NENUTEC®

INNOVATIVE MEMBER OF SWISTEC

SE1 – electrothermal actuators

100 Nm | 140 Nm

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

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_{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.

TECHNICAL SPECIFICATION

TYPE	FORCE [N]	STROKE [mm]	POWER SUPPLY 50/60 Hz	CONTROL	POWER CONSUMPTION [VA]
SE1M24	100	2.5	24	0...10 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

Optional

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

Power supply:	
SE1M24	24 V_{AC} ± 10% 50/60 Hz
SE1T24, SE1TP24	24 V_{AC} ± 10% 50/60 Hz
SE1T230, SE1TP230	230 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	3.5 min (2.5 mm at 20°C)
SE1T24, SE1TP24	4.5 min (2.5 mm at 20°C)
Working temperature range:	0.-50°C
Working conditions:	10...90 % r.h. (non condensing)
Storage temp:	-20...70°C
Cable:	PVC, section 2 x 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 (SE1T230, SE1TP230),
	class III (SE1T24, SE1TP24 and SE1M24)
Self extinguishing:	V0 - V1 according to UL94
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.

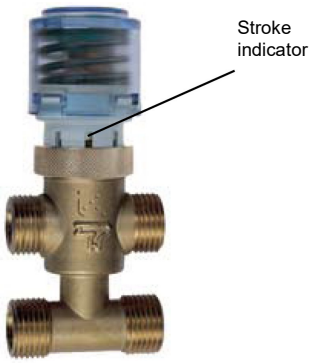


Fig. 1

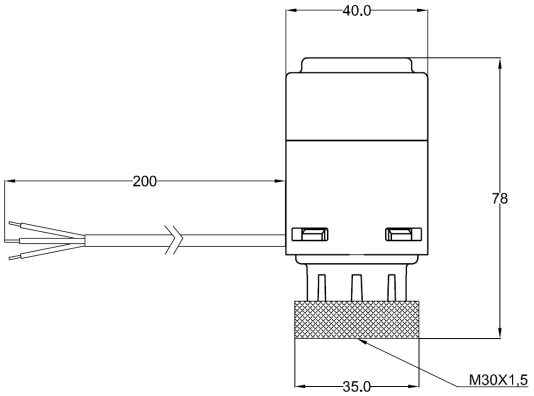
SE1 – electrothermal actuators

100 Nm | 140 Nm

ELECTRICAL WIRING AND DIMENSIONS [mm]

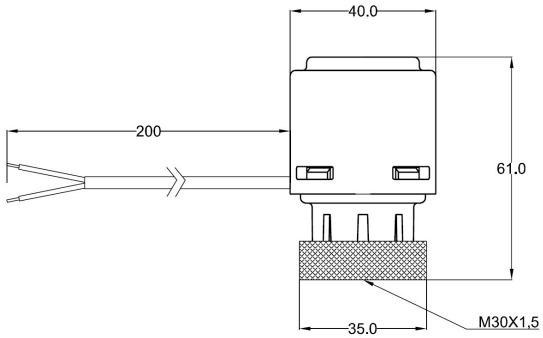
SE1M24

COMMON	**Blue**
Y (control signal) 0 ... 10 V_{DC}	**Black**
24 V AC	**Brown**



SE1T24, SE1TP24 / SE1T230, SE1TP230

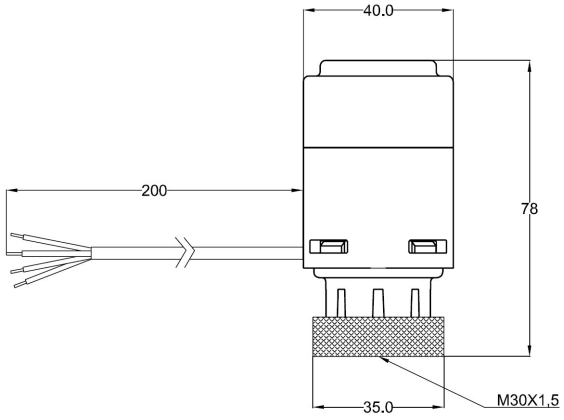
COMMON	**Blue**
24/230 V_{AC} SE1T24 , SE1TP24/ SE1T230, SE1TP230	**Brown**



SE1T24S, SE1TP24S / SE1T230S, SE1TP230S

COMMON	**Blue**
24/230 V_{AC} SE1T24S, SE1TP24S/ SE1T230S, SE1TP230S	**Brown**
Auxiliary switch	**Grey**
	Black

Closed valve A-AB way, contact open
Open valve A-AB way, contact closed



Nenutec Polska

00-236 Warszawa
ul. Świętojerska 5/7
tel.: +48-(0)-504-050225
nenutec@nenutec.pl