

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	24	-		082H0210	
			30				082H0211	
			60				082H0212	
			120				082H0213	
			480				082H0214	
			15				AS*	082H0215
			30					082H0216
			60					082H0217
			120		082H0218			
			480		082H0219			
			15		-			082H0220
			30					082H0221
			60					082H0222
			120				082H0223	
			480				082H0224	
			15				230	AS*
		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	3-point		24	240	-	15-150	082H0233	
								60	082H0234
			240		AS*			082H0235	
			60					082H0236	
			240		230			-	082H0237
			60						082H0238
			240						AS*
	240	082H0240							
	mod		60/90/120	24	-	15-150	082H0241		

* actuator with build in aux switch

AMB linkage kits

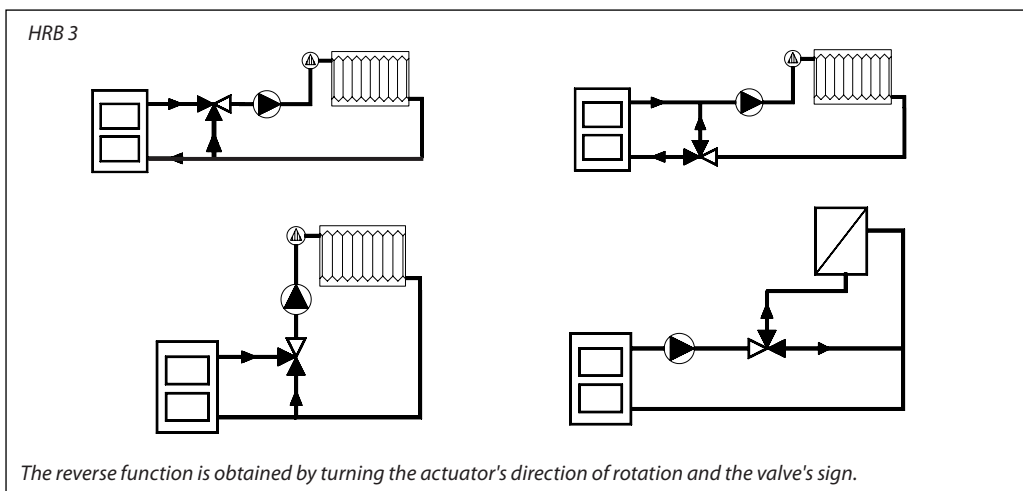
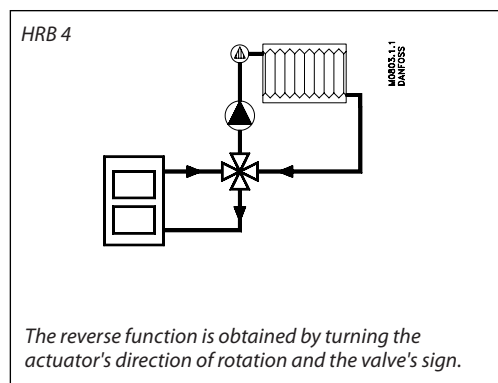
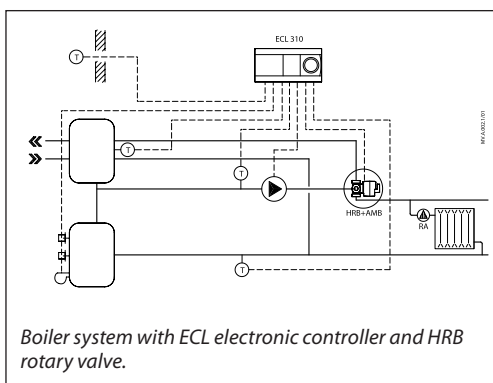
Description	Code No.
for Danfoss HFE, ESBE (old type), Seltron, Somatherm, Hora, WIP, PAW, Acaso, BRV, IMIT, IMP, IVAR	082H0250
for Centra - Type DR/ZR	082H0251
for Centra - Type DRU	
for Meibes, Wita	082H0252
for Honeywell - Type V5442.., Type V5433..	082H0253
for old Danfoss RVA, Esbe VRG	082H0254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

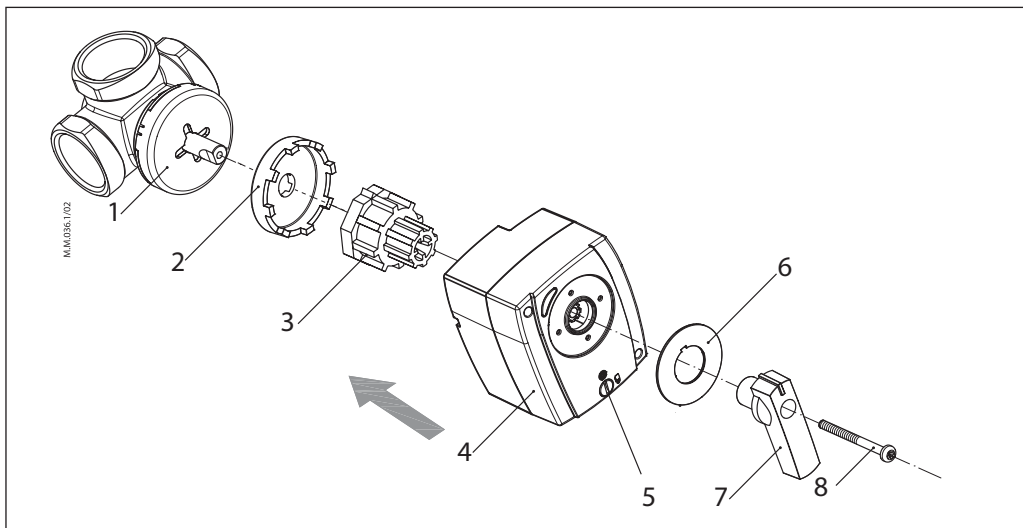
* selectable on DIP switch

Application principle



Installation procedure

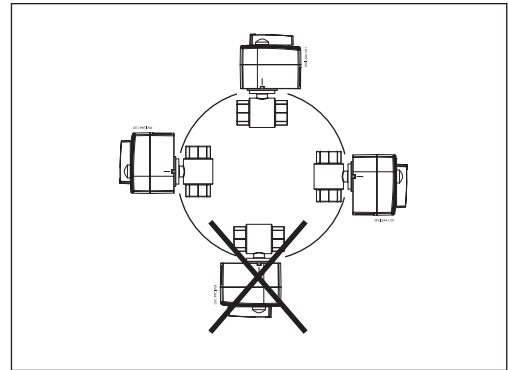
1. Rotary valve
2. Anti-rotation spacer
3. Valve adapter
4. Actuator
5. Manual operating clutch
6. Position indicator
7. Handle
8. Fixing screw



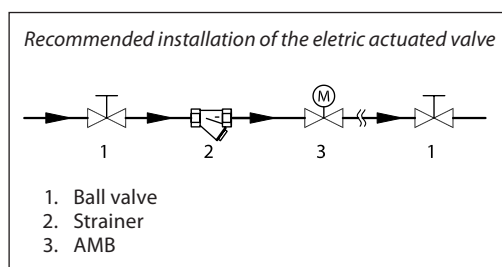
Installation

The actuator can be mounted directly to the rotary valve.

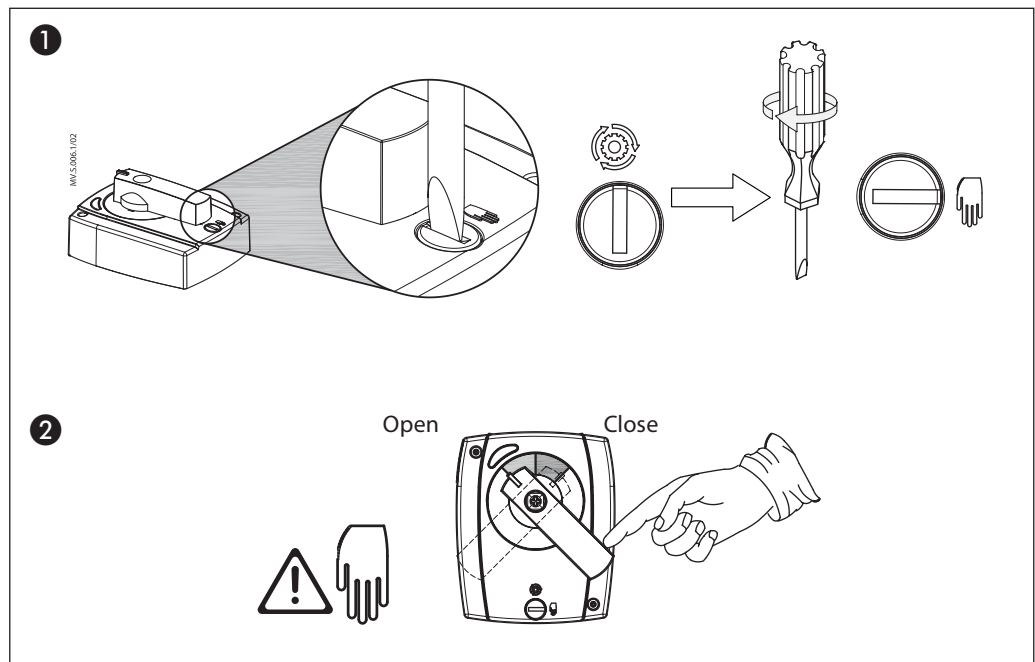
Rotating angle is limited to 90° and when the actuator reaches the limit, the voltage supply to the actuator is disconnected.



Hydraulic installation



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/2-point+switch

Direct/Inverse function

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

3-point/3-point+switch

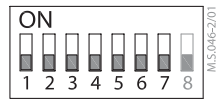
Modulating

~ ⊥ AC 24V
+ - DC 24V
Y DC 0(2)...10V ←
X DC 0(2)...10V →

2/3-point + switch

AUX-SWITCH

DIP switch setting
(modulating actuators only)



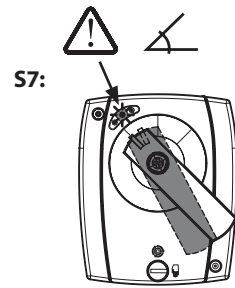
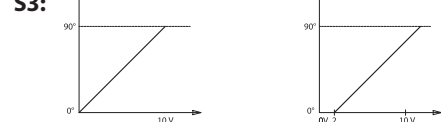
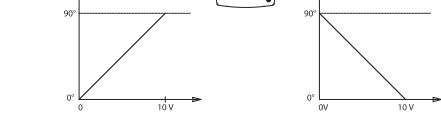
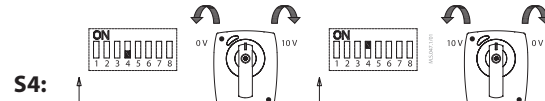
S1	S2	SIG.
0	0	U
1	1	I

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

S4	↻
0	↻
1	↻

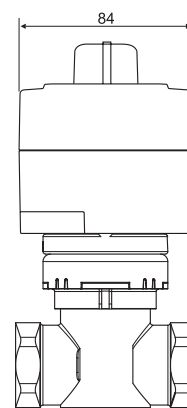
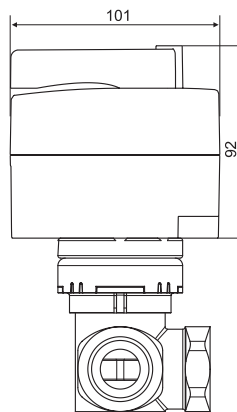
S5	S6	⌚
0	0	60 s
0	1	90 s
1	0	120 s
1	1	120 s

S7	Valve blockage
0	-
1	☀

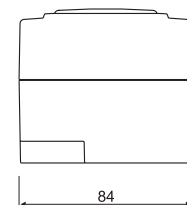
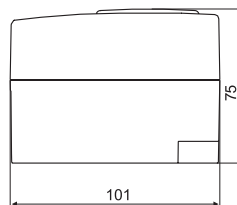


Dimensions

with handle



without handle





Danfoss A/S

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