



Gear actuators

AMB 162/182

Description

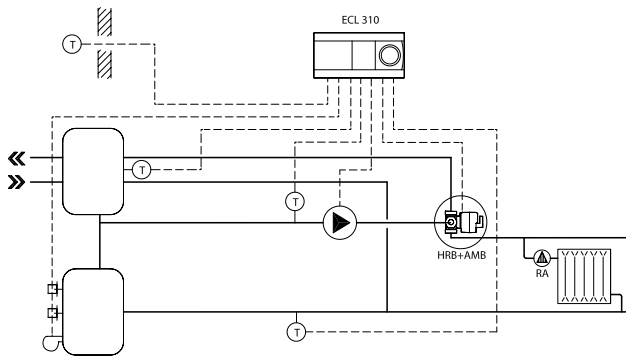
Actuators AMB are intended to control rotating mixing and diverting valves.

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.

Features & benefits

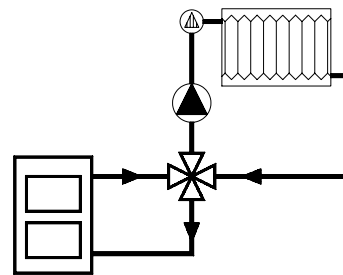
- Additional AUXILIARY switch
- Indication of actual valve position
- LED indication of turning direction
- Manual valve turning mode enabled by a permanent clutch
- No damage in case of valve blocking
- Silent and reliable operation
- Maintenance free
- Selectable speed on DIP switch (modulating actuator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

Applications



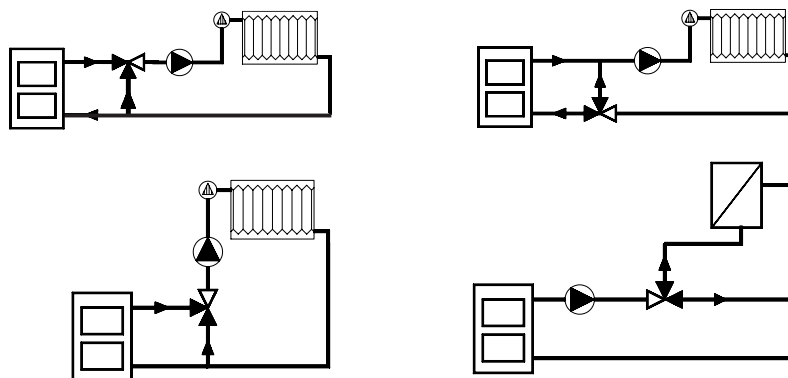
Boiler system with ECL electronic controller and HRB rotary valve.

HRB 4



The reverse function is obtained by turning the actuator's direction of rotation and the valve's sign.

HRB 3



The reverse function is obtained by turning the actuator's direction of rotation and the valve's sign.

Ordering

Product code numbers

Description	Operating torque [Nm]	Control signal type	Actuator speed [s/°]	Supply voltage [V]	Auxiliary switch	Code number
AMB 162 5Nm 3p 15s 24V	5	3-point	15	24 V AC	No	082H0210
AMB 162 5Nm 3p 30s 24V	5	3-point	30	24 V AC	No	082H0211
AMB 162 5Nm 3p 60s 24V	5	3-point	60	24 V AC	No	082H0212
AMB 162 5Nm 3p 120s 24V	5	3-point	120	24 V AC	No	082H0213
AMB 162 5Nm 3p 480s 24V	5	3-point	480	24 V AC	No	082H0214
AMB 162 5Nm 3p 15s 24V AS	5	3-point	15	24 V AC	Yes	082H0215
AMB 162 5Nm 3p 30s 24V AS	5	3-point	30	24 V AC	Yes	082H0216
AMB 162 5Nm 3p 60s 24V AS	5	3-point	60	24 V AC	Yes	082H0217
AMB 162 5Nm 3p 120s 24V AS	5	3-point	120	24 V AC	Yes	082H0218
AMB 162 5Nm 3p 480s 24V AS	5	3-point	480	24 V AC	Yes	082H0219
AMB 162 5Nm 3p 15s 230V	5	3-point	15	230 V AC	No	082H0220
AMB 162 5Nm 3p 30s 230V	5	3-point	30	230 V AC	No	082H0221
AMB 162 5Nm 3p 60s 230V	5	3-point	60	230 V AC	No	082H0222
AMB 162 5Nm 3p 120s 230V	5	3-point	120	230 V AC	No	082H0223
AMB 162 5Nm 3p 480s 230V	5	3-point	480	230 V AC	No	082H0224
AMB 162 5Nm 3p 15s 230V AS	5	3-point	15	230 V AC	Yes	082H0225
AMB 162 5Nm 3p 30s 230V AS	5	3-point	30	230 V AC	Yes	082H0226
AMB 162 5Nm 3p 60s 230V AS	5	3-point	60	230 V AC	Yes	082H0227
AMB 162 5Nm 3p 120s 230V AS	5	3-point	120	230 V AC	Yes	082H0228
AMB 162 5Nm 3p 480s 230V AS	5	3-point	480	230 V AC	Yes	082H0229
AMB 162 5Nm mod 60s 24V	5	Modulating	60 120 90	24 V AC/DC	No	082H0230
AMB 182 10Nm 3p 60s 24V	10	3-point	60	24 V AC	No	082H0231
AMB 182 10Nm 3p 60s 230V	10	3-point	60	230 V AC	No	082H0232
AMB 182 15Nm 3p 60s 24V	15	3-point	60	24 V AC	No	082H0233
AMB 182 15Nm 3p 240s 24V	15	3-point	240	24 V AC	No	082H0234
AMB 182 15Nm 3p 60s 24V AS	15	3-point	60	24 V AC	Yes	082H0235
AMB 182 15Nm 3p 240s 24V AS	15	3-point	240	24 V AC	Yes	082H0236
AMB 182 15Nm 3p 60s 230V	15	3-point	60	230 V AC	No	082H0237
AMB 182 15Nm 3p 240s 230V	15	3-point	240	230 V AC	No	082H0238
AMB 182 15Nm 3p 60s 230V AS	15	3-point	60	230 V AC	Yes	082H0239
AMB 182 15Nm 3p 240s 230V AS	15	3-point	240	230 V AC	Yes	082H0240
AMB 182 14Nm mod 60s 24V	15	Modulating	60 90 120	24 V AC/DC	No	082H0241
AMB 162 5Nm mod 60s 24V I-pack	5	Modulating	120 60 90	24 V AC/DC	No	082H0260
AMB 182 14Nm mod 60s 24V I-pack	15	Modulating	60 90 120	24 V AC/DC	No	082H0261
AMB 162 5Nm 2-point 15s 24V	5	2-point	15	24 V AC	No	082H0270
AMB 162 5Nm 2-point 15s 230V	5	2-point	15	230 V AC	No	082H0271
AMB 162 5Nm 2-point 15s 24V AS	5	2-point	15	24 V AC	Yes	082H0272
AMB 162 5Nm 2-point 15s 230V AS	5	2-point	15	230 V AC	Yes	082H0273
AMB 182 15Nm 2-point 60s 24V	15	2-point	60	24 V AC	No	082H0274
AMB 182 15Nm 2-point 60s 230V	15	2-point	60	230 V AC	No	082H0275
AMB 182 15Nm 2-point 60s 24V AS	15	2-point	60	24 V AC	Yes	082H0276
AMB 182 15Nm 2-point 60s 230V AS	15	2-point	60	230 V AC	Yes	082H0277

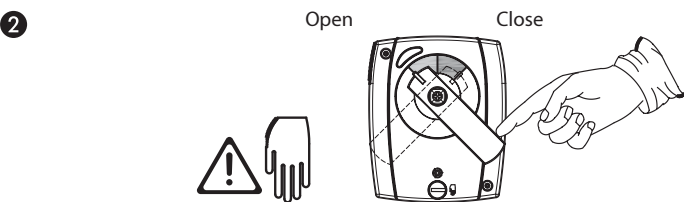
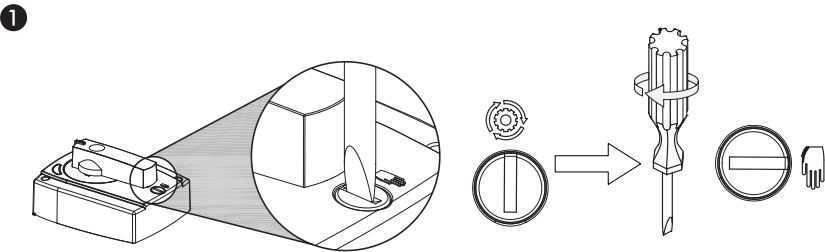
Accessories code numbers

Code number	Type	Description
082H0250	Other valves accessories	AMB Linkage kit multi type
082H0251	Other valves accessories	AMB Linkage kit for Centra
082H0252	Other valves accessories	AMB Linkage kit for Wita, Meibes
082H0253	Other valves accessories	AMB Linkage kit for Honeywell
082H0254	Other valves accessories	AMB Linkage kit for ESBE VRG, Danfoss RV
082H0255	Other valves accessories	AMB Linkage kit for Danfoss HRB,HRE,HFE

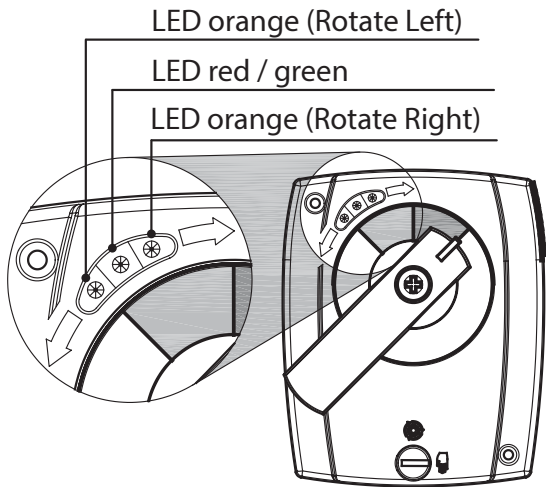
Functions

Operation

Manual override



LED signalling



AMB 162/182

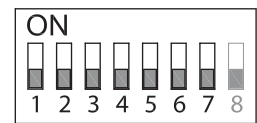
LED color	2-point	3-point	Modulating
orange	Rotation Left / Right		
green	-	-	Status OK
red	AUX switch activation	AUX switch activation	-

Settings

DIP switch setting

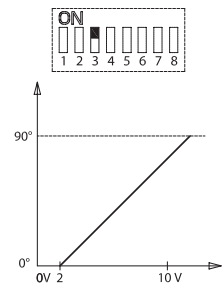
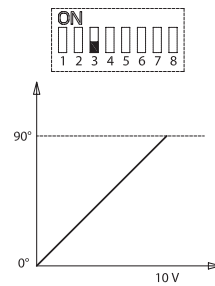
(modulating actuators only)

S1	S2	SIG.
0	0	U
1	1	I



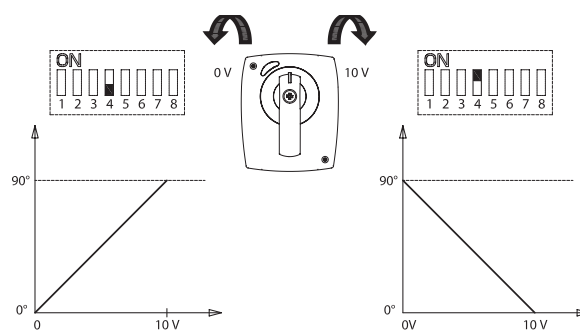
S3	U/I
0	0-10 V/0-20 mA
1	2-10 V/4-20 mA

S3:



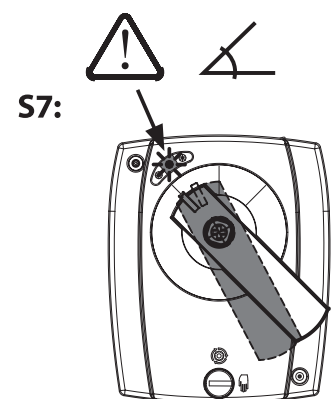
S4	
0	
1	

S4:



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

S7	Valve blockage
0	-
1	



Product details

General data

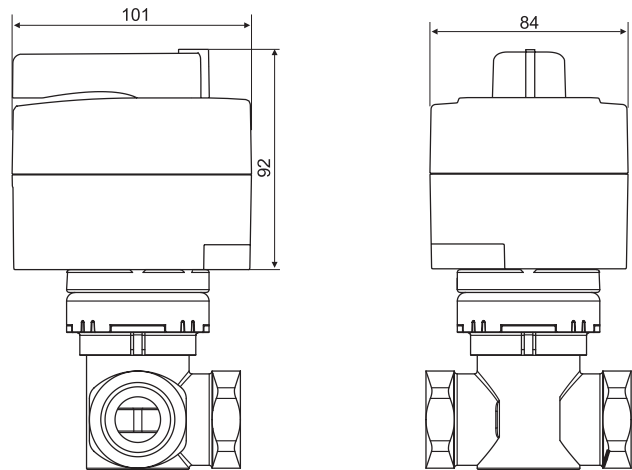
Technical data

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

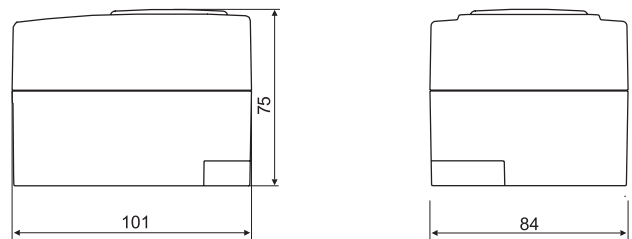
*selectable on DIP switch

Dimensions

with handle

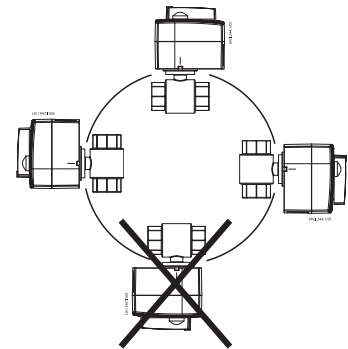


without handle



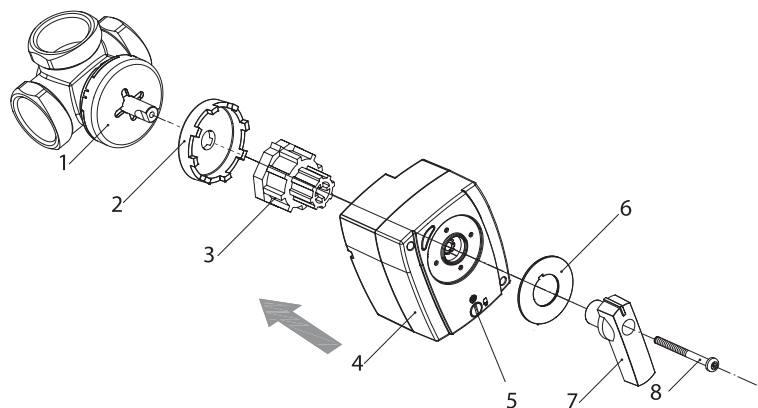
Installation

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.



Installation procedure

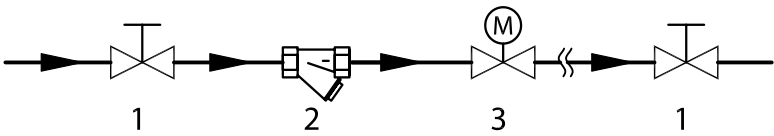
1. Rotary valve
2. Anti-rotation spacer
3. Valve adapter
4. Actuator
5. Manual operating clutch
6. Position indicator
7. Handle
8. Fixing screw



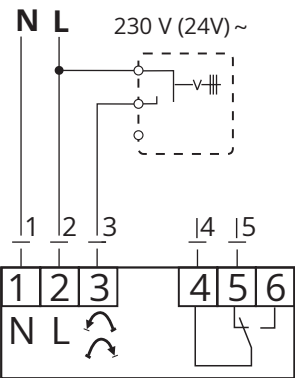
Hydraulic installation

Recommended installation of the electric actuated valve

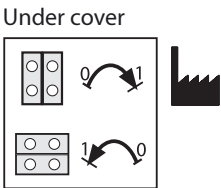
- 1. Ball valve
- 2. Strainer
- 3. AMB



Wiring

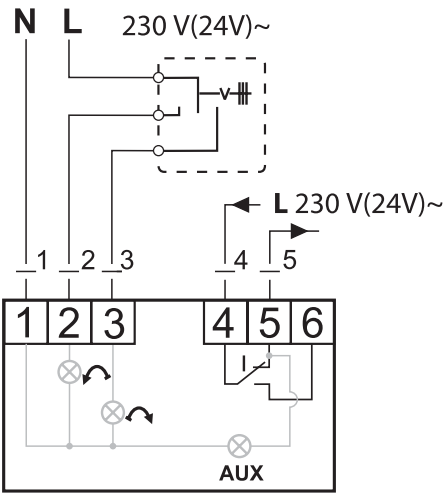


2-point/2-point+switch

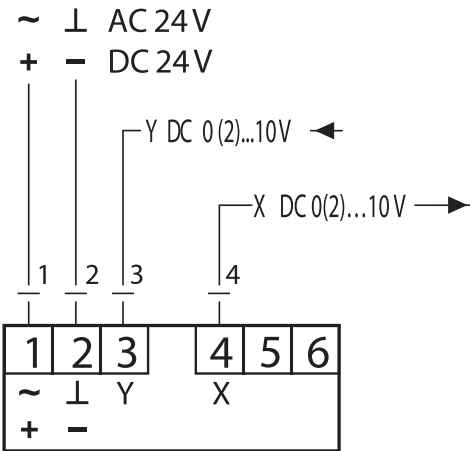


Direct/Inverse function

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



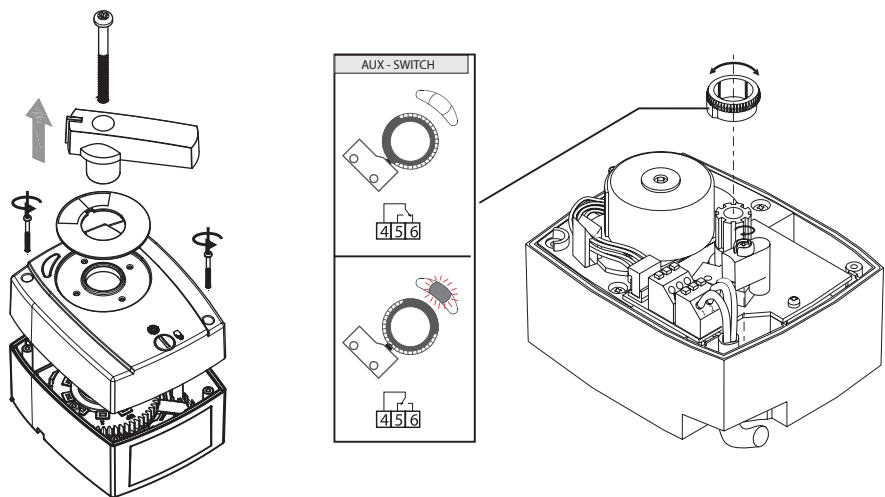
3-point/3-point+switch



Modulating



2/3-point + switch



Certificates, declarations and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

When you click on the link you will be directed to the latest version of the ‘Declaration of Conformity’. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

Approval type	Title	Issuer	Approval topic
UA Declaration	UA Actuators 2024-06-27	Danfoss	LVD
EU Declaration	Danfoss EU 220621EN0802102.01	Danfoss	LVD
Export Control Declaration	Gear and Thermal actuators	Danfoss	
EU Declaration	EU Declaration of conformity 260619EN2801	Danfoss	Packaging

Contact details

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