

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:

- Commercial central heating 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 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;
- 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 15-20: 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

Ordering

AMZ 112 2-port valve/actuator

DN	k _{vs} (m ³ /h)	Connect.	Control type	Code No.	
				230 V	24 V
20	28	Cu-Cu 22	2-point	-	082G5427
15	17	R _p ½		082G5406	082G5400
20	28	R _p ¾		082G5407	082G5401
25	39	R _p 1		082G5408	082G5402
32	84	R _p 1¼		082G5409	082G5403
40	156	R _p 1½		082G5410	082G5404
50	243	R _p 2		082G5411	082G5405

AMZ 113 3-port valve/actuator

DN	k _{vs} (m ³ /h)	Connection	Control type	Code No.	
				230 V	24 V
15	4.3	R _p ½	2 - point	082G5418	082G5412
20	8.3	R _p ¾		082G5419	082G5413
25	13	R _p 1		082G5420	082G5414
32	21	R _p 1¼		082G5421	082G5415

Accessories

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

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 ¹⁾	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 AMZ 113	g	728 906
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

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

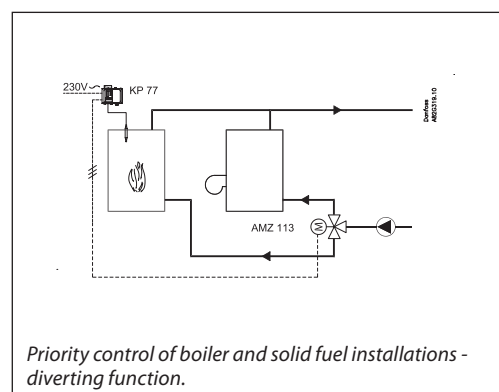
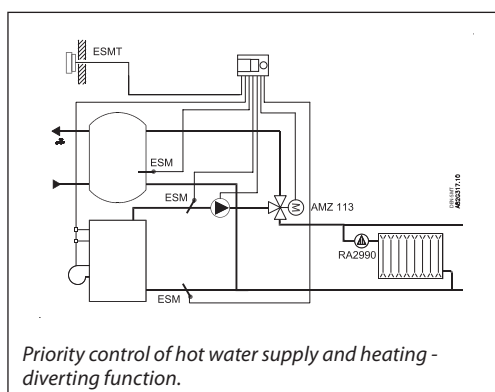
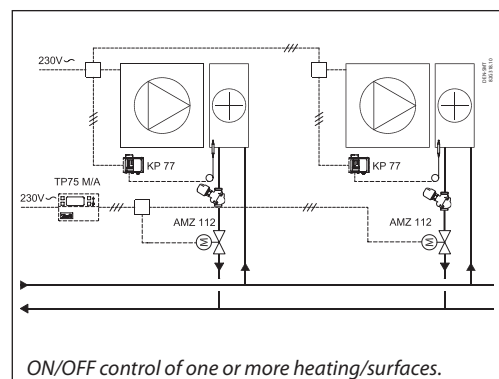
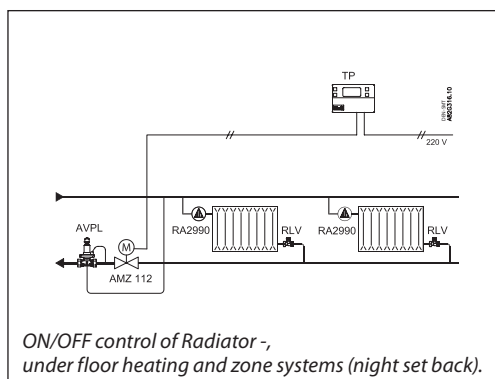
Valve AMZ 112

DN		15	20	25	32	40	50
Nominal pressure	PN	40				25	
Flow (k _{vs})	m³/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					
Materials							
Body		CW 617 N UNI EN 12165					
Ball, Stem		CW 614 N UNI EN 12164					
Antifriction ring		PTFE					

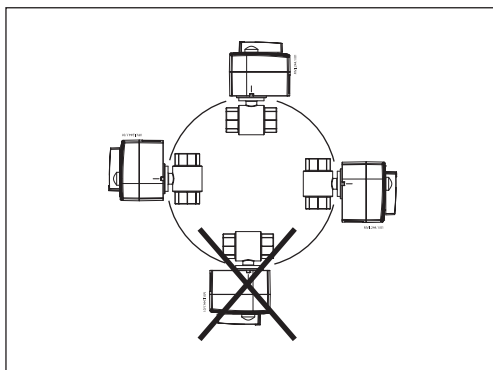
Valve AMZ 113

DN		15	20	25	32
Nominal pressure	PN	40			
Flow (k _{vs})	m³/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			
Materials					
Body		CW 617 N UNI EN 12165			
Ball, Stem		CW 614 N UNI EN 12164			
Antifriction ring		PTFE			

Application principles

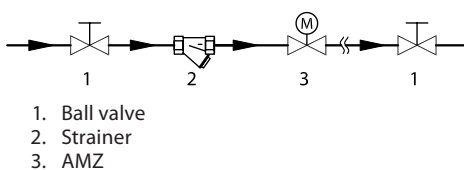


Installation positions

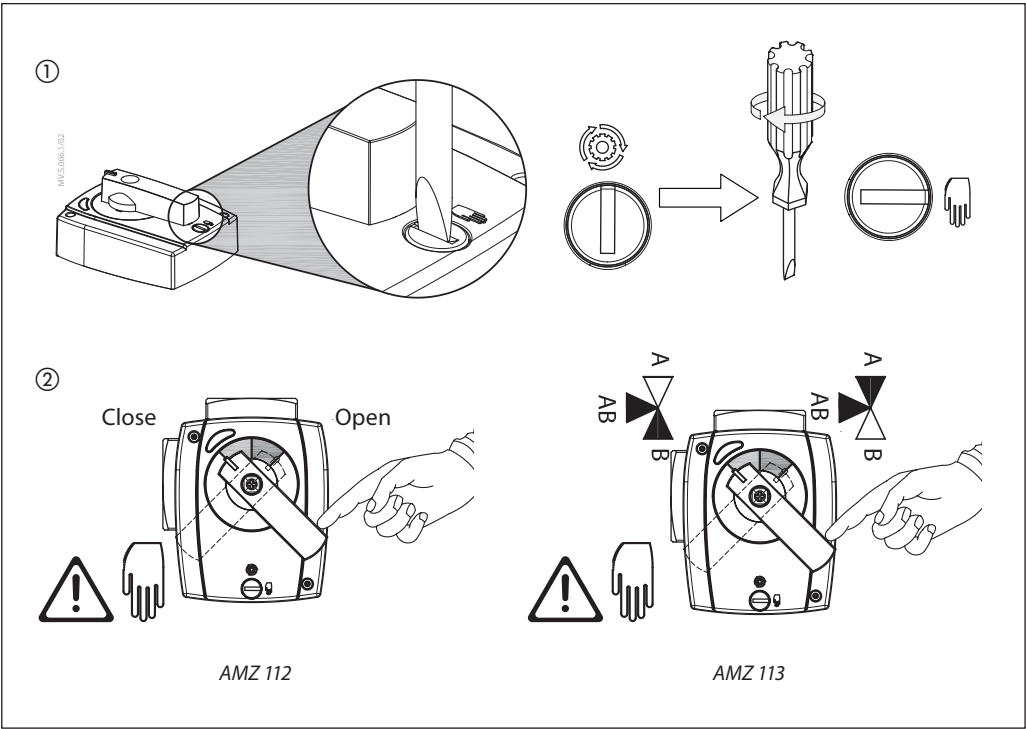


Hydraulic installation

Recommended installation of the electric actuated ball valve



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

N L 230 V (24V) ~

1 2 3 4 5 6

N L

2-point+switch

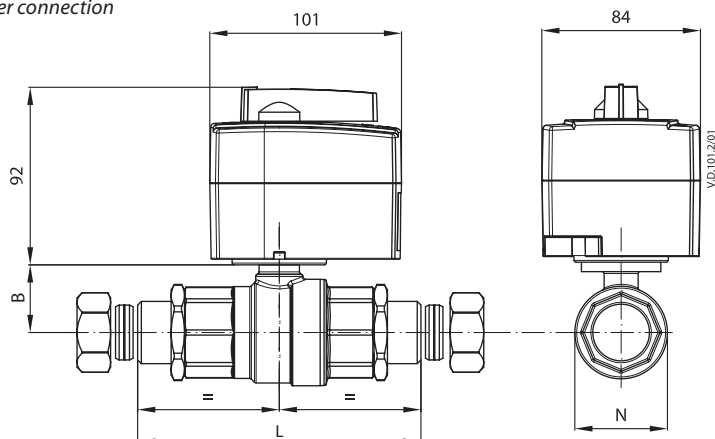
Under cover

Direct/Inverse function

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

Dimensions

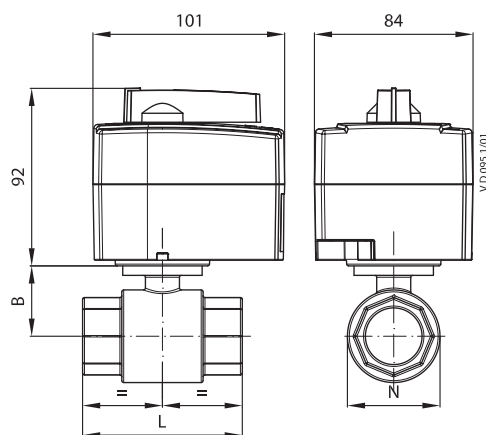
AMZ 112 - Copper connection



AMZ 112

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

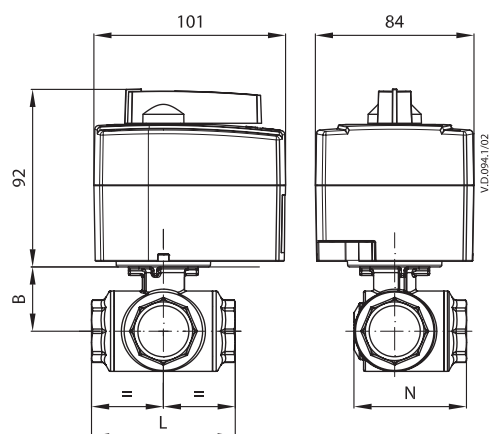
AMZ 112



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)

AMZ 113



DN	Connection (G)	L	B	N
		mm		
15	1/2"	64.5	38	49.5
20	3/4"	78	42	59.5
25	1"	97	46.5	74.5
32	1 1/4"	118	61.25	95.5



Danfoss A/S

Heating Segment • heating.danfoss.com • +45 7488 2222 • E-Mail: heating@danfoss.com

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed.
All trademarks in this material are property of the respective companies. Danfoss and all Danfoss logotypes are trademarks of Danfoss A/S. All rights reserved.