

Danfoss

**AMB 162
Actuator For
Temperature
Control In
Central Heating
Systems**



Danfoss AMB 162 Actuator For Temperature Control In Central Heating Systems Installation Guide

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Danfoss AMB 162 Actuator For Temperature Control In Central Heating Systems



Product Usage Instructions

- **Power Supply Connection**

- Connect the power supply wires according to the specified N L 230 V (24V) ~ configuration.

- **Input and Output Connections**

- Connect the AC 24 V and DC 24 V input voltages to the corresponding terminals. Connect the output voltage Y DC and control signal X DC to the designated terminals.

- **Operating Mode Selection**

- Set the operating mode to either 3-point or 3-point+switch, Modulating as per your requirements.

- **Valve Control**

- Use the S4 switch for valve control. Rotate the switch to open or close the valve. The LED indicators will show the status of the valve.

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

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

Main Data:

- **Nominal voltage:**
 - 230 V AC, 50/60 Hz,
 - 24 V AC, 50/60 Hz – 3-point,
 - 24V AC/DC – modulating;
- Output torque 5, 10, and 15 Nm;
- Rotation angle 90°;
- **Actuator running speed**
 - **variants:** 15/30/60/120/240/480 sec. per 90°(option to change speeds on DIP switch);
- **Control signal:**
 - 3-point,

- modulating (0(2)-10 V).

Ordering

Type	Torque	Control signal	Speed	Supply voltage	Remark	For RVA DN	Code No.
	(Nm)		(s/90°)	(V)			
AMB 162	5	3-point	15	24	—	15-50	082H0210
			30				082H0211
			60				082H0212
			120				082H0213
			480				082H0214
			15		AS*		082H0215
			30				082H0216
			60				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

Type	Torque	Control signal	Speed	Supply volta ge	Remark	For RVA DN	Code No.
	(Nm)		(s/90°)	(V)			
AMB 182	10	3-point	60	24		15-100	082H0231
				230			082H0232
	15		60	24	—	15-150	082H0233
			240				082H0234
			60		AS*		082H0235
			240				082H0236
			60	230	—		082H0237
			240				082H0238
			60		AS*		082H0239
			240				082H0240
	mod	60/90/120	24	—	15-150	082H0241	

actuator with built-in aux switch

AMB linkage kits

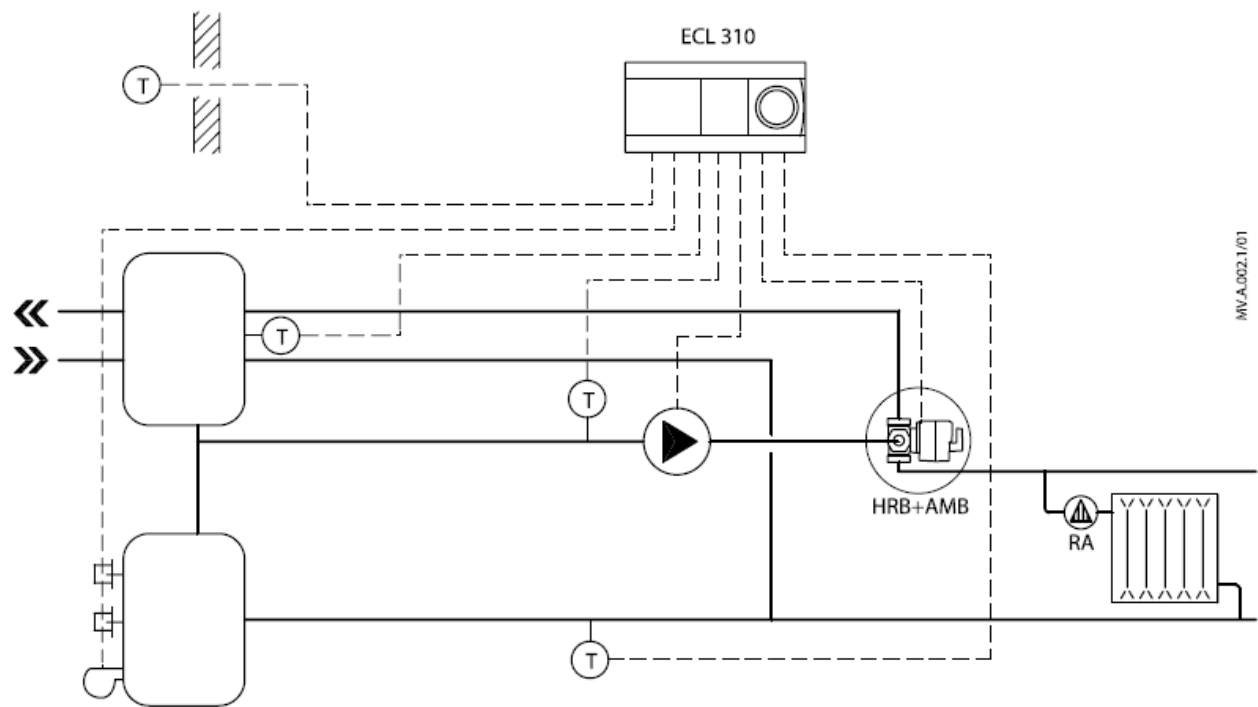
Description	Code No.
for Esbe – old type, Seltron, Somatherm, Hora, WIP, PAW, Acaso, BRV, IMIT, IMP, IVAR	082H0250
for Centra – Type DR/ZR	082H0251
for Centra – Type DRU	
for Meibes, Wita	082H0252
for Honeywell – Type V5442.., Type V5433..	082H0253
for old Danfoss RVA, Esbe VRG	082H0254
for Danfoss HRB,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

Technical data

Power supply		V	24 AC/DC or 230 AC
Power consumption		VA	AMB 162: 2,5
			AMB 182: 3,5
Frequency		Hz	50/60
Running speed	3-point	sec/ 90 °	15/30/60/120/240/480
	modulating		60/90/120*
Control input			3-point modulating (0(2)-10 V)
Operating torque		Nm	5, 10 or 15
Rotation angle			90 °
Auxiliary switch			Adjustable 0-90° (only 3-point actuators)
Max. medium temperature		°C	110
Ambient temperature			0 ... 50
Storage and transport temperature			-10 ... 80
Protection Class			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			Low Voltage Directive 2006/95/EC, EMC-Directive 2004/108/EC
			RoHS II: 2011/65/EU
			Applied standards: EN 60730-1, EN 60730-2-14

* selectable on DIP switch

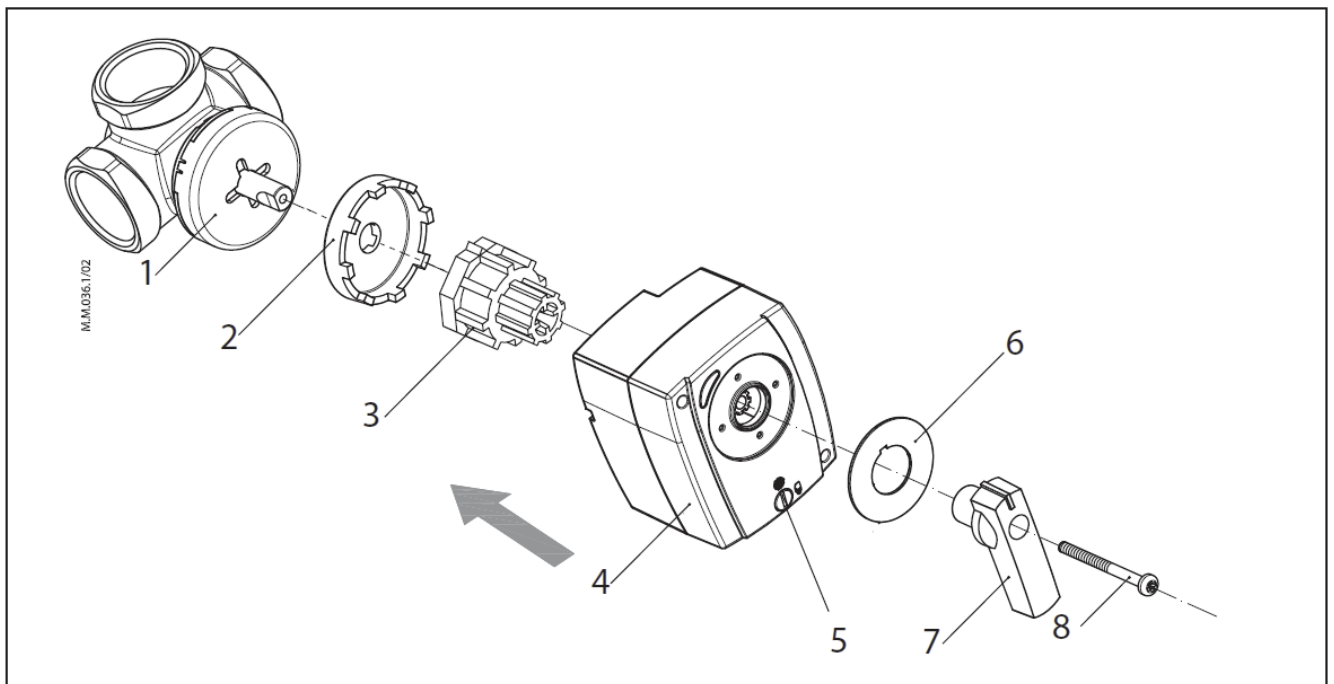
Application principle



Boiler system with ECL electronic controller and HRB rotary valve.

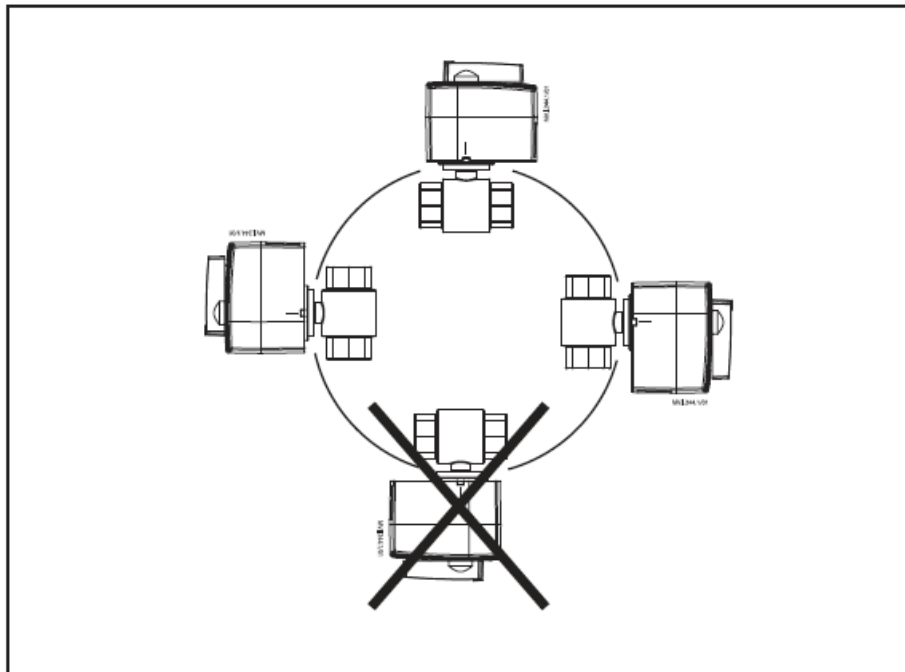
Installation procedure

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



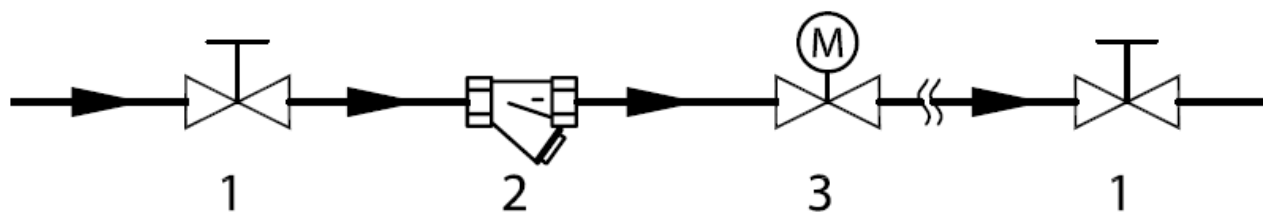
INSTALLTION

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.



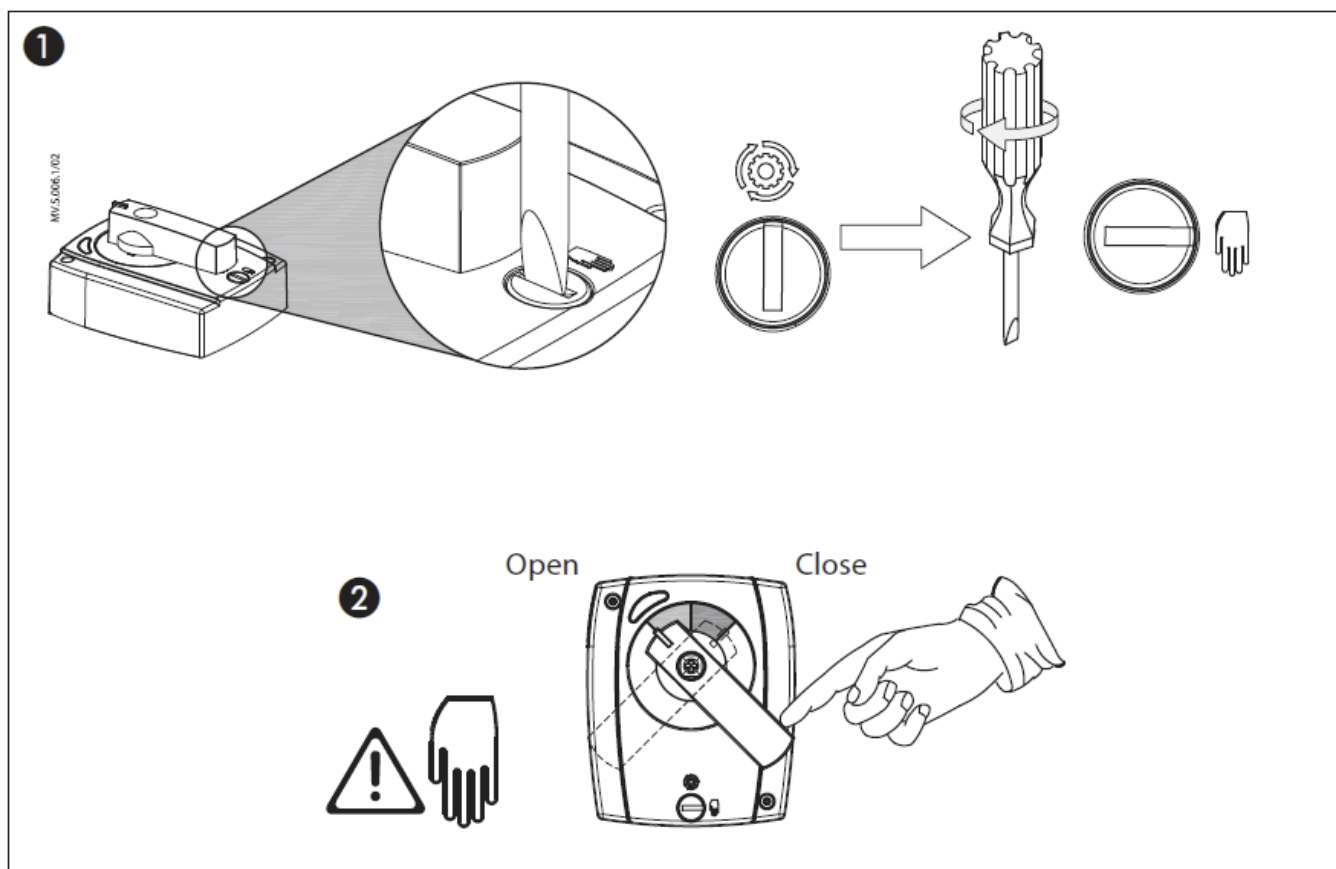
Hydraulic installation

Recommended installation of the electric actuated valve

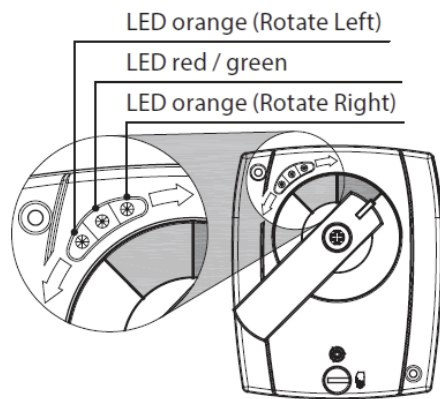


1. Ball valve
2. Strainer
3. AMB

Manual override



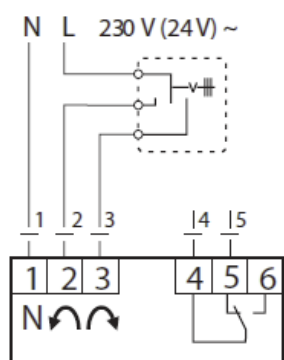
LED signalling



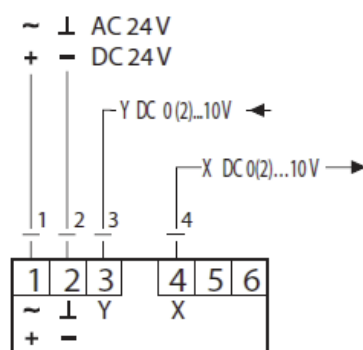
AMB 162/182

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

Wiring

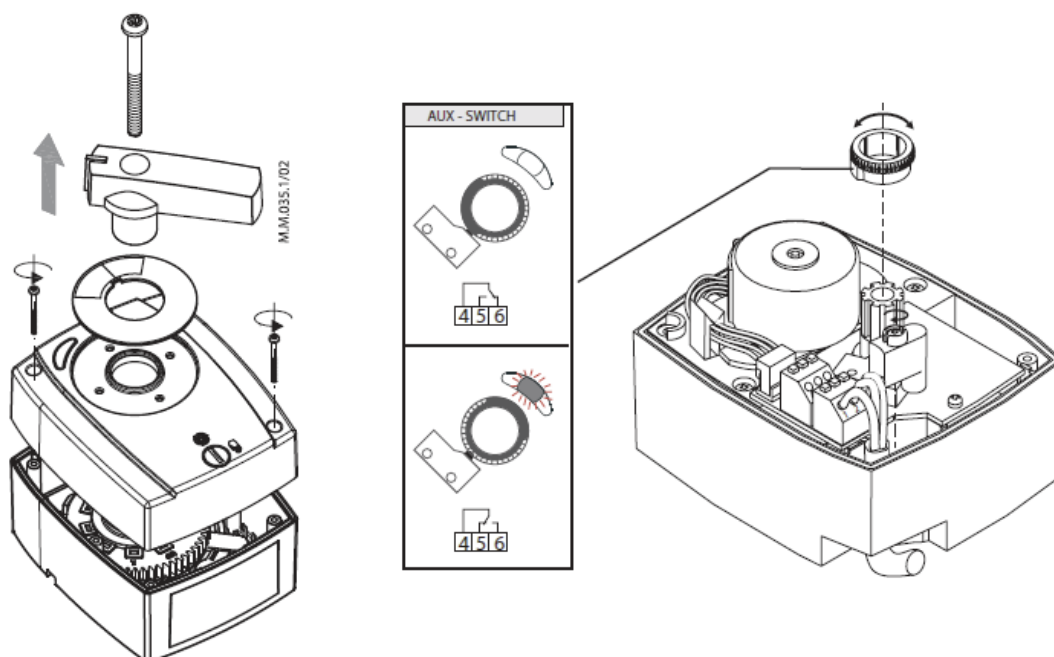


3-point/3-point+switch

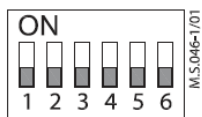


Proportional

3-point + switch



DIP switch setting



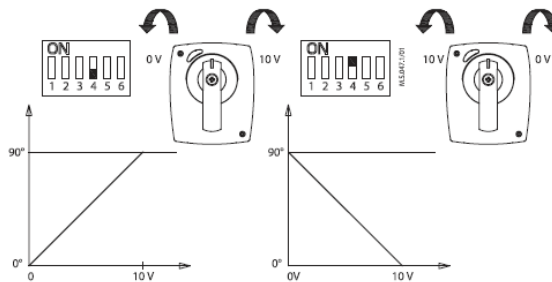
S1	S2	SIG.
0	0	U
1	1	I

S4	
0	↺
1	↻

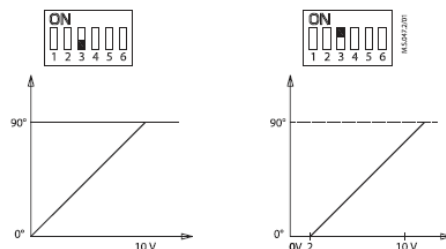
S3	U/I
0	0-10 V/0-20 mA
1	2-10 V/4-20 mA

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

S4:

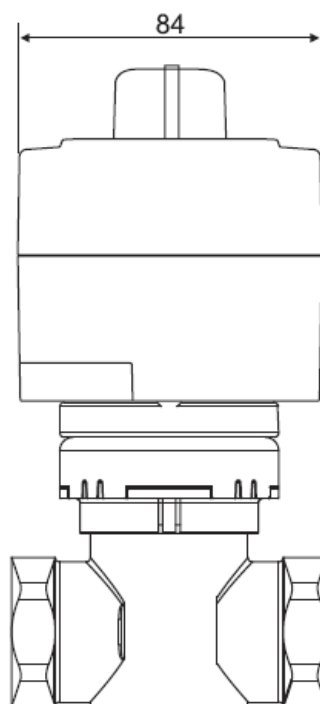
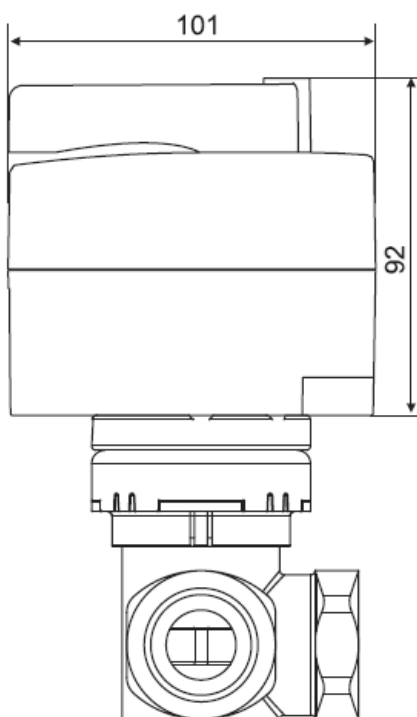


S3:

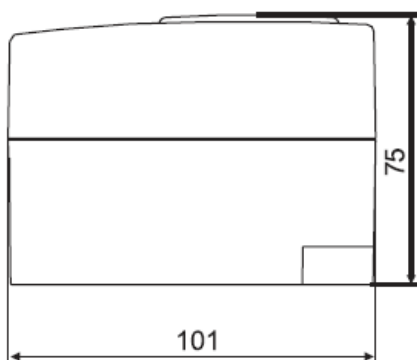


Dimensions

with handle



without handle



MORE INFORMATION

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FAQs

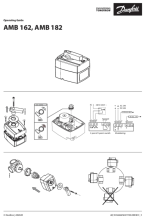
- **Q: What do the LED colors indicate?**

- A: The orange LED indicates rotation left, green/red LED indicates rotation right, and orange/green/red LED indicates status OK.

- **Q: How do I activate the AUX switch?**

- A: AUX switch activation can be done by following the instructions provided in the user manual. Ensure proper connections are made as per the guidelines.

Documents / Resources

	Danfoss AMB 162 Actuator For Temperature Control In Central Heating Systems [pdf] Installation Guide 162, 182, AMB 162 Actuator For Temperature Control In Central Heating Systems, AMB 162, Actuator For Temperature Control In Central Heating Systems, Temperature Control In Central Heating Systems, Central Heating Systems, Heating Systems, Systems
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References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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