

Pressure Regulators MS4N-LR/LRB – Inch Series



The pressure regulator maintains a constant working pressure (secondary side), regardless of the pressure variations in the system (primary side) and the air consumption.

- Pressure regulators
 - MS4-LR
 - MS4-LRB, manifold units
- Pneumatic connection: 1/8 NPT, 1/4 NPT, 3/8 NPT
- Supply pressure: 12 ... 206 psi
- Controlled pressure range: 4.4 ... 176 psi
- Flow rate: 10.6 ... 74.1 scfm

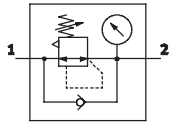
Product Range Overview															
Type	Flow rate [scfm]	Pneumatic connections		Pressure regulation range [psi]				Pressure indicator				Pressure adjustment		Reverse flow	
				D5	D6	D7	D8	VS	AG	A8	A4	AD...	AS		LD
		Body thread	Port plate	4.4 ... 59	4.4 ... 103	7.4 ... 176	7.4 ... 235	Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter for pressure gauge 1/8 NPT	Adapter for pressure gauge 1/4 NPT	Pressure sensor with display	Rotary knob, lockable	Rotary knob, long	Flow direction from right to left
MS4N			AG...	D5	D6	D7	D8	VS	AG	A8	A4	AD...	AS	LD	Z
LR	35.3 ... 74.1	1/8 NPT, 1/4 NPT	1/8 NPT, 1/4 NPT, 3/8 NPT	■	■	■	-	■	■	■	■	■	■	■	■
LRB	10.6 ... 67.1	1/4 NPT	1/8 NPT, 1/4 NPT, 3/8 NPT	■	■	■	-	■	■	■	■	■	■	■	■

Contents	
MS4N-LR	MS4N-LRB
Technical Data → 174	Technical Data → 184
Dimensional Drawings → 176	Dimensional Drawings → 186
Ordering Data → 179	Ordering Data → 189
Accessories → 182	Accessories → 192
Replacement Parts → 203	Replacement Parts → 203
→ www.festo.com/catalog/ms4n-lr	→ www.festo.com/catalog/ms4n-lrb

Pressure Regulators MS4N-LR – Inch Series

Technical Data

ISO Symbol



- Good control characteristics with low hysteresis and primary pressure compensation
- High flow rate with minimal pressure drop
- Available with or without secondary venting
- Setting values are secured by locking the rotary knob
- Lockable rotary knob
- Three pressure regulation ranges
- Two pressure gauge connections for different fitting options
- Reverse flow option for exhausting from output 2 to output 1
- Optional pressure sensor with display
- Optional rotary knob pressure gauge



General Technical Data			
Pneumatic connection 1, 2		1/8 NPT	1/4 NPT
Supply pressure	[psi]	12 ... 206	
Pressure regulation range	D5 [psi]	4.4 ... 59	
	D6 [psi]	4.4 ... 103	
	D7 [psi]	7.4 ... 176 (7.4 ... 147 with variant pressure sensor AD...)	
Max. hysteresis	[psi]	3.7	

Standard Nominal Flow Rate qnN ¹⁾ [scfm]			
Pneumatic connection 1, 2		1/8 NPT	1/4 NPT
Pressure regulation range	D5	42.4 ²⁾	74.1 ²⁾
	D6	40.6	63.5
	D7	35.3	60.0

1) Measured at p1 = 147 psi and p2 = 88 psi, Δp = 15 psi

2) Measured at p1 = 147 psi and p2 = 44 psi, Δp = 15 psi

Operating and Environmental Conditions		
Variant	Standard	Pressure sensor with display AD...
Operating medium	Compressed air	Filtered compressed air, lubricated or unlubricated, filtration grade 40 μm
Ambient temperature	[°F]	14 ... 140
Temperature of medium	[°F]	14 ... 140
Storage temperature	[°F]	14 ... 140
Assembly position	Any	
Corrosion resistance	CRC ¹⁾	2

1) Corrosion resistance class 2 according to Festo standard 940 070

Components requiring moderate corrosion resistance. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Pressure Regulators MS4N-LR – Inch Series

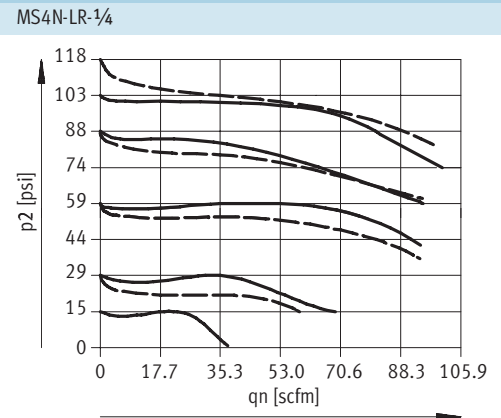
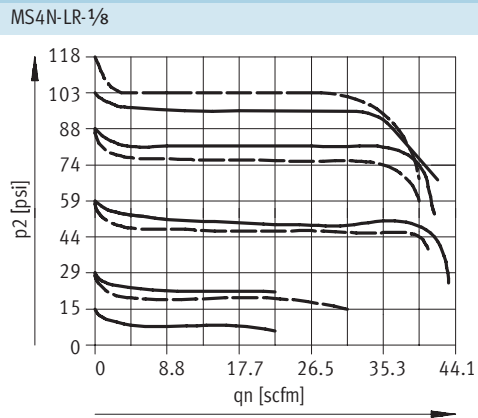
Technical Data

Weights [lb]	
Pressure regulator	0.45

- Wearing parts kits → 203
- For spare parts go to: www.festo.com/en/spare_parts_service

Standard Flow Rate qn as a Function of Output Pressure p2

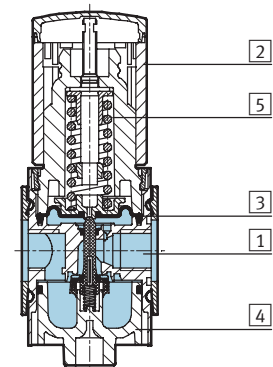
Primary pressure p1 = 147 psi



— D6: 4.4 ... 103 psi
 - - - D7: 7.4 ... 176 psi

Materials

Sectional view



Pressure regulator		
1	Body	Die-cast aluminum
2	Regulating knob	Polyamide/polyacetate
3	Diaphragm	Nitrile rubber
4	Bottom cap	Polyester, fiberglass reinforced
5	Springs	Steel
-	Seals	Nitrile rubber
Note on materials		Free of copper and PTFE only with cover plate VS

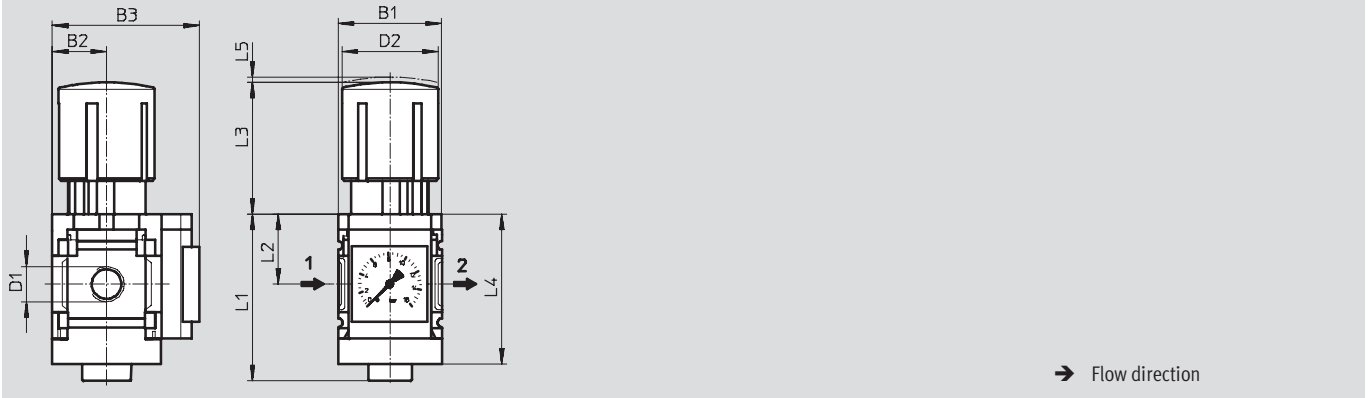
Pressure Regulators MS4N-LR – Inch Series

Dimensional Drawings

Dimensions¹⁾ – Standard

Download CAD Data → www.festo.com/us/cad

With pressure gauge, display unit [psi]



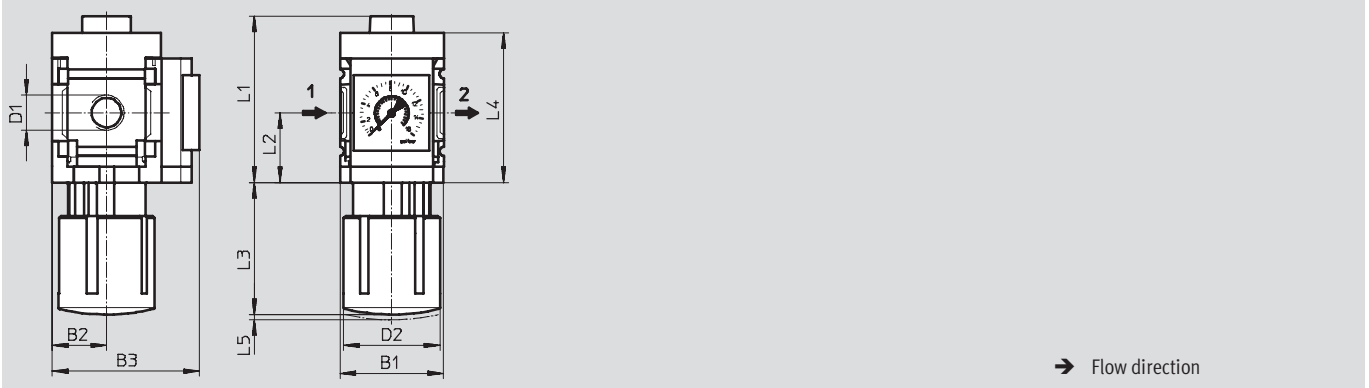
Type	B1	B2	B3	D1	D2	L1	L2	L3	L4	L5
MS4N-LR-1/8	1.57	0.83	2.24	1/8 NPT	1.46	2.54	1.06	2.01	2.28	0.08
MS4N-LR-1/4				1/4 NPT						

1) Dimensions are in inches, unless otherwise noted.

Dimensions¹⁾ – Alternative Mounting Position

Download CAD Data → www.festo.com/us/cad

Rotary knob underneath KD, standard rotary knob, with pressure gauge



Type	B1	B2	B3	D1	D2	L1	L2	L3	L4	L5
MS4N-LR-1/8-...-KD	1.57	0.83	2.24	1/8 NPT	1.46	2.54	1.06	2.01	2.28	0.08
MS4N-LR-1/4-...-KD				1/4 NPT						

1) Dimensions are in inches, unless otherwise noted.

Pressure Regulators MS4N-LR – Inch Series

Dimensional Drawings



Dimensions¹⁾ – Pressure Gauge Alternatives Download CAD Data → www.festo.com/us/cad

Cover plate VS Adapter plate A8/A4 for EN pressure gauge 1/8/1/4, without pressure gauge

→ Flow direction → Flow direction

Pressure sensor with display AD1 ... AD4 Technical data SDE1 → www.festo.com/catalog/sde1

→ Flow direction

AD1 variants:
SDE1-D10-G2-MS-L-P1-M8 with 3-pin plug M8x1, 1 switching output PNP

AD2 variants:
SDE1-D10-G2-MS-L-N1-M8 with 3-pin plug M8x1, 1 switching output NPN

AD3 variants:
SDE1-D10-G2-MS-L-PI-M12 with 4-pin plug M12x1, 1 switching output PNP and 4 ... 20 mA analog

AD4 variants:
SDE1-D10-G2-MS-L-NI-M12 with 4-pin plug M12x1, 1 switching output NPN and 4 ... 20 mA analog

Type	B2	B3	D1	D4	D6	L5	L6
MS4N-LR-1/8-...-VS	0.83	2.13	1/8 NPT	-	-	-	-
MS4N-LR-1/4-...-VS			1/4 NPT				
MS4N-LR-1/8-...-A8	0.83	2.30	1/8 NPT	1/8 NPT	-	-	-
MS4N-LR-1/4-...-A8			1/4 NPT				
MS4N-LR-1/8-...-A4	0.83	2.30	1/8 NPT	1/4 NPT	-	-	-
MS4N-LR-1/4-...-A4			1/4 NPT				
MS4N-LR-1/8-...-AD1/AD2	0.83	3.25	1/8 NPT	-	M8x1	1.38	1.84
MS4N-LR-1/4-...-AD1/AD2			1/4 NPT				
MS4N-LR-1/8-...-AD3/AD4	0.83	3.25	1/8 NPT	-	M12x1	1.38	2.20
MS4N-LR-1/4-...-AD3/AD4			1/4 NPT				

1) Dimensions are in inches, unless otherwise noted.

Pressure Regulators MS4N-LR – Inch Series

Dimensional Drawings



Dimensions¹⁾ – Rotary Knob Pressure Gauge Download CAD Data → www.festo.com/us/cad

Small DM1

Large DM2

Note
Due to the protruding rotary knob, only a MS4N-FRM distribution block can be connected as a directly adjacent service unit.

Type	D2	D3	L3	L4	L8	L9
MS4N-LR-...-DM1	1.46	M30x1.5	2.13	2.30	0.51	0.26
MS4N-LR-...-DM2	2.01	M48x1.5	2.19	2.38	0.51	0.26

1) Dimensions are in inches, unless otherwise noted.

Dimensions – Rotary Knob Download CAD Data → www.festo.com/us/cad

For installation into control panel

Standard

Standard, lockable AS

Long LD

Long, lockable LD-AS

1 Max. control panel thickness

Type	B4	B5	D2	D3 +0.04	L3	L8	L9
MS4N-LR-...	-	-	1.46	1.18	2.01	0.51	0.24
MS4N-LR-...-AS	1.90	1.17			2.37		
MS4N-LR-...-LD	-	-	1.46	-	2.01	-	-
MS4N-LR-...-LD-AS	1.90	1.17			2.37		

Pressure Regulators MS4N-LR – Inch Series

Ordering Data – Pre-configured Products



Ordering Data			
Pressure gauge, lockable standard type rotary knob			
Connection	Part No.	Type	LT
Pressure regulation range 4.4 ... 59 psi			
1/8 NPT	531419	MS4N-LR-1/8-D5-AS	1D
1/4 NPT	531418	MS4N-LR-1/4-D5-AS	1D
Pressure regulation range 4.4 ... 103 psi			
1/8 NPT	531423	MS4N-LR-1/8-D6-AS	1D
1/4 NPT	531422	MS4N-LR-1/4-D6-AS	1D
Pressure regulation range 7.4 ... 176 psi			
1/8 NPT	531427	MS4N-LR-1/8-D7-AS	1D
1/4 NPT	531426	MS4N-LR-1/4-D7-AS	1D

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Pressure Regulators MS4N-LR – Inch Series



Ordering Data – Configurable Products

Mandatory Data →

Part No.	Series	Size	Thread	Function	Connection size	Pressure regulation range
527691	MS	4	N	LR	1/8, 1/4, AQK, AQN, AQP	D5 D6 D7
Order example						
527691	MS	4	N	- LR	- AQN	- D6

Ordering Table		Grid dimension [mm]	40	Conditions	Code	Enter code
M	Part No.	527691				
	Series	Standard			MS	MS
	Size	4			4	4
	Thread	NPT thread			N	N
	Function	Pressure regulator			-LR	-LR
	Connection size	Body thread 1/8 NPT			-1/8	
		Body thread 1/4 NPT			-1/4	
		Port plate 1/8 NPT (dimensions → 198)			-AQK	
		Port plate 1/4 NPT (dimensions → 198)			-AQN	
		Port plate 3/8 NPT (dimensions → 198)			-AQP	
	Pressure regulation range	4.4 ... 59 psi			-D5	
		4.4 ... 103 psi			-D6	
		7.4 ... 176 psi		1	-D7	

1 D7 Not with rotary knob alternatives DM1, DM2

Transfer order code

527691	MS	4	N	- LR		
---------------	-----------	----------	----------	-------------	--	--

Pressure Regulators MS4N-LR – Inch Series



Ordering Data – Configurable Products

Options

Pressure gauge alternatives	Alternative pressure gauge scale	Secondary venting	Rotary knob alternative	Alternative assembly position	Security	Type of mounting	Reverse flow direction
VS A8 A4 AD1 AD2 AD3 AD4	BAR MPA	OS	LD DM1 DM2	KD	AS	WR WP WPM WB WBM	Z
- AD3	-	- OS	- LD	-	- AS	- WB	- Z

Ordering Table		Grid dimension [mm]	40	Conditions	Code	Enter code
0 Pressure gauge alternatives	Cover plate				-VS	
	Adapter plate for EN pressure gauge 1/8, without pressure gauge				-A8	
	Adapter plate for EN pressure gauge 1/4, without pressure gauge				-A4	
	Pressure sensor with display, plug M8, 1 switch output PNP, 3-pin			2	-AD1	
	Pressure sensor with display, plug M8, 1 switch output NPN, 3-pin			2	-AD2	
	Pressure sensor with display, plug M12, 1 switch output PNP, 4-pin, analog output 4 ... 20 mA			2	-AD3	
	Pressure sensor with display, plug M12, 1 switch output NPN, 4-pin, analog output 4 ... 20 mA			2	-AD4	
Alternative pressure gauge scale	bar			3	-BAR	
	MPa			3	-MPA	
Secondary venting	Without secondary venting			4	-OS	
Rotary knob alternative	Long rotary knob				-LD	
	Rotary knob pressure gauge, small			5	-DM1	
	Rotary knob pressure gauge, large			5	-DM2	
Alternative assembly position	Rotary knob at bottom			6	-KD	
Security	Lockable rotary knob			7	-AS	
Type of mounting	Mounting bracket with knurled nut for regulator head (dimensions → 196)			8	-WR	
	Mounting bracket (dimensions → 199)			9	-WP	
	Mounting bracket (dimensions → 199)			9	-WPM	
	Mounting bracket (dimensions → 195)			10	-WB	
	Mounting bracket (dimensions → 195)				-WBM	
Reverse flow direction	Flow direction from right to left				-Z	

- | | |
|--|---|
| 2 AD1 ... AD4 Measuring range max. 147 psi.
Not with rotary knob alternative DM2 | 7 AS Not with rotary knob alternatives DM1, DM2 |
| 3 BAR, MPA Not with pressure gauge alternatives VS, A8, A4, AD1, AD2, AD3, AD4 | 8 WR Not with long rotary knob LD.
Not with rotary knob alternative DM2 |
| 4 OS Not with rotary knob alternatives DM1, DM2 | 9 WP, WPM Only with port plate AQK, AQN or AQP |
| 5 DM1, DM2 Only with one pressure gauge alternative VS, A8, A4, AD1, AD2, AD3 or AD4 | 10 WB Not with rotary knob alternative DM2 |
| 6 KD Not with alternative pressure gauge scale MPA.
Not with mounting type WP.
Not with rotary knob alternatives DM1, DM2 | |

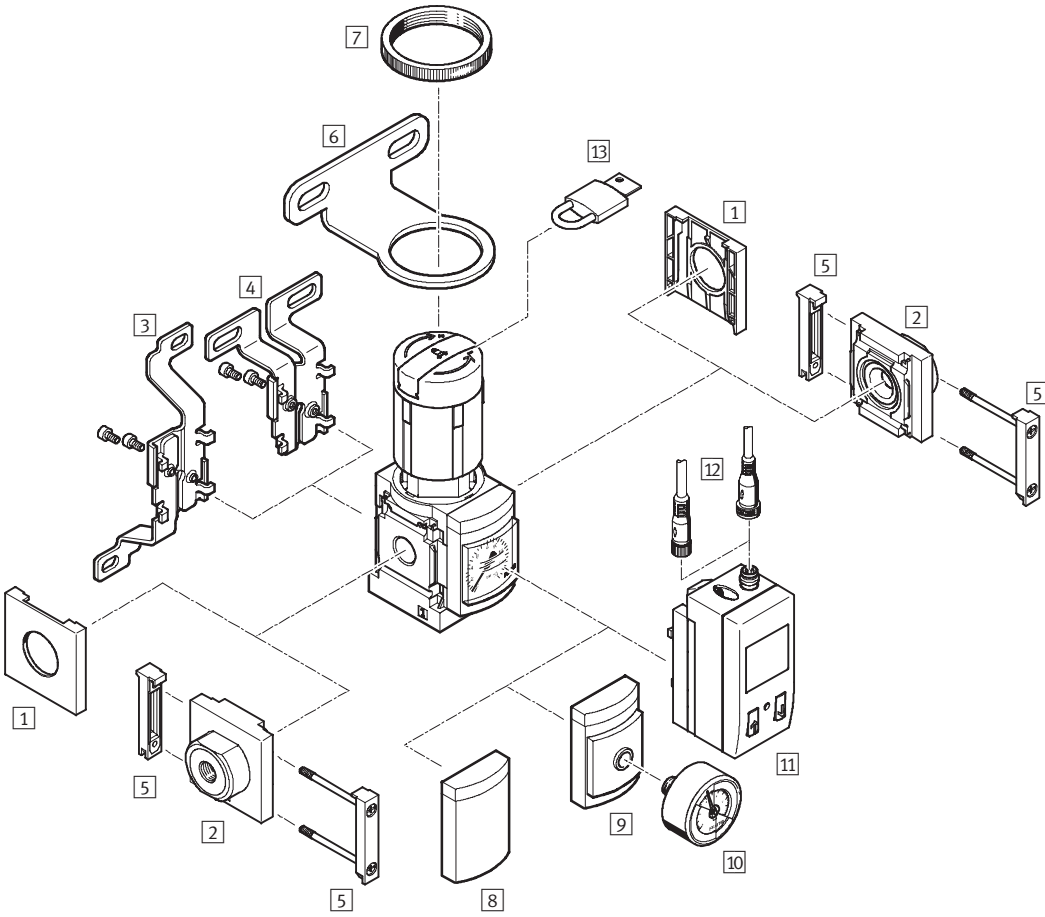
Transfer order code

- [] - [] - [] - [] - [] - [] - [] - []

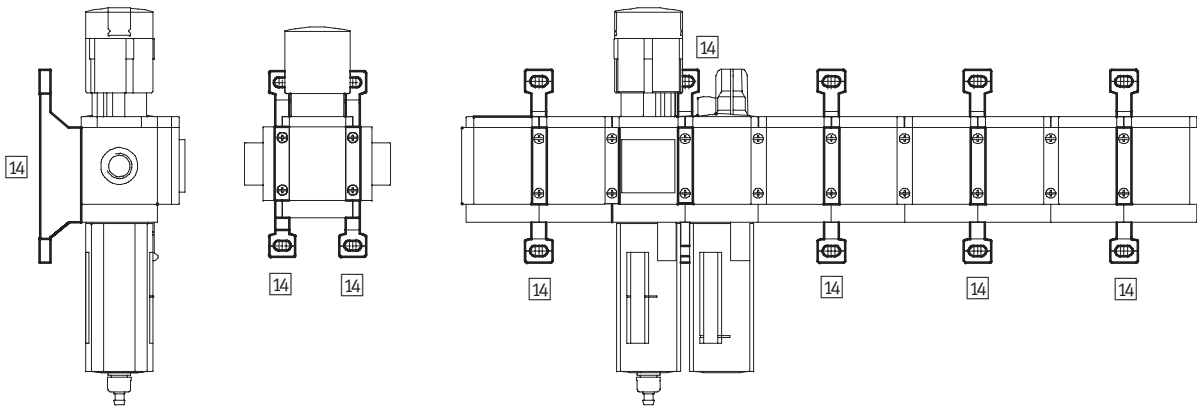
Pressure Regulators MS4N-LR – Inch Series

Accessories Overview

Mounting Attachments and Accessories



Single unit and combination unit mounting brackets.



Pressure Regulators MS4N-LR – Inch Series

Accessories Overview

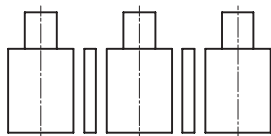
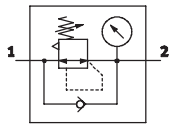


Mounting Attachments and Accessories						
		Single unit		Combination unit → 2.1-49		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS4-END	■	-	■	-	197
2	Port plate MS4N-AQ...	-	■	-	■	198
3	Mounting bracket MS4-WB	■	■	-	-	195
4	Mounting bracket MS4-WBM	■	■	-	-	195
5	Body connector MS4-MV	-	■	■	■	198
6	Regulator wall bracket MS4-WR	■	■	-	-	196
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Cover plate VS	■	■	■	■	180
9	Adapter for EN pressure gauge 1/8/1/4 A8/A4	■	■	■	■	180
10	Pressure gauge MA	■	■	■	■	202
11	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	180
12	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	202
13	Padlock LRVS-D	■	■	■	■	202
14	Mounting bracket MS4-WP/WPB/WPM	-	■	■	■	199

Pressure Regulators MS4N-LRB – Inch Series

Technical Data

ISO Symbol



LRB-manifold with through pressure supply for manifold assembly

- This pressure regulator is suitable for manifold assemblies with through air supply on both sides. Pressure output is at the front or rear.
- For configuring a regulator manifold with independent pressure regulation ranges
- Good control characteristics with low hysteresis and primary pressure compensation
- Available with or without secondary venting
- Setting values are secured by locking the rotary knob
- Lockable rotary knob
- Four pressure regulation ranges
- Reverse flow option for exhausting from output 2 to output 1
- Optional pressure sensor with display



General Technical Data		
Size		MS4
Pneumatic connection 1		1/4 NPT
Pneumatic connection 2		1/4 NPT
		QS-1/4-U push-in tubing connector
		QS-5/16-U push-in tubing connector
Supply pressure	[psi]	12 ... 206
Pressure regulation range	D5 [psi]	4.4 ... 59
	D6 [psi]	4.4 ... 103
	D7 [psi]	7.4 ... 176 (7.4 ... 147 with variant pressure sensor AD...)
Max. hysteresis	[psi]	3.7

Standard Nominal Flow Rate qn ¹⁾ [scfm]				
Variant		Standard	Angled outlet block	
			QS-1/4-U	QS-5/16-U
Pressure regulation range	D5	67.1 ²⁾	10.6 ²⁾	22.9 ²⁾
	D6	60.0	12.4	29.7
	D7	53.0	12.4	22.6

1) Measured at p₁ = 147 psi and p₂ = 88 psi, Δp = 15 psi
 2) Measured at p₁ = 147 psi and p₂ = 44 psi, Δp = 15 psi

Pressure Regulators MS4N-LRB – Inch Series

Technical Data



Operating and Environmental Conditions		
Variant	Standard	Pressure sensor with display AD...
Operating medium	Compressed air	Filtered compressed air, lubricated or unlubricated, filtration grade 40 µm
Ambient temperature [°F]	14 ... 140	32 ... 122
Temperature of medium [°F]	14 ... 140	32 ... 122
Storage temperature [°F]	14 ... 140	14 ... 140
Assembly position	Any	
Corrosion resistance CRC ¹⁾	2	

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

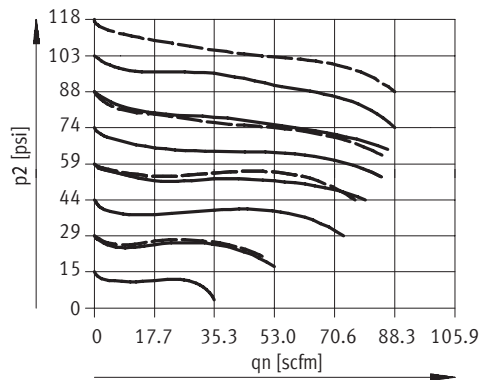
Weights [lb]	
Pressure regulator	0.44

- Wearing parts kits → 203
- For spare parts go to: www.festo.com/en/spare_parts_service

Standard Flow Rate qn as a Function of Output Pressure p2

MS4N-LRB-1/4

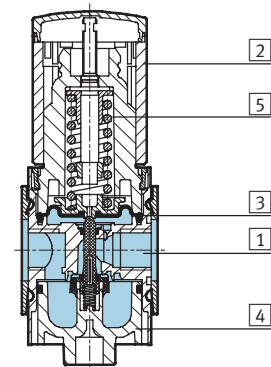
Primary pressure p1 = 147 psi



— D6: 4.4 ... 103 psi
- - - D7: 7.4 ... 176 psi

Materials

Sectional view



Pressure regulator (manifold assembly)		
1	Body	Die-cast aluminum
2	Regulating knob	Polyamide/polyacetate
3	Diaphragm	Nitrile rubber
4	Bottom cap	Polyester, fiberglass reinforced
5	Springs	Steel
-	Seals	Nitrile rubber
Note on materials		Free of copper and PTFE only with cover plate VS

Pressure Regulators MS4N-LRB – Inch Series

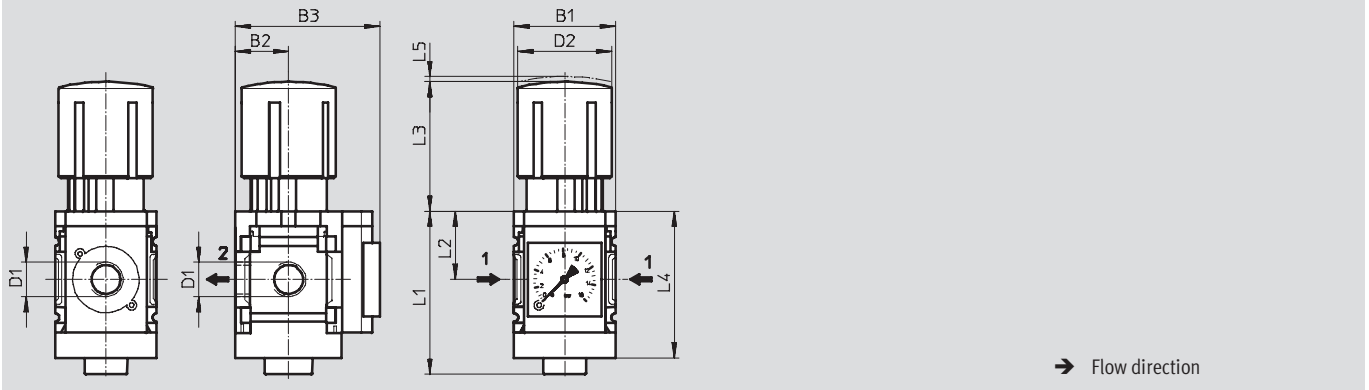
Dimensional Drawings



Dimensions¹⁾ – Standard

Download CAD Data → www.festo.com/us/cad

With pressure gauge, display unit [psi]



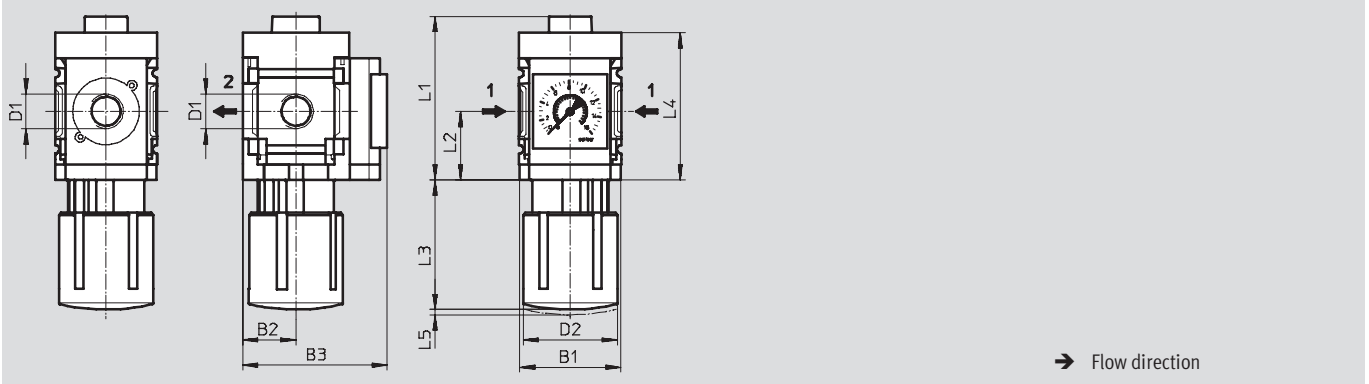
Type	B1	B2	B3	D1	D2	L1	L2	L3	L4	L5
MS4N-LRB-1/4	1.57	0.83	2.24	1/4 NPT	1.46	2.54	1.06	2.01	2.28	0.08

1) Dimensions are in inches, unless otherwise noted.

Dimensions¹⁾ – Alternative Mounting Position

Download CAD Data → www.festo.com/us/cad

Rotary knob underneath KD, standard rotary knob, with pressure gauge



Type	B1	B2	B3	D1	D2	L1	L2	L3	L4	L5
MS4N-LRB-1/4-...-KD	1.57	0.83	2.24	1/4 NPT	1.46	2.54	1.06	2.01	2.28	0.08

1) Dimensions are in inches, unless otherwise noted.

Pressure Regulators MS4N-LRB – Inch Series

Dimensional Drawings

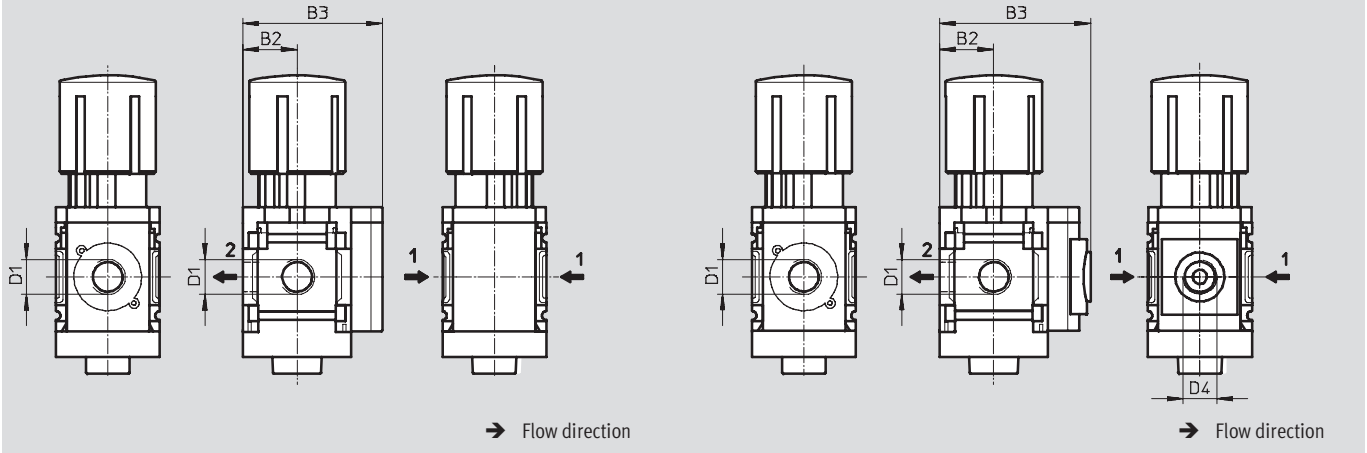


Dimensions¹⁾ – Pressure Gauge Alternatives

Download CAD Data → www.festo.com/us/cad

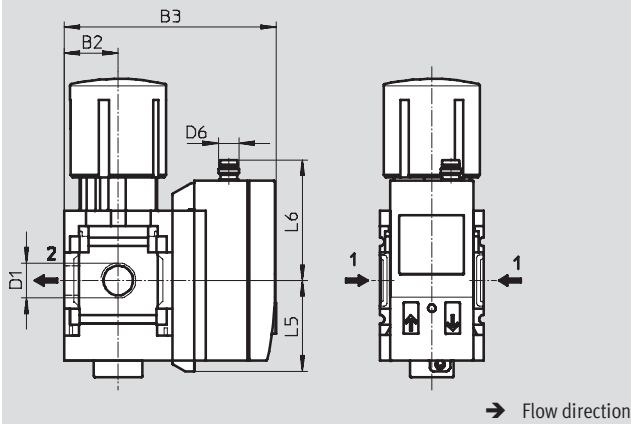
Cover plate VS

Adapter plate A8/A4 for EN pressure gauge 1/8/1/4, without pressure gauge



Pressure sensor with display AD1 ... AD4

Technical data SDE1 → www.festo.com/catalog/sde1



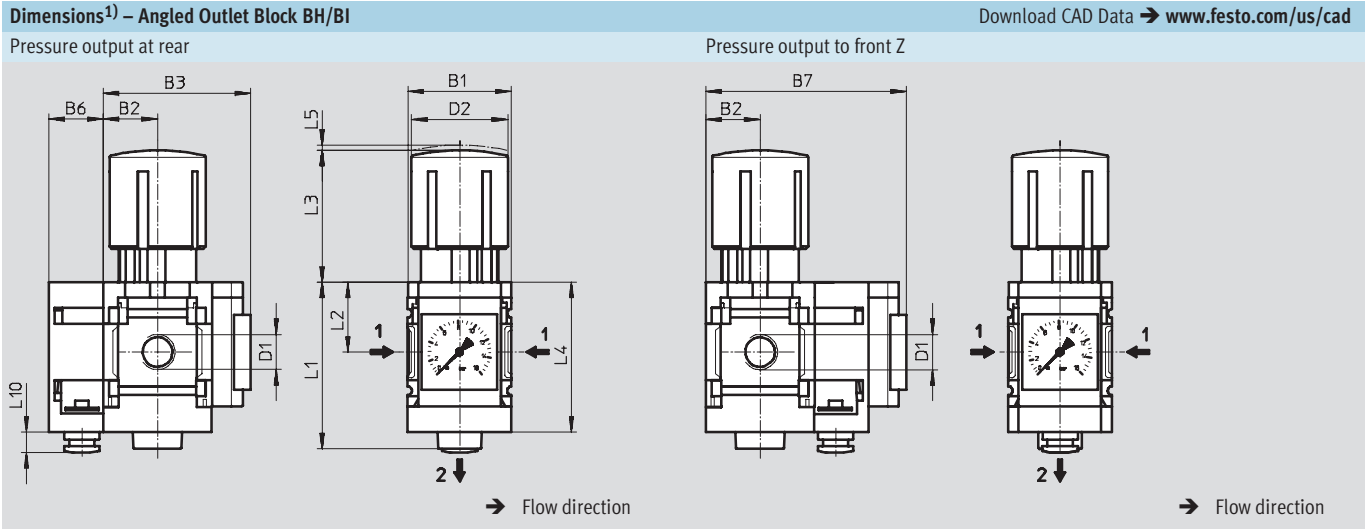
- AD1 variants:
SDE1-D10-G2-MS-L-P1-M8 with 3-pin plug M8x1, 1 switching output PNP
- AD2 variants:
SDE1-D10-G2-MS-L-N1-M8 with 3-pin plug M8x1, 1 switching output NPN
- AD3 variants:
SDE1-D10-G2-MS-L-PI-M12 with 4-pin plug M12x1, 1 switching output PNP and 4 ... 20 mA analog
- AD4 variants:
SDE1-D10-G2-MS-L-NI-M12 with 4-pin plug M12x1, 1 switching output NPN and 4 ... 20 mA analog

Type	B2	B3	D1	D4	D6	L5	L6
MS4N-LRB-1/4-...-VS	0.83	2.13	1/4 NPT	-	-	-	-
MS4N-LRB-1/4-...-A8	0.83	2.30	1/4 NPT	1/8 NPT	-	-	-
MS4N-LRB-1/4-...-A4	0.83	2.30	1/4 NPT	1/4 NPT	-	-	-
MS4N-LRB-1/4-...-AD1/AD2	0.83	3.25	1/4 NPT	-	M8x1	1.38	1.84
MS4N-LRB-1/4-...-AD3/AD4	0.83	3.25	1/4 NPT	-	M12x1	1.38	2.20

1) Dimensions are in inches, unless otherwise noted.

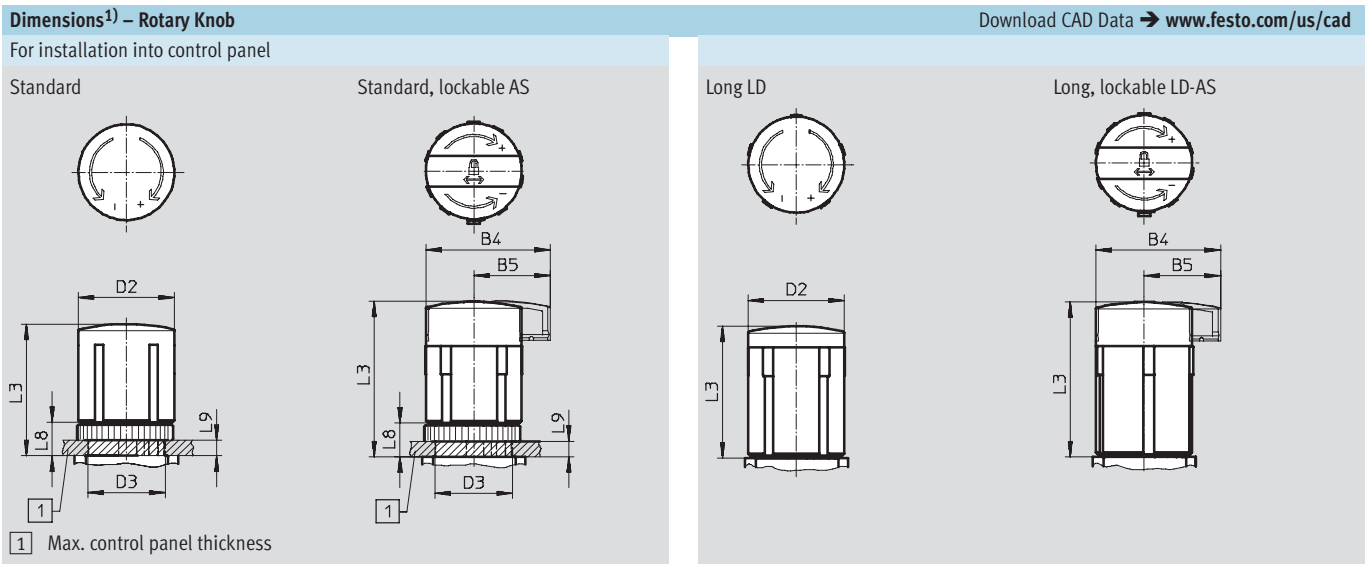
Pressure Regulators MS4N-LRB – Inch Series

Dimensional Drawings



Type	B1	B2	B3	B6	B7	D1	D2	L1	L2	L3	L4	L5	L10
MS4N-LRB-1/4-...-B...	1.57	0.83	2.24	0.83	3.07	1/4 NPT	1.46	2.54	1.06	2.01	2.28	0.08	0.31

1) Dimensions are in inches, unless otherwise noted.



Type	B4	B5	D2	D3 +0.04	L3	L8	L9
MS4N-LRB-...	-	-	1.46	1.18	2.01	0.51	0.24
MS4N-LRB-...-AS	1.90	1.17			2.37		
MS4N-LRB-...-LD	-	-	1.46	-	2.01	-	-
MS4N-LRB-...-LD-AS	1.90	1.17			2.37		

1) Dimensions are in inches, unless otherwise noted.

Pressure Regulators MS4N-LRB – Inch Series



Ordering Data – Pre-configured Products

Ordering Data						
Pressure gauge, lockable standard type rotary knob						
Connection	Pressure output to rear without angled outlet block			Pressure output to rear with angled outlet block QS-5/16-U		
	Part No.	Type	LT	Part No.	Type	LT
Pressure regulation range 4.4 ... 59 psi						
1/4 NPT	531780	MS4N-LRB-1/4-D5-AS	1D	531786	MS4N-LRB-1/4-D5-AS-BI	Q
Pressure regulation range 4.4 ... 103 psi						
1/4 NPT	531782	MS4N-LRB-1/4-D6-AS	1D	531788	MS4N-LRB-1/4-D6-AS-BI	Q
Pressure regulation range 7.4 ... 176 psi						
1/4 NPT	531784	MS4N-LRB-1/4-D7-AS	1D	531790	MS4N-LRB-1/4-D7-AS-BI	Q

Ordering Data						
Adapter plate A8 for EN pressure gauge 1/8, lockable standard-type rotary knob						
Connection	Pressure output to rear without angled outlet block					
	Part No.	Type	LT			
Pressure regulation range 4.4 ... 59 psi						
1/4 NPT	531792	MS4N-LRB-1/4-D5-A8-AS				Q
Pressure regulation range 4.4 ... 103 psi						
1/4 NPT	531793	MS4N-LRB-1/4-D6-A8-AS				Q
Pressure regulation range 7.4 ... 176 psi						
1/4 NPT	531794	MS4N-LRB-1/4-D7-A8-AS				Q

LT = Lead time 1D typically ships same day/next day 1W typically ships within 1 week Q request a quote for lead time

Pressure Regulators MS4N-LRB – Inch Series



Ordering Data – Configurable Products

M Mandatory Data						O Options →	
Part No.	Series	Size	Thread	Function	Connection size	Pressure regulation range	Pressure gauge alternatives
527693	MS	4	N	LRB	¼ AQK AQN AQP	D5 D6 D7	VS A8 A4 AD1 AD2 AD3 AD4
Order example							
527693	MS	4	N	- LRB	- AQP	- D5	- A4

Ordering Table		Grid dimension [mm]	40	Conditions	Code	Enter code
M	Part No.	527693				
	Series	Standard			MS	MS
	Size	4			4	4
	Thread	NPT thread			N	N
	Function	Pressure regulator for manifold assembly			-LRB	-LRB
	Connection size	Body thread ¼ NPT			-¼	
		Port plate ⅛ NPT (dimensions → 198)			-AQK	
		Port plate ¼ NPT (dimensions → 198)			-AQN	
		Port plate ⅜ NPT (dimensions → 198)			-AQP	
	Pressure regulation range	4.4 ... 59 psi			-D5	
		4.4 ... 103 psi			-D6	
		7.4 ... 176 psi			-D7	
O	Pressure gauge alternatives	Cover plate		1	-VS	
		Adapter plate for EN pressure gauge ⅛, without pressure gauge		2	-A8	
		Adapter plate for EN pressure gauge ¼, without pressure gauge		2	-A4	
		Pressure sensor with display, plug M8, 1 switching output PNP, 3-pin		2 3	-AD1	
		Pressure sensor with display, plug M8, 1 switching output NPN, 3-pin		2 3	-AD2	
		Pressure sensor with display, plug M12, 1 switching output PNP, 4-pin, analog output 4 ... 20 mA		2 3	-AD3	
		Pressure sensor with display, plug M12, 1 switching output NPN, 4-pin, analog output 4 ... 20 mA		2 3	-AD4	

- 1 VS Must be selected if alternative flow direction Z is selected without alternative assembly position KD and without pressure output BH, BI.
 - 2 A8, A4, AD1 ... AD4 In combination with alternative flow direction Z only with alternative assembly position KD
 - 3 AD1 ... AD4 Measuring range max. 147 psi
- Must be selected if alternative assembly position KD is selected without alternative flow direction Z and without pressure output BH, BI

Transfer order code

527693	MS	4	N	- LRB	-	-	-	-
--------	----	---	---	-------	---	---	---	---

Pressure Regulators MS4N-LRB – Inch Series

Ordering Data – Configurable Products



→ 0 Options

Alternative pressure gauge scale	Secondary venting	Rotary knob alternative	Alternative assembly position	Security	Pressure output	Type of mounting	Reverse flow direction
BAR MPA	OS	LD	KD	AS	BH BI	WR WP WPM WPB WB WBM	Z
-	- OS	- LD	-	- AS	- BH	- WP	-

Ordering Table		Grid dimension [mm]	40	Conditions	Code	Enter code
Alternative pressure gauge scale	bar			4	-BAR	
	MPa			4	-MPA	
Secondary venting	Without secondary venting				-OS	
Rotary knob alternative	Long rotary knob				-LD	
Alternative assembly position	Rotary knob, underneath			5	-KD	
Security	Lockable rotary knob				-AS	
Pressure output (p _{max} = 147 psi)	Angled outlet block QS-1/4-U				-BH	
	Angled outlet block QS-5/16-U				-BI	
Type of mounting	Mounting bracket with knurled nut for regulator head (dimensions → 196)			6 7	-WR	
	Mounting bracket (dimensions → 199)			8 9	-WP	
	Mounting bracket (dimensions → 199)			6 8	-WPM	
	Mounting bracket for large wall gap (dimensions → 199)			8 10	-WPB	
	Mounting bracket (dimensions → 195)			6	-WB	
	Mounting bracket (dimensions → 195)			6	-WBM	
Reverse flow direction	Pressure output at front (for gauge connection an angled outlet block is required)				-Z	

- 4 **BAR, MPA** Not with pressure gauge alternatives VS, A8, A4, AD1, AD2, AD3, AD4.
Not with alternative assembly position KD.
In combination with alternative flow direction Z only with pressure output BH, BI
- 5 **KD** With alternative pressure gauge scale BAR only if alternative flow direction Z or pressure output BH, BI has been selected.
Not with mounting type WP, WPB.
In combination with mounting type WR, WPM, WB, WBM not with alternative flow direction Z.
In combination with pressure gauge alternatives A8, A4, AD1, AD2, AD3, AD4 only with alternative flow direction Z

- 6 **WR, WPM, WB, WBM** In combination with alternative flow direction Z not with alternative assembly position KD
- 7 **WR** Only with alternative flow direction Z.
Not with rotary knob alternative LD
- 8 **WP, WPM, WPB** Only with port plate AQK, AQN, AQP
- 9 **WP** Only with alternative flow direction Z and/or only with pressure output BH, BI
- 10 **WPB** Not with alternative flow direction Z.
Not with pressure output BH, BI

Transfer order code

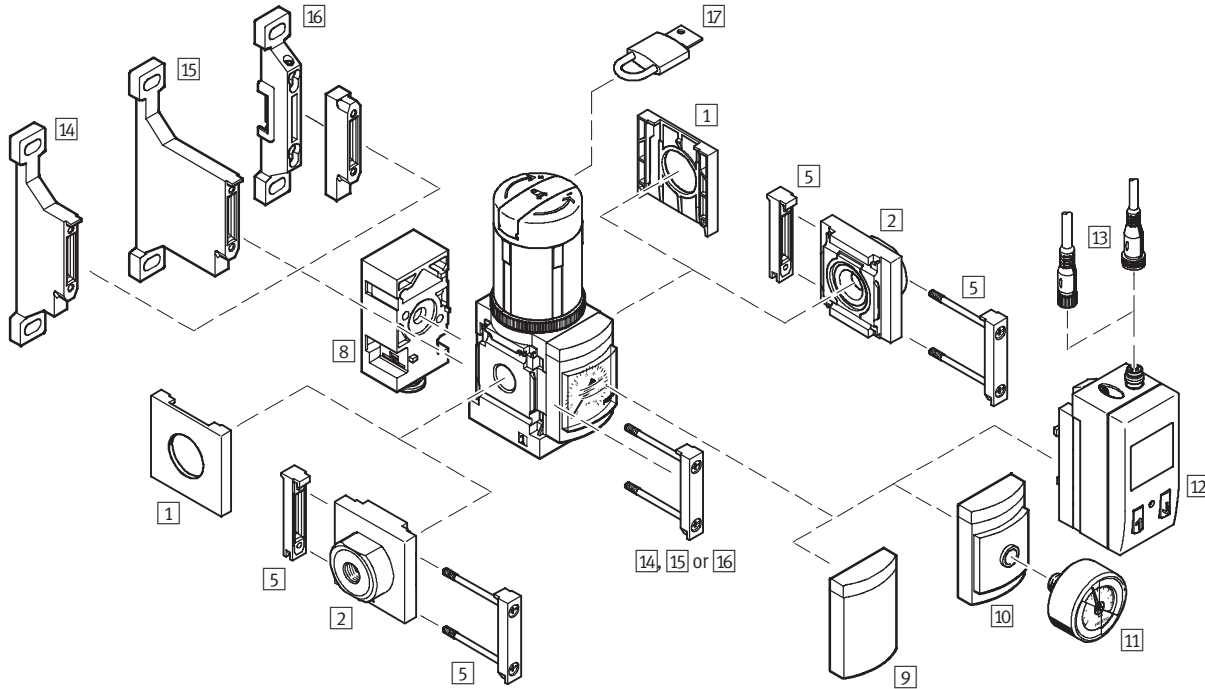
- [] - [] - [] - [] - [] - [] - [] - []

Pressure Regulators MS4N-LRB – Inch Series

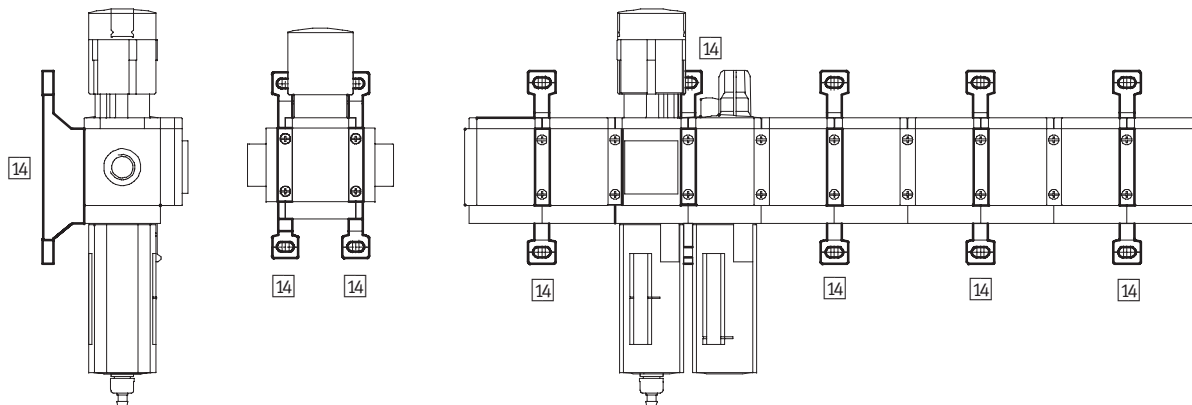
Accessories Overview

Mounting Attachments and Accessories

Pressure output at rear



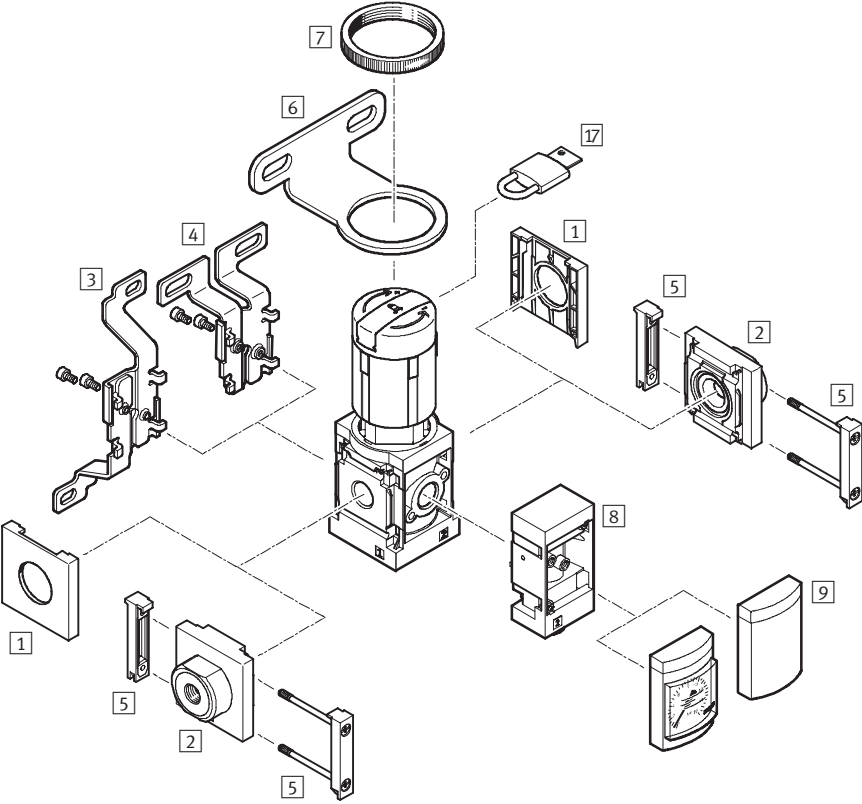
Single unit and combination unit mounting brackets.



Pressure Regulators MS4N-LRB – Inch Series

Accessories Overview

Pressure output at front



Pressure Regulators MS4N-LRB – Inch Series

Accessories Overview



Mounting Attachments and Accessories						
		Single unit		Combination unit → 2.1-49		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS4-END	■	-	■	-	197
2	Port plate MS4N-AQ...	-	■	-	■	198
3	Mounting bracket MS4-WB	■	■	-	-	195
4	Mounting bracket MS4-WBM	■	■	-	-	195
5	Body connector MS4-MV	-	■	■	■	198
6	Regulator wall bracket MS4-WR	■	■	-	-	196
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Angled outlet block B...	■	■	■	■	191
9	Cover plate VS	■	■	■	■	190
10	Adapter for EN pressure gauge 1/8/1/4 A8/A4	■	■	■	■	190
11	Pressure gauge MA	■	■	■	■	202
12	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	180
13	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	202
14	Mounting bracket MS4-WP	-	■	■	■	199
15	Mounting bracket MS4-WPB	-	■	■	■	199
16	Mounting bracket MS4-WPM	-	■	■	■	199
17	Padlock LRVS-D	■	■	■	■	202

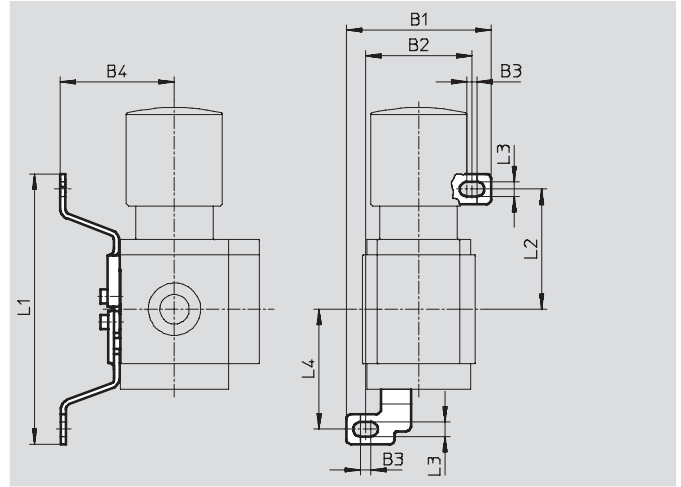
Pressure Regulators MS4N-LR/LRB – Inch Series

Accessories

3 Mounting bracket MS4-WB

- For wall mounting

Material:
Steel

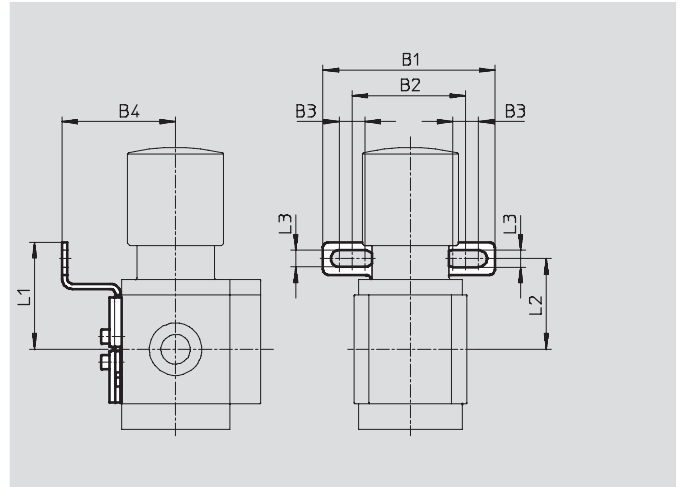


Dimensions and Ordering Data										
B1	B2	B3	B4	L1	L2	L3	L4	Weight [lb]	Part No.	Type
2.21	1.62	0.16	1.74	4.12	1.83	0.22	1.83	0.09	532185	MS4-WB

4 Mounting bracket MS4-WBM

- For wall mounting

Material:
Steel



Dimensions and Ordering Data									
B1	B2	B3	B4	L1	L2	L3	Weight [lb]	Part No.	Type
2.62	1.73	0.39	1.73	1.63	1.38	0.26	0.10	526062	MS4-WBM

Pressure Regulators MS4N-LR/LRB – Inch Series

Accessories

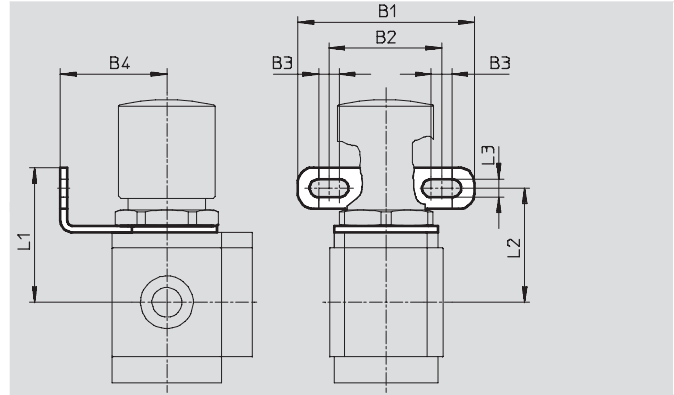
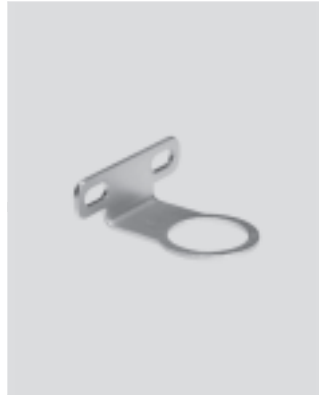
6 Mounting bracket MS4-WR

- For wall mounting a filter regulator and pressure regulator

Material:
Steel

Note

The hex nut for attaching components to this bracket must be ordered separately.

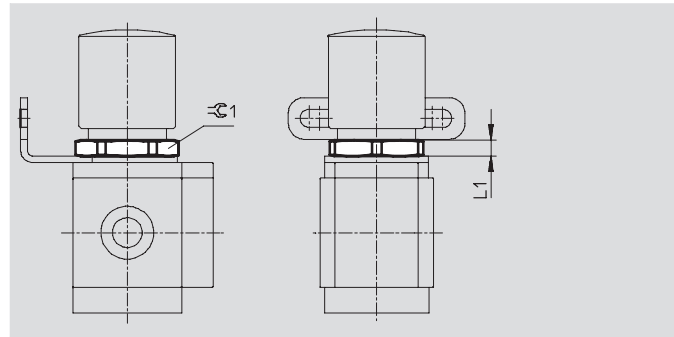


Dimensions and Ordering Data								Part No.	Type
B1	B2	B3	B4	L1	L2	L3	Weight [lb]		
2.68	1.73	0.31	1.61	2.05	1.73	0.28	0.10	526064	MS4-WR

Hex nut MS4-WRS

- For front panel mounting
- For attaching components to the mounting bracket MS4-WR

Material:
Aluminum



Dimensions and Ordering Data				Part No.	Type
L1	±0.1	Weight [lb]			
0.24	1.42	0.01	532187	MS4-WRS	

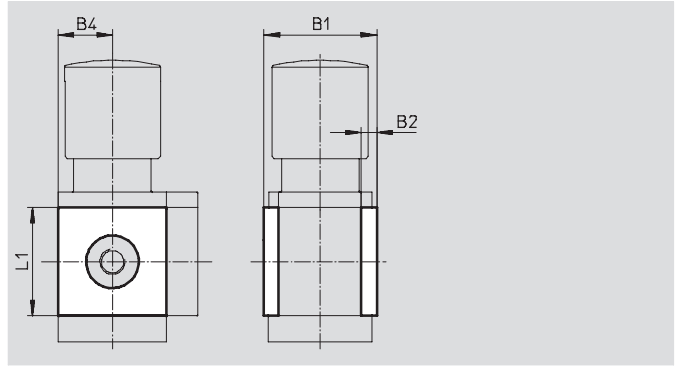
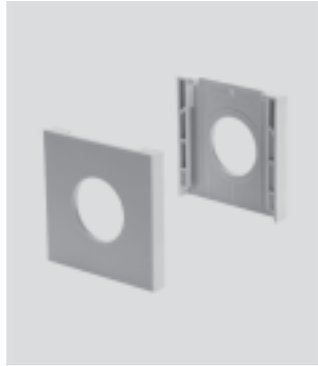
Pressure Regulators MS4N-LR/LRB – Inch Series

Accessories

Cover cap MS4-END

- Can be used to cover the body sides of the first and last module if port plates are not used.

Material:
Reinforced polyamide
Free of copper and PTFE

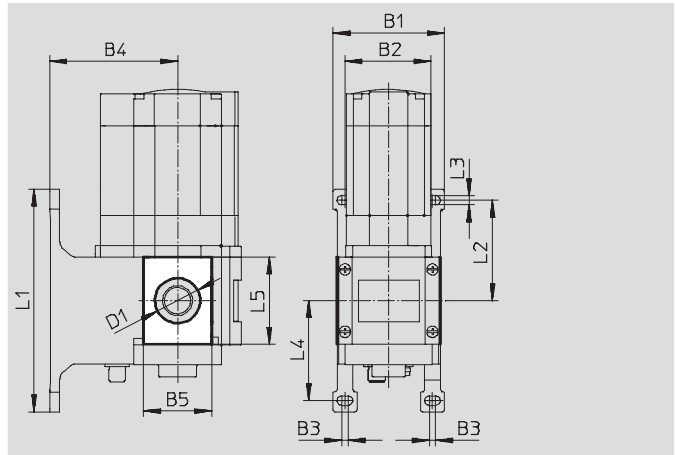


Dimensions and Ordering Data						
B1	B2	B4	L1	Part No.	Type	
1.72	0.24	0.83	1.65	538779	MS4-END	

Mounting plate MS4-AEND

- In combination with mounting bracket MS-WP or MS-WPB for mounting an individual unit on a wall with body thread

Material:
Reinforced polyamide
Conforms to RoHS
Free of copper and PTFE



Dimensions and Ordering Data															
B1	B2	B3	B4		B5	D1 ∅	L1	L2	L3	L4	L5	CRC ¹⁾	Weight [lb]	Part No.	Type
			WP	WPB											
2.17	1.58	0.16	1.73	2.60	1.20	0.80	4.17	1.83	0.22	1.84	1.65	2	0.01	542966	MS4-AEND

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

Pressure Regulators MS4N-LR/LRB – Inch Series

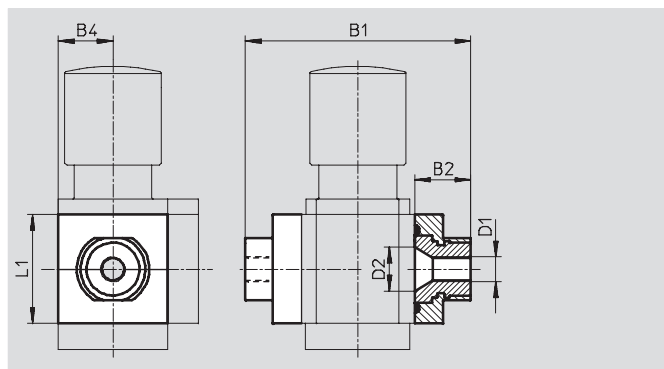


Accessories

Port plate MS4N-AQ...

- Adapter for pneumatic connection

Material:
Aluminum



Dimensions and Ordering Data								
B1	B2	B4	D1	D2	L1	Weight [lb]	Part No.	Type
3.29	0.85	0.83	1/8 NPT	0.66	1.65	0.26	526065	MS4N-AQK
			1/4 NPT				526066	MS4N-AQN
			3/8 NPT				526067	MS4N-AQP

Body connector MS4-MV

- For connecting modules

Material:
Stainless steel/polyacetate



Ordering Data		
Weight [lb]	Part No.	Type
0.07	532798	MS4-MV

Pressure Regulators MS4N-LR/LRB – Inch Series

Accessories



14 Mounting Bracket MS4-WP...

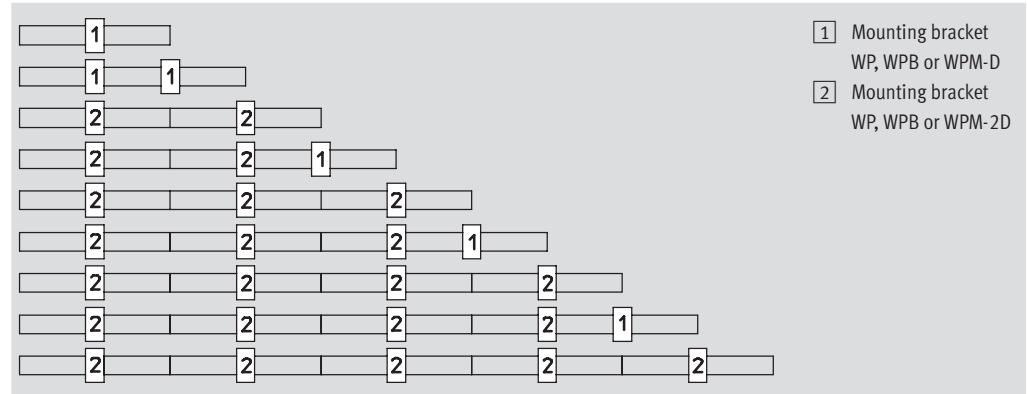
Suggested placement of wall mounting brackets when mounting air preparation combinations

1 unit: 1.575 in

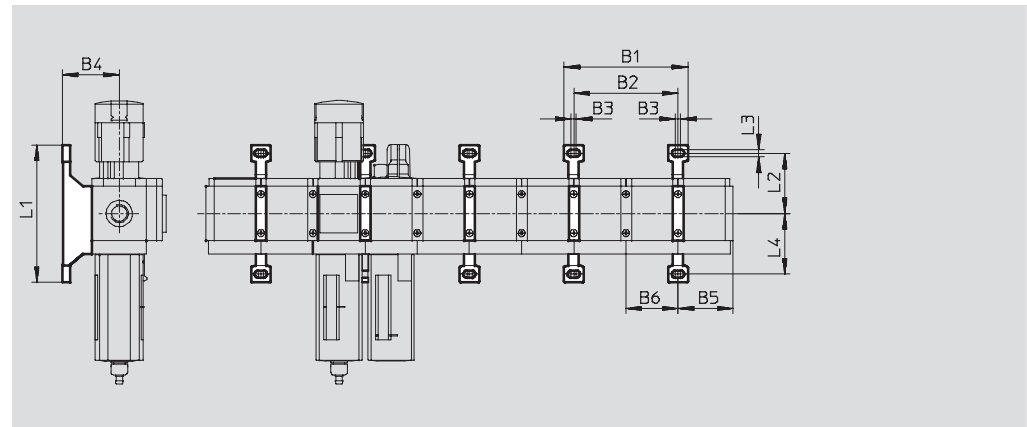
2 units: 3.15 in

Number of units

1 2 3 4 5 6 7 8 9 10



Mounting dimensions



Type	B1	B2	B3	B4	B5	B6	L1	L2	L3	L4
MS4-WP	3.75	3.15	0.16	1.73	1.65	1.57	4.17	1.83	0.22	1.84
MS4-WPB				2.60						1.57
MS4-WPM-...D				1.73						1.57

Pressure Regulators MS4N-LR/LRB – Inch Series

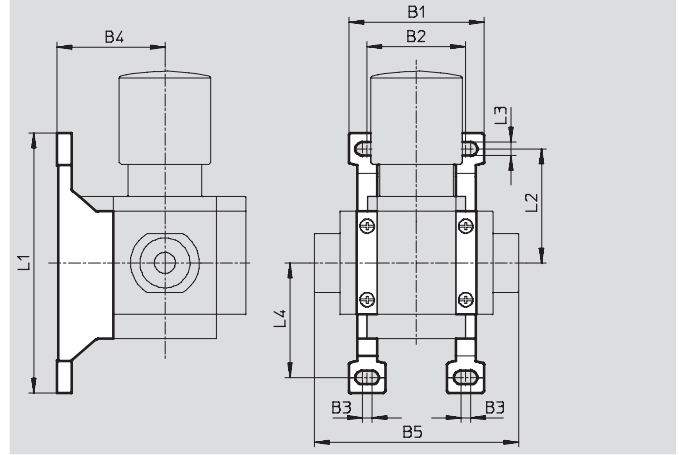


Accessories

Mounting bracket MS4-WP

- To connect the modules for wall mounting
- In combination with a port plate MS-AG... for mounting an individual unit on a wall
- In combination with mounting plate MS-AEND or for mounting an individual unit with body thread on a wall
- For pressure regulator LRB with angled outlet block B... at rear

Material:
Die-cast aluminum

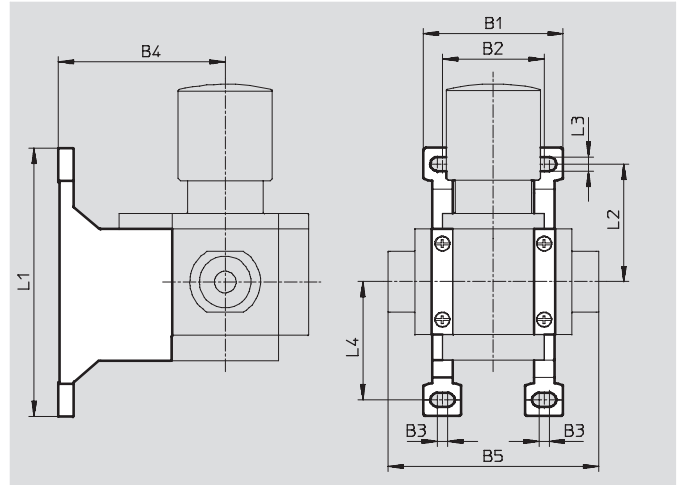


Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [lb]	Part No.	Type
2.17	1.58	0.16	1.73	3.28	4.17	1.83	0.22	1.84	0.08	532184	MS4-WP

Mounting bracket MS4-WPB

- To connect the modules for wall mounting
- In combination with a port plate MS-AG... for mounting an individual unit on a wall
- In combination with mounting plate MS-AEND or for mounting an individual unit with direct thread on a wall
- Provides large wall gap for pressure regulator

Material:
Die-cast aluminum



Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [lb]	Part No.	Type
2.17	1.58	0.16	2.60	3.28	4.17	1.83	0.22	1.84	0.11	526063	MS4-WPB

Pressure Regulators MS4N-LR/LRB – Inch Series

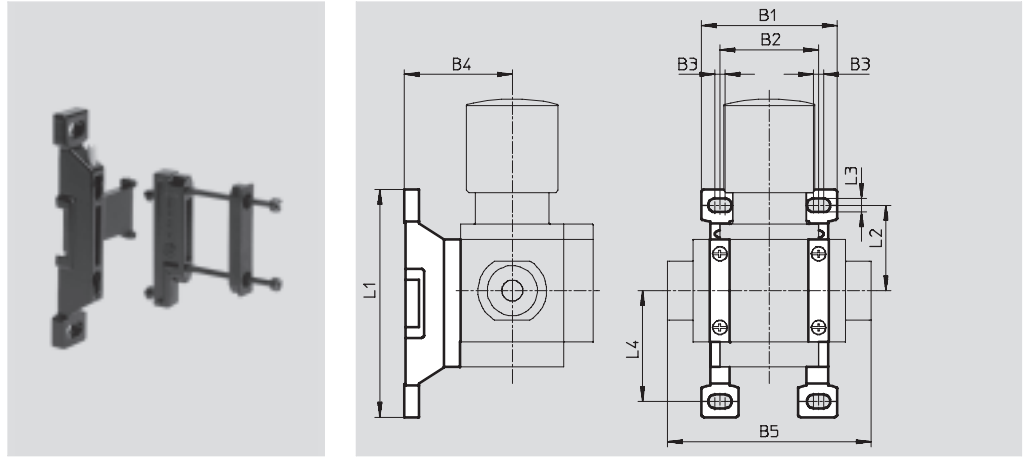
Accessories

Mounting bracket MS4-WPM

- To connect the modules for wall mounting
- In combination with a port plate MS-AG... for mounting an individual unit on a wall
- Speedy attachment and detachment
- For installation of modules with regulating knob pointing downwards

The distance piece D or 2D (designated in the type code) is included in the scope of delivery and ensures the correct clearance

Material:
Die-cast aluminum



Dimensions and Ordering Data												
B1	B2	B3	B4	B5	L1	L2	L3	L4	Clearance	Weight [lb]	Part No.	Type
2.17	1.57	0.16	1.73	3.28	3.65	1.37	0.22	1.78	1.57	0.09	526060	MS4-WPM-D
3.75	3.15			4.86					3.15	0.11	526061	MS4-WPM-2D

Body connector MS4-MVM

- For installation of modules with regulating knob pointing downwards

Material:
Die-cast aluminum







Ordering Data		
Size	Part No.	Type
MS4	532800	MS4-MVM


Pressure Regulators MS4N-LR/LRB – Inch Series


Accessories

FESTO

12 Ordering Data – Plug Socket with Cable SIM-M8			Technical data → www.festo.com/catalog/sim-m8	
	Electrical connection	Cable length [ft]	Part No.	Type
				M8x1, 3-pin
		16.4	159421	SIM-M8-3GD-5-PU
		32.8	192964	SIM-M8-3GD-10-PU
	M8x1, 3-pin	8.2	159422	SIM-M8-3WD-2,5-PU
		16.4	159423	SIM-M8-3WD-5-PU
		32.8	192965	SIM-M8-3WD-10-PU

Ordering Data – Plug Socket with Cable SIM-M12			Technical data → www.festo.com/catalog/sim-m12	
	Electrical connection	Cable length [ft]	Part No.	Type
				M12x1, 4-pin
	M12x1, 4-pin	16.4	164258	SIM-M12-4WD-5-PU

10 Ordering Data – Pressure Gauge MA				Technical data → www.festo.com/catalog/ma		
	Nominal size	Pneumatic connection	Indicating range		Part No.	Type
			[bar]	[psi]		
	Pressure gauge MA, DIN EN 837-1					
	1.57	1/4 NPT	0 ... 16	0 ... 232	183908	MA-40-16-N1/4-EN
	Pressure gauge MA, DIN EN 837-1, with red-green range					
	1.57	1/8 NPT	–	0 ... 232	530388	MA-40-232-N1/8-PSI-E-RG
	1.97	1/4 NPT	–	0 ... 232	530391	MA-50-232-N1/4-PSI-E-RG

13 Ordering Data – Padlock LRV5-D			
	Description	Weight [lb]	Part No. Type
	for regulators, filter/regulators and manual on-off valves	0.24	193786 LRV5-D

Pressure Regulators MS4N-LR/LRB – Inch Series



Replacement Parts

Ordering Data – Wearing Parts Kits			
Size	Description	Part No.	Type
MS4	Snap-ring, membrane, bellows, O-rings, screws, stem	673649	MS4-LR/LRB

- For spare parts go to: www.festo.com/en/spare_parts_service

Product Range and Company Overview

A Complete Suite of Automation Services

Our experienced engineers provide complete support at every stage of your development process, including: conceptualization, analysis, engineering, design, assembly, documentation, validation, and production.



Custom Automation Components
Complete custom engineered solutions



Custom Control Cabinets
Comprehensive engineering support and on-site services



Complete Systems
Shipment, stocking and storage services

The Broadest Range of Automation Components

With a comprehensive line of more than 30,000 automation components, Festo is capable of solving the most complex automation requirements.



Electromechanical
Electromechanical actuators, motors, controllers & drives



Pneumatics
Pneumatic linear and rotary actuators, valves, and air supply



PLCs and I/O Devices
PLC's, operator interfaces, sensors and I/O devices

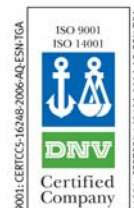
Supporting Advanced Automation... As No One Else Can!

Festo is a leading global manufacturer of pneumatic and electromechanical systems, components and controls for industrial automation, with more than 12,000 employees in 56 national headquarters serving more than 180 countries. For more than 80 years, Festo has continuously elevated the state of manufacturing with innovations and optimized motion control solutions that deliver higher performing, more profitable automated manufacturing and processing equipment. Our dedication to the advancement of automation extends beyond technology to the education and development of current and future automation and robotics designers with simulation tools, teaching programs, and on-site services.

Quality Assurance, ISO 9001 and ISO 14001 Certifications

Festo Corporation is committed to supply all Festo products and services that will meet or exceed our customers' requirements in product quality, delivery, customer service and satisfaction.

To meet this commitment, we strive to ensure a consistent, integrated, and systematic approach to management that will meet or exceed the requirements of the ISO 9001 standard for Quality Management and the ISO 14001 standard for Environmental Management.



© Copyright 2008, Festo Corporation. While every effort is made to ensure that all dimensions and specifications are correct, Festo cannot guarantee that publications are completely free of any error, in particular typing or printing errors. Accordingly, Festo cannot be held responsible for the same. For Liability and Warranty conditions, refer to our "Terms and Conditions of Sale", available from your local Festo office. All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, electronic, mechanical, photocopying or otherwise, without the prior written permission of Festo. All technical data subject to change according to technical update.



Printed on recycled paper at New Horizon Graphic, Inc., FSC certified as an environmentally friendly printing plant.

Festo North America

United States

Customer Resource Center

502 Earth City Expy., Suite 125
Earth City, MO 63045

For ordering assistance, or to find
your nearest Festo Distributor,

Call: 1.800.99.FESTO

Fax: 1.800.96.FESTO

Email: customer.service@us.festo.com

For technical support,

Call: 1.866.GO.FESTO

Fax: 1.800.96.FESTO

Email: product.support@us.festo.com

Headquarters

Festo Corporation
395 Moreland Road
P.O. Box 18023
Hauppauge, NY 11788
www.festo.com/us

Sales Offices

Appleton

N. 922 Tower View Drive, Suite N
Greenville, WI 54942

Boston

120 Presidential Way, Suite 330
Woburn, MA 01801

Chicago

1441 East Business Center Drive
Mt. Prospect, IL 60056

Dallas

1825 Lakeway Drive, Suite 600
Lewisville, TX 75057

Detroit - Automotive Engineering Center

2601 Cambridge Court, Suite 320
Auburn Hills, MI 48326

New York

395 Moreland Road
Hauppauge, NY 11788

Silicon Valley

4935 Southfront Road, Suite F
Livermore, CA 94550

Design and Manufacturing Operations



East: 395 Moreland Road, Hauppauge, NY 11788



Central: 1441 East Business Center Drive, Mt. Prospect, IL 60056



West: 4935 Southfront Road, Suite F, Livermore, CA 94550

Mexico

Headquarters

Festo Pneumatic, S.A.
Av. Ceylán 3, Col. Tequesquahuac
54020 Tlalnepantla, Edo. de México
Call: 011 52 [55] 53 21 66 00
Fax: 011 52 [55] 53 21 66 65
Email: festo.mexico@mx.festo.com
www.festo.com/mx



Canada

Headquarters

Festo Inc.
5300 Explorer Drive
Mississauga, Ontario L4W 5G4
Call: 1.905.624.9000
Fax: 1.905.624.9001
Email: info.ca@ca.festo.com
www.festo.com/ca



Festo Worldwide

Argentina Australia Austria Belarus Belgium Brazil Bulgaria Canada Chile China Colombia Croatia Czech Republic Denmark
Estonia Finland France Germany Great Britain Greece Hong Kong Hungary India Indonesia Iran Ireland Israel Italy Japan
Latvia Lithuania Malaysia Mexico Netherlands New Zealand Norway Peru Philippines Poland Romania Russia Serbia Singapore
Slovakia Slovenia South Africa South Korea Spain Sweden Switzerland Taiwan Thailand Turkey Ukraine United States Venezuela

www.festo.com