



MB30A

Modulating 0–10 V
Butterfly Valve actuator

G-20-16

4 Aug 2003

MB30A is an electromechanical actuator for motorizing butterfly valves TRV-S.

MB30A is available for 24 V and it is controlled by 0 – 10 V or 0 – 20 mA signal.

The actuators working range is set from factory to 90° to fit with TRV-S.

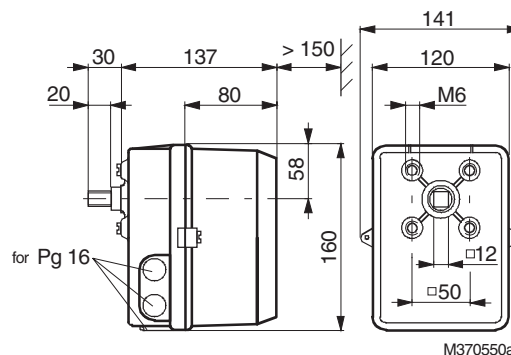
MB30A can be operated manually a pointer between the actuator and the valve indicates the valve position.



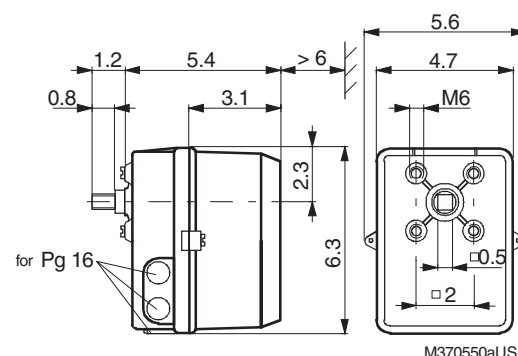
TECHNICAL SPECIFICATION

Part number see table below
 Duty cycle 100%
 Torque 30 Nm (22,1 ft-lbf)
 Control signal:
 Voltage 0 – 10 V
 Impedance min. 30 kΩ
 Output Y:
 Voltage 0 – 10 V
 Impedance min. 2,5 kΩ
 Enclosure material :
 Cover cast light alloy
 House cast light alloy
 Color black/aluminium
 Standards conformity:
 EMC, emission SS EN 50081-1
 EMC, immunity SS EN 50082-1
 Enclosure rating IP 55
 Ambient humidity < 95 %rH
 Ambient temperature:
 Operation –5 to +50 °C (23 to +122 °F)
 Storage –30 to +70 °C (– 22 to +158 °F)
 Maintenance maintenance-free
 Weight:
 MB30A-60s-24V 2.7 kg (6.0 lb)
 MB30A-120s-24V 2.4 kg (5.3 lb)

Dimensions in mm



Dimensions in inches



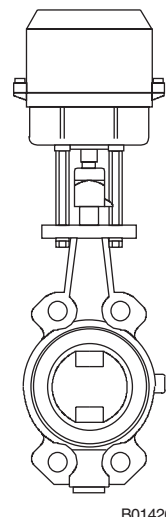
Part number	Description	Running time 90° ∠	Power supply	Power consumption			
				50 Hz		60Hz	
				running	standstill	running	standstill
865-3018-000	MB30A-60s-24V	60s	24 Vac±20%	5.1 VA	0.7 VA	5.4 VA	0.7 VA
865-3028-000	MB30A-120s-24V	120s	24 Vac±20%	5.1 VA	0.7 VA	5.4 VA	0.7 VA

SELECTION OF ASSEMBLY KIT

Part number		Actuator Input		MB30A 0-10 V/0-20 mA ΔP_c		
		Size DN	in.	Kit ¹⁾	kP	psi
721-6010-000	TRV-S 25	25	1	C	1000	145
721-6014-000	TRV-S 32	32	1½	C	1000	145
721-6018-000	TRV-S 40	40	1¾	C	1600	232
721-6022-000	TRV-S 50	50	2	C	1600	232
721-6026-000	TRV-S 65	65	2½	C	1600	232
721-6030-000	TRV-S 80	80	3	D	1000	145
721-6034-000	TRV-S 100	100	4	D	1000	145
721-6038-000	TRV-S 125	125	5	D	600	87
721-6042-000	TRV-S 150	150	6	E	500	72
721-6046-000	TRV-S 200	200	8	E	300	43

ΔP_c = Permissible differential pressure when the valve is closed

¹⁾ Needed assembly kit C= **911-3018-000** Kit MB30 to TRV-S DN25-65
D= **911-3022-000** Kit MB30 to TRV-S DN80-125
E= **911-3026-000** Kit MB30 to TRV-S DN150-200



FUNCTION

The actuator

MB30A consists of a reversible motor and a gear train in a cast light alloy housing.

All bearings of motor and gear train are of permanent lubrication type.

The reversible motor cuts out in both end positions on activating limit switches.

The operating range of the MB30A is 90 degrees.

Control signal

MB30A is controlled by a voltage or current input so that a certain level always corresponds to a position of the actuator.

The control signal reaction can be programmed normal or inverted. See settings.

Position feedback

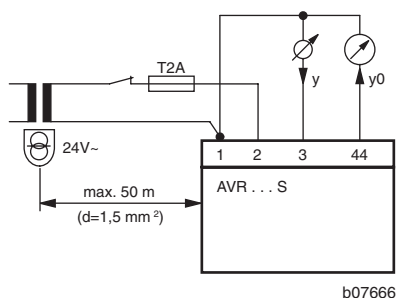
The feedback output can be voltage or current. See settings.

Manual operation

The actuator can be manually operated by means of a handle used in a position under the cover of the actuator. See settings.

The position of the actuator is indicated with a pointer between the actuator and the valve.

WIRING



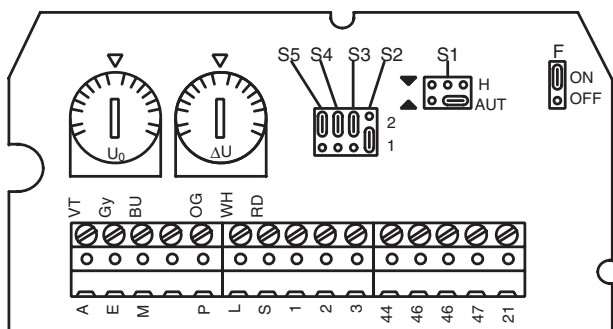
INSTALLATION

The installation of the MB30A is carried out according to instruction, shipped together with the actuator.

The actuator may be mounted beside or above the valve. Mounting below the valve should be avoided.

SETTINGS

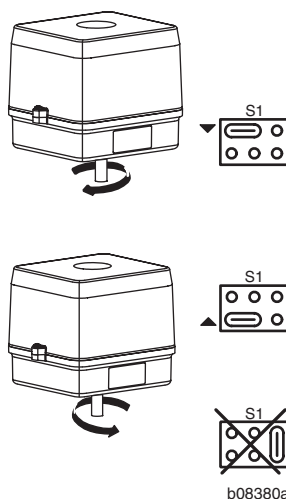
After the cover is removed functions as control signal type, reaction and output signal type can be programmed by moving jumpers.



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S1: Standby mode

By these positions on jumper S1 the actuator will drive the valve to either closed or fully open. It will stay in this position until the jumper is moved to the automatic mode see below.

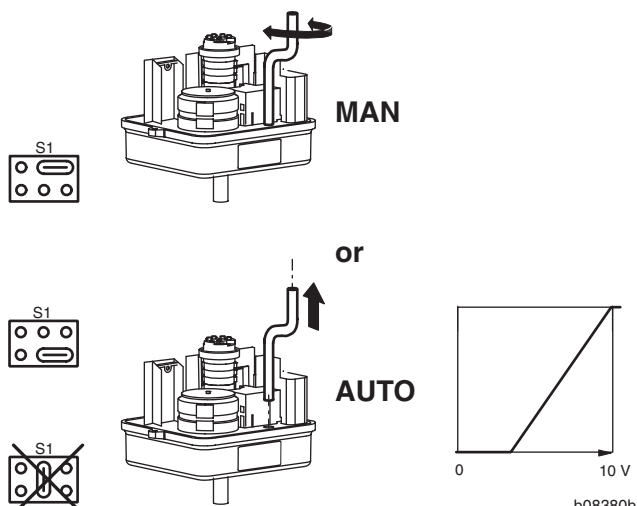


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S1: Manual operation

To secure the manually set position the jumper has to be in the high right position.

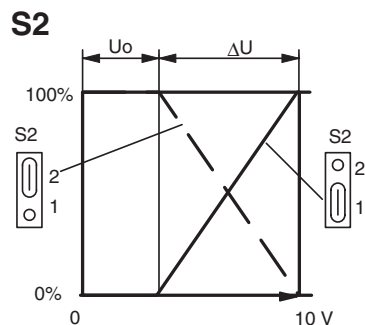
To get automatic mode, when the actuator acts on control signal, the jumper S1 has to be in its low right position.



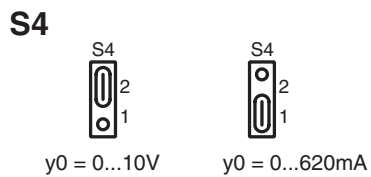
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SETTINGS

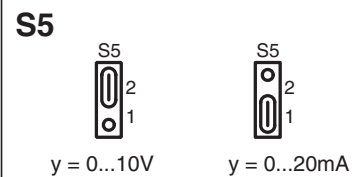
S2: Direct reversed acting



S4: Feed back signal type

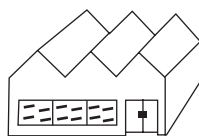


S5: Control signal type

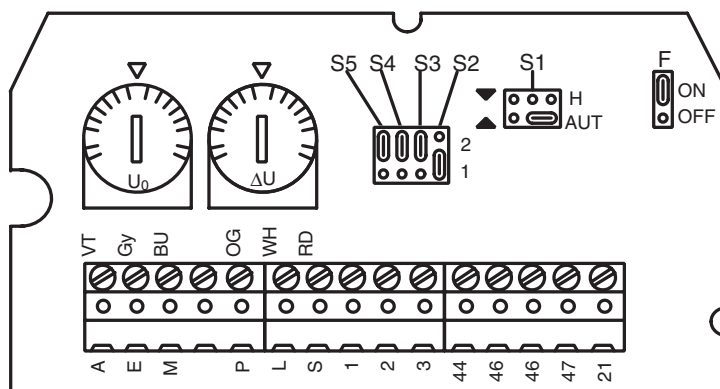


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FACTORY SETTINGS



S1: Pos. = AUT S2: Pos. = 1 (direct acting)
 F: Pos. = ON S3: Pos. = 2 (no function)
 U_o : = 0,5V S4: Pos. = 2 ($Y = 0 \dots 10V$)
 ΔU = 10V S5: Pos. = 2 ($X1 = 0 \dots 10V$)



B10047Factory

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