

Data sheet

Electrical rotary actuators

AMB 162, AMB 182

Description

**Main Data:**

- Nominal voltage
 - 2 and 3 point:
 - 230 V AC, 50/60 Hz
 - 24 V AC, 50/60 Hz;
 - modulating:
 - 24V AC/DC;
- Output torque 5, 10 and 15 Nm;
- Rotation angle 90°;
- Actuator running speed
 - variants: 15/30/60/90/120/240/480 sec. per 90°
- Control signal:
 - 2-point,
 - 3-point,
 - modulating (0(2)-10 V and 0(4)-20 mA).

Features:

- Additional AUXILIARY switch;
- Indication of actual valve position;
- LED indication of turning direction;
- Manual valve turning mode enabled by a permanent clutch;
- No damage in case of valve blocking;
- Silent and reliable operation;
- Maintenance free;
- Selectable speed on DIP switch (modulating actuator only);
- LED indication of activated AUXILIARY switch (2&3-point controlled actuators only).

Actuators AMB are intended to control rotating mixing and diverting valves.

AMB 162 and AMB 182 actuators are used for temperature control in central heating systems together with 3-way and 4-way rotary valves of the types HRB, HRE and HFE.

Ordering

Type	Torque (Nm)	Control signal	Speed (s/90°)	Supply voltage (V)	Remark	For RVA DN	Code No.
AMB 162	5	2-point	15	24	-	15-50	082H0270
				230	-		082H0271
				24	AS*		082H0272
				230			082H0273
		3-point	15	24	-		082H0210
			30				082H0211
			60				082H0212
			120				082H0213
			480				082H0214
			15				082H0215
			30				082H0216
			60		AS*		082H0217
			120				082H0218
			480				082H0219
			15	230	-		082H0220
			30				082H0221
			60				082H0222
			120				082H0223
			480				082H0224
			15		AS*		082H0225
			30				082H0226
			60				082H0227
			120				082H0228
			480				082H0229
		mod	60/90/120	24	-		082H0230

* actuator with build in aux switch

Ordering (continuous)

Type	Torque (Nm)	Control signal	Speed (s/90°)	Supply voltage (V)	Remark	For RVA DN	Code No.
AMB 182	15	2-point	60	24	-	15-150	082H0274
				230			082H0275
				24	AS*		082H0276
				230			082H0277
	10	3-point		24	-	15-100	082H0231
				230			082H0232
	15			24	-	15-150	082H0233
							082H0234
			082H0235				
			082H0236				
		AS*	082H0237				
			082H0238				
		-	082H0239				
			AS*		082H0240		
	mod	60/90/120	24		-	15-150	082H0241

* actuator with build in aux switch

AMB linkage kits

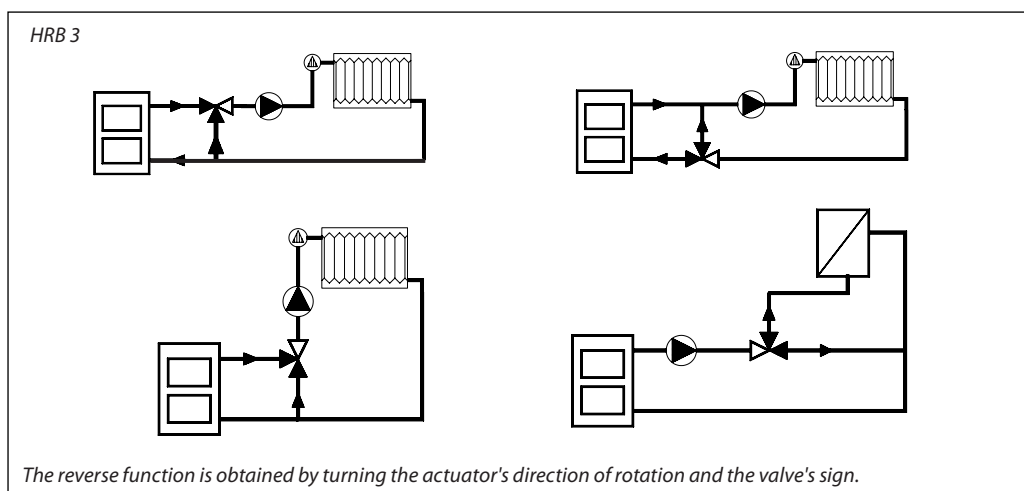
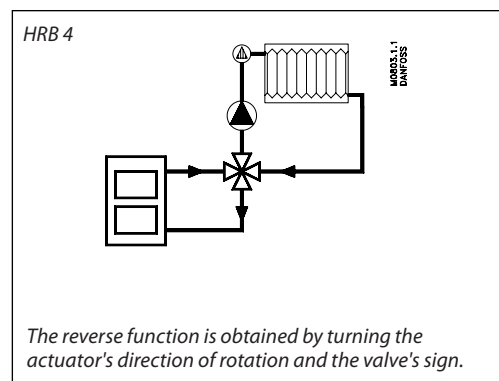
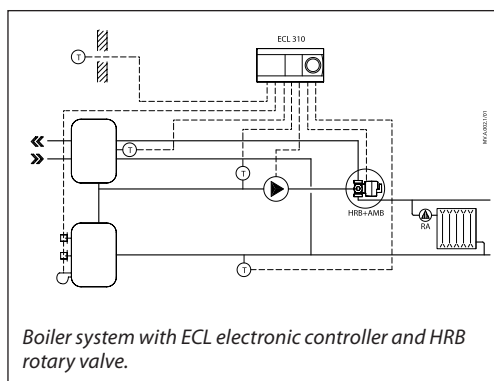
Description	Code No.
for Danfoss HFE, ESBE (old type), Seltron, Somatherm, Hora, WIP, PAW, Acaso, BRV, IMIT, IMP, IVAR	082H0250
for Centra - Type DR/ZR	082H0251
for Centra - Type DRU	
for Meibes, Wita	082H0252
for Honeywell - Type V5442.., Type V5433..	082H0253
for old Danfoss RVA, Esbe VRG	082H0254
for Danfoss HRB, HRE	082H0255

Technical data

Power supply	2-point	V	24 AC or 230 AC; ±10%
	3-point		
	modulating		24 AC/DC; ±10%
Power consumption		VA	AMB 162: 2.5
			AMB 182: 3.5
Frequency		Hz	50/60
Running speed	2-point	sec/90°	15/60
	3-point		15/30/60/120/240/480
	modulating		60/90/120*
Control input			2&3-point modulating (0(2)-10 V and 0(4)-20 mA)
Operating torque		Nm	5, 10 or 15
Rotation angle			90°
Auxiliary switch			adjustable 0-90° (only 2 and 3 point actuators)
Max. medium temperature		°C	110
Ambient temperature			0 ... 50
Storage and transport temperature			-10 ... 80
Protection Class	24 V		III according to EN 60730-1
	230 V		II according to EN 60730-1
Grade of enclosure			IP42 according to EN 60529
Wire lenght		m	2
Weight		g	300
Color / material			dark grey/PC
CE - marking in accordance with standards			Restriction of Hazardous Substances Directive (RoHS2) 2011/65/EU Low Voltage Directive (LVD) 2014/35/EU Electromagnetic Compatibility Directive (EMC) 2014/30/EU

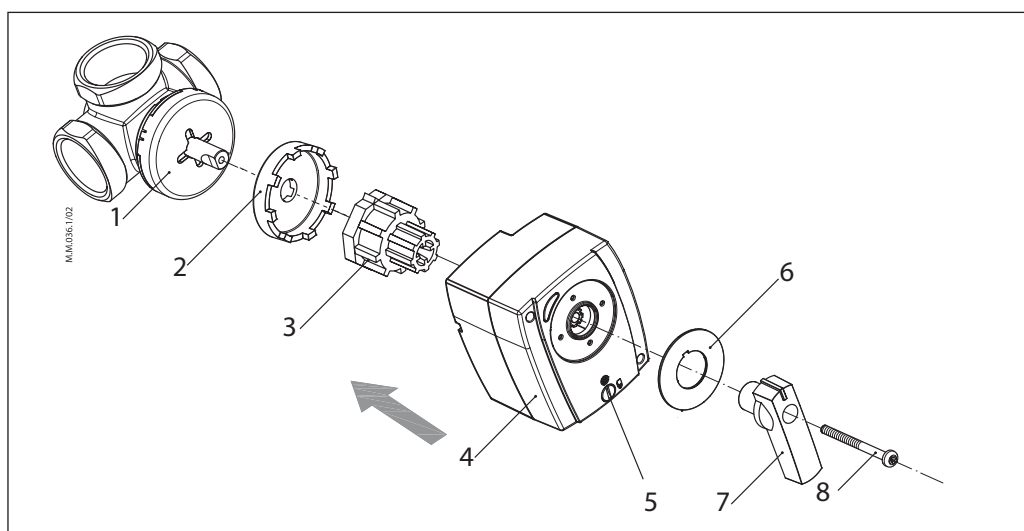
* selectable on DIP switch

Application principle



Installation procedure

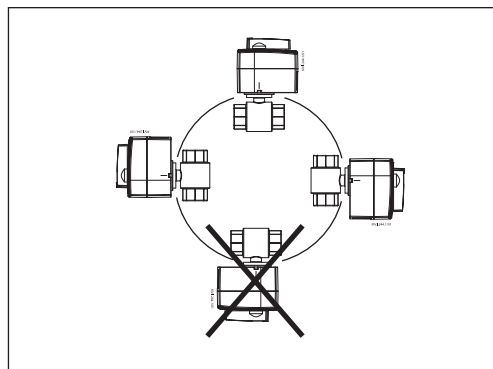
1. Rotary valve
2. Anti-rotation spacer
3. Valve adapter
4. Actuator
5. Manual operating clutch
6. Position indicator
7. Handle
8. Fixing screw



Installation

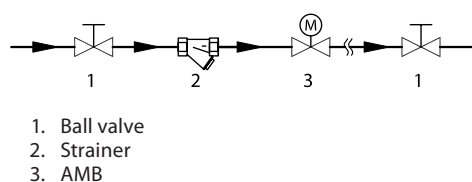
The actuator can be mounted directly to the rotary valve.

Rotating angle is limited to 90° and when the actuator reaches the limit, the voltage supply to the actuator is disconnected.

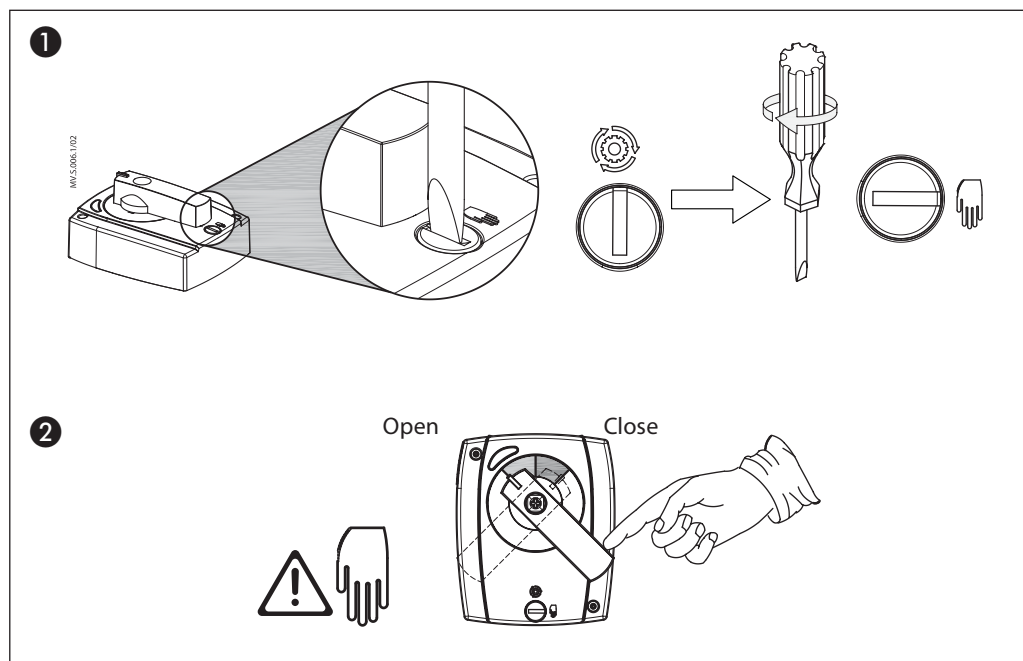


Hydraulic installation

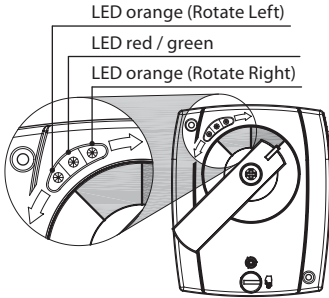
Recommended installation of the electric actuated valve



Manual override



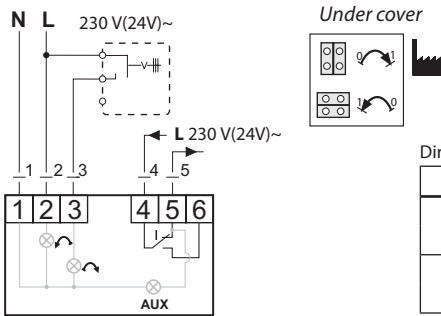
LED signalling



AMB 162/182

LED color	2-point	3-point	Modulating
orange	Rotation Left / Right		
green	-	-	Status OK
red	AUX switch activation	AUX switch activation	-

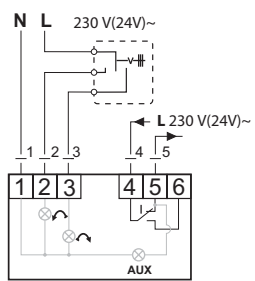
Wiring



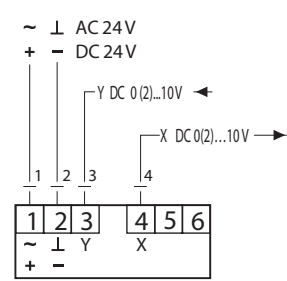
Direct/Inverse function

Jumper	Wiring	Rotation
DIR	L = 2 L = 2 & 3	Left Right
INV	L = 2 L = 2 & 3	Right Left

2-point/2-point+switch

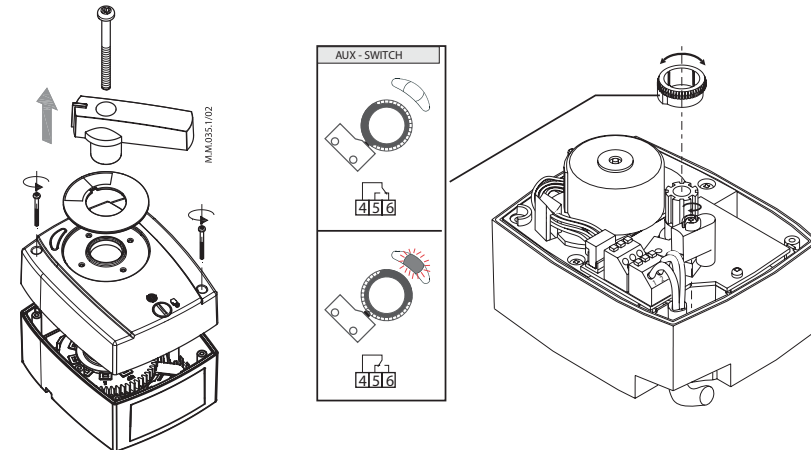


3-point/3-point+switch



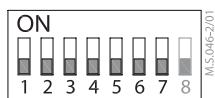
Modulating

2/3-point + switch



DIP switch setting

(modulating actuators only)



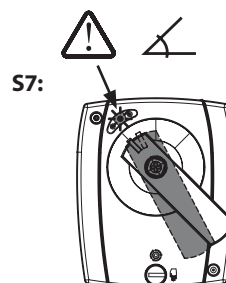
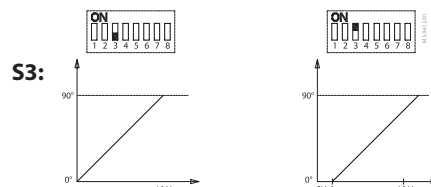
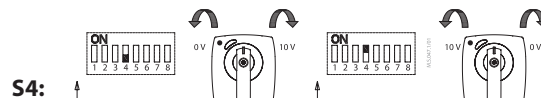
S1	S2	SIG.
0	0	U
1	1	I

S3	U/I
0	0-10 V/0-20 mA
1	2-10 V/4-20 mA

S4	
0	↺
1	↻

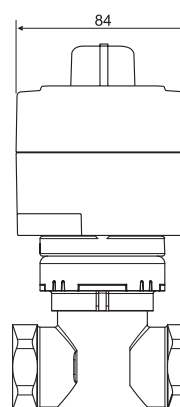
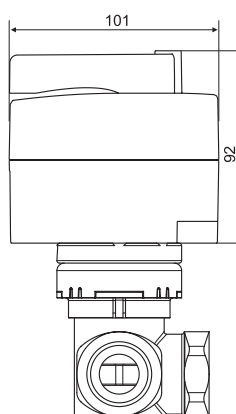
S5	S6	⌚
0	0	60 s
0	1	90 s
1	0	120 s
1	1	120 s

S7	Valve blockage
0	-
1	☀

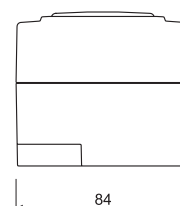
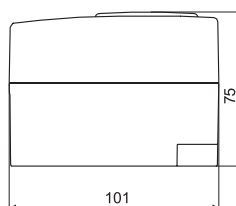


Dimensions

with handle



without handle





Danfoss A/S

Climate Solutions • danfoss.com • +45 7488 2222

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