

Data sheet

Zone valves

AMZ 112, AMZ 113

Description



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 (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

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).

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 1/2		082G5406	082G5400
20	28	R _p 3/4		082G5407	082G5401
25	39	R _p 1		082G5408	082G5402
32	84	R _p 1 1/4		082G5409	082G5403
40	156	R _p 1 1/2		082G5410	082G5404
50	243	R _p 2		082G5411	082G5405

AMZ 112 2-port valve/actuator

DN	k _{vs} (m ³ /h)	Connect.	Control type	Code No. (24 V)
15	17	R _p 1/2	modulating	082G5451
20	28	R _p 3/4		082G5452
25	39	R _p 1		082G5453
32	84	R _p 1 1/4		082G5454
40	156	R _p 1 1/2		082G5455
50	243	R _p 2		082G5456

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 1/2	2 - point	082G5418	082G5412
20	8,3	R _p 3/4		082G5419	082G5413
25	13	R _p 1		082G5420	082G5414
32	21	R _p 1 1/4		082G5421	082G5415

Technical data

Actuator

Power supply	2-point	V	24 AC or 230 AC
	modulating		24 AC/DC
Power consumption	VA		AMZ 112: 2,5
			AMZ 113: 3,5
Frequency	Hz		50/60
Running speed ¹⁾	2-point	sec/90°	15/60
	modulating		60/90/120 *
Control type			2-point, modulating
Operating torque	Nm		5, 10, 15
Rotation angle			90 °
Auxiliary switch			adjustable 0-90° (2-point only)
Auxiliary switch max. load	A		6 (24V AC, 230V AC)
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
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

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

* selectable on DIP switch

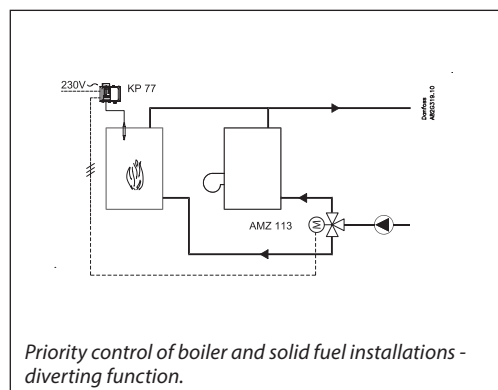
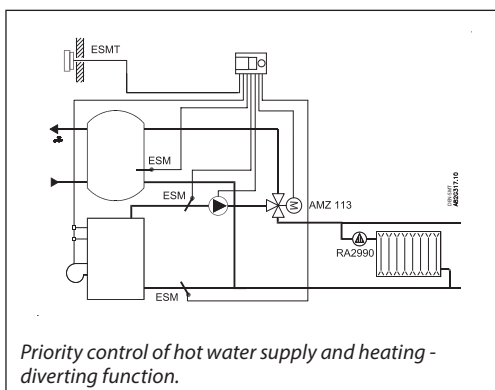
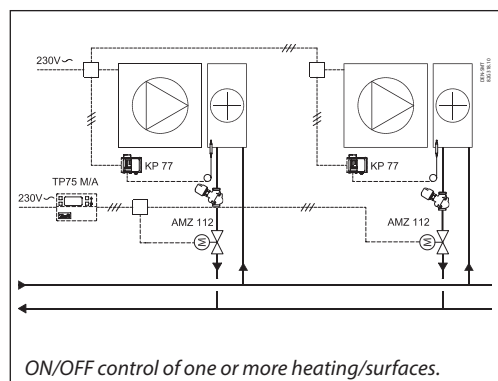
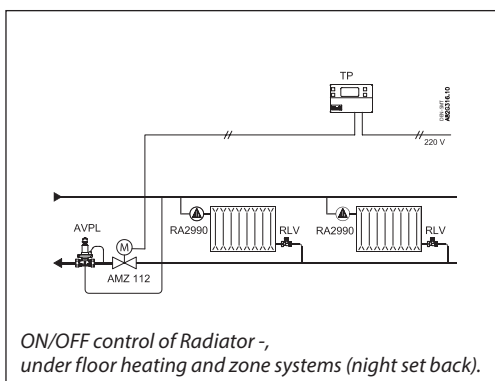
Valve AMZ 112

DN		15	20	25	32	40	50	
Nominal pressure	PN	40				25		
Flow (k _{vS})	m ³ /h	17	28	39	84	156	243	
Valve characteristic	Logarithmic							
Medium temperature	°C	2 ... 130 (Actuator max. 110)						
Medium	Drinking water, 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							

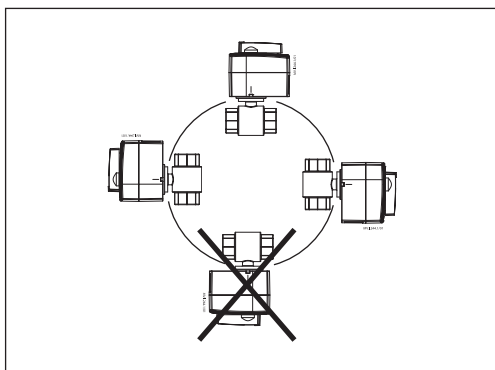
Valve AMZ 113

DN		15	20	25	32
Nominal pressure	PN	40			
Flow (k _{vS})	m ³ /h	4,3	8,3	13	21
Medium temperature	°C	2 ... 130 (Actuator max. 110)			
Medium	Drinking water, 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				

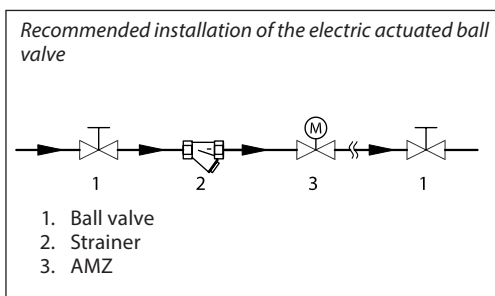
Application principles



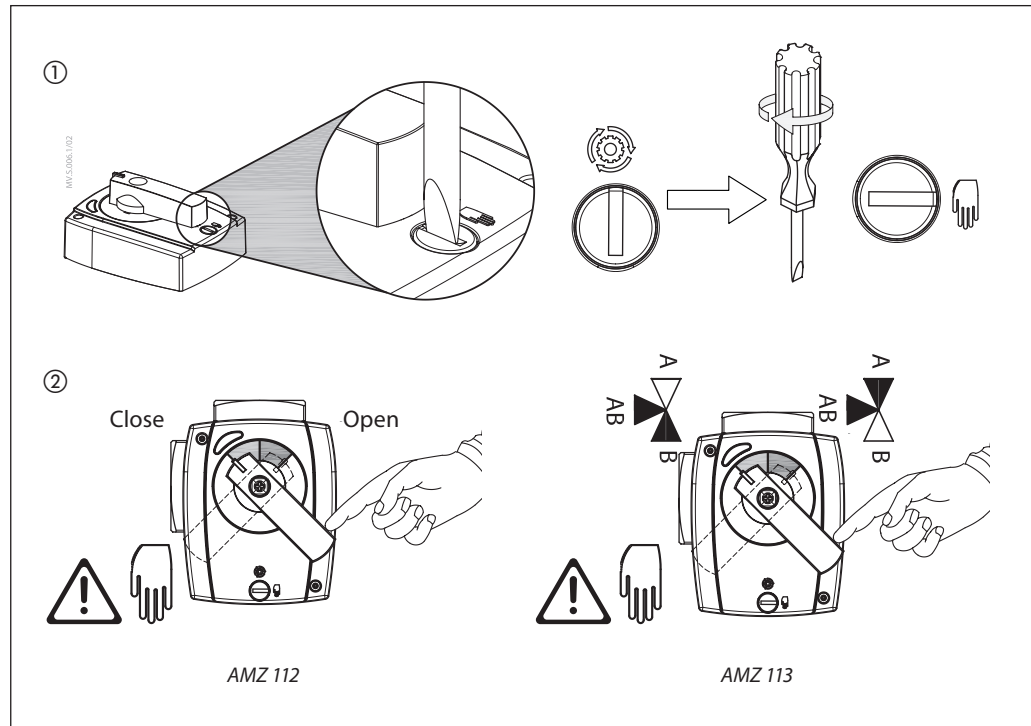
Installation positions



Hydraulic installation



Manual override



LED signalling

LED orange (Rotate Left)
LED green / red
LED orange (Rotate Right)

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

Wiring

2-point+switch

Modulating

Direct/Inverse function

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

DIP switch setting

ON

M.S.046-1/01

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

AMZ 112 - Copper connection

V.D.101.2/01

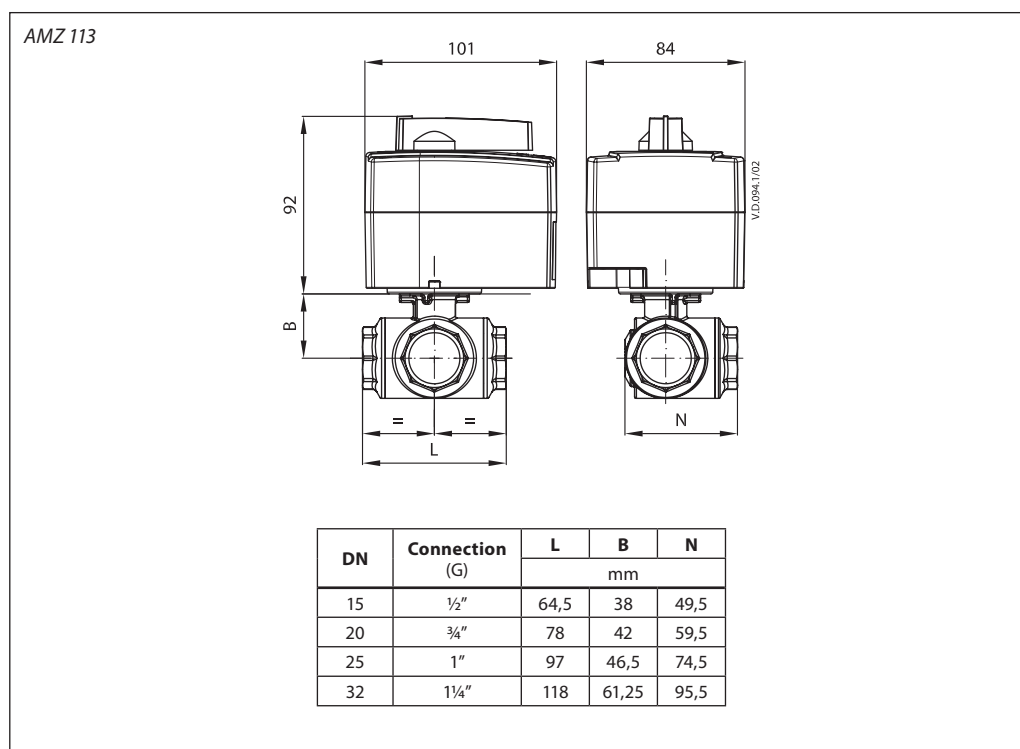
AMZ 112				
DN	Connection (G)	L	B	N
		mm		
20	Cu-Cu 22	111,5	33	37

AMZ 112

V.D.095.1/01

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)





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