

Water separators MS-LWS, MS series, NPT

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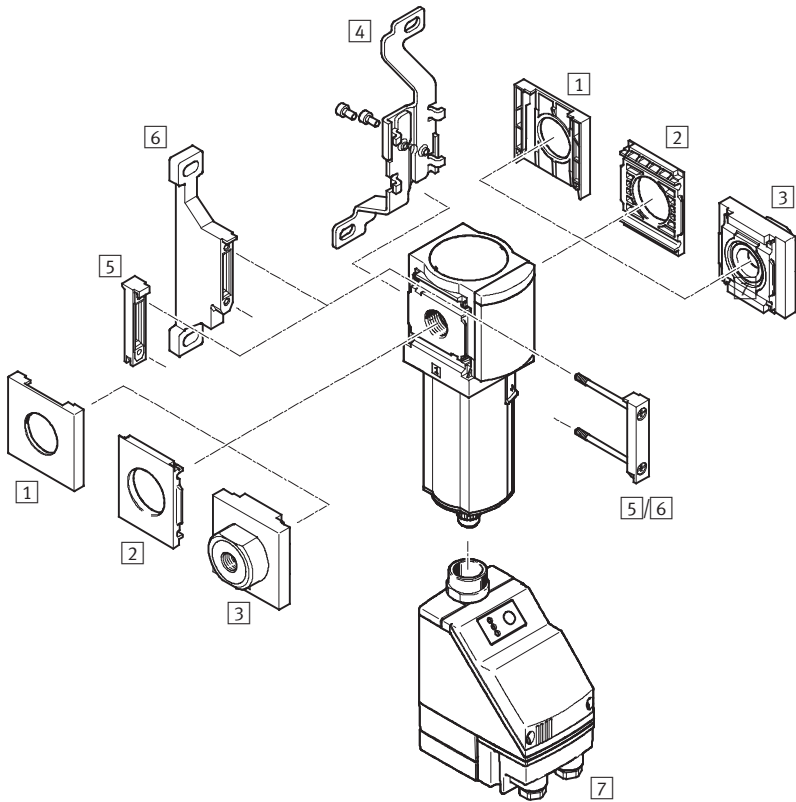


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Peripherals overview

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Water separator MS6N-LWS



Note

Additional accessories:

- Module connector for combination with size MS4/MS6 or size MS9 → Internet: amv, rmv, armv
- Adapter for mounting on profiles → Internet: ipm-80, ipm-40-80, ipm-80-80

Mounting attachments and accessories						
		Individual device		Combination		→ Page/Internet
		Without connecting plate	With connecting plate	Without connecting plate	With connecting plate	
1	Cover cap MS6-END	■	-	■	-	ms6-end
2	Mounting plate MS6-AEND	■ ¹⁾	-	■ ¹⁾	-	ms6-aend
3	Connecting plate MS6N-AQ...	-	■ ¹⁾	-	■ ¹⁾	ms6n-aq
4	Mounting bracket MS6-WB	■	■	-	-	ms6-wb
5	Module connector MS6-MV	-	■	■	■	ms6-mv
6	Mounting bracket MS6-WP	■	■	■	■	ms6-wp
	Mounting bracket (not illustrated) MS6-WPB/WPE/WPM	■	■	■	■	ms6-wp
7	Fully automatic, electrically actuated condensate drain E1 ... E4	■	■	■	■	7

1) Module connector MS6-MV [5] or mounting bracket MS6-WP/WPB/WPE/WPM [6] is required for mounting.

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Type codes

		MS	6	N	-	LWS	-	1/4	-	U	-	V
Series												
MS	Standard service unit											
Size												
6	Grid dimension 62 mm											
Thread												
N	NPT thread											
Service function												
LWS	Water separator											
Pneumatic connection												
1/4	Thread NPT1/4-18											
3/8	Thread NPT3/8-18											
1/2	Thread NPT1/2-14											
Bowl guard												
U	Integrated as metal bowl											
Condensate drain												
V	Fully automatic											

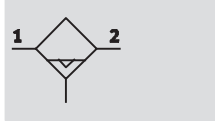
Further variants can be ordered using the modular system → 7

- Connecting plates
- Condensate drain
- Type of mounting
- Alternative flow direction

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Technical data

Condensate drain,
fully automatic



- - Flow rate
2,400 ... 3,800 l/min
- - Temperature range
+1 ... +60 °C
- - Supply pressure
0.8 ... 16 bar



The maintenance-free water separator removes condensate from the compressed air.

- Constantly high condensate separation (99%) up to the maximum flow rate
- Available with fully automatic or fully automatic, electrically actuated condensate drain
- Metal bowl

General technical data				
Size	MS6			
Pneumatic connection 1, 2	NPT $\frac{1}{4}$ -18	NPT $\frac{3}{8}$ -18	NPT $\frac{1}{2}$ -14	NPT $\frac{1}{4}$ -18 ... NPT $\frac{3}{4}$ -14 (with connecting plate AQ...)
Constructional design	Centrifugal separator			
Type of mounting	Via accessories			
	In-line installation			
Mounting position	Vertical $\pm 5^\circ$			
Air purity class at the output	-.7.- to DIN ISO 8573-1			
Bowl guard	Integrated as metal bowl			
Condensate drain	Fully automatic			
	Fully automatic, electrically actuated			
Degree of condensate separation [%]	99			
Max. condensate volume [ml]	38			

Standard nominal flow rate $q_{nN}^{1)}$			
Size	MS6		
Pneumatic connection	NPT $\frac{1}{4}$ -18	NPT $\frac{3}{8}$ -18	NPT $\frac{1}{2}$ -14
q_{nN} [l/min]	2,400	3,500	3,800

1) Measured at $p_1 = 6$ bar and $\Delta p = 1$ bar

Operating and environmental conditions		
Condensate drain	Fully automatic V	Fully automatic, electrically actuated E1 ... E4
Size	MS6	
Supply pressure [bar]	2 ... 12	0.8 ... 16
Operating medium	Compressed air	
Ambient temperature [°C]	+5 ... +60	+1 ... +60
Temperature of medium [°C]	+5 ... +60	+1 ... +60
Storage temperature [°C]	-10 ... +60	+1 ... +60
Corrosion resistance class CRC ¹⁾	2	

1) Corrosion resistance class 2 to Festo standard 940 070
Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricants.

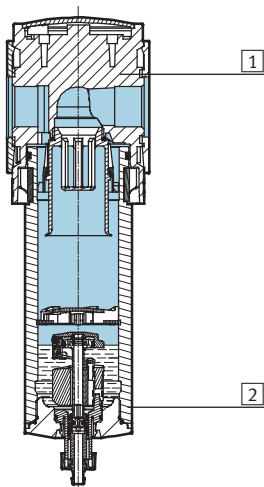
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Technical data

Weight [g]	
Size	MS6
Water separator	820
Water separator with fully automatic, electrically actuated condensate drain E1 ... E4	1,800

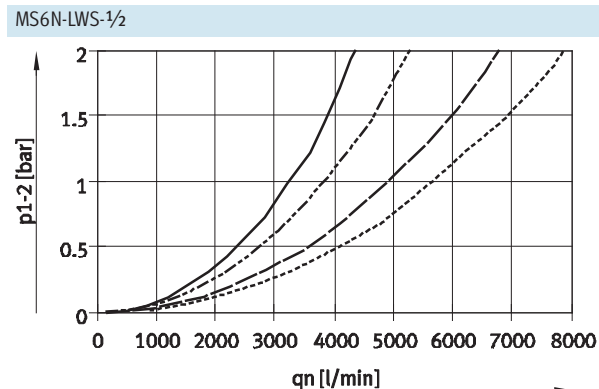
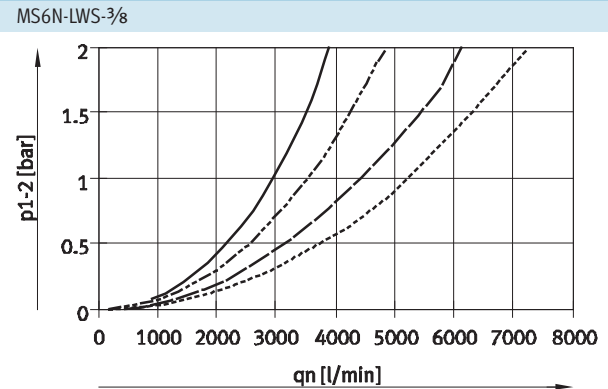
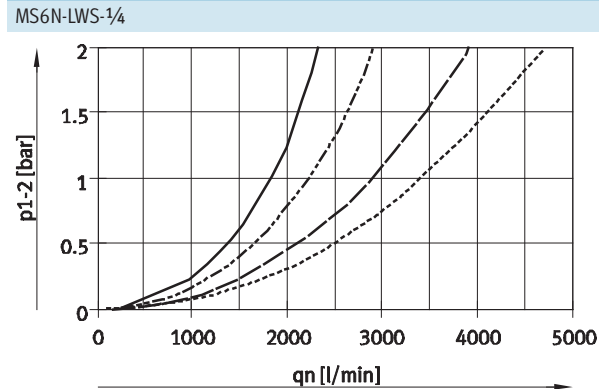
Materials

Sectional view



Water separator		
1	Housing	Die-cast aluminium
2	Bowl	Wrought aluminium alloy
	Inspection window	PA
-	Seals	NBR
Note on materials		Free of copper and PTFE
		RoHS-compliant (not with variant E1, E2, E3 or E4)

Standard flow rate q_n as a function of differential pressure p_{1-2}



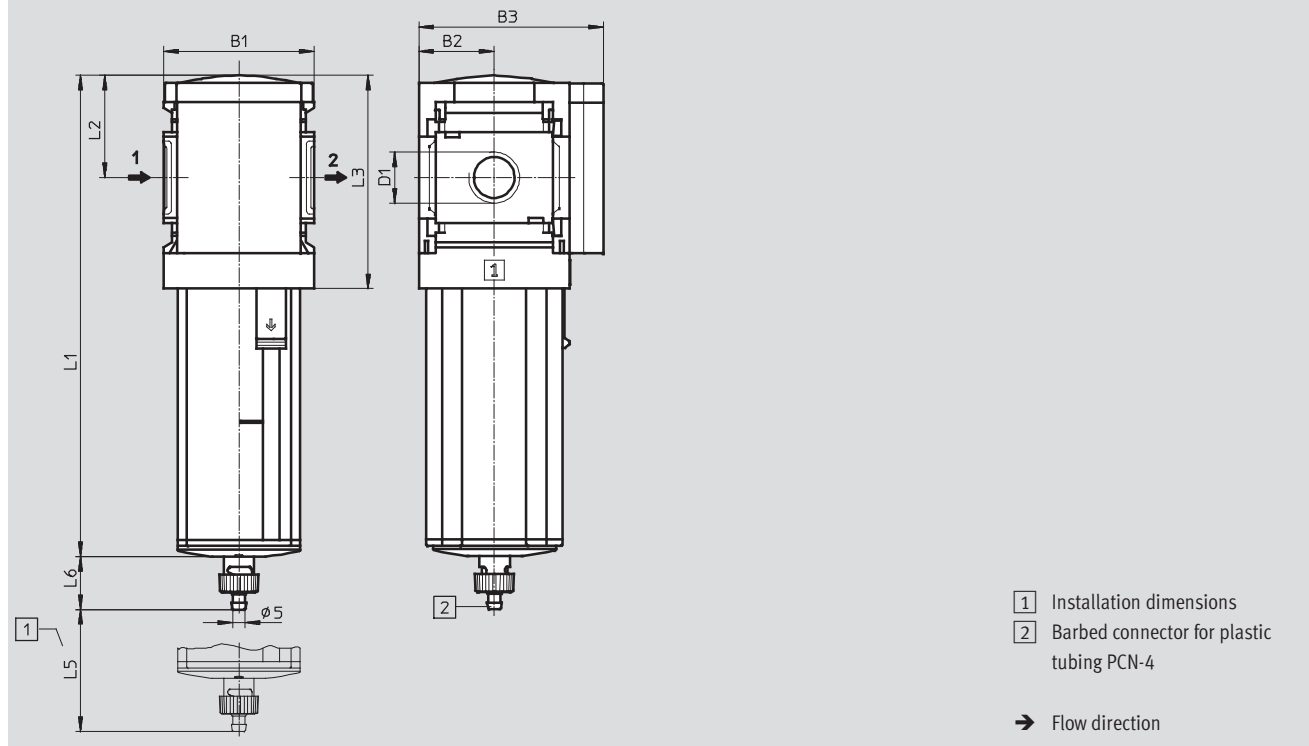
- 4 bar
- - - 6 bar
- 10 bar
- - - 14 bar

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Technical data

Dimensions – Standard Download CAD data → www.festo.com

Fully automatic condensate drain V



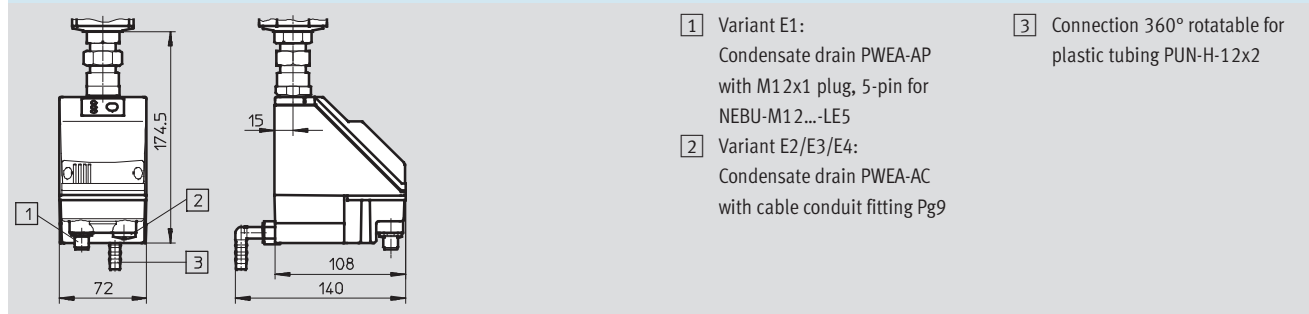
- 1 Installation dimensions
- 2 Barbed connector for plastic tubing PCN-4

→ Flow direction

Type	B1	B2	B3	D1	L1	L2	L3	L5	L6
MS6N-LWS-1/4-...-V	62	31	76	NPT1/4-18	198	42	87	68	22
MS6N-LWS-3/8-...-V				NPT3/8-18					
MS6N-LWS-1/2-...-V				NPT1/2-14					

Dimensions – Condensate drain Download CAD data → www.festo.com

Fully automatic, electrically actuated E1 ... E4 Technical data → Internet: pwea



- 1 Variant E1:
Condensate drain PWEA-AP with M12x1 plug, 5-pin for NEBU-M12...-LE5
- 2 Variant E2/E3/E4:
Condensate drain PWEA-AC with cable conduit fitting Pg9
- 3 Connection 360° rotatable for plastic tubing PUN-H-12x2

Ordering data

Size	Condensate drain	Connection	Part No.	Type
Integrated as metal bowl				
MS6	Fully automatic	NPT1/4-18	564871	MS6N-LWS-1/4-U-V
		NPT3/8-18	564872	MS6N-LWS-3/8-U-V
		NPT1/2-14	564873	MS6N-LWS-1/2-U-V

- 2 - Variant E1 discontinued
Available up until 2011

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Ordering data – Modular products

M Mandatory data								O Options	
Module No.	Series	Size	Thread	Function	Connection size	Bowl guard	Condensate drain	Type of mounting	Alternative flow direction
564898	MS	6	N	LWS	¼, ⅜, ½, AQN, AQP, AQR, AQS	U	V, E1, E2, E3, E4	WP, WPM, WB	Z
Ordering example									
564898	MS	6	N	- LWS	- AQN	- U	- V	- WP	- Z

Ordering table		Grid dimension	[mm]	62	Condi- tions	Code	Enter code
M	Module No.	564898					
	Series	Standard				MS	MS
	Size	6				6	6
	Thread	NPT thread				N	N
	Function	Water separator				-LWS	-LWS
	Connection size	Thread NPT¼				-¼	
		Thread NPT⅜				-⅜	
		Thread NPT½				-½	
		Connecting plate NPT¼				-AQN	
		Connecting plate NPT⅜				-AQP	
		Connecting plate NPT½				-AQR	
		Connecting plate NPT¾				-AQS	
	Bowl guard	Metal bowl				-U	-U
	Condensate drain	Fully automatic (P1 max. 12 bar)				-V	
		External fully automatic condensate drain, electrical, 24 V DC, M12 (P1 max. 16 bar) - 2				-E1	
		External fully automatic condensate drain, electrical, 110 V AC, terminals (P1 max. 16 bar)				-E2	
		External fully automatic condensate drain, electrical, 230 V AC, terminals (P1 max. 16 bar)				-E3	
		External fully automatic condensate drain, electrical, 24 V DC, terminals (P1 max. 16 bar)				-E4	
O	Type of mounting	Mounting bracket			1	-WP	
		Mounting bracket			1	-WPM	
		Mounting bracket				-WB	
	Alternative flow direction	Flow direction from right to left				-Z	

1 WP, WPM Only with connecting plate AQN, AQP, AQR or AQS

Transfer order code

564898	MS	6	N	- LWS	-	-U	-	-	-
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