

TACODRIVE

THERMAL ACTUATOR WITH MANIFOLD VALVE



Electro-thermal actuator in normally closed mode for installation in panel heating manifolds.

DESCRIPTION

TacoDrive is a valve drive unit consisting of an electro-thermal actuator and a heating valve. The valve drive unit is intended for installation in panel heating manifolds.

The innovative valve technology is compatible with the standardized Taconova TopMeter interface. This patented technology allows the actuator to be designed in a compact manner.

The valve drive unit has been reduced to the essential functional components and is especially suitable for automatic installation in panel heating manifolds. The integrated and reversible first-open function guarantees the subsequent filling and venting of the system. The system operator can use the integrated valve position indicator to check the actual valve position.

ADVANTAGES

- Extremely compact
- Pre-assembled valve drive unit for automatic installation in panel heating manifolds
- Actuator with connector and maximum protection class (IP54)
- Integrated valve position indicator
- Integrated reversible first-open function for manual operation
- Can be adapted to TopMeter interface
- Very high valve control force owing to direct-acting expansion element

INSTALLATION POSITION

In the panel heating manifold return bar. The IP54 protection class allows subsequent installation of the heating manifold in any installed position.

OPERATION

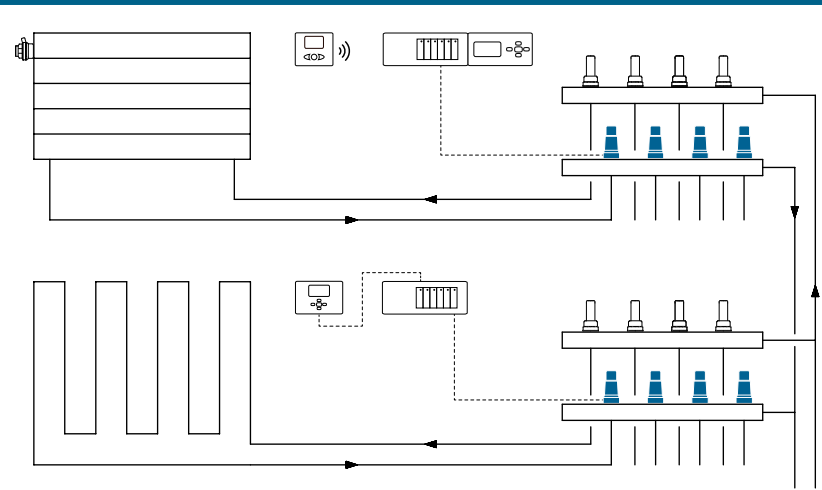
The TacoDrive combines valve and actuator for controlling heating circuits at panel heating manifolds. The valve drive unit operates in normally closed (NC) mode. The TacoDrive is activated by a room temperature control unit (e.g. in the NovaStat series) with a two-step output.

BUILDING CATEGORIES

For installation in heating and cooling applications in:

- Apartment blocks, housing estates, multiple dwelling units
- Residential care facilities and hospitals
- Administration and service buildings
- Hotels and restaurants
- School buildings and sports halls, sports facilities
- Commercial and industrial buildings
- Facilities with partial use – for example, barracks, camping sites etc.

SYSTEM/BASIC DIAGRAM



TECHNICAL DATA

Actuator

- Type: Normally closed (NC)
- Ambient temperature: 0 – 50 °C
- Opening/closing time:
approx. 3 minutes
- Visual inspection of expansion
element
- Reversible first-open
- Protection class of actuator: IP54
- Protection class II

Electrical connection data

- Rated voltage: 230 V, 50/60 Hz
- Permissible voltage deviation: $\pm 10\%$
- Operating efficiency: 1.3 W
- Inrush current: 230 V:
0.6 A for max. 100 ms
- Recommended fuse: 0.35 A
slow-acting, as per DIN 41662
- Connection cable length: 1 m
- Connection cable: 2 * 0.75 mm²,
PVC with plug protected against
polarity reversal

Valve

- Medium temperature: -10 °C – +60 °C
- Operating pressure $P_{0\ max}$: 6 bar
- System test pressure: max. 10 bar
(20 °C)
- k_{VS} value: 1.55
- External thread G 1/2" (cylindrical)
as per ISO 228
- Double valve stem seal with
grease reservoir
- Visual inspection of valve

Material

- Brass, heat-resistant plastics
- Seals: EPDM, FKM

Fluids

- Heating water (VDI 2035; SWKI BT
102-01; ÖNORM H 5195-1)
- Cooling water and water mixtures
with typical corrosion and anti-frost
additives

APPROVALS / CERTIFICATES

- VDE

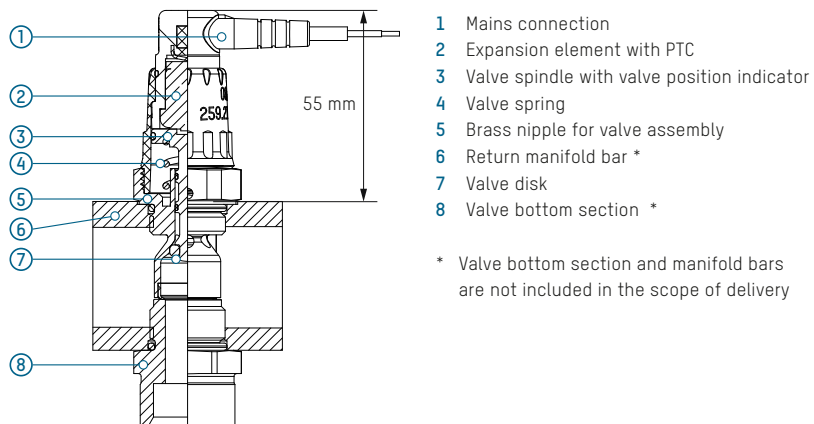
TYPE OVERVIEW

TacoDrive | Electro-thermal actuator, NC (Normally Closed) mode, suitable for valves of Taconova

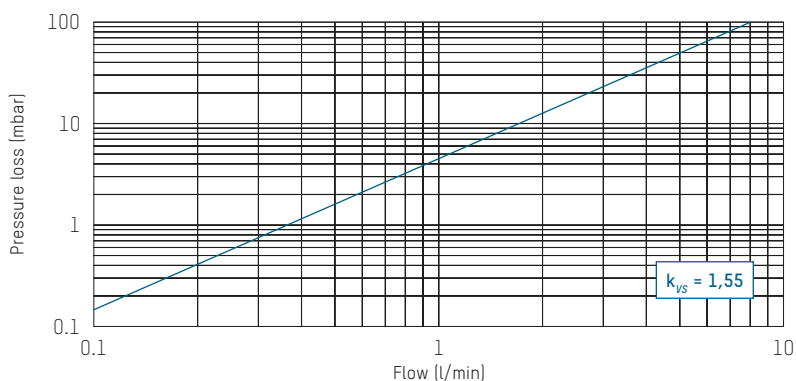
Order no.	Fixing	Nipple
259.2270.000	G 1/2"	Brass
259.2270.100	G 1/2"	Brass, nickel-plated

* The required valve bottom section depends on the cross-section of the manifold bar used and has to be agreed with Taconova.

DIMENSIONAL DRAWING



PRESSURE LOSS DIAGRAM



NOTE


PTC patent application
CH2015/000054

OPERATING MODES

Valve open,
first open engaged

Valve open,
operating function

Valve closed,
standby



The diagrams show the internal components of the actuator, including the valve body, stem, and O-rings. The first diagram shows the valve open with the first open engaged. The second diagram shows the valve open with the operating function engaged. The third diagram shows the valve closed in the standby position.

Splash-proof based on O-rings

