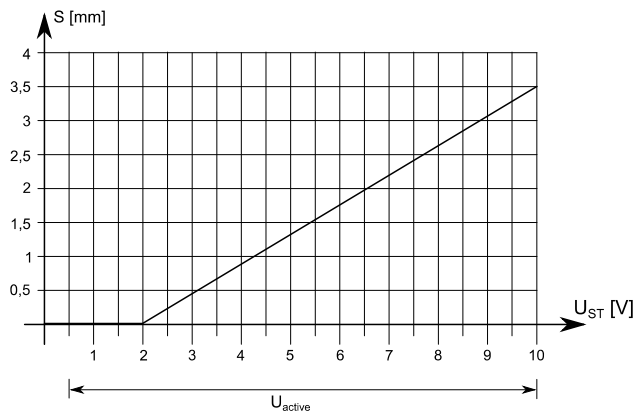


THERMAL ACTUATOR APR 40405

APR 40405 thermal actuators are designed for controlling control valves in HVAC automation systems. The thermal actuator is controlled by 0...10 Vdc control signal according to the following figure.



S = stroke
 U_{ST} = control signal
 U_{active} = active control signal range

When the control signal is under 0,5 V, the actuator moves to stand-by mode for 20 minutes to ensure fast response time. After the stand-by mode the actuator moves to power saving mode.

The actuator calibrates automatically when power is switched on for the first time. The actuator calibrates also when the control signal is over 2 V for 24 hours.

During the calibration cycle, the actuator is driven to closed position and is kept closed for 20 seconds. The actuator returns to the control signal position after the calibration.

NOTE: Do not use ammoniac materials or glues near the thermal actuators.

Thermal actuators are mounted to the NV2 control valves by using a VA 80 adapter ring. Special adapter rings are also available for other valve manufacturers' valves.

APR 40405 thermal actuators are delivered in "First open" status which leaves the valve a bit open after actuator assembly. This allows the system filling and flushing even if the control system is not yet functioning. The actuator set to normal operation after the actuator is connected to the supply voltage for at least 6 minutes. You cannot activate the "First open" function again.



Technical data:

Supply	24 Vac (22...28 V)
Power consumption	1 W
Operating current	42 mA
Start-up current	< 300 mA (max. 2 min.)
Force	95...105 N
Control signal	0...10 Vdc
Control range	2...10 V
Stroke	3,5 mm
Running time	approx. 30 s / mm
De-energized position	closed (NC), actuator in lower position
Mounting	By using an adapter ring (sold separately). Actuator is not recommended to install upside down.
Fluid temperature	0...100 °C
Ambient temperature	0...60 °C
Housing	IP54, polyamide

Wiring:

Blue	0 V
Black	24 Vac
Red	0...10 Vdc

Ordering guide:

Model	Product number	Description
APR 40405-01N00-0	1210052	thermal actuator 0...10 V, NC, removable cable (sold separately)
BA-ALL.5.3.01	1220031	removable cable, 1 m
BA-ALL.5.3.02	1220032	removable cable, 2 m
BA-ALL.5.3.03	1220033	removable cable, 3 m
BA-ALL.5.3.05	1220035	removable cable, 5 m
BA-ALL.5.3.10	1220036	removable cable, 10 m
BA-ALL.5.3.15	1220037	removable cable, 15 m
BA-ALL.5.3.20	1220038	removable cable, 20 m

Products fulfill the requirements of directives 2004/108/EC and 2006/95/EC and are in accordance with the standards EN60730-1, EN60730-2-14:2009-6 and EN60730-2-14/A2:2008.