

A44 W0...W2: Motor drive

How energy efficiency is improved

Electric cut-off in end position to save energy.

Areas of application

Actuation of regulating units, such as air dampers, gate valves, butterfly valves, etc. For controllers with a switching output (3-point control).

Features

- Torque up to 30 Nm
- Synchronous motor with limit switch
- Maintenance-free gearbox
- Control of regulating unit to be activated in any intermediate position
- Rotation angle min. 30° to max. 320°

Technical description

- Depending on the model, the torque is 25 or 30 Nm
- Cast light alloy housing
- Cover made of self-extinguishing thermoplastic
- Electrical connections (max. 1.5 mm²) with screw terminals
- Cable clamping sleeve M20 x 1.5
- Crank handle for manual adjustment with automatic motor cut-off
- Depending on the model, the running time for 90° rotation angle is 30, 60 or 120 sec.



T04258



Y07551

Type	Torque Nm	Holding torque Nm	Running time for 90° s	Voltage	Weight kg
A44 W0 F001	25	22	30	230 V~	2,5
A44 W0 F020	25	22	30	24 V~	2,5
A44 W1 F001	30	30	60	230 V~	2,5
A44 W1 F020	30	30	60	24 V~	2,5
A44 W2 F001	30	30	120	230 V~	2,2
A44 W2 F020	30	30	120	24 V~	2,2

Supply voltage	230 V~ ± 15%, 50...60 Hz 24 V~ ± 20%, 50...60 Hz	Angle of rotation ²⁾	90°
Power consumption		Perm. ambient temp. ³⁾	-20...60 °C
A44 W0, A44 W1	9,2 W	Perm. ambient humidity	< 95 %rh
A44 W2	3,8 W	Degree of protection ⁴⁾	IP 43 (EN 60529)
Perm. damper area ¹⁾		Wiring diagram	A01344
A44 W0	8 m ²	Dimension drawing	M370550
A44 W1, A44 W2	10 m ²	Fitting instructions	MV 505006

- 1) The recommended permissible damper area applies to equal-sided, easy-action dampers.
- 2) Angle of rotation of end shaft is adjustable from 30° min. to 320° max. by means of a switching cam (starting point is freely selectable). If a potentiometer is fitted: observe potentiometer rotation angle.
- 3) Use a heating resistor in temperatures below 0 °C (accessory).
- 4) Degree of protection IP 43 is attained only in conjunction with cable screw fitting M20x1,5.
Degree of protection IP 55 is attained with steel or aluminium cover (accessory) and cable screw fitting M20x1,5.

Accessories

- 0188614 000*** Fixing bracket for wall mounting
0274605 000* Angle ball joint for clamp-on lever with M10 nut
0294967 000* Pivot-pin for clamp-on lever
0370205 001 Heating resistor 5 W, 230 V~, MV 505058
0370205 002 Heating resistor 5 W, 24 V~, MV 505058
0370396 000* 3 plug-in auxiliary change-over contacts ¹⁾, 10 (2) A 250 V~, MV 505004
0370479 000* Bright galvanised steel cover with lever for external manual adjustment, rubber seal, degree of protection IP 55, olive. Fitted as per MV 505005
0370486 000* Clamp-on lever, complete (incl. square-head hub)
0370493 000* 2 plug-in auxiliary change-over contacts ¹⁾, 10 (2) A 250 V~, MV 505004
0370628 000* Adaptor plate including four M6 counter-sunk screws for replacing A33 W by A44 W.
0370638 000* Straight ball joint for clamp-on lever with M10 nut
0370715 001* Cover of diecast aluminium, with rubber seal, degree of protection IP 55
0371290 001* Black cover of diecast aluminium; with window, rubber seal, position indicator and scale. Fitted as per MV 505329, degree of protection IP 55
0372460 001 Cable screw fitting (plastic M20x1,5) incl. locking nut and gasket, max. 3 pcs.

Potentiometer 1,0 W, with slipping clutch, fitted as per MV 505228

Set of cogs according to angle of rotation of end shaft

- | | | | |
|---------------------|---|--------------------|------------------|
| 0370640 ...* | /001 = 2000 Ω | /002 = 130 Ω | /006 = 1000 Ω |
| 0370641 ...* | /001 = 130/2000 Ω | /002 = 2000/2000 Ω | /006 = 130/140 Ω |
| 0370644 001 | Rotation-angle cog set 90° or 180° with clutch | | |
| 0370644 002 | Rotation-angle cog set 120° or 150° with clutch | | |
| | Other resistance values or angles of rotation (135°, 270°, 320°) on demand. | | |

Potentiometer 1,0 W, with rigid clutch ²⁾, fitted as per MV 505222

Set of cogs (370646) according to angle of rotation of end shaft

- | | | |
|--------------------|---|---------------|
| 0370645 ... | /006 = 1000 Ω | /007 = 5000 Ω |
| 0370646 001 | Rotation-angle cog set 90°, without clutch | |
| 0370646 002 | Rotation-angle cog set 120°, without clutch | |

^{*)} Dimension drawing or wiring diagram are available under the same number

¹⁾ Switching cam 180° ON or 180° OFF can be positioned at any point over the entire angle of rotation (360°).

²⁾ Potentiometers with a rigid clutch are obligatory for certain TÜV-approved burner control systems.

Operation

The regulating unit can be driven to any intermediate position by making the electric circuit at terminals 1-2 or 1-3 respectively. Viewed from the drive towards the shaft, the output shaft rotates in an anti-clockwise direction if the power is at terminal 2. The reversible synchronous motor is switched off by limit switches at its end positions; self-locking is in this case ensured by a built-in magnetic brake. Using the hand crank for manual operation will interrupt the neutral conductor of the motor by means of a switch.

Engineering and fitting notes

The max. internal equipment of the drive unit comprises: 2 change-over limit switches (standard), 5 auxiliary change-over contacts and 1 dual operation potentiometer or 1 heating resistor.

The angle of rotation of the end shaft can be freely adjusted between 30° max. and 320° min by means of a switching cam. If a potentiometer is built in, the corresponding angle of rotation of the end shaft depends on the rotation-angle wheel set selected; this angle is to be taken into consideration when adjusting the limit switches. Limit and auxiliary change-over contacts are set centrally at the switch dome which is mechanically connected directly to the end shaft.

The connection terminals for auxiliary functions are located at the corresponding limit and auxiliary switches or on the potentiometer, resp. (max. 1,5 mm); the protective conductor terminal is located on the steel coverplate. The drive unit is fixed through four M6 holes on the end shaft side. The motor drive can be installed in any position.

Fitting outdoors. If the devices are fitted outdoors, we recommend that additional measures be taken to protect them against the effects of the weather.

Additional technical data

Storage and transportation temp. limits	-30...70 °C	Power consumption at 60 Hz	
		A44 W0, A44 W1	10,4 W
		A44 W2	4,8 W
A44 W0 F001		A44 W0 F020	
Complies with:-		Complies with:-	
Directive 2006/95/EC	EN 60730-1/ EN 60730-2-14	EMC directive 2004/108/EC	EN 61000-6-1/ EN 61000-6-2
EMC directive 2004/108/EC	EN 61000-6-1/ EN 61000-6-2		EN 61000-6-3/ EN 61000-6-4
	EN 61000-6-3/ EN 61000-6-4		

Additional data for accessories

- 0370493 000** (2 auxiliary contacts) min. load: 100 mA, 24 V~
- 0370396 000** (3 auxiliary contacts) min. load: 100 mA, 24 V~
- 0370479 000** (steel cover w/ manual adjustment) olive, hammer enamel RAL 1020

Accessories Potentiometer

- 0370640 . . .** Single-operation potentiometer 1,0 W
- 0370641 . . .** Dual-operation potentiometer 1,0 W (installation as per MV 505228)

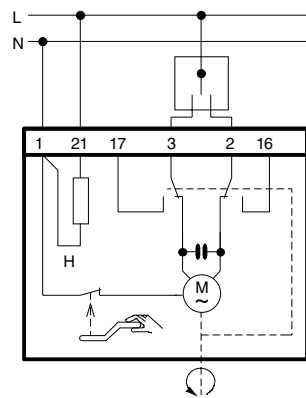
Accessories 0370644 . . .

Set of cogs (fitted as per MV 505228)

/ . .	single Ω	dual Ω	/ . .	single	dual Ω
/001	2000	130/2000	/008	-	130/130
/002	130	2000/2000	/009	-	130/500
/003	100	100/100	/010	-	130/1000
/004	200	1000/1000	/011	-	130/5000
/005	500	200/200	/012	-	130/10000
/006	1000	130/140	/013	-	1000/2000
/007	-	130/200	-	-	-

/ . .	angle
/001	90/180
/002	120/150
/003	135
/004	270
/005	320

Wiring diagram



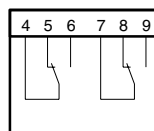
Counterclockwise when voltage on 2 (seen from the drive to the regulating unit).

H= heating resistor / (accessory)

A01344

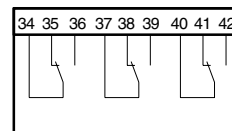
Accessories

370493



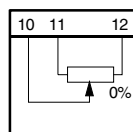
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370396



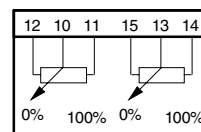
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370640/. . .



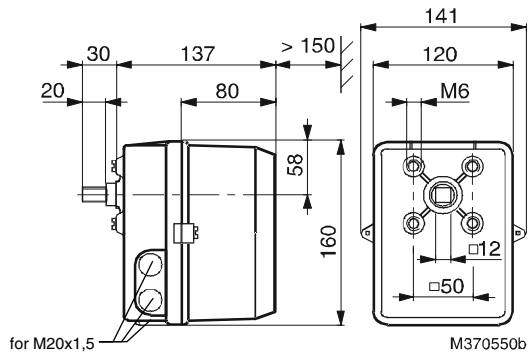
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370641/. . .



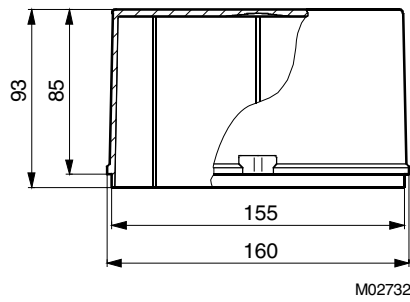
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Dimension drawing

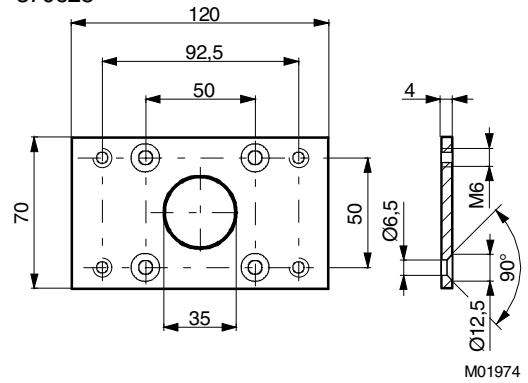


Accessories

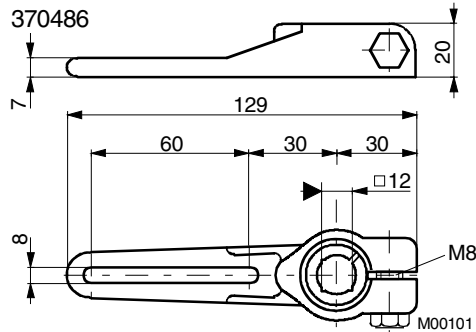
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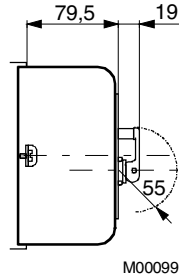
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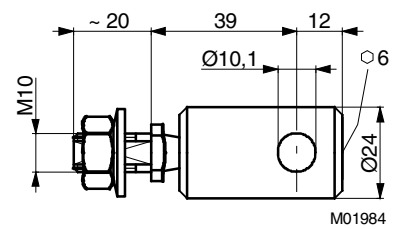
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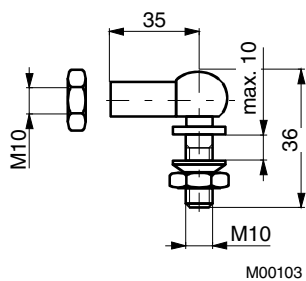
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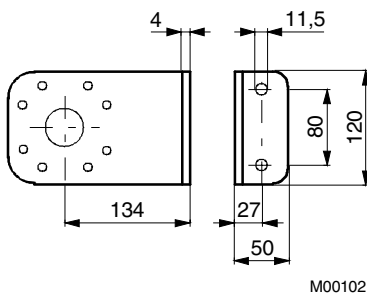
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188614



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