

Data sheet

Electrical rotary actuators AMB 162, AMB 182

Description



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).

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).

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	AS*		082H0273				
		3-point	15	3-point	15		24	-	082H0210		
									30	082H0211	
									60	082H0212	
									120	082H0213	
									480	082H0214	
									15	082H0215	
									30	082H0216	
									60	082H0217	
			24		24		AS*	24	-	082H0218	
										120	082H0219
										480	082H0220
										15	082H0221
										30	082H0222
										60	082H0223
										120	082H0224
										480	082H0225
			230		230		AS*	230	-	082H0226	
										15	082H0227
										30	082H0228
										60	082H0229
120	082H0230										
480	082H0230										
mod	60/90/120	mod		60/90/120		24				-	082H0230
											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			3-point	24	-	15-150	082H0233
								240
			60		AS*	082H0235		
			240			082H0236		
		60	082H0237					
		230	240		-	082H0238		
			60			082H0239		
	240		082H0240					
		mod		60/90/120	24	-	15-150	082H0241

* actuator with build in aux switch

AMB linkage kits

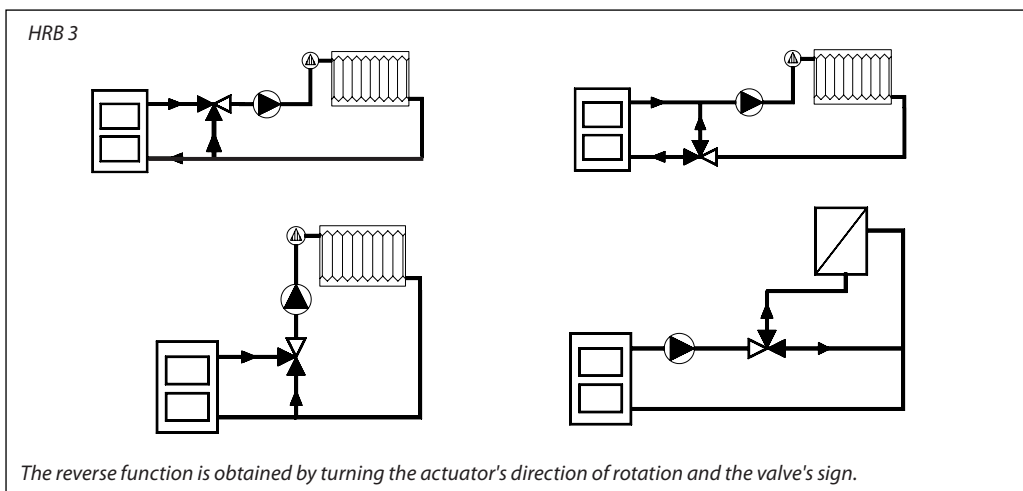
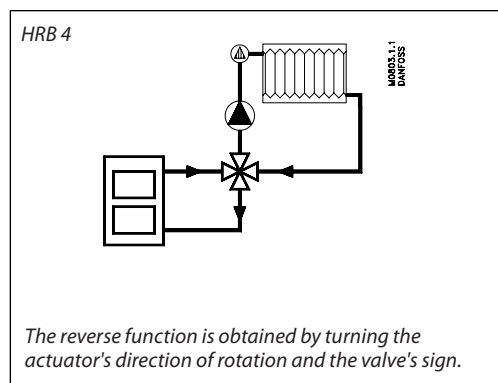
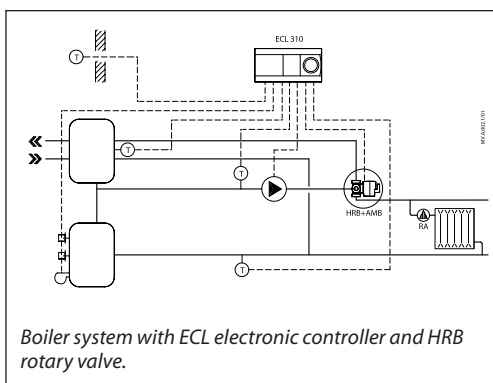
Description	Code No.
for Danfoss HFE, ESBE (old type), Seltron, Somatherm, Hora, WIP, PAW, Acaso, BRV, IMIT, IMP, IVAR	082H0250
for Centra - Type DR/ZR	082H0251
for Centra - Type DRU	
for Meibes, Wita	082H0252
for Honeywell - Type V5442.., Type V5433..	082H0253
for old Danfoss RVA, Esbe VRG	082H0254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

Technical data

Power supply	2-point	V	24 AC or 230 AC; ±10%
	3-point		
	modulating		
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
- 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

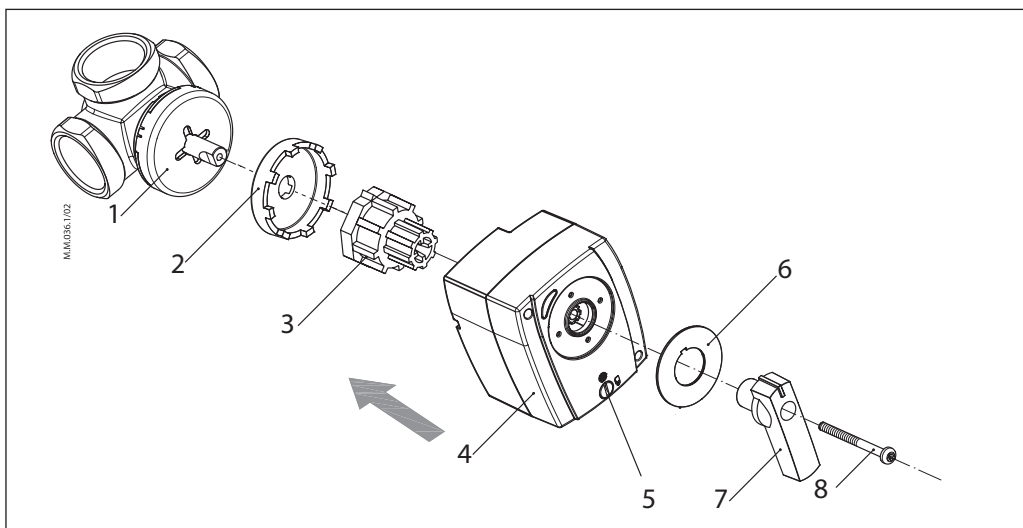
* selectable on DIP switch

Application principle



Installation procedure

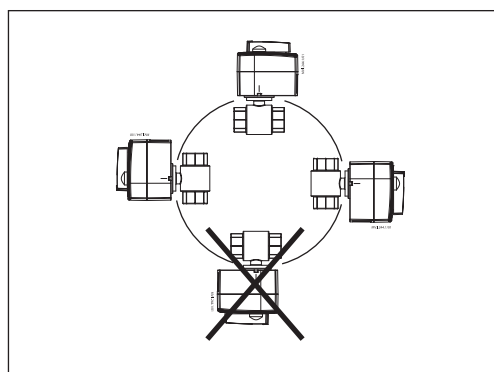
1. Rotary valve
2. Anti-rotation spacer
3. Valve adapter
4. Actuator
5. Manual operating clutch
6. Position indicator
7. Handle
8. Fixing screw



Installation

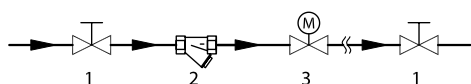
The actuator can be mounted directly to the rotary valve.

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



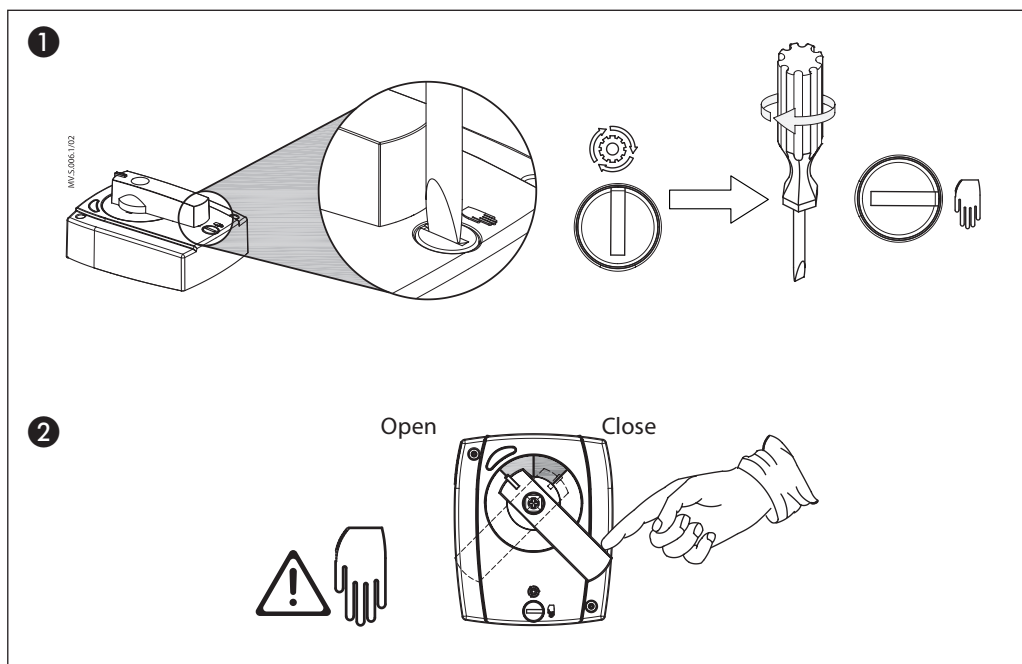
Hydraulic installation

Recommended installation of the electric actuated valve



- 1. Ball valve
- 2. Strainer
- 3. AMB

Manual override



LED signalling

LED orange (Rotate Left)
LED red / green
LED orange (Rotate Right)

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

Under cover

2-point+switch

Direct/Inverse function		
Jumper	Wiring	Rotation
DIR	L = 2	Left
	L = 2 & 3	Right
INV	L = 2	Right
	L = 2 & 3	Left

3-point/3-point+switch

Modulating

2/3-point + switch

AUX-SWITCH
MAM0351/02

DIP switch setting
(modulating actuators only)

ON

N.U.S.0466-1/01

S1	S2	SIG.
0	0	U
1	1	I

S4	↻
0	↻
1	↻

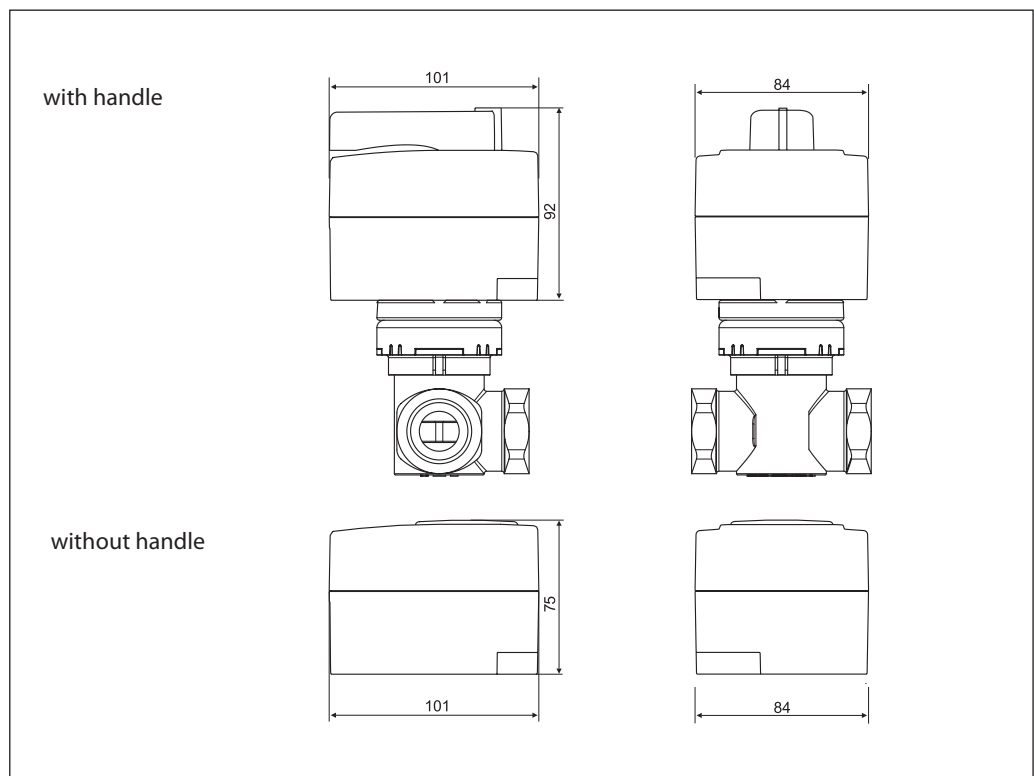
S3	U/I
0	0-10 V/0-20 mA
1	2-10 V/4-20 mA

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

S4:

S3:

Dimensions





Danfoss A/S

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