they can be supplied with plastic cap that ensures stem protection and manual action.

	MODE OF OPERATION	
•	The sensing element inside the capsule spreads out causing the movement of the shaft. So the stem valve connected to the shaft moves and opens the valve.	
-	When actuator is powered Off, the shaft goes up and the valve moves to the closed position by a spring return. The assembly actuator/valve body is done directly and easily by a metal ring nut, no tool is necessary.	

The actuator is with position valve indication.

TYPE	FORCE [N]	STROKE [mm]	POWER SUPPLY 50/60 Hz	CONTROL	POWER CONSUMPTION [VA]		
SE1M24	100	2.5	24	010 V _{DC}	3.5		
SE1T24	100	2.5	24	Open/Close	3.0		
SE1T230	100	2.5	230	Open/Close	3.0		
SE1TP24	140	2.5	24	Open/Close	3.0		
SE1TP230	140	2.5	230	Open/Close	3.0		
0							

Optional

S version with 1 auxiliary microswitch, only for models SE1T and SE1TP

SE1M24 $24 V_{AC} \pm 10\% 50/60 Hz$ SE1T24, SE1TP24 $24 V_{AC} \pm 10\% 50/60 Hz$ SE1T230, SE1TP230 $230 V_{AC} \pm 10\% 50/60 Hz$ Peak current: $320 V_{AC} \pm 10\% 50/60 Hz$ SE1M24 $< 0.25 A$ SE1T230, SE1TP230 $< 0.70 A$ Aux. switch rating: $250 V_{AC} 3 A$ Sensing element: capsule with special wax Timing: $SE1T230$, SE1TP230 SE1T24, SE1TP24 $4.5 \min (2.5 mm at 20^{\circ}C)$ SE1T24, SE1TP24 $4.5 \min (2.5 mm at 20^{\circ}C)$ Working temperature range: $050^{\circ}C$ Working conditions: $1090 \% r.h.$ (non condensing) Storage temp: $-2070^{\circ}C$ Cable: PVC, section $2 \times 0.50 mm^2$, length $2 m$ connection: metal ring M30 x 1.5 Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T24, SE1TP24), class III (SE1T24, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page Weight: $200 g$	Power supply:			
SE1T230, SE1TP230 230 $V_{AC} \pm 10\%$ 50/60 Hz Peak current: 230 $V_{AC} \pm 10\%$ 50/60 Hz SE1M24 < 0.25 A SE1T230, SE1TP230 < 0.70 A Aux. switch rating: 250 $V_{AC} \pm 3 A$ Sensing element: capsule with special wax Timing: SE1T230, SE1TP230 SE1T24, SE1TP24 4.5 min (2.5 mm at 20°C) SE1T24, SE1TP24 4.5 min (2.5 mm at 20°C) Working temperature range: 050°C Working conditions: 1090 % r.h. (non condensing) Storage temp: -2070°C Cable: PVC, section 2 x 0.50 mm², length 2 m connection: metal ring M30 x 1.5 Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T24, SE1TP230), class III (SE1T24, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions:	SE1M24	24 V _{AC} ± 10% 50/60 Hz		
Peak current: SE1M24 < 0.25 A SE1T24, SE1TP24 < 0.25 A SE1T230, SE1TP230 < 0.70 A Aux. switch rating: 250 V _{AC} 3 A Sensing element: capsule with special wax Timing: SE1T230, SE1TP230 SE1T230, SE1TP230 3.5 min (2.5 mm at 20°C) SE1T24, SE1TP24 4.5 min (2.5 mm at 20°C) Working temperature range: 050°C Working conditions: 1090 % r.h. (non condensing) Storage temp: -2070°C Cable: PVC, section 2 x 0.50 mm², length 2 m connection: metal ring M30 x 1.5 Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T24, SE1TP230), class III (SE1T24, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions:	SE1T24, SE1TP24	24 V _{AC} ± 10% 50/60 Hz		
SE1M24< 0.25 A	SE1T230, SE1TP230	230 V _{AC} ± 10% 50/60 Hz		
SE1T24, SE1TP24 < 0.25 A SE1T230, SE1TP230 < 0.70 A Aux. switch rating: 250 V _{AC} 3 A Sensing element: capsule with special wax Timing: 3.5 min (2.5 mm at 20°C) SE1T24, SE1TP24 4.5 min (2.5 mm at 20°C) Working temperature range: 050°C Working conditions: 1090 % r.h. (non condensing) Storage temp: -2070°C Cable: PVC, section 2 x 0.50 mm², length 2 m connection: metal ring M30 x 1.5 Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T230, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page				
SE1T230, SE1TP230 < 0.70 A Aux. switch rating: 250 V _{AC} 3 A Sensing element: capsule with special wax Timing:		< 0.25 A		
Aux. switch rating: 250 V _{AC} 3 A Sensing element: capsule with special wax Timing: 3.5 min (2.5 mm at 20°C) SE1T24, SE1TP24 4.5 min (2.5 mm at 20°C) Working temperature range: 050°C Working conditions: 1090 % r.h. (non condensing) Storage temp: -2070°C Cable: PVC, section 2 x 0.50 mm², length 2 m connection: metal ring M30 x 1.5 Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T24, SE1TP24), class III (SE1T24, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page	SE1T24, SE1TP24	< 0.25 A		
Sensing element: capsule with special wax Timing:	SE1T230, SE1TP230	< 0.70 A		
Timing: 3.5 min (2.5 mm at 20°C) SE1T230, SE1TP230 3.5 min (2.5 mm at 20°C) SE1T24, SE1TP24 4.5 min (2.5 mm at 20°C) Working temperature range: 050°C Working conditions: 1090 % r.h. (non condensing) Storage temp: -2070°C Cable: PVC, section 2 x 0.50 mm², length 2 m connection: metal ring M30 x 1.5 Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T230, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page	Aux. switch rating:	250 V _{AC} 3 A		
SE1T230, SE1TP230 3.5 min (2.5 mm at 20°C) SE1T24, SE1TP24 4.5 min (2.5 mm at 20°C) Working temperature range: 050°C Working conditions: 1090 % r.h. (non condensing) Storage temp: -2070°C Cable: PVC, section 2 x 0.50 mm², length 2 m connection: metal ring M30 x 1.5 Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T230, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page	Sensing element:	capsule with special wax		
SE1T24, SE1TP24 4.5 min (2.5 mm at 20°C) Working temperature range: 050°C Working conditions: 1090 % r.h. (non condensing) Storage temp: -2070°C Cable: PVC, section 2 x 0.50 mm², length 2 m connection: metal ring M30 x 1.5 Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T230, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page				
Working temperature range: 050°C Working conditions: 1090 % r.h. (non condensing) Storage temp: -2070°C Cable: PVC, section 2 x 0.50 mm², length 2 m connection: metal ring M30 x 1.5 Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T230, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page		3.5 min (2.5 mm at 20°C)		
Working conditions: 1090 % r.h. (non condensing) Storage temp: -2070°C Cable: PVC, section 2 x 0.50 mm², length 2 m connection: metal ring M30 x 1.5 Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T230, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page	SE1T24, SE1TP24	4.5 min (2.5 mm at 20°C)		
Storage temp: -2070°C Cable: PVC, section 2 x 0.50 mm², length 2 m connection: metal ring M30 x 1.5 Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T230, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page	Working temperature range:	050°C		
Cable: PVC, section 2 x 0.50 mm², length 2 m connection: metal ring M30 x 1.5 Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T230, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page	Working conditions:	1090 % r.h. (non condensing)		
connection: metal ring M30 x 1.5 Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T230, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page	Storage temp:	-2070°C		
Housing: transparent Protection class: IP40, IP44 if mounted vertically class II (SE1T230, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page	Cable:	PVC, section 2 x 0.50 mm ² , length 2 m		
Protection class: IP40, IP44 if mounted vertically class II (SE1T230, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page	connection:	metal ring M30 x 1.5		
class II (SE1T230, SE1TP230), class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page	Housing:	transparent		
class III (SE1T24, SE1TP24 and SE1M24) Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page	Protection class:	IP40, IP44 if mounted vertically		
Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page		class II (SE1T230, SE1TP230),		
Self extinguishing: V0 - V1 according to UL94 Dimensions: see next page		class III (SE1T24, SE1TP24 and SE1M24)		
- dee next page	Self extinguishing:	V0 - V1 according to UL94		
Weight: 200 g	Dimensions:	see next page		
	Weight:	200 g		

INSTALLATION

Mount the thermal actuator on the valve body and tighten the metal ring nut on the thread of bonnet valve body. This operation must be done when the actuator is cold (not powered on). Perform the electrical connections as per the wiring diagrams. Pay attention that power supply value corresponds to the value of actuator indicated on label stuck on unit.





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