PRODUAL
measure-be sure.

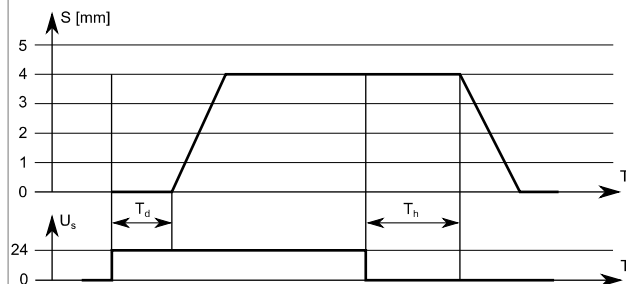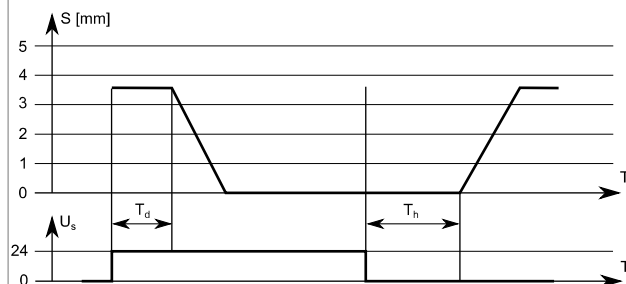# THERMAL ACTUATORS BA4005 AND BA4105

BA4005 and BA4105 thermal actuators are designed for controlling control valves in HVAC automation systems. The thermal actuator can be controlled by 24 Vac on/off control signal or PWM signal. BA4005 is normally closed and BA4105 is normally open. The following figures illustrate the function principles of the BA4005 and BA4105 thermal actuators.
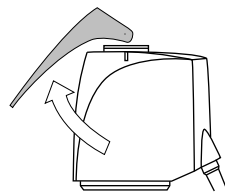
BA4005:

BA4105:

S = stroke T_d = dead time
U_s = supply voltage T_h = hold time
T = time

By removing the actuator cover, you can prevent unauthorized removal of the BA4005 and BA4105 actuators.

NOTE: Do not use ammoniac materials or glues near the BA4005 and BA4105 thermal actuators.

BA4005 and BA4105 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.

BA4005 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/Vdc (22...28 V)
Power consumption	1,8 W
Operating current	75 mA
Start-up current	250 mA (max. 2 minutes)
Force	95…105 N
Stroke	4 mm
Running time	approx. 3 min (close/open)
De-energized position	
BA4005	closed (NC)
BA4105	open (NO)
Mounting	by using an adapter ring (sold separately)
Ambient temperature	0…60 °C
Housing	IP54, polyamide

Wiring:

Blue	0 V
Brown	24 V

Ordering guide:

Model	Product number	Description
BA4005	1210040	thermal actuator 24 V, NC, removable cable (sold separately)
BA4105	1210045	thermal actuator 24 V, NO, removable cable (sold separately)
BA-ALL.5.2.01	1220021	removable cable, 1 m
BA-ALL.5.2.02	1220022	removable cable, 2 m
BA-ALL.5.2.03	1220023	removable cable, 3 m
BA-ALL.5.2.04	1220024	removable cable, 4 m
BA-ALL.5.2.05	1220025	removable cable, 5 m
BA-ALL.5.2.10	1220026	removable cable, 10 m
BA-ALL.5.2.15	1220027	removable cable, 15 m
BA-ALL.5.2.20	1220028	removable cable, 20 m