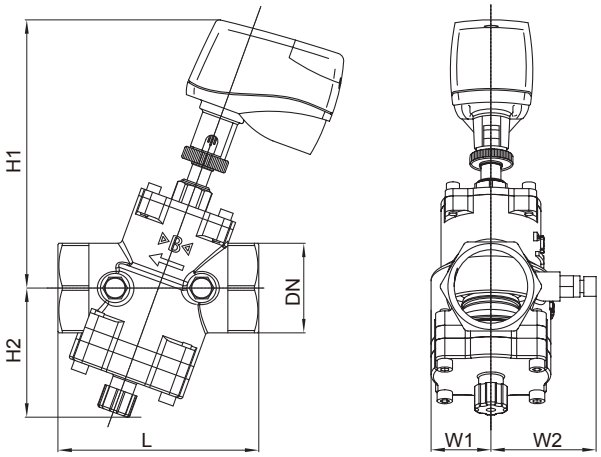
TBSX Pressure Independent Control Valve PN16 threaded connections



Material specification

TBSX Pressure Independent Control Valve 1 1/4" to 2"

No	Component	Material
1	Body	Bronze C83600
2	Bonnet	Brass C38000
3	Seat	304 stainless steel
4	Disc	304 stainless steel
5	Stem	304 stainless steel
6	Scale bar	Brass C38000
7	Adjusting nut	Brass C38000
8	Diaphragm	Rubber EPDM
9	Spring	304 stainless steel

Applicable standards:

- Design standard: Q/IBP 1-0001-2014.
- Flange standard: GB/T 17241.6 EN 1092.
- Threaded standard: EN 10226.1 - 10226.2.
- Face to face standard: GB/T 12221 EN 558-1.
- Pressure test standard: CJ/T 179.

Technical data:

- Nominal dimension: DN 32 - DN 150 (1.1/2" - 6").
- Nominal pressure: PN16.
- Work temperature: -5 °C to 85 °C.
- Shell test: 1.5 PN.
- Seat test: 1.1 PN.
- Suitable for water, ethylene glycol, etc.

Features and benefits:

- Three functions in one: automatic electronic adjustment + pressure independent control + static balancing.
- Linear flow control.
- Uses straight travel plug disc, lower torque.
- Adjustable Kvs allowing control of maximum flow rate.
- Wide differential pressure control range with precise flow control.
- Manufactured from high quality bronze.

Performance parameters

DN	Differential pressure range KPa	Minimum flow m^3/h	Maximum flow m^3/h	Valve stroke mm	Actuator model
DN32	30 - 400	0.6	4.5	5	MD50-R-BA Actuator
DN40	30 - 400	1.0	6.3	10	MD50-R-BA Actuator
DN50	30 - 400	1.5	12	10	MD50-R-BA Actuator

TBSX Series Pressure Independent Control Valve dimensions valve + actuator (mm)

Order code	Size	DN	L	H1	H2	W1	W2	Weight(Kg)
I0032CTBGMMSSO	1.1/4"	32	130	72	98	39	72	3.5
I0040CTBGMMSSO	1.1/2"	40	130	72	97	39	72	4.1
I0050CTBGMMSSO	2"	50	150	89	107	47	72	5.9

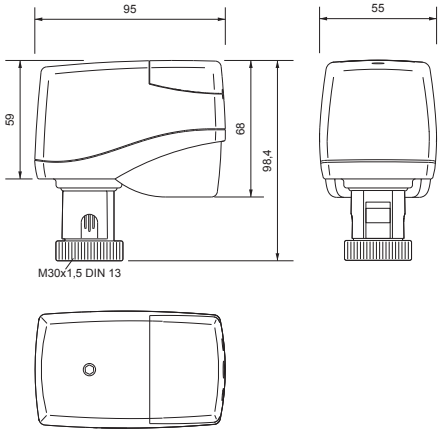
MD50-R-BA Actuator

Technical data:

- Voltage: 24 V AC.
- Power: 2 VA.
- Closing torque: 500 N.
- Maximum stroke: 10 mm.
- Input signal: 0(2) - 10 V, 0(4) - 20 mA.
- Feedback signal: 0 - 10 V.
- Work temperature: 0 °C to 50 °C.
- Protection grade: IP40.

Features and benefits:

- Multiple input and output signal selection options, allowing fast simple system configuration.
- Self calibration, actuator accurately calibrates stroke length.
- Block protection prevents the valve from sticking if it has not moved for a long period of time.
- Safe mode: the actuator will power off automatically once the actuator has fully opened.

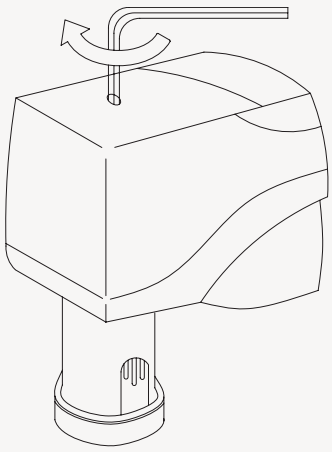


Operating instruction

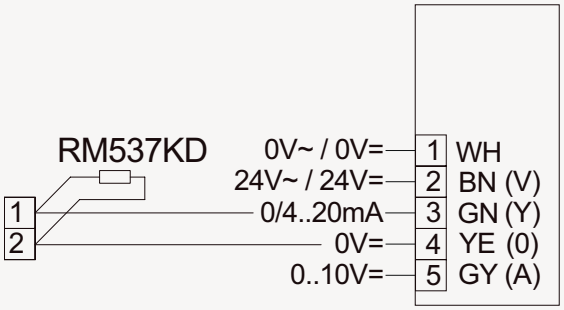
Manual operation / power failure.

Manual adjustment / operation of the actuator may be performed after the actuator has been installed but only when it is disconnected from the mains supply.

A 4mm allen key can be used (see above) to adjust operating position of the actuator e.g. On / Off.



Conversion of the input signal

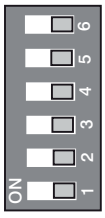


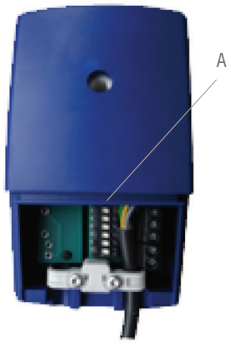
Input signal selection: 0(2) - 10 V or 0(4) - 2 0 mA

To change the input signal from 0(2) - 10 V to 0(4) - 20 mA bridge terminals 1 and 2 with resistance (RM537KD).

Function switch

Function	Switch (A)	Function
No function		No function
Switching position auxiliary switch active		Switching position auxiliary switch inactive
Characteristic curve compensation on		Characteristic curve compensation off
Actuation direction and positionig feedback 100% to 0%		Actuation direction and positionig feedback 0% to 100%
DC: 2 V to 10 V		DC: 0 to 10 V
Valve block protection on		Valve block protection off





The valve functions are adjusted with switch A by placing the dip switches 1 to 6 in the desired position. The switch is located under the wiring connection cover.