

Data sheet

# Zone valves

## AMZ 112, AMZ 113

Description



The ON/OFF zone valves type AMZ 112 and AMZ 113 are typical used in connection with:

- Domestic and commercial central heating applications
- Domestic hot water applications
- Solar energy plants
- HVAC
- Priority control of hot water supply and heating (diverting function)
- Priority control of boiler and solid fuel installations (diverting function).

The ON/OFF zone valves can be applied together with most Danfoss Room Thermostats, particularly type RET 230 (single poled switch)

and programmable Room Thermostats type RET 1000/2000. Other compatible room thermostats are available, please see [www.danfoss.com/heating](http://www.danfoss.com/heating) for details.

**Features:**

- 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;
- Integrated AUXILIARY switch (2-point only);
- LED indication of activated AUXILIARY switch.

**Main Data:**

- Nominal voltage:
  - 230 V AC, 50/60 Hz
  - 24 V AC, 50/60 Hz
- Rotation angle 90°
- Actuator running speed: AMZ 112
  - DN 15-50: selectable (modulating only)
  - DN 15-20: 30 sec / 90°
  - DN 25-50: 60 sec / 90°
- Actuator running speed: AMZ 113
  - DN 15: 30 sec / 90°
  - DN 20-32: 60 sec / 90°
- Control signal: 2-point, modulating

Ordering

**AMZ 112** 2-port valve/actuator

DN	k <sub>vs</sub> (m <sup>3</sup> /h)	Connect.	Control type	Code No.	
				230 V	24 V
20	28	Cu-Cu 22	2-point	-	<b>082G5427</b>
15	17	R <sub>p</sub> 1/2		<b>082G5406</b>	<b>082G5400</b>
20	28	R <sub>p</sub> 3/4		<b>082G5407</b>	<b>082G5401</b>
25	39	R <sub>p</sub> 1		<b>082G5408</b>	<b>082G5402</b>
32	84	R <sub>p</sub> 1 1/4		<b>082G5409</b>	<b>082G5403</b>
40	156	R <sub>p</sub> 1 1/2		<b>082G5410</b>	<b>082G5404</b>
50	243	R <sub>p</sub> 2		<b>082G5411</b>	<b>082G5405</b>

**AMZ 113** 3-port valve/actuator

DN	k <sub>vs</sub> (m <sup>3</sup> /h)	Connection	Control type	Code No.	
				230 V	24 V
15	4.3	R <sub>p</sub> 1/2	2 - point	<b>082G5418</b>	<b>082G5412</b>
20	8.3	R <sub>p</sub> 3/4		<b>082G5419</b>	<b>082G5413</b>
25	13	R <sub>p</sub> 1		<b>082G5420</b>	<b>082G5414</b>
32	21	R <sub>p</sub> 1 1/4		<b>082G5421</b>	<b>082G5415</b>

**Accessories**

Type	Code No.
AUX switch ring AMZ	<b>082G1635</b>
Junction box 24V	<b>082G1636</b>
Replacement actuator AMZ 112/113 24V 15 Nm	<b>082G1637</b>
Replacement actuator AMZ 112/113 230V 15 Nm	<b>082G1638</b>
Linkage kit AMZ 112/113	<b>082G1639</b>

Technical data

Actuator

Power supply	2-point	V	24 ac or 230 ac
Power consumption		VA	AMZ 112: 2.5 AMZ 113: 3.5
Frequency		Hz	50/60
Running speed <sup>1)</sup>	2-point	sec/90°	15/60
Control type			2-point
Operating torque		Nm	5, 10, 15
Rotation angle			90 °
Auxiliary switch			adjustable 0-90°
Auxiliary switch max. load		A	6 (24V ac, 230V ac)
Max. medium temperature			110
Ambient temperature		°C	0 ... 50
Storage and transport temperature			-10 ... 80
Protection Class			II according to EN 60730-1
Grade of enclosure			IP42 according to EN 60529
Weight	AMZ 112	g	728
	AMZ 113		906
Color / material			dark grey/PC
CE-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

<sup>1)</sup> 5 Nm is 30 sec/90°; 10, 15 Nm is 60 sec/90°

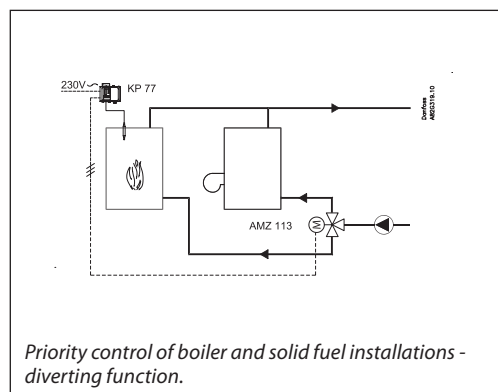
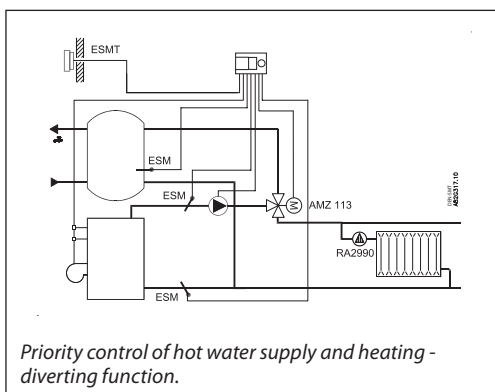
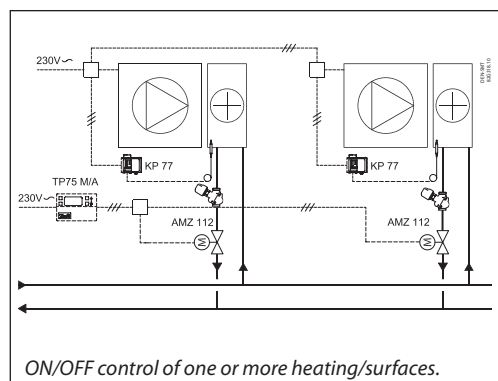
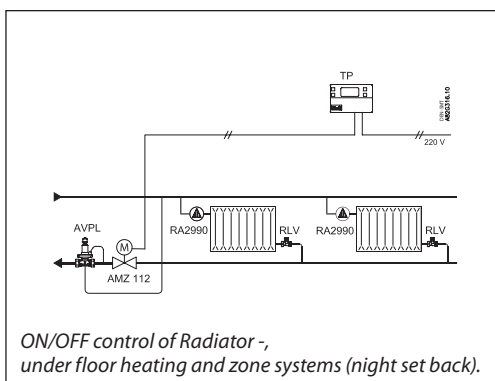
Valve AMZ 112

DN		15	20	25	32	40	50
Nominal pressure	PN	40				25	
Flow (k <sub>v5</sub> )	m <sup>3</sup> /h	17	28	39	84	156	243
Valve characteristic		Logarithmic					
Medium temperature	°C	2 ... 130 (Actuator max. 110)					
Medium		Water, glycol ≤50%, air, nonaggressive fluids					
Max. operating Δp	bar	6					
Leakage		according to UNI EN331 (<20cc/h)					
Valve neck		ISO 5211					
Connection		Internal thread Rp ISO 7/1					
Certifications and standards		CE-PED – CSA - GOST					
<b>Materials</b>							
Body		CW 617 N UNI EN 12165					
Ball, Stem		CW 614 N UNI EN 12164					
Antifriction ring		PTFE					

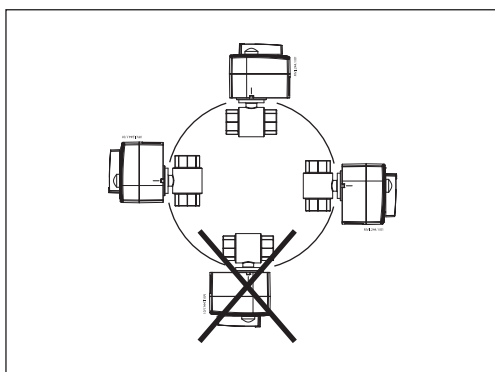
Valve AMZ 113

DN		15	20	25	32
Nominal pressure	PN	40			
Flow (k <sub>v5</sub> )	m <sup>3</sup> /h	4.3	8.3	13	21
Medium temperature	°C	2 ... 130 (Actuator max. 110)			
Medium		Water, glycol ≤50%, air, nonaggressive fluids			
Max. operating Δp	bar	6			
Leakage		according to UNI EN331 (<20cc/h)			
Valve neck		ISO 5211			
Connection		Internal thread Rp ISO 7/1			
Certifications and standards		CE-PED – CSA - GOST			
<b>Materials</b>					
Body		CW 617 N UNI EN 12165			
Ball, Stem		CW 614 N UNI EN 12164			
Antifriction ring		PTFE			

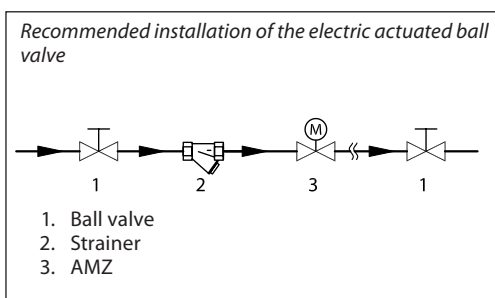
Application principles



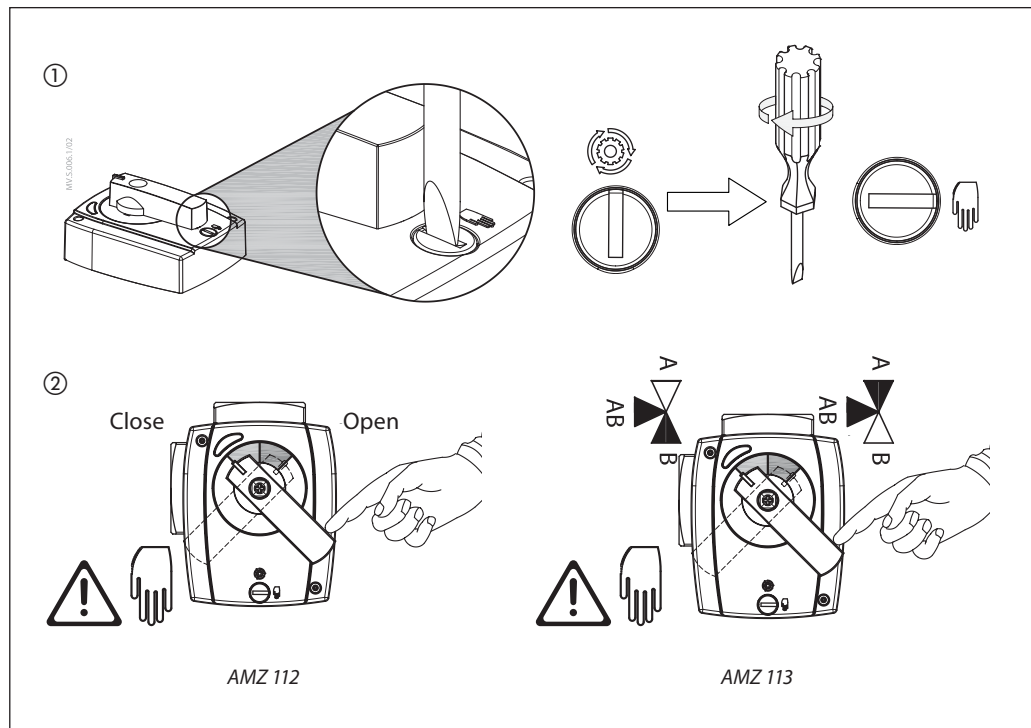
Installation positions



Hydraulic installation



Manual override



LED signalling

LED orange (Rotate Left)

LED green / red

LED orange (Rotate Right)

**AMZ 112/113**

LED color	2-point (AMZ 112/113)
Orange	Rotation left / right
Green	/
Red	AUX switch activation

Wiring

2-point+switch

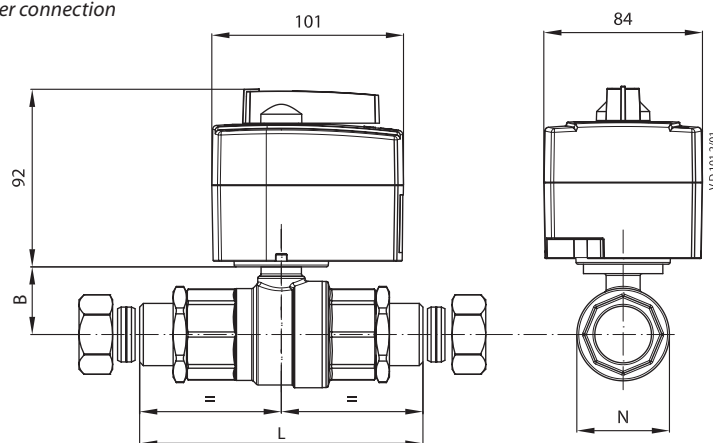
Under cover

**Direct/Inverse function**

Jumper	Wiring	Open Port
DIR	L = 2	AB-B
	L = 2 & 3	AB-A
INV	L = 2	AB-A
	L = 2 & 3	AB-B

Dimensions

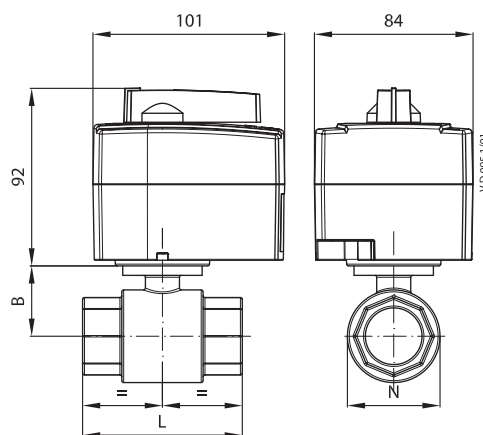
AMZ 112 - Copper connection



AMZ 112

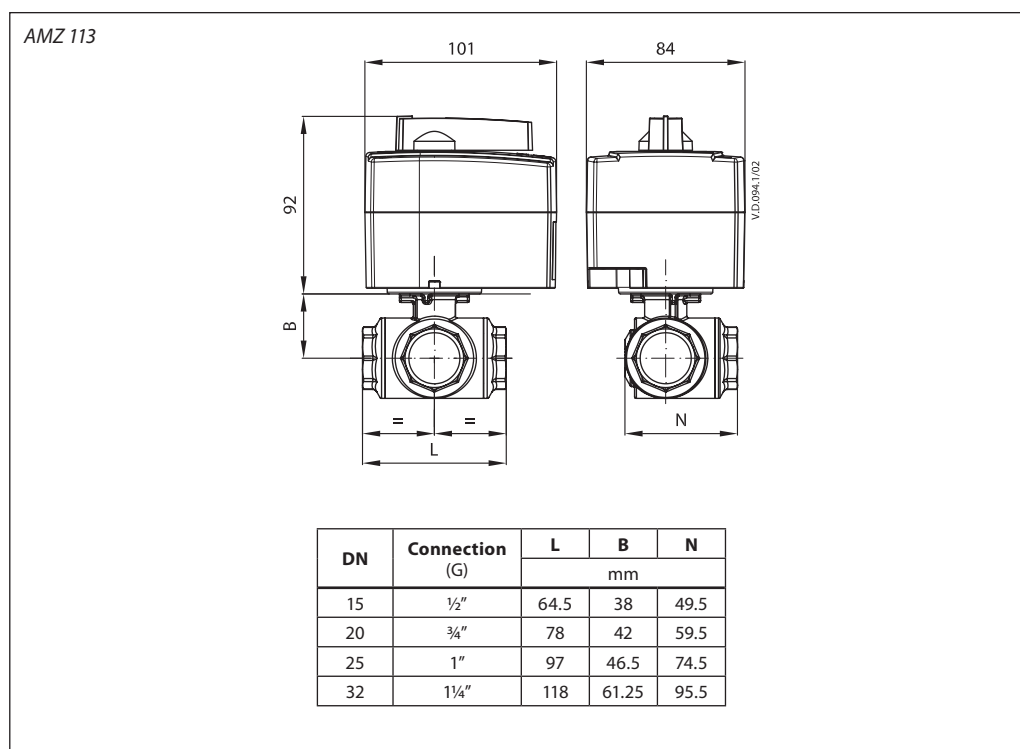
DN	Connection (G)	L	B	N
		mm		
20	Cu-Cu 22	111.5	33	37

AMZ 112



DN	Connection (G)	L	B	N
		mm		
15	1/2"	61	29.4	37
20	3/4"	69.5	33	37
25	1"	84.5	37.2	42
32	1 1/4"	98.5	47.5	42
40	1 1/2"	110	53	42
50	2"	130	64	48

Dimensions (continuous)







**Danfoss A/S**

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