

Characteristics

Motor type MT40

- Three-point floating control, 24 V AC
- Automatic stroke adjustment

Motor type MT40A

- For analogue control signal 2-10 V or 4-20 mA, 24 V AC
- Automatic stroke adjustment

Valves type L1UP and L1IP

- Nominal pressure PN 16
- Regulating capability $\frac{k_{vs}}{k_{vr}} > 50$
- Single seated
- Internal pack box
- Logarithmic characteristic

Applications

MT40/MT40A is a series of valve actuators intended for control valves type L1UP and L1IP.

The valves type L1UP and L1IP are mainly used for controlling heating and cooling systems.

Design

The valve components - spindle, seats and cone - are made of stainless steel. The valve body is made of gun metal RG 5. The valve spindle thread connects

to motor MT40/MT40A only. The valves are single seated and the leakage rate is less than 0.05% of the full flow (according to VDI/VDE 2174). The valve has a build-in pack box.

Quality assurance

All valves are manufactured under an ISO 9001 certification, and are pressure and leakage tested before shipment.

Function

The regulation capability of the valves are better than 50:1. This means that the defined regulating characteristic will not cease, until the flow has dropped below 2% of full flow.

L1UP and L1IP valves differ from other Clorius valves by having internal pack box.

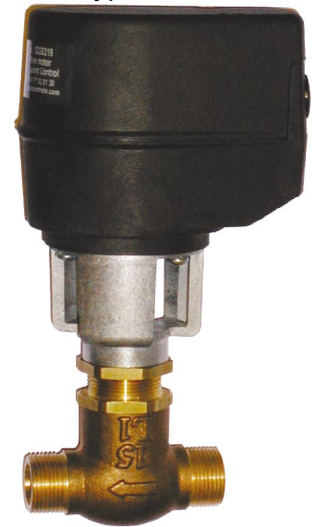
MT40

Actuator for three-point floating control signal (increase-decrease). Supply voltage 24V AC.

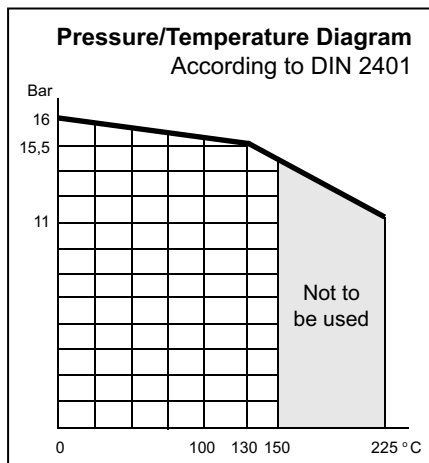
MT40A

A microprocessor based actuator for a 2-10 V or 4-20 mA input signal. Supply voltage 24V AC. The actuator has automatic stroke adjustment.

Motor type MT40/MT40A



Valve type L1UP/L1IP



Specifications - valve

Type	Connection	DN mm	Opening mm	k_{vs} -value m ³ /h	Lifting height mm	Max. Δp_L bar	Weight kg
Type L1UP (External connection threads ISO 228)							
15 L1UP	G $\frac{3}{4}$	15	15	2.75	12	14	0.7
20 L1UP	G1	20	20	5	14	8.6	0.8
Type L1IP (Internal connection threads ISO 7/1)							
15 L1IP	Rp $\frac{1}{2}$	15	15	2.75	12	14	0.7
20 L1IP	Rp $\frac{3}{4}$	20	20	5	14	8.6	0.8

Subject to change without notice.

Wiring and dimensions

MT40 *three-point*

1	0 V AC
2	Not connected
3	24 V AC (stem up)
4	24 V AC (stem down)

MT40A *2-10 V, 4-20 mA control*

1	0 V AC
2	24 V AC
3	2-10 V DC
4	
5	4-20 mA (feedback signal)

Technical Data - motor

Supply voltage 24 V AC
Control signal 2-10 V
or 4-20 mA.

(For 4-20 mA control signal a 500 Ohms resistor (enclosed in packing) is to be mounted between the control signal (terminal 3) and system neutral (terminal 1)).

Transformer sizing 6 VA
Stroke time MT40 3 or 1.5 s/mm
(3 s/mm factory set)

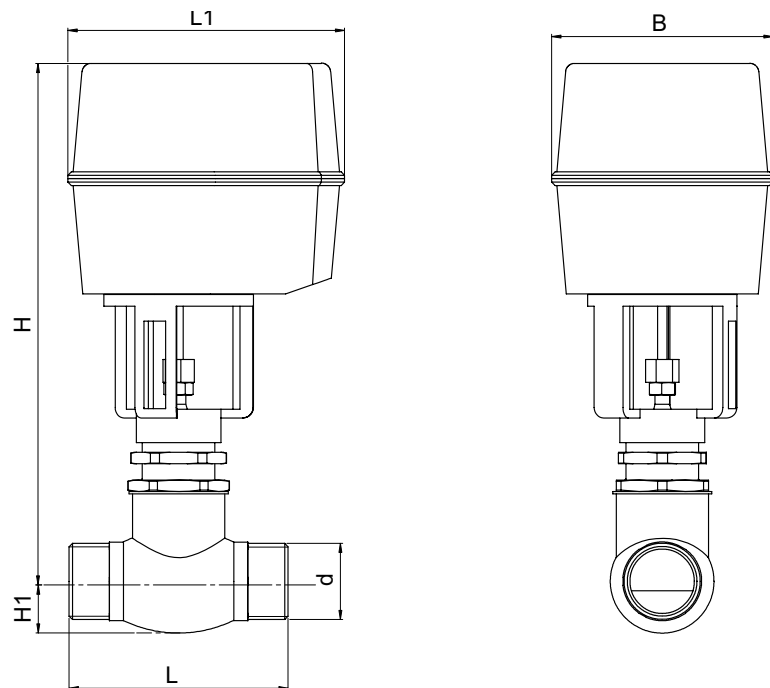
MT40A 3 s/mm

Force 400 N
Ambient temperature -18 - +50°C
Storage temperature -30 - +50°C
Ambient humidity Max 90% RH
Cable connection Screw terminals
Degree of protection IP54
Weight 0.9 kg

Technical Data - valve

Materials:
- Valve body Gun metal RG 5
- components Stainless steel
Nominal pressure PN 16
Seating Single seated
Valve characteristic Logarithmic
Leakage $\leq 0.05\%$ of k_{vs}
Temperature range max. 150°C
Connection:
- type L1UP External connection threads ISO 228
ISO 228
- type L1IP Internal connection threads ISO 7/1

Dimension Sketch



Type	L mm	H1 mm	H mm (w/MT40)	H mm (w/MT40A)	L1 mm	d	B mm
Type L1UP (External connection threads ISO 228)							
15 L1UP	85	20	220	250	122	G $\frac{3}{4}$ B	92
20 L1UP	95	23	225	255	122	G1B	92
Type L1IP (Internal connection threads ISO 7/1)							
15 L1IP	85	20	220	250	122	Rp $\frac{1}{2}$	92
20 L1IP	95	23	225	255	122	Rp $\frac{3}{4}$	92

Definition of k_{vs} -value

The k_{vs} -value is identical to the IEC flow coefficient k_v and defined as the water flow rate in m³/h through the fully open valve by a constant differential pressure, Δp_v , of 1 bar.

Mounting

For valve temperatures of max. 170°C, the motor can be fitted below or above the valve.

Strainer

It is recommended to use a strainer in front of the regulating valve if the liquid contains suspended particles.

Accessories

Pipe connectors for L1UP valves.

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