



Gear actuators

AME 130(H) / AME 140(H)

Description

AME 130, AME 140, AME 130H and AME 140H actuators are used with:

- VZ DN 15, 20,
- VZL DN 15, 20 with stem extension plug or
- AHQM (DN 15-32) valves.

The actuator can be used with fan coil units, induction units, small reheaters, recoolers, and zone applications in which hot/cold water is the controlled medium.

Features & benefits

- Modulating control
- Force switch-off at stem down position prevents overload of actuator and valve
- No tools required for mounting
- Maintenance free during lifetime
- Low noise operation
- Self-positioning process
- Supplied with 1.5 m cable

Ordering

Product code numbers

Type	Supply voltage [V] AC	Spindle speed [s/mm]	Code number
AME 130	24	24	082H8044
AME 140	24	12	082H8045
AME 130H	24	24	082H8046
AME 140H	24	12	082H8047

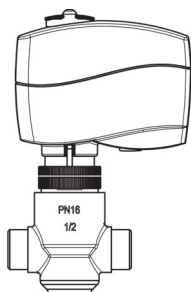
Spare parts code numbers



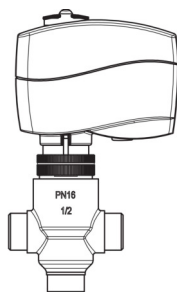
Overview

Product portfolio

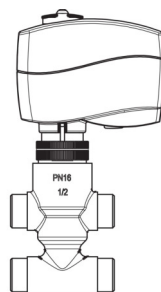
Actuator – valve combinations



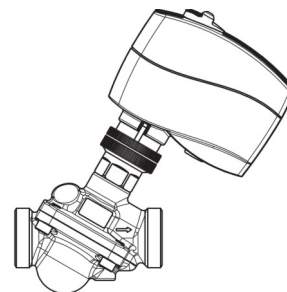
AME 130(H)/140(H)
+ VZ 2 / VZL 2



AME 130(H)/140(H)
+ VZ 3 / VZL 3



AME 130(H)/140(H)
+ VZ 4 / VZL 4



AME 130(H)/140(H)
+ AHQM (DN 15-32)

Remark: VZL valves with stem extension plug

Functions

Operation

Commissioning

The factory setting of the spindle is the fully stem up position because of easier mechanical connection of the actuator on the valve.

Manual override (for service purposes only)



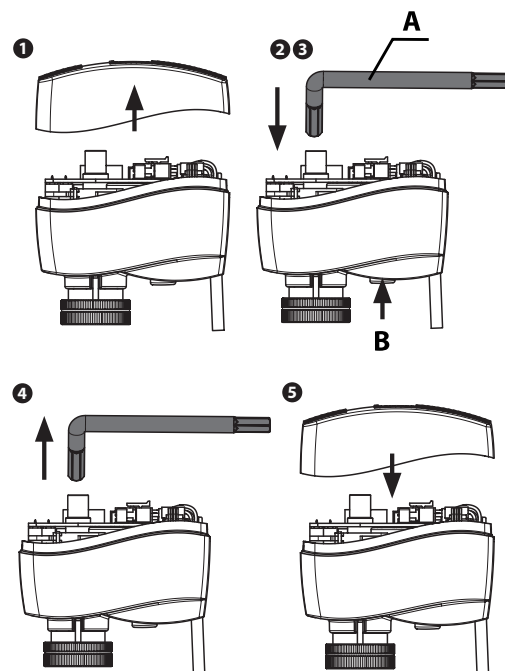
Caution: Do not manually operate the drive under power!

AME 130, AME 140

1. Remove the cover.
2. Insert the Allen key 6 into the spindle.
3. Press and hold the button (on the bottom side of the actuator) during manual override.
4. Pull out the tool.
5. Place cover back on the actuator.

Remark: A "click" sound after energizing the actuator means that the gear wheel has jumped into normal position.

If manual override has been used, then Y signal is not correct until the actuator reaches it's end position. If this is not accepted, reset the actuator.

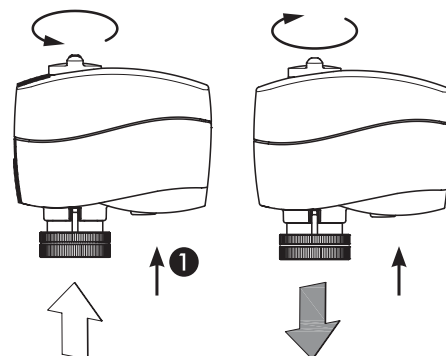


A	Allen key 6 mm
B	push

AME 130H, AME 140H

1. Press and hold the button (on the bottom side of the actuator) during manual override.

Remark: A "click" sound after energizing the actuator means that the gear wheel has jumped into normal position.



Settings

DIP Switch Setting (for service purposes only)

The actuator has a function selection DIP switch under the removable cover. The switch provides the following functions:

• SW1:

Reset

Changing this switch position will cause the actuator to go through a self stroking cycle.

• SW2:

0/2 - Input signal range selector

If set to OFF position, the input signal is in the range from 2-10 V (voltage input) or from 4-20 mA (current input). If set to ON position, the input signal is in the range from 0-10 V (voltage input) or from 0-20 mA (current input).

• SW3:

D/I - Direct or inverse acting selector

If set to OFF position, the actuator is direct acting (stem lowers as voltage increases). If the actuator is set to ON position, the actuator is inverse acting (stem raises as voltage increases).

• SW4:

---/Seq - Normal or sequential mode selector:

If set to OFF position, the actuator is working in range 0(2)-10V or 0(4)-20mA. If set to ON position, the actuator is working in sequential range; 0(2)-5 (6)V or 0(4)-10 (12)mA) or (5(6)-10V) or (10(12)-20mA).

• SW5:

0 ... 5 V/5 ... 10 V - Input signal range in sequential mode:

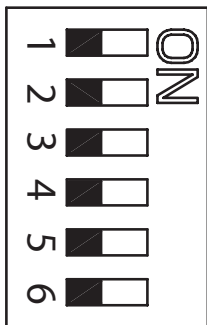
If set to OFF position, the actuator is working in sequential range 0(2)-5 (6)V or 0(4)-10 (12) mA.

If set to ON position, the actuator is working in sequential range; 5(6)-10V or 10(12)-20mA.

• SW6:

U/I - Input signal type selector

If set to OFF position, voltage input is selected. If set to ON position, current input is selected.



DIP Switch	OFF	ON
1	Reset	Reset
2	2V ... ---V	0V ... ---V
3	Direct	Inverse
4	---	Sequential
5	0(2)V ... 5(6)V	5(6)V ... 10V
6	U	I

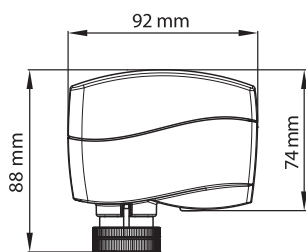
Product details

General data

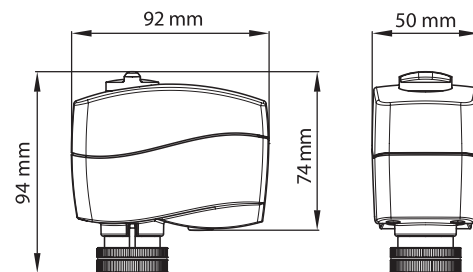
Technical data

Type		AME 130, AME 130H	AME 140, AME 140H
Power supply	V	24 AC; +10 to -15%	
Power consumption	VA	1.3	
Frequency	Hz	50/60	
Control Input Y	V	0-10 (2-10) [Ri = 200 kΩ]	
	mA	0-20 (4-20) [Ri = 500Ω]	
Closing force	N	200	
Max. stroke	mm	5.5	
Speed	s/mm	24	12
Max. medium temperature inside the pipe	°C	130	
Ambient temperature		0 ... 55	
Storage and transport temperature		- 40 ... 70	
Ambient humidity	95 % r.h., non-condensing		
Protection Class	II		
Grade of enclosure	IP 42		
Weight	kg	0.3	

Dimensions



AME 130, AME 140



AME 130H, AME 140H

Installation

Mechanical

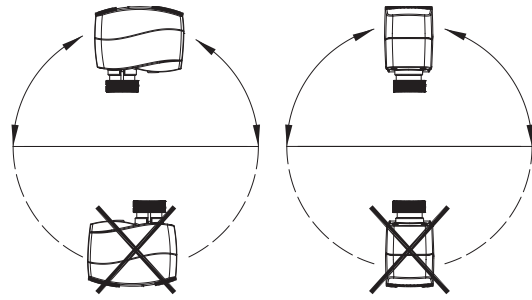
The actuator should be mounted with the valve stem in either horizontal position or pointing upwards.

The actuator is fixed to the valve body by means of a mounting ring which requires no tools for mounting. The ring should be tightened by hand.

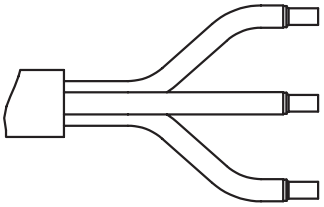

Electrical

Important: It is strongly recommended that the mechanical installation is completed before the electrical installation.

Each actuator is supplied with the connecting cable for the controller.

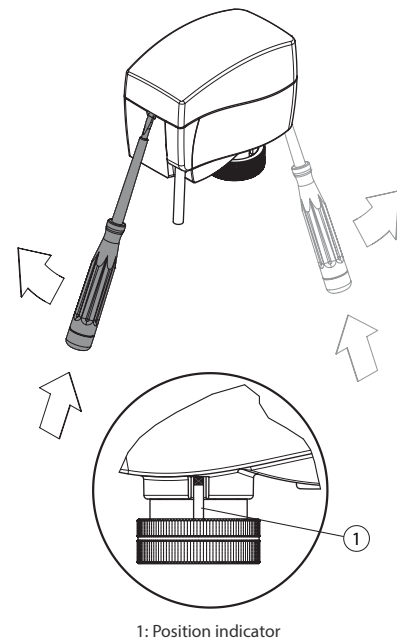


Wiring

	Red	24 V	
	Grey	Y	
	Black	Common	

Installation procedure

1. Check the valve's neck. The actuator should be in steam up position (factory setting). Ensure that the actuator is mounted securely on valve body.
2. Energise the actuator according to the wiring diagram.
3. The direction of stem movement can be observed on the position indicator.



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	Certification body	Approval topic
EU Declaration	Danfoss EU 221011EN0815101.04	Danfoss	LVD, EU RoHS
Export Control Declaration	Gear and Thermal actuators	Danfoss	
UA Declaration	UA Actuators 2024-06-27	Danfoss	EMC, LVD

Contact details

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