



EAO

EAV



Technical Data

Control Signal	EAV 0-10Vdc EAO on/off or PWM
Power supply	230Vac, 50/60Hz +/-10% 24Vac, 50/60 Hz +/-10%
Power consumption	3VA for EAO 3,5VA for EAV
Peak current	EAV <0,25A EAO 24 <0,25A EAO 230 <0,70A
Aux. switch rating	250Vac 3A
Sensing element	special wax
Ambient operating temperature	0...+50°C, 10-90% non-condensing
Ambient storage temperature	-20°...+70°C
Positioning time	EAO 230 3,5min (2,5mm@20C). EAO 24 4,5min (2,5mm@20C).
Stroke	2,5mm
Connection	M30 x 1,5mm
Actuating force	100N or 140N
Cable length	plug-in type of PVC, wire 2x0,5mm ² , 2m
Enclosure	IP40 IP44, if mounted vertically
Housing	transparent
Self extinguishing	V0-V1 according to UL94
Weight	200 gram
Approvals	These products meets the demands of CE

Features

- Direct assembly with union nut to the neck of the valve (no tools required)
- Reliability
- The stroke is adapted automatically to the valve
- 100N or 140N Torque
- The unit indicates the current position of the shaft
- Position Indicator by LEDs for EAV
- Silent operating
- Connection between actuator and valve by threaded male M30 x1,5 ring nut

Application

The valve actuator EAO/EAV is suitable to drive VFC valve body series in HVAC systems.

When actuators is not energized the valves are normally closed on direct way.

Two action types are available:

- on/off and PWM
- modulating 0-10Vdc

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 the actuator os powered Off, the shaft goes up and the valve moves to the closed position by a spring return..

The assembly actuator/valve bodyis done directly by a metal ring nut easy, no tool is necessary.

The actuator is fitted with position valve indication

140N actuator for FBV-valve kvs 4 and 6

Ordering Codes

EAV 24	Valve Actuator	24Vac	0-10Vdc	100N
EAO 24	Valve Actuator	24Vac	On/Off/PWM	100N
EAO 230	Valve Actuator	230Vac	On/Off/PWM	100N
EAV 24S	Valve Actuator	24Vac	0-10Vdc	140N
EAO 24S	Valve Actuator	24Vac	On/Off/PWM	140N
EAO 230S	Valve Actuator	230Vac	On/Off/PWM	140N

/AUX with 1 auxiliary micro switch, only for EAO



Assembly/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 electrical wiring diagrams.

For a correct mounting there must be enough space around the unit.

Pay attention that the clearance around the unit is sufficient to mount correctly the actuator.

After the unit is powered on, it does a self adjustment stroke according to the valve in which it is mounted on (type EAV).

In order to make electrical wiring easier, the actuators are supplied with a cable.

A LED indicates the current state of the actuator;

- adaptive stroke cycle
- regulation
- error





Warning

Each single operation done on the unit, either installation or maintenance, must be done without main supply on the units and external loads.¹

Such operations are permitted only by skilled workers.

AP is not responsible for possible damages caused by an inadequate installation and/or by removed or exchanged security devices.

Choose the place in which the unit has to be mounted and follow the next instructions.

In normal conditions of use, power supply, temperature and humidity inside the unit must be always in the range indicated in the technical features.

Verify that inside the unit the ventilation is sufficient, particularly when the loads are around the maximum allowed.

Limit possible overcurrent with adequate protection (fuse or magnetothermic switch).

LED signalling of EAV

LED flashing slowly:	actuator in self-adjustment stroke valve is opening completely
LED flashing very slowly:	actuator is self-adjustment stroke valve is closing completely
LED flashing very fastly:	self-adjustment stroke not valid contact technical office
LED switched off:	actuator not powered on during regulation
LED switched on:	actuator powered on during regulation

Notes;

LED flashing slowly corresponds to 1 flash/second

LED flashing fastly corresponds to 1 flash every 3 seconds

LED flashing very fastly corresponds to 5 flashes / second



Electrothermal Actuators for Zone and Fan-coil valves

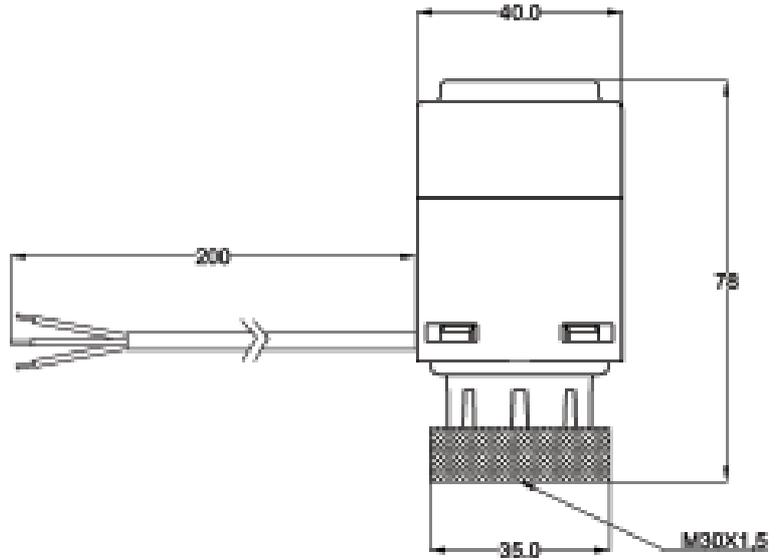
EAV EAO

Jan.09

Wiring Diagram and Dimensions

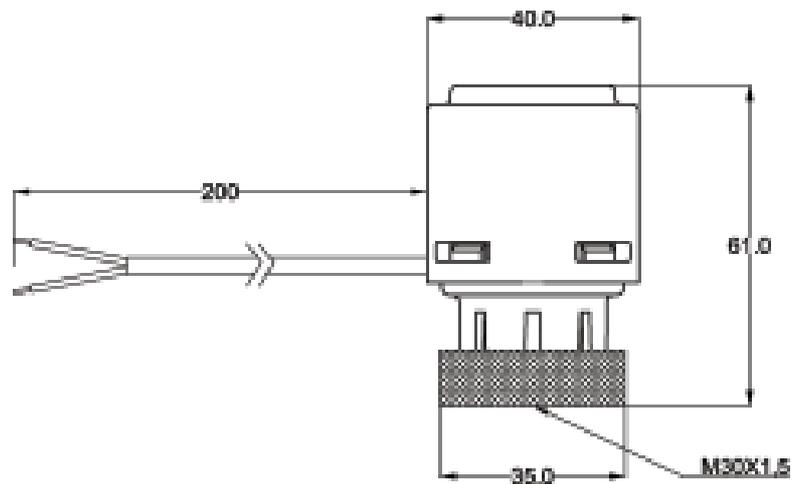
EAV

COM	Blue
IN. (N) 0...10 V	Black
24 Vac	Brown



EAO

COM	Blue
24/230 Vac	Brown



EAO/AUX

COM	Blue
24/230 Vac	Brown
Aux. contact	Grey
	Black

