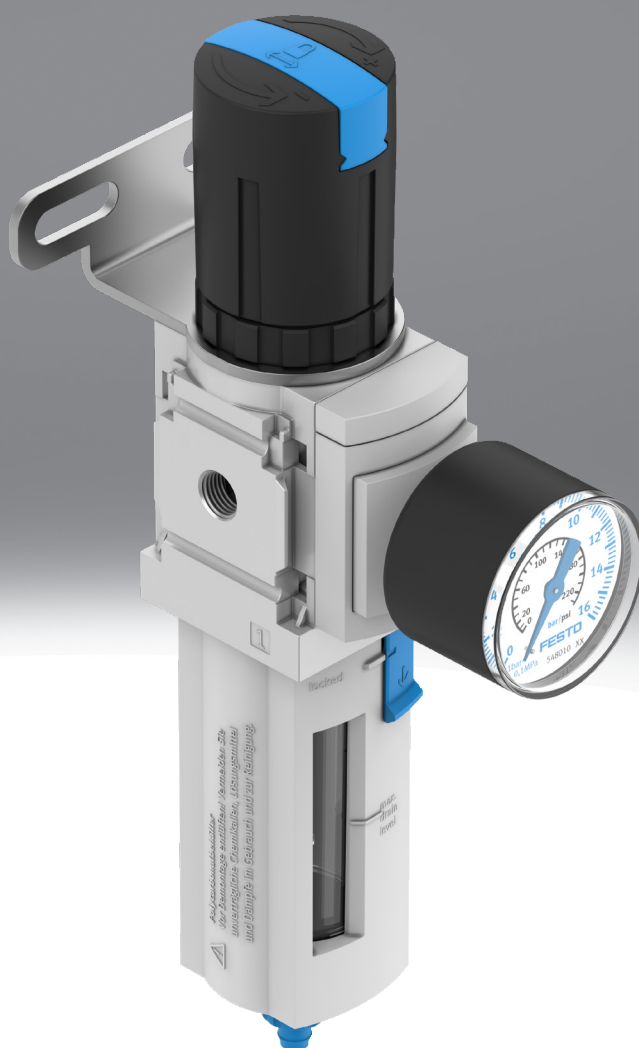


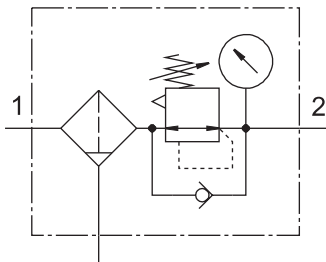
Filter regulator MS4-LFR-...-WR

FESTO



Characteristics

At a glance



- Very compact series for use close to the process directly on the machine
- These service unit components are configured with mounting components and display units specifically for the Indian market.
- Grid dimension: 40 mm
 - Filter and pressure regulator are combined into one unit
 - Good control characteristics with minimal pressure hysteresis and primary pressure compensation
 - The regulated working pressure can also be reduced without a consuming device via the optional secondary venting.
 - Return flow option for exhausting from output 2 to input 1 already integrated
 - High flow rate
 - Good particle and condensate separation

Diagrams

Link [ms4-lfr](#)



The diagrams shown in this document are also available online. These can be used to display precise values.

Function

- Directly actuated diaphragm control valve
- For stepless, precise adjustment of the required operating pressure
- The pressure regulator keeps the working pressure largely constant, irrespective of compressed air fluctuations in the network and due to air consumption

Grade of filtration

Grade of filtration of 5 µm or 40 µm can be selected.

Pressure gauge alternatives

[AD13] Pressure sensor (SPAN-B) with LCD display, cable 2.5 m OE, 4-pin, PNP, NPN



The pressure sensor SPAN is suitable for monitoring compressed air and non-corrosive gases. The sensor can be used in many industries thanks to its compact design. The measurement method is based on a piezoresistive measuring cell for relative pressure measurement. The pressure value is transmitted to the connected controller as a switching signal, as an analogue signal or via IO-Link® depending on the sensor variant and the selected parameters. Monitoring and setting a pressure threshold, a pressure range or a monitoring a differential pressure using a teach-in function or by entering values.

[PAGN] Pressure gauge PAGN-40-16-G18



Operating pressure: 16 bar

Characteristics

Type of mounting

[WP] Mounting bracket basic design



- For wall mounting an individual device

Type code

001	Series	
MS4	MS series, size 4	

002	Function	
LFR	Filter regulator	

003	Pneumatic connection	
1/8	Female thread G1/8	
1/4	Female thread G1/4	

004	Pressure regulation range	
D7	0.5 ... 12 bar	

005	Filter design	
C	5 µm	
E	40 µm	

006	Bowl	
R	Plastic bowl with plastic bowl guard	

007	Condensate drain	
M	Manually	

008	Pressure gauge alternatives	
AD13	Pressure sensor (SPAN-B) with LCD display, cable 2.5 m OE, 4-pin, PNP, NPN	
PAGN	Pressure gauge PAGN-40-16-G18	

009	Lockability	
AS	Can be locked using accessories	

010	Type of mounting	
WR	Mounting bracket with knurled nut on regulator knob	

Datasheet

General technical data				
Grade of filtration	5 µm		40 µm	
Pressure regulation range	0.05 ... 1.2 MPa	0.05 ... 1 MPa	0.05 ... 1.2 MPa	0.05 ... 1 MPa
Pressure regulation range	0.5 ... 12 bar	0.5 ... 10 bar	0.5 ... 12 bar	0.5 ... 10 bar
Pressure regulation range	7.25 ... 174 psi	7.25 ... 145 psi	7.25 ... 174 psi	7.25 ... 145 psi
Pneumatic connection, port 1	G1/8, G1/4			
Pneumatic connection, port 2	G1/8, G1/4			
Size	4			
Design	Filter regulator without pressure gauge			
Controller function	Output pressure constant, With secondary venting, With return flow function			
Type of mounting	Either: Front panel mounting In-line installation With accessories			
Mounting position	Vertical +/-5°			
Pore size	<5 µm		<40 µm	
Air purity class at output	Compressed air to ISO 8573-1:2010 [6:4:4]		Compressed air to ISO 8573-1:2010 [7:4:4]	
Bowl guard	Plastic bowl guard			
Condensate drain	Manually rotating			
Degree of condensate separation	>75%			
Actuator lock	Rotary knob with detent, can be closed with accessories			
Max. pressure hysteresis	0.25 bar			
Pressure gauge (ANALOG) or Pressure display (DIGITAL)	Prepared for G1/4			
Max. condensate volume	19 ml			

Standard nominal flow rate q _N				
Pneumatic connection, port 1	G1/8		G1/4	
Grade of filtration	5 µm	40 µm	5 µm	40 µm
Standard nominal flow rate (standardised to DIN 1343)	850 l/min	900 l/min	1,200 l/min	1,500 l/min

Operating and environmental conditions	
Operating pressure	0.08 ... 1.4 MPa
Operating pressure	0.8 ... 14 bar
Operating pressure	11.6 ... 203 psi
Operating medium	Compressed air to ISO 8573-1:2010 [-:4:-] Inert gas
Ambient temperature	-10 ... 60°C
Media temperature	-10 ... 60°C
Storage temperature	-10 ... 60°C
Corrosion resistance class CRC ¹⁾	2 - Moderate corrosion stress
Suitable for use with food ²⁾	See supplementary material information

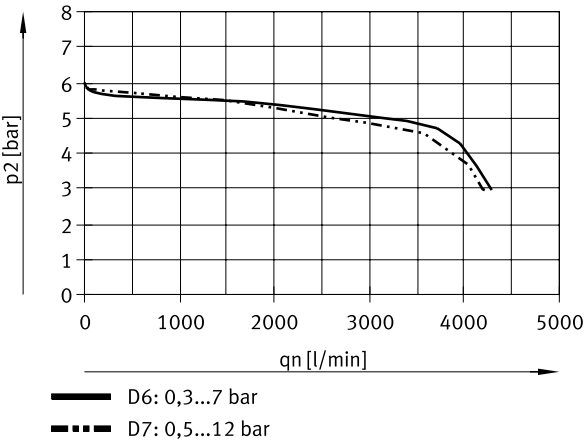
1) More information www.festo.com/x/topic/crc

2) More information www.festo.com/catalogue/ms-lfr → Support/Downloads.

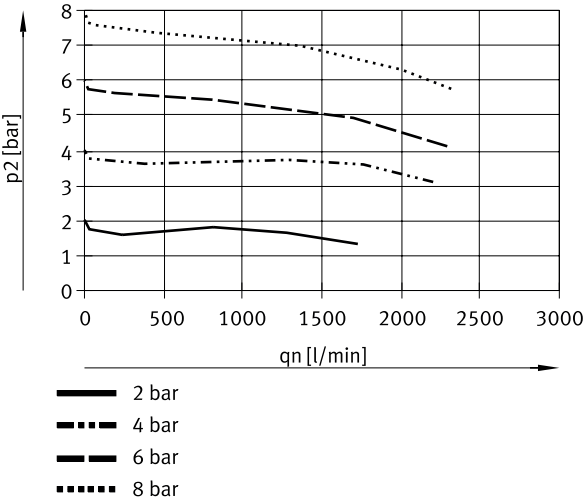
Materials	
Material housing	Die-cast aluminium
Material bowl	PC
Material filter	PE
Material seals	NBR
Material membrane	NBR
Material separating plate	POM
Note on materials	RoHS-compliant
LABS (PWIS) conformity	VDMA24364-B1/B2-L

Datasheet

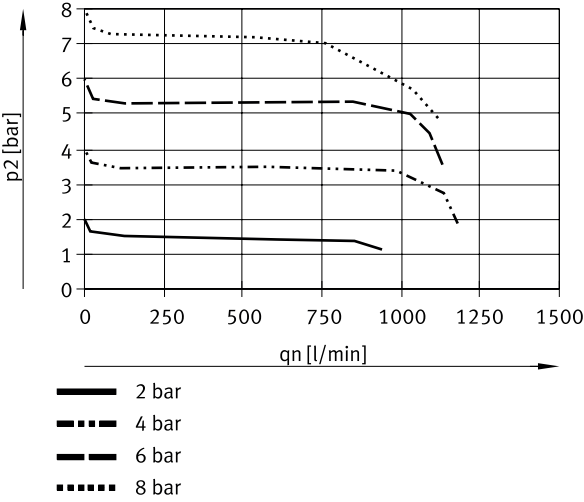
Normal flow rate q_n as a function of output pressure p_2 ($p_1 = 10$ bar) - MS4-LFR-1/8-...-E.. (grade of filtration: 5 μm)



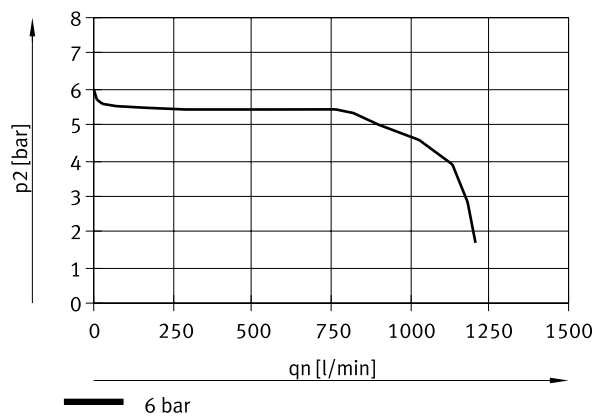
Normal flow rate q_n as a function of output pressure p_2 ($p_1 = 10$ bar) - MS4-LFR-1/8-...-E.. (grade of filtration: 40 μm)



Normal flow rate q_n as a function of output pressure p_2 ($p_1 = 10$ bar) - MS4-LFR-1/4-...-E.. (grade of filtration: 5 μm)



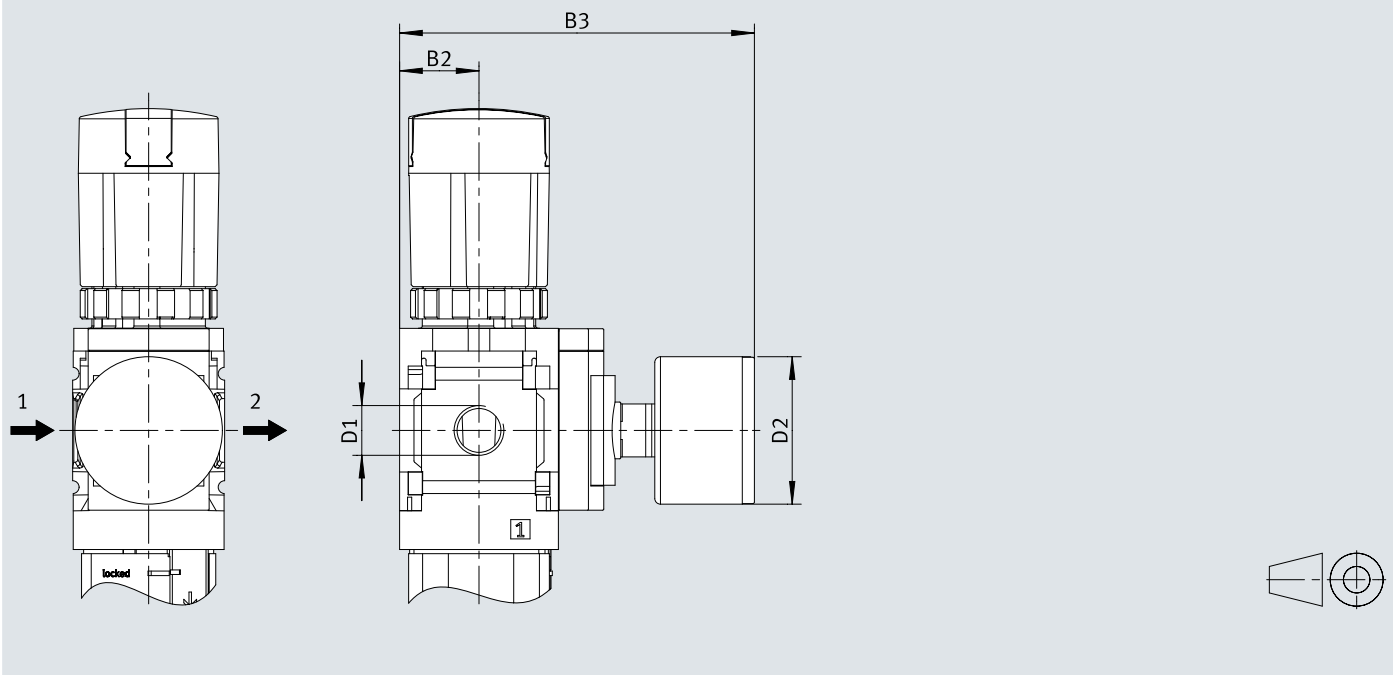
Datasheet

Normal flow rate q_n as a function of output pressure p_2 ($p_1 = 10$ bar) - MS4-LFR-1/4-...-E.. (grade of filtration: $40\ \mu\text{m}$)

Dimensions

Dimensions – Basic type Integrated MS pressure gauge with standard scale / with red/green scale

Download CAD data www.festo.com



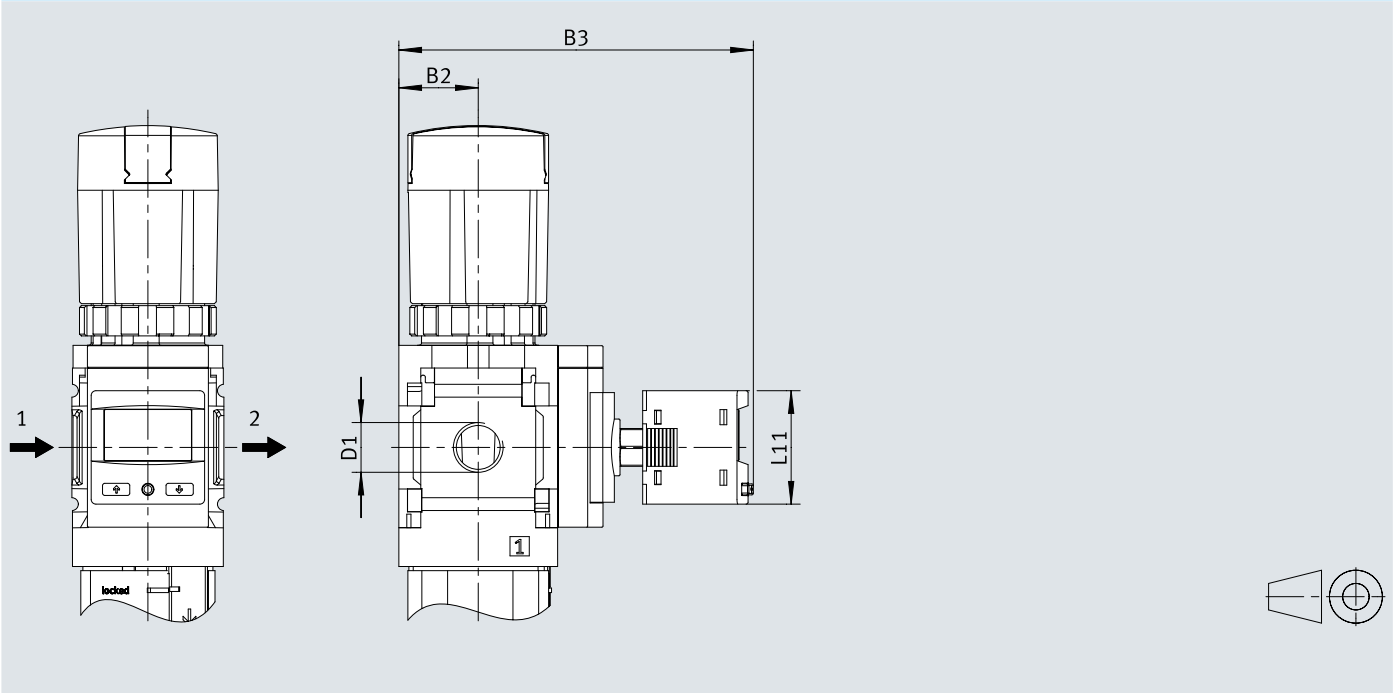
	B2	B3	D1	D2 Ø
MS4-LFR-1/8-D7-E-R-M-PAGN-AS-WR	21	94	G1/8	30
MS4-LFR-1/8-D7-C-R-M-PAGN-AS-WR				
MS4-LFR-1/4-D7-E-R-M-PAGN-AS-WR			G1/4	
MS4-LFR-1/4-D7-C-R-M-PAGN-AS-WR				

1) Standard scale

Dimensions

Dimensions – Alternative mounting position, rotary knob underneath

Download CAD data www.festo.com



	B2	B3	D1	L11
MS4-LFR-1/8-D7-E-R-M-AD13-AS-WR	21	94	G1/8	30
MS4-LFR-1/8-D7-C-R-M-AD13-AS-WR			G1/4	
MS4-LFR-1/4-D7-E-R-M-AD13-AS-WR				
MS4-LFR-1/4-D7-C-R-M-AD13-AS-WR				

1) Standard scale

Ordering data

Ordering data – with pressure sensor (SPAN-B)

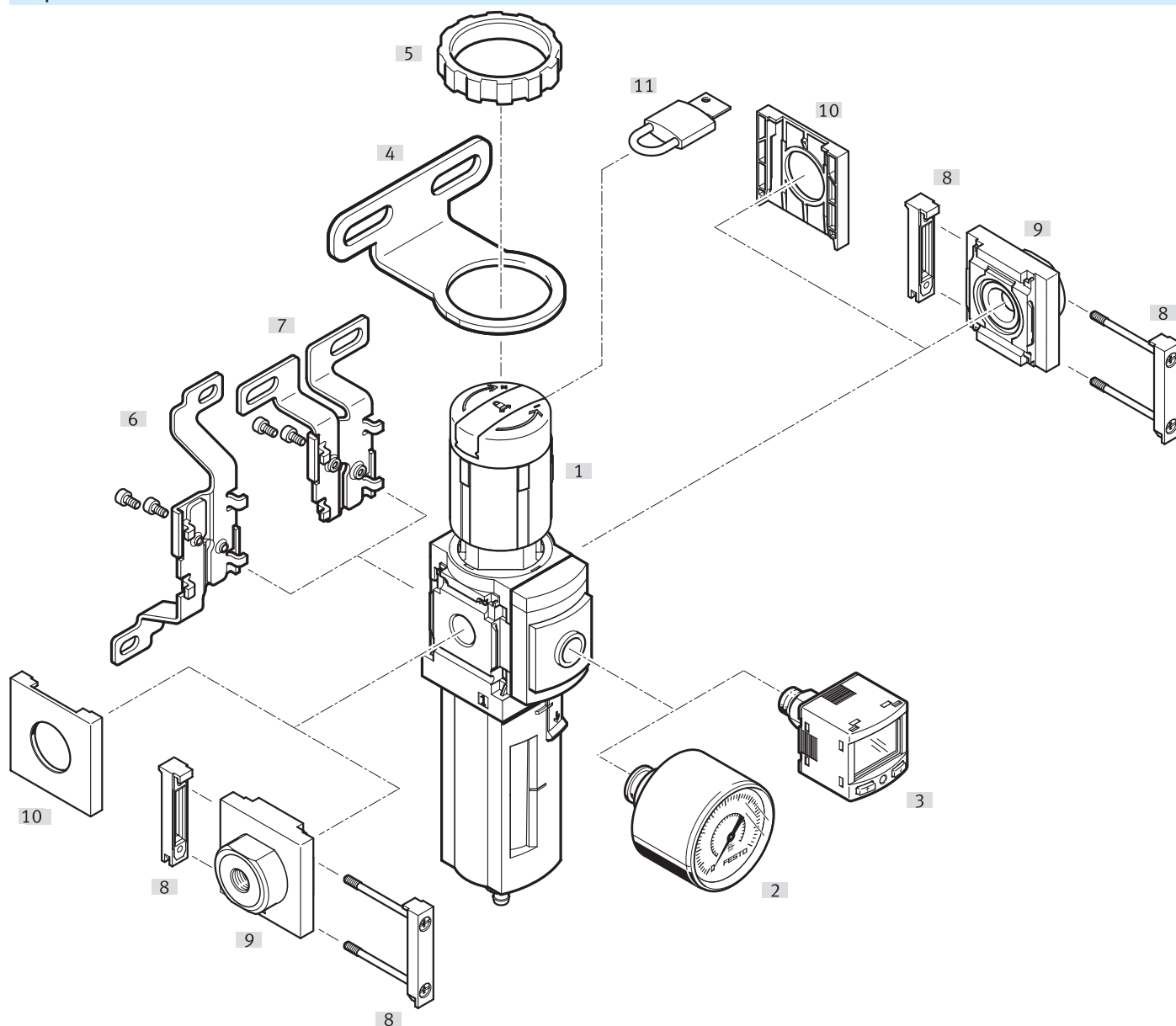
	Pneumatic connection, port 1	Grade of filtration	Pressure regulation range	Product weight	Part no.	Type
	G1/8	5 µm	0.5 ... 10 bar	275 g	8229779	MS4-LFR-1/8-D7-C-R-M-AD13-AS-WR
		40 µm			8229776	MS4-LFR-1/8-D7-E-R-M-AD13-AS-WR
	G1/4	5 µm			8229740	MS4-LFR-1/4-D7-C-R-M-AD13-AS-WR
		40 µm			8229741	MS4-LFR-1/4-D7-E-R-M-AD13-AS-WR

Ordering data – with pressure gauge (PAGN)

	Pneumatic connection, port 1	Grade of filtration	Pressure regulation range	Product weight	Part no.	Type
	G1/8	5 µm	0.5 ... 12 bar	275 g	8229778	MS4-LFR-1/8-D7-C-R-M-PAGN-AS-WR
		40 µm			8229777	MS4-LFR-1/8-D7-E-R-M-PAGN-AS-WR
	G1/4	5 µm			8229739	MS4-LFR-1/4-D7-C-R-M-PAGN-AS-WR
		40 µm			8229574	MS4-LFR-1/4-D7-E-R-M-PAGN-AS-WR

Peripherals

Peripherals overview MS4



Accessories		→ Link
Type/order code	Description	
[1] Filter regulator MS4-LFR		ms4-lfr
[2] Pressure gauge PAGN	Included in the scope of delivery	ms4-lfr
[3] Pressure sensor SPAN	Included in the scope of delivery	ms4-lfr
[4] Mounting bracket MS4-WR	Included in the scope of delivery	12
[5] Hex nut MS4-WRS		ms4-lfr
[6] Mounting bracket MS4-WB	For a single device	12
[7] Mounting bracket MS4-WBM	For a single device	12
[8] Module connector MS4-MV1	For device combinations and individual devices with connecting plate	12
[9] Connecting plate SET MS4-AG...		13
[10] Cover cap MS4-END	For devices without connecting plate	13
[11] Padlock LRV5-D		13
[12] Filter cartridge MS-LFP	No illustration	12

Accessories

Filter cartridge MS-LFP						
	Size	Grade of filtration	Material filter	LABS (PWIS) conformity	Part no.	Type
	4	5 µm	PE	VDMA24364-B1/B2-L	534501	MS4-LFP-C
		40 µm			534502	MS4-LFP-E

Module connector MS4-MV1						
	Size	Material module connector	LABS (PWIS) conformity	Product weight	Part no.	Type
	4	POM, High-alloy stainless steel	VDMA24364-B1/B2-L	13 g	8119201	MS4-MV1

Mounting bracket MS4-WB						
	Size	Material bracket	LABS (PWIS) conformity	Product weight	Part no.	Type
	4	Steel	VDMA24364-B1/B2-L	46 g	532185	MS4-WB

Mounting bracket MS4-WBM						
	Size	Material bracket	LABS (PWIS) conformity	Product weight	Part no.	Type
	4	Steel	VDMA24364-B1/B2-L	48 g	526062	MS4-WBM

Mounting bracket MS4-WR						
	Size	Material bracket	LABS (PWIS) conformity	Product weight	Part no.	Type
	4	Steel	VDMA24364-B1/B2-L	49 g	526064	MS4-WR

Accessories

Cover cap MS4-END				
	Size	Part no.	Type	
	4	538779	MS4-END	

Connecting plate-SET MS4-AG...				
	Size	Pneumatic connection, port 1	Part no.	Type
	4	G1/8	526068	MS4-AGA
			541549	MS4-AGA-EX
		G1/4	526069	MS4-AGB
			541550	MS4-AGB-EX
		G3/8	526070	MS4-AGC
			541551	MS4-AGC-EX

Padlock LRVS-D				
	Short type code	Product weight	Part no.	Type
	LRVS-D	120 g	193786	LRVS-D