



Flow Control

Tyco Valves & Controls

## Quarter-turn electric actuators to operate ball- or butterfly valves in HVAC utility systems.

### Features

- Permanent capacitor, reversible synchronous motor driving a multi-stage precision gear train.
- Lifetime lubrication with high performance grease.
- O-ring sealing and external position indicator with knob.
- Simple, yet rugged manual operating facility by means of a clutch knob or lever.
- Molded resin housings, weatherproof to IP65 with SS cover fasteners.
- Four adjustable cams on the main shaft to ensure perfect positioning and open/close indication.
- Internal PCB for power distribution and control, with four switches, SPDT for end-of-travel and position indication.
- Terminal bank inside the housing for ease of field wiring, including two cable glands Pg11.
- AC single phase and DC motors are standard.
- Top shaft with flats showing correct valve position.
- Mounting pattern to ISO 5211/DIN 3337.
- Direct mounting onto Keystone butterfly valves with ISO top works via standard stock item spacer plates.
- Compatible to CE regulations.
- Operation possible in any mounting position.
- Electric connections via cable glands in the basic housing (DIN connectors optional).



### Applications

TVC quarter-turn actuators are designed for the operation of valves which require a swivel stroke of 90°, e.g. butterfly or ball valves in:

- air conditioning
- heating and ventilation
- green housing
- refrigeration
- energy saving systems
- air distribution

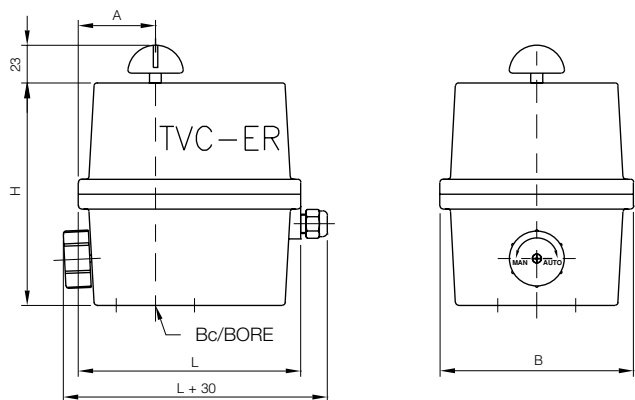
### Technical data

Motor	:	single phase, reversible synchronous type
Duty cycle	:	
		ER range 50% for 110/230V AC and 30% for 24V AC/24V DC
		EP range 50% for all voltages
Standard		
AC voltage	:	24V-115V-230V
DC voltage	:	24V
Winding Insulation	:	VDE 0530 - class B
Temp range	:	-10°C to +55°C
Torque range	:	20-300 Nm
Stroking time	:	20-65 sec
		(see table page 2)

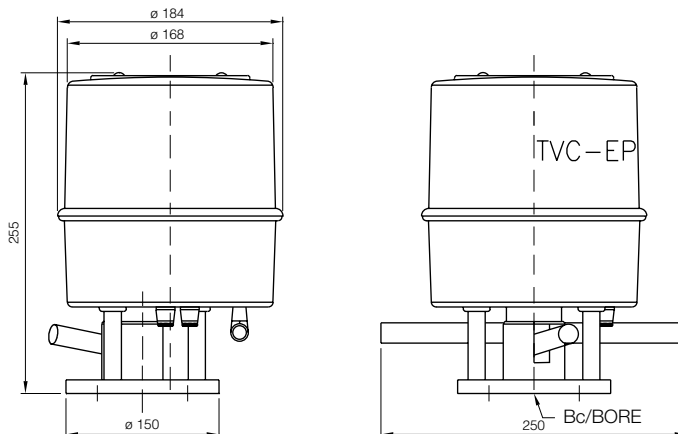
# TVC Electric Actuators

## dimensions

### Model TVC-ER



### Model TVC-EP

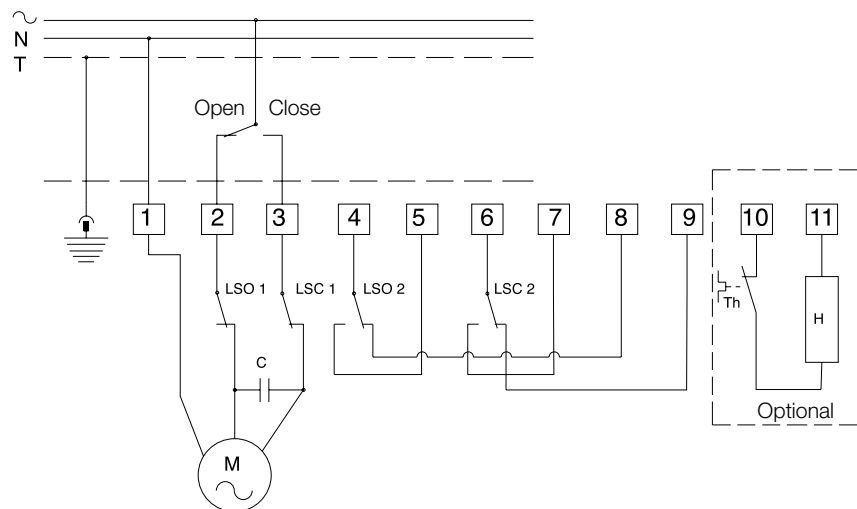


#### Dimensions

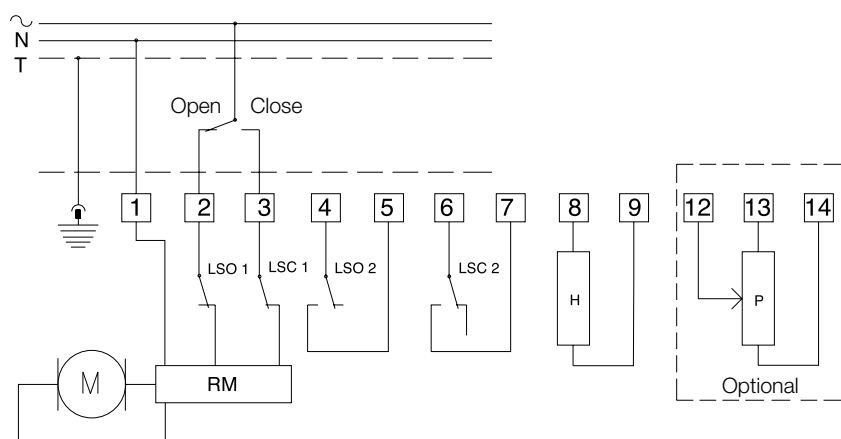
Model	Output torque NM	Stroking time -90°	Bc to ISO 5211	Bore mm	Adaptor	A	B	L	H	Weight (kg)
TVC-ER20	20	20S	F05	Sq14	DD12x8	44	90	135	123	1,5
TVC-ER45	45	20S	F07	Sq24	DD16x11	54	127	150	152	3
TVC-ER60	60	20S	F07	Sq24	SQ24x17	54	127	150	152	3
TVC-ER100	100	35S	F07	Sq24	DD20x14	54	127	150	152	3
TVC-EP200	200	35S	F07/12	DD30X22						7,3
TVC-EP300	300	65S	F07/12	DD30X22						7,3

#### Wiring diagrams

##### Model TVC-ER



##### Model TVC-EP



24V/115V/230V AC

#### Options

##### Available on request

- External connectors (2) to DIN 43650 + Pg9 cable glands
- Heating element, ERT 230-10W-4K7 including thermostat
- Reducing sleeves to meet DIN 3337
- Spacer plates
- Potentiometer kit, EPR for resistant feedback signal
- Converter kit, EPT for analog position transmission 4-20mA
- PCB for modulating service of TVC-ER models only. Input signal: 4-20mA or 1-10V
- Power failure enclosure, EBT1/230 for 230/50 only

#### Notes

- LSO1 = Open travel
- LSC1 = Close travel
- LSO2 = Open indication
- LSC2 = Close indication
- C = Capacitor
- M = Electro motor
- H = Heating element
- Th = Thermostat
- P = Potentiometer