

Pressure Regulators MS6N-LR/LRB, MS6N-LRP/LRPB – Inch Series

FESTO



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
 - MS6-LR
 - MS6-LRB, manifold units
 - MS6-LRP, precision – MS6-LRPB, precision, manifold units
- Pneumatic connection: 1/4 NPT, 3/8 NPT, 1/2 NPT, 3/4 NPT
- Supply pressure
 - LR and LRB: 12 ... 294 psi
 - LRP and LRB: 15 ... 206 psi
- Flow rate: 21.2 ... 264.8 scfm

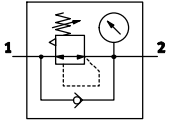
Product Range Overview																	
Type	Flow rate [scfm]	Pneumatic connections		Pressure regulation range						Pressure indicator				Pressure adjustment		Reverse flow	
				[psi]													
		Body thread	Port plate	0.7 ... 10.3	0.7 ... 36.8	4.4 ... 58.8	4.4 ... 103	7.4 ... 176	7.4 ... 235	Cover 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
MS6N			AG...	D2	D4	D5	D6	D7	D8	VS	AG	A8	A4	AD...	AS	LD	Z
LR	77.7 ... 264.8	1/4 NPT, 3/8 NPT, 1/2 NPT	1/4 NPT, 3/8 NPT, 1/2 NPT, 3/4 NPT	-	-	■	■	■	■	■	■	-	■	■	■	■	■
LRB	21.2 ... 257.7	1/2 NPT	1/4 NPT, 3/8 NPT, 1/2 NPT, 3/4 NPT	-	-	■	■	■	■	■	■	-	■	■	■	■	■
LRP	28.2 ... 176.5	1/4 NPT, 3/8 NPT, 1/2 NPT	1/4 NPT, 3/8 NPT, 1/2 NPT, 3/4 NPT	■	■	■	-	■	-	■	-	■	■	■	■	■	■
LRPB	56.5 ... 176.5	1/2 NPT	1/4 NPT, 3/8 NPT, 1/2 NPT, 3/4 NPT	■	■	■	-	■	-	■	-	■	■	■	■	■	■

Contents			
MS6N-LR	MS6N-LRB	MS6N-LRP	MS6N-LRPB
Technical Data → 677	Technical Data → 689	Technical Data → 700	Technical Data → 713
Dimensional Drawings → 681	Dimensional Drawings → 691	Dimensional Drawings → 704	Dimensional Drawings → 715
Ordering Data → 684	Ordering Data → 694	Ordering Data → 708	Ordering Data → 720
Accessories → 687	Accessories → 697	Accessories → 711	Accessories → 723
Replacement Parts → 734	Replacement Parts → 734	Replacement Parts → 734	Replacement Parts → 734
→ www.festo.com/catalog/ms6n-lr	→ www.festo.com/catalog/ms6n-lrb	→ www.festo.com/catalog/ms6n-lrp	→ www.festo.com/catalog/ms6n-lrpb

Pressure Regulators MS6N-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
- Four 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



General Technical Data			1/4 NPT	3/8 NPT	1/2 NPT
Pneumatic connection 1, 2					
Supply pressure	[psi]		12 ... 294		
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...)		
	D8	[psi]	7.4 ... 235		
Max. hysteresis	[psi]		3.7		

Standard Nominal Flow Rate q _N ¹⁾ [scfm]			1/4 NPT	3/8 NPT	1/2 NPT
Pneumatic connection 1, 2					
Pressure regulation range	D5		84.7 ²⁾	194.2 ²⁾	264.8 ²⁾
	D6		105.9	204.7	229.5
	D7		95.3	158.9	194.2
	D8		77.7	141.2	158.9

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 MS6N-LR – 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	1.46

- Wearing parts kits → 734
- For spare parts go to: www.festo.com/en/spare_parts_service

Pressure Regulators MS6N-LR – Inch Series

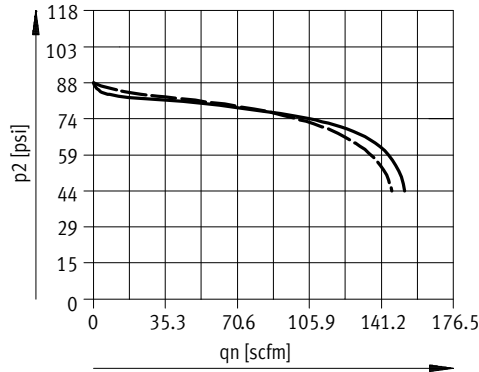
Technical Data



Standard Flow Rate q_n as a Function of Output Pressure p_2

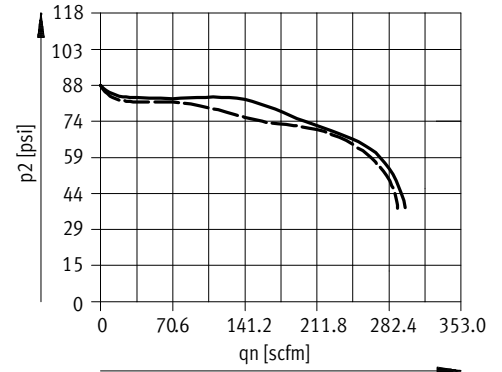
Primary pressure $p_1 = 147$ psi

MS6N-LR-1/4



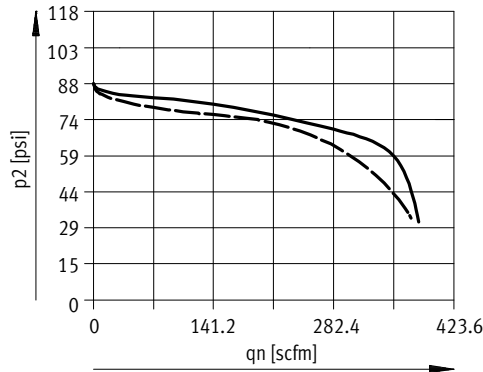
— D6: 4.4 ... 103 psi
 - - - D7: 7.4 ... 176 psi

MS6N-LR-3/8



MS6N-LR-1/2

Primary pressure $p_1 = 147$ psi



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

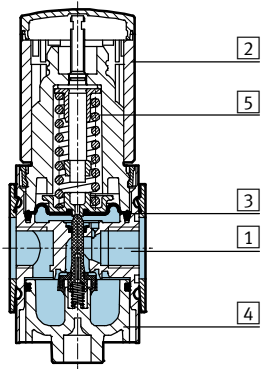
Pressure Regulators MS6N-LR – Inch Series

Technical Data



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 MS6N-LR – Inch Series

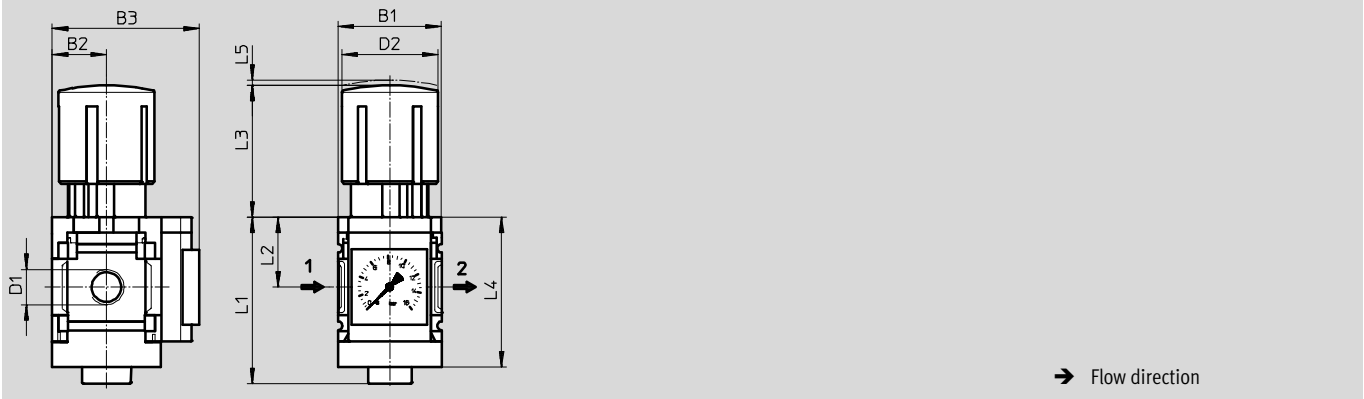
Dimensional Drawings



Dimensions¹⁾ – Standard

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

With pressure gauge, display unit [psi]



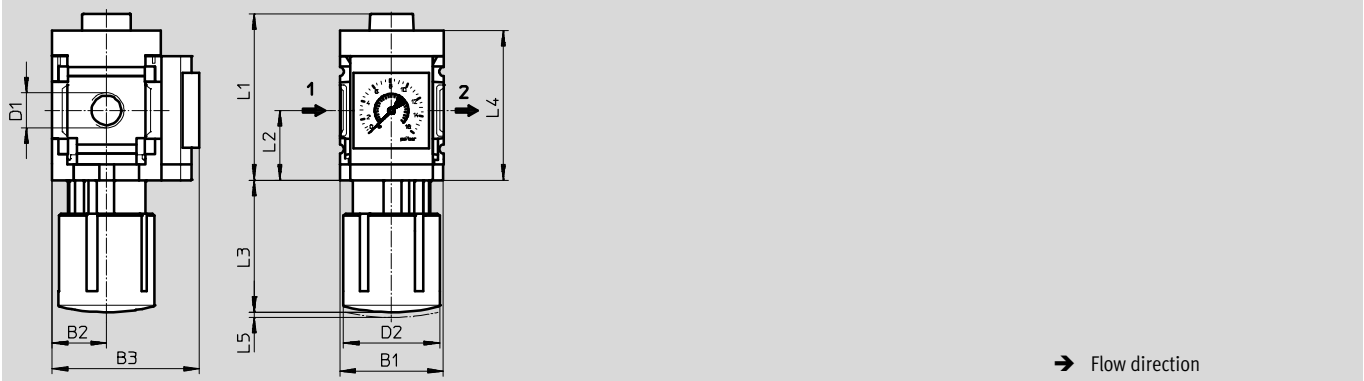
Type	B1	B2	B3	D1	D2	L1	L2	L3	L4	L5
MS6N-LR-1/4	2.44	1.22	3.03	1/4 NPT	2.01	3.66	1.54	3.39	3.31	0.20
MS6N-LR-3/8				3/8 NPT						
MS6N-LR-1/2				1/2 NPT						

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
MS6N-LR-1/4-...-KD	2.44	1.22	3.03	1/4 NPT	2.01	3.66	1.54	3.39	3.31	0.20
MS6N-LR-3/8-...-KD				3/8 NPT						
MS6N-LR-1/2-...-KD				1/2 NPT						

1) Dimensions are in inches, unless otherwise noted.

Pressure Regulators MS6N-LR – Inch Series

Dimensional Drawings



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

Cover plate VS Adapter plate A4 for EN pressure gauge 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
MS6N-LR-1/4-...-VS	1.22	2.99	1/4 NPT	-	-	-	-
MS6N-LR-3/8-...-VS			3/8 NPT				
MS6N-LR-1/2-...-VS			1/2 NPT				
MS6N-LR-1/4-...-A4	1.22	3.09	1/4 NPT	G1/4	-	-	-
MS6N-LR-3/8-...-A4			3/8 NPT				
MS6N-LR-1/2-...-A4			1/2 NPT				
MS6N-LR-1/4-...-AD1/AD2	1.22	4.06	1/4 NPT	-	M8x1	1.38	1.84
MS6N-LR-3/8-...-AD1/AD2			3/8 NPT				
MS6N-LR-1/2-...-AD1/AD2			1/2 NPT				
MS6N-LR-1/4-...-AD3/AD4	1.22	4.06	1/4 NPT	-	M12x1	1.38	2.20
MS6N-LR-3/8-...-AD3/AD4			3/8 NPT				
MS6N-LR-1/2-...-AD3/AD4			1/2 NPT				

1) Dimensions are in inches, unless otherwise noted.

Pressure Regulators MS6N-LR – Inch Series

Dimensional Drawings

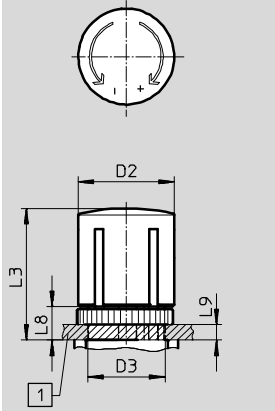


Dimensions¹⁾ – Rotary Knob

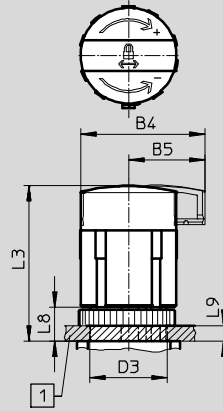
Download CAD Data → www.festo.com/us/cad

For installation into control panel

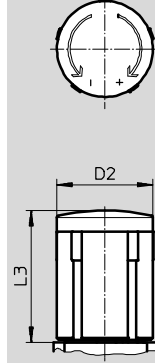
Standard



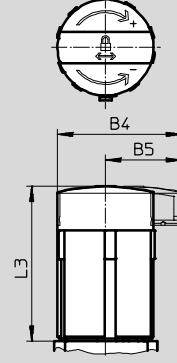
Standard, lockable AS



Long LD



Long, lockable LD-AS



1 Max. control panel thickness

Type	B4	B5	D2	D3 +0.04	L3	L8	L9
MS6N-LR-...	-	-	2.01	1.73	3.39	0.87	0.55
MS6N-LR-...-AS	2.67	1.65			3.76		
MS6N-LR-...-LD	-	-	2.01	-	3.39	-	-
MS6N-LR-...-LD-AS	2.67	1.65			3.76		

1) Dimensions are in inches, unless otherwise noted.

Pressure Regulators MS6N-LR – Inch Series

Ordering Data – Pre-configured Products

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Ordering Data			
Pressure gauge, lockable standard type rotary knob			
Connection	Part No.	Type	LT
Pressure regulation range 4.4 ... 59 psi			
1/4 NPT	531442	MS6N-LR-1/4-D5-AS	1D
3/8 NPT	531444	MS6N-LR-3/8-D5-AS	1D
1/2 NPT	531443	MS6N-LR-1/2-D5-AS	1D
Pressure regulation range 4.4 ... 103 psi			
1/4 NPT	531448	MS6N-LR-1/4-D6-AS	1D
3/8 NPT	531450	MS6N-LR-3/8-D6-AS	1D
1/2 NPT	531449	MS6N-LR-1/2-D6-AS	1D
Pressure regulation range 7.4 ... 176 psi			
1/4 NPT	531454	MS6N-LR-1/4-D7-AS	1D
3/8 NPT	531456	MS6N-LR-3/8-D7-AS	1D
1/2 NPT	531455	MS6N-LR-1/2-D7-AS	1D

LT = Lead time 1D typically ships same day/next day 3D typically ships within 3 days

Pressure Regulators MS6N-LR – Inch Series

Ordering Data – Configurable Products



Mandatory Data →

Part No.	Series	Size	Thread	Function	Connection size	Pressure regulation range
527664	MS	6	N	LR	1/4, 3/8, 1/2, AQN, AQP, AQR, AQS	D5 D6 D7 D8
Order example						
527664	MS	6	N	- LR	- AQN	- D6

Ordering Table

Grid dimension	[mm]	62	Conditions	Code	Enter code
M Part No.	527664				
Series	Standard			MS	MS
Size	6			6	6
Thread	NPT thread			N	N
Function	Pressure regulator			-LR	-LR
Connection size	Body thread 1/4 NPT			-1/4	
	Body thread 3/8 NPT			-3/8	
	Body thread 1/2 NPT			-1/2	
	Port plate 1/4 NPT (dimensions → 729)			-AQN	
	Port plate 3/8 NPT (dimensions → 729)			-AQP	
	Port plate 1/2 NPT (dimensions → 729)			-AQR	
	Port plate 3/4 NPT (dimensions → 729)			-AQS	
Pressure regulation range	4.4 ... 59 psi			-D5	
	4.4 ... 103 psi			-D6	
	7.4 ... 176 psi			-D7	
	7.4 ... 235 psi			-D8	

Transfer order code

527664	MS	6	N	- LR	-		-	
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Pressure Regulators MS6N-LR – Inch Series



Ordering Data – Configurable Products

→ 0 Options

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

Ordering Table		Grid dimension [mm]	62	Conditions	Code	Enter code
0	Pressure gauge alternatives	Cover plate			-VS	
		Adapter plate for EN pressure gauge 1/4, without pressure gauge			-A4	
		Pressure sensor with display, plug M8, 1 switch output PNP, 3-pin	1		-AD1	
		Pressure sensor with display, plug M8, 1 switch output NPN, 3-pin	1		-AD2	
		Pressure sensor with display, plug M12, 1 switch output PNP, 4-pin, analog output 4 ... 20 mA	1		-AD3	
		Pressure sensor with display, plug M12, 1 switch output NPN, 4-pin, analog output 4 ... 20 mA	1		-AD4	
	Alternative pressure gauge scale	bar	2		-BAR	
		MPa	2		-MPA	
	Secondary venting	Without secondary venting			-OS	
	Rotary knob alternative	Long rotary knob			-LD	
Alternative assembly position	Rotary knob at bottom	3		-KD		
Security	Lockable rotary knob			-AS		
Type of mounting	Mounting bracket with knurled nut for regulator head (dimensions → 727)	4		-WR		
	Mounting bracket (dimensions → 730)	5		-WP		
	Mounting bracket (dimensions → 730)	5		-WPM		
	Mounting bracket (dimensions → 726)			-WB		
Reverse flow direction	Flow direction from right to left			-Z		

- 1 **AD1 ... AD4** Measuring range max. 147 psi.
Not with pressure regulation range D8
- 2 **BAR, MPA** Not with pressure gauge alternatives VS, A4, AD1, AD2, AD3, AD4
- 3 **KD** Not with alternative pressure gauge scale MPA.
Not with mounting type WP
- 4 **WR** Not with long rotary knob LD
- 5 **WP, WPM** Only with port plate AQN, AQP, AQR or AQS

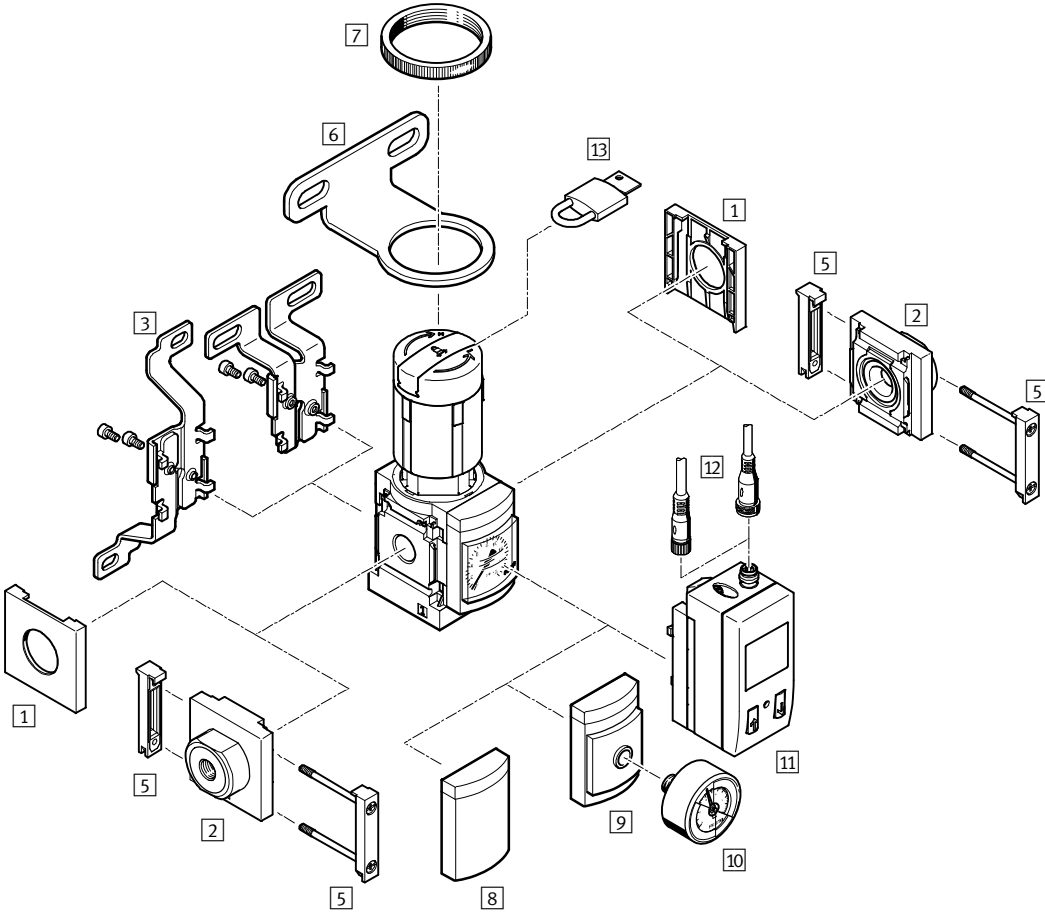
Transfer order code

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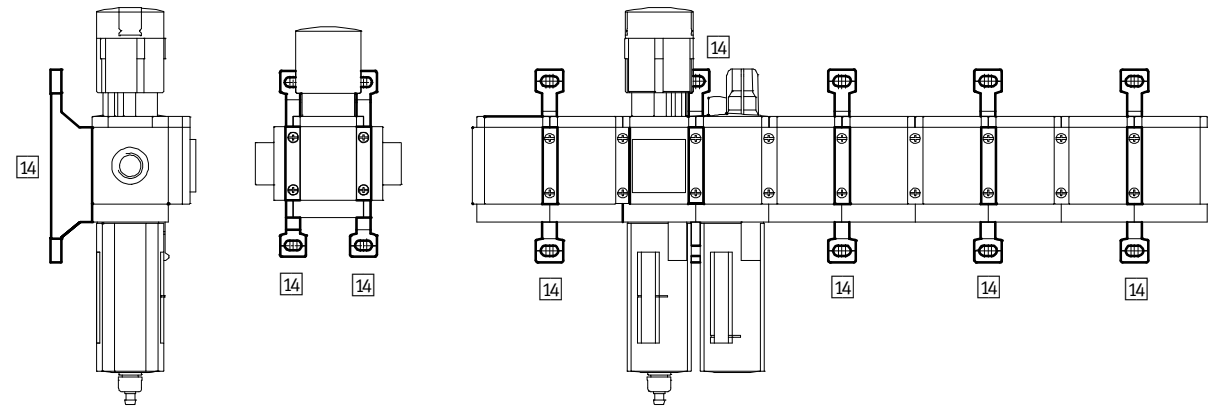
Pressure Regulators MS6N-LR – Inch Series

Accessories Overview

Mounting Attachments and Accessories



Single unit and combination unit mounting brackets.



Pressure Regulators MS6N-LR – Inch Series

Accessories Overview

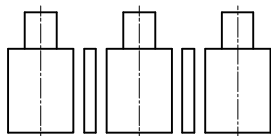
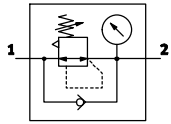


Mounting Attachments and Accessories						
		Single unit		Combination unit → 3.1-49		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS6-END	■	-	■	-	728
2	Port plate MS6N-AQ...	-	■	-	■	729
3	Mounting bracket MS6-WB	■	■	-	-	726
5	Body connector MS6-MV	-	■	■	■	729
6	Regulator wall bracket MS6-WR	■	■	-	-	727
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Cover plate VS	■	■	■	■	685
9	Adapter for EN pressure gauge 1/4 A4	■	■	■	■	685
10	Pressure gauge MA	■	■	■	■	733
11	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	685
12	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	733
13	Padlock LRVS-D	■	■	■	■	733
14	Mounting bracket MS6-WP/WPB/WPM	-	■	■	■	730

Pressure Regulators MS6N-LRB – Inch Series

Technical Data

ISO Symbol



LRB-manifold
with through pressure supply for
manifold assembly

- The 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

Pneumatic connection 1		1/2 NPT
Pneumatic connection 2		1/2 NPT
		QS-5/16-U push-in tubing connector
		QS-3/8-U push-in tubing connector
Supply pressure	[psi]	12 ... 294
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...)
	D8	[psi] 7.4 ... 235
Max. hysteresis	[psi]	3.7

Standard Nominal Flow Rate qnN¹⁾ [scfm]

Variant		Standard	Angled outlet block	
			QS-5/16-U	QS-3/8-U
Pressure regulation range	D5	257.7 ²⁾	21.2 ²⁾	26.5 ²⁾
	D6	222.4	31.1	35.3
	D7	194.2	28.2	33.5
	D8	158.9	26.5	30.0

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

Pressure Regulators MS6N-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.

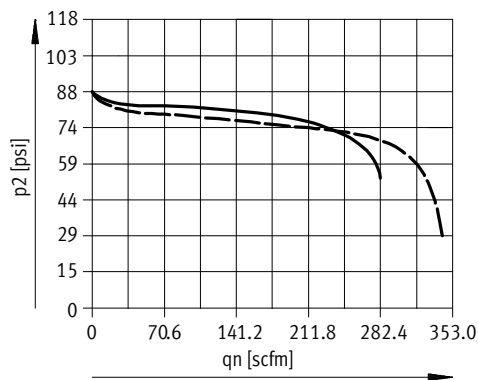
Weights [lb]	
Pressure regulator	1.49

- Wearing parts kits → 734
- For spare parts go to: www.festo.com/en/spare_parts_service

Standard Flow Rate qn as a Function of Output Pressure p2

MS6N-LRB-1/2

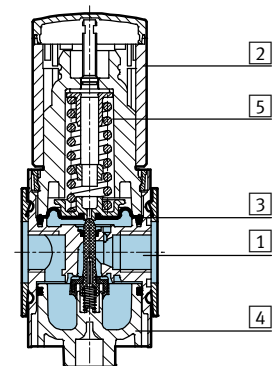
Primary pressure p1 = 147 psi



- 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

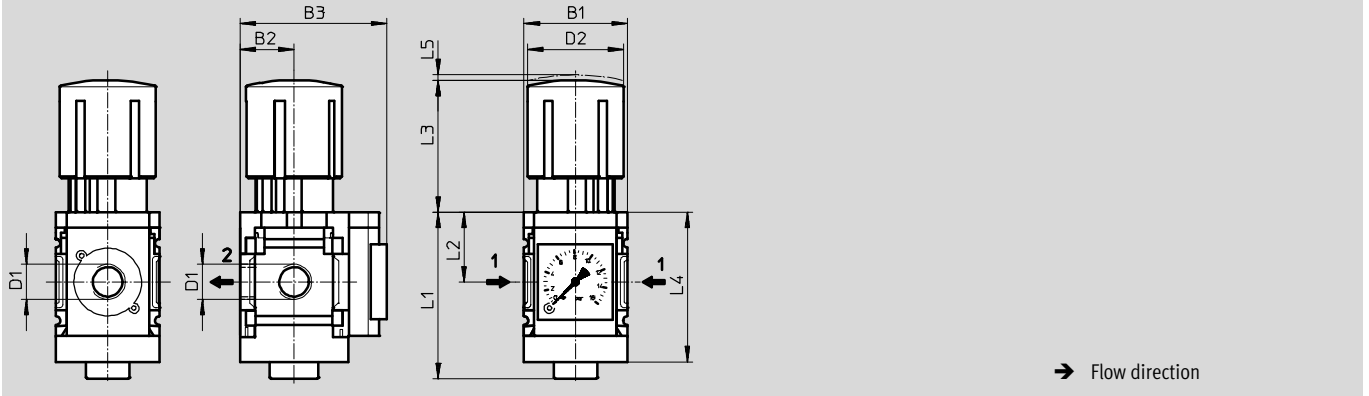
Pressure Regulators MS6N-LRB – Inch Series

Dimensional Drawings

Dimensions¹⁾ – Standard

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

With pressure gauge, display unit [psi]



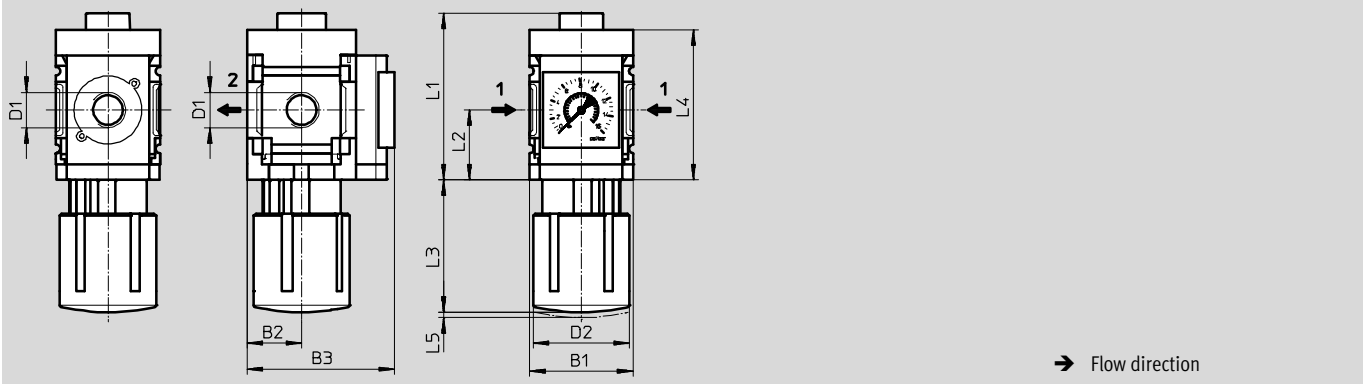
Type	B1	B2	B3	D1	D2	L1	L2	L3	L4	L5
MS6N-LRB-1/2	2.44	1.22	3.03	1/2 NPT	2.01	3.66	1.54	3.39	3.31	0.20

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
MS6N-LRB-1/2-...-KD	2.44	1.22	3.03	1/2 NPT	2.01	3.66	1.54	3.39	3.31	0.20

1) Dimensions are in inches, unless otherwise noted.

Pressure Regulators MS6N-LRB – Inch Series

Dimensional Drawings



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

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

→ 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

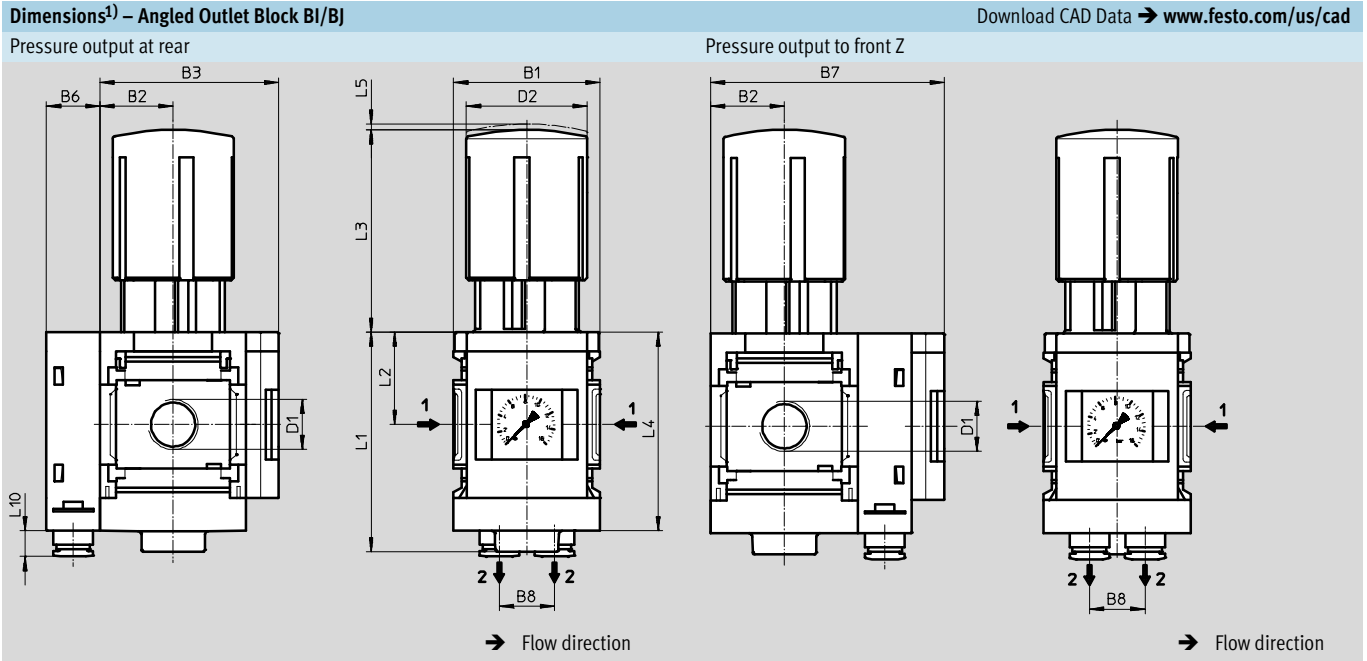
AD4 variants:
SDE1-D10-G2-MS-L-NI-M12 with 4-pin plug M12x1, 1 switching output NPN and 4 ... 20 mA analog

Type	B2	B3	D1	D4	D6	L5	L6
MS6N-LRB-1/2-...-VS	1.22	2.99	1/2 NPT	-	-	-	-
MS6N-LRB-1/2-...-A4	1.22	3.09	1/2 NPT	G1/4	-	-	-
MS6N-LRB-1/2-...-AD1/AD2	1.22	4.06	1/2 NPT	-	M8x1	1.38	1.84
MS6N-LRB-1/2-...-AD3/AD4	1.22	4.06	1/2 NPT	-	M12x1	1.38	2.20

1) Dimensions are in inches, unless otherwise noted.

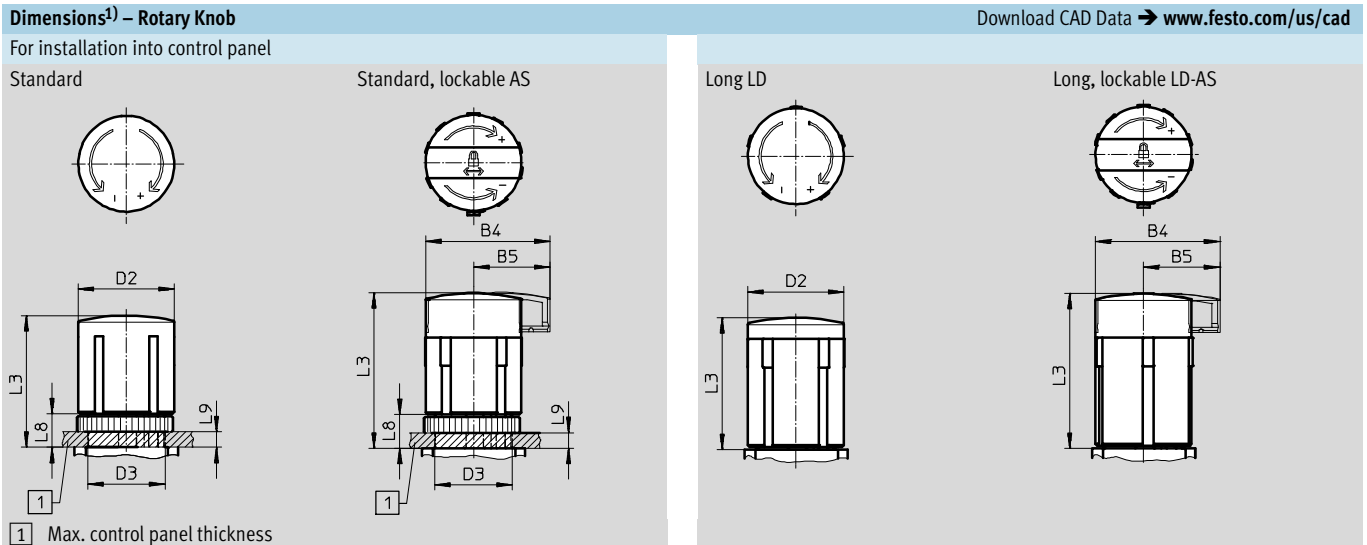
Pressure Regulators MS6N-LRB – Inch Series

Dimensional Drawings



Type	B1	B2	B3	B6	B7	B8	D1	D2	L1	L2	L3	L4	L5	L10
MS6N-LRB-1/2-...-B...	2.44	1.22	3.03	0.89	3.92	0.92	1/2 NPT	2.01	3.66	1.54	3.39	3.31	0.20	0.43

1) Dimensions are in inches, unless otherwise noted.



Type	B4	B5	D2	D3 +0.04	L3	L8	L9
MS6N-LRB-...	-	-	2.01	1.73	3.39	0.87	0.55
MS6N-LRB-...-AS	2.67	1.65			3.76		
MS6N-LRB-...-LD	-	-	2.01	-	3.39	-	-
MS6N-LRB-...-LD-AS	2.67	1.65			3.76		

Pressure Regulators MS6N-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						
1/2 NPT	531818	MS6N-LRB-1/2-D5-AS	1D	531824	MS6N-LRB-1/2-D5-AS-BI	Q
Pressure regulation range 4.4 ... 103 psi						
1/2 NPT	531820	MS6N-LRB-1/2-D6-AS	1D	531826	MS6N-LRB-1/2-D6-AS-BI	Q
Pressure regulation range 7.4 ... 176 psi						
1/2 NPT	531822	MS6N-LRB-1/2-D7-AS	1D	531828	MS6N-LRB-1/2-D7-AS-BI	Q

Ordering Data						
Adapter plate A4 for EN pressure gauge 1/4, 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						
1/2 NPT	531830	MS6N-LRB-1/2-D5-A4-AS				Q
Pressure regulation range 4.4 ... 103 psi						
1/2 NPT	531831	MS6N-LRB-1/2-D6-A4-AS				Q
Pressure regulation range 7.4 ... 176 psi						
1/2 NPT	531832	MS6N-LRB-1/2-D7-A4-AS				Q

LT = Lead time 1D typically ships same day/next day 3D typically ships within 3 days

Pressure Regulators MS6N-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
527666	MS	6	N	LRB	1/2 AQN AQP AQR AQS	D5 D6 D7 D8	VS A4 AD1 AD2 AD3 AD4
Order example							
527666	MS	6	N	-LRB	-AQP	-D5	-A4

Ordering Table		Grid dimension [mm]	62	Conditions	Code	Enter code
M	Part No.	527666				
	Series	Standard			MS	MS
	Size	6			6	6
	Thread	NPT thread			N	N
	Function	Pressure regulator for manifold assembly			-LRB	-LRB
	Connection size	Body thread 1/2 NPT			-1/2	
		Port plate 1/4 NPT (dimensions → 729)			-AQN	
		Port plate 3/8 NPT (dimensions → 729)			-AQP	
		Port plate 1/2 NPT (dimensions → 729)			-AQR	
		Port plate 3/4 NPT (dimensions → 729)			-AQS	
	Pressure regulation range	4.4 ... 59 psi			-D5	
		4.4 ... 103 psi			-D6	
		7.4 ... 176 psi			-D7	
		7.4 ... 235 psi			-D8	
O	Pressure gauge alternatives	Cover plate		1	-VS	
		Adapter plate for EN pressure gauge 1/4, 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 BI, BJ.
- 2 A4, AD1 ... AD4 In combination with alternative flow direction Z only with alternative assembly position KD
- 3 AD1 ... AD4 Measuring range max. 147 psi. Not with pressure regulation range D8

Transfer order code

527666 MS 6 N - LRB - - - -

Pressure Regulators MS6N-LRB – Inch Series

Ordering Data – Configurable Products



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	BI BJ	WR WP WPM WPB WB	Z
-	- OS	- LD	-	- AS	- BJ	- WP	-

Ordering Table		Grid dimension [mm]	62	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-5/16-U				-BI	
	Angled outlet block QS-3/8-U				-BJ	
Type of mounting	Mounting bracket with knurled nut for regulator head (dimensions → 727)			6 7	-WR	
	Mounting bracket (dimensions → 730)			8 9	-WP	
	Mounting bracket (dimensions → 730)			6 8	-WPM	
	Mounting bracket for large wall gap (dimensions → 730)			8 10	-WPB	
	Mounting bracket (dimensions → 726)			6	-WB	
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, A4, AD1, AD2, AD3, AD4.
Not with alternative assembly position KD.
In combination with alternative flow direction Z only with pressure output BI, BJ
- 5 **KD** With alternative pressure gauge scale BAR only if alternative flow direction Z or pressure output BI, BJ has been selected.
Not with mounting type WP, WPB.
In combination with mounting type WR, WPM, WB not with alternative flow direction Z.
In combination with pressure gauge alternatives A4, AD1, AD2, AD3, AD4 only with alternative flow direction Z

- 6 **WR, WPM, WPB** 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 AQN, AQP, AQR, AQS
- 9 **WP** Only with alternative flow direction Z and/or only with pressure output BI, BJ
- 10 **WPB** Not with alternative flow direction Z.
Not with pressure output BI, BJ

Transfer order code

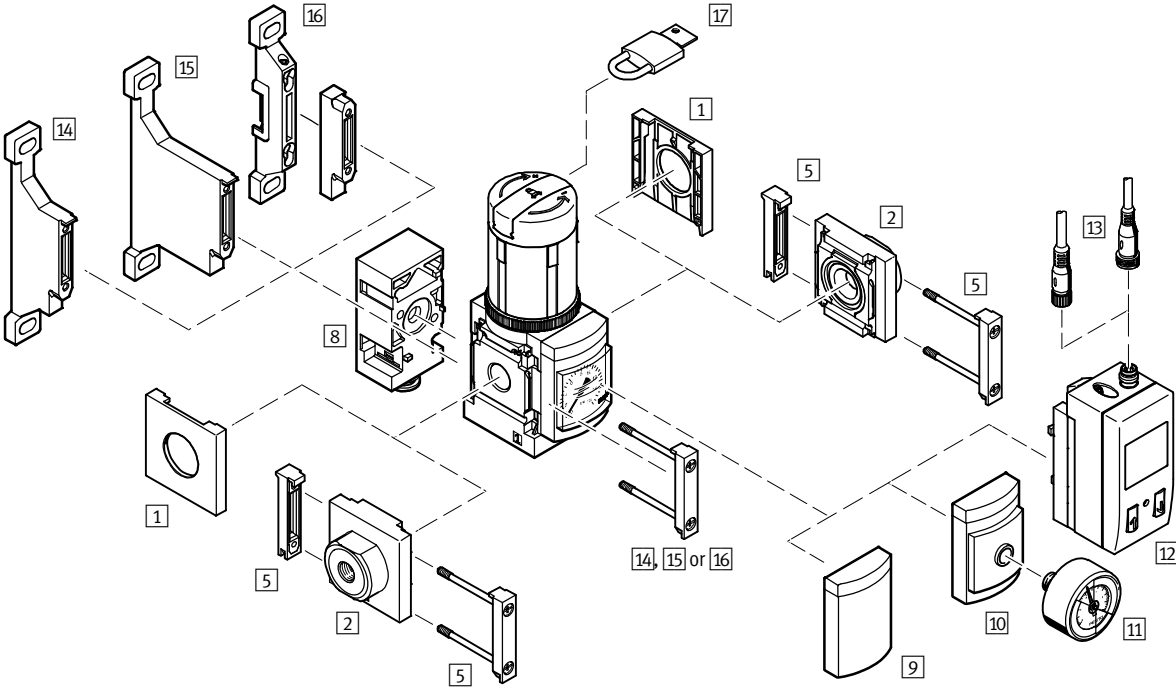
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Pressure Regulators MS6N-LRB – Inch Series

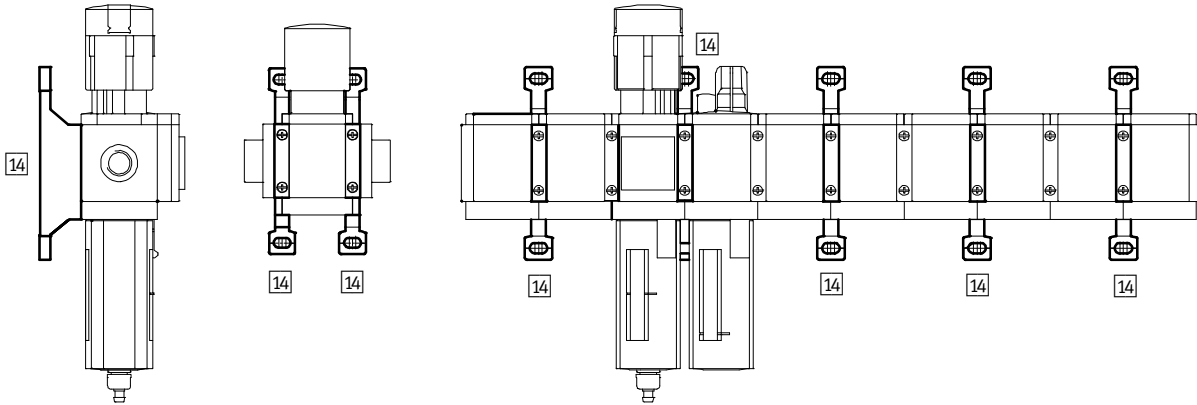
Accessories Overview

Mounting Attachments and Accessories

Pressure output at rear



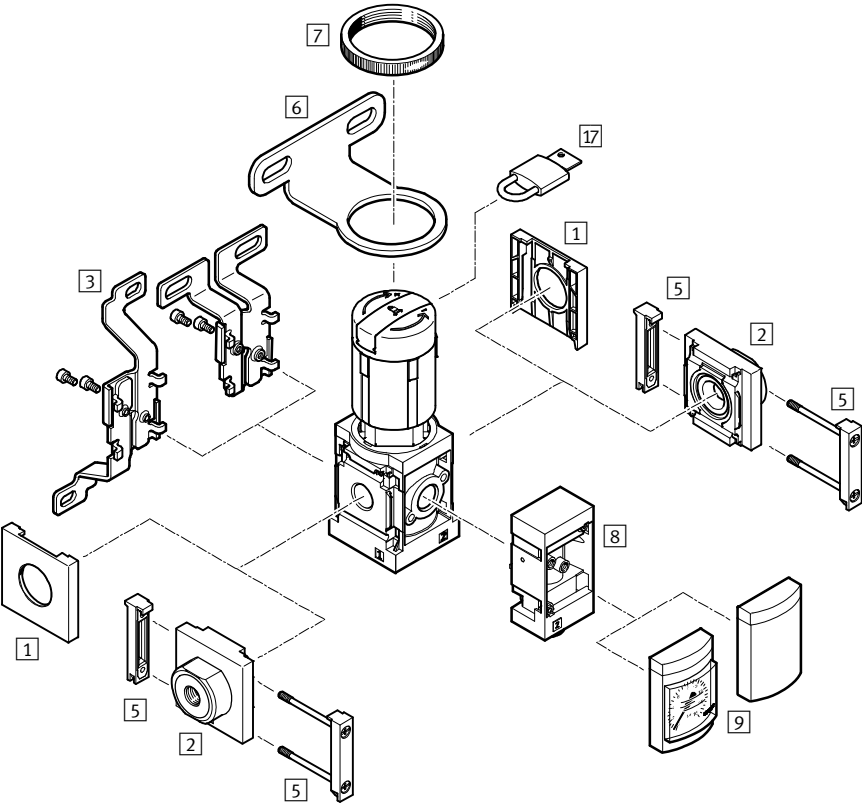
Single unit and combination unit mounting brackets.



Pressure Regulators MS6N-LRB – Inch Series

Accessories Overview

Pressure output at front



Pressure Regulators MS6N-LRB – Inch Series

Accessories Overview

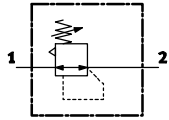


Mounting Attachments and Accessories						
		Single unit		Combination unit → 3.1-49		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS6-END	■	-	■	-	728
2	Port plate MS6N-AQ...	-	■	-	■	729
3	Mounting bracket MS6-WB	■	■	-	-	726
5	Body connector MS6-MV	-	■	■	■	729
6	Regulator wall bracket MS6-WR	■	■	-	-	727
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Angled outlet block B...	■	■	■	■	696
9	Cover plate VS	■	■	■	■	695
10	Adapter for EN pressure gauge 1/4 A4	■	■	■	■	695
11	Pressure gauge MA	■	■	■	■	733
12	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	695
13	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	733
14	Mounting bracket MS6-WP	-	■	■	■	730
15	Mounting bracket MS6-WPB	-	■	■	■	730
16	Mounting bracket MS6-WPM	-	■	■	■	730
17	Padlock LRVS-D	■	■	■	■	733

Precision Pressure Regulators MS6N-LRP – Inch Series

Technical Data

ISO Symbol



- The precision pressure regulator is suitable for sensitive applications with a required pressure hysteresis of 0.3 psi.
- Good control characteristics with low hysteresis and primary pressure compensation
- High flow rate with minimal pressure drop
- Setting values are secured by locking the rotary knob
- Lockable rotary knob (optional)
- Four pressure regulation ranges
- Optional pressure sensor with display
- With secondary venting



General Technical Data			1/4 NPT	3/8 NPT	1/2 NPT
Pneumatic connection 1, 2			1/4 NPT	3/8 NPT	1/2 NPT
Pneumatic connection of secondary venting			1/4 NPT		
Supply pressure	[psi]	15 ... 206			
Pressure regulation range	D2 [psi]	0.7 ... 10			
	D4 [psi]	0.7 ... 37			
	D5 [psi]	1.5 ... 59			
	D7 [psi]	1.5 ... 176 (1.5 ... 147 with pressure sensor variant AD...)			
Max. hysteresis	[psi]	0.3			

Standard Nominal Flow Rate qnN [scfm]			1/4 NPT	3/8 NPT	1/2 NPT
Pressure regulation range	D2	28.2 ¹⁾	38.8 ¹⁾	56.5 ¹⁾	
	D4	38.8 ²⁾	49.4 ²⁾	81.2 ²⁾	
	D5	49.4 ³⁾	60.0 ³⁾	105.9 ³⁾	
	D7	105.9 ⁴⁾	116.5 ⁴⁾	176.5 ⁴⁾	

1) Measured at p1 = 147 psi and p2 = 7.4 psi, Δp = 1.5 psi

2) Measured at p1 = 147 psi and p2 = 22 psi, Δp = 1.5 psi

3) Measured at p1 = 147 psi and p2 = 37 psi, Δp = 1.5 psi

4) Measured at p1 = 147 psi and p2 = 88 psi, Δp = 1.5 psi

Precision Pressure Regulators MS6N-LRP – Inch Series



Technical Data

Operating and Environmental Conditions		
Variant	Standard	Pressure sensor with display AD...
Operating medium	Compressed air, filtered, 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
Installation position	Any	
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 lubricating agents.

Weight [lb]	
Precision pressure regulator	2.00

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

Precision Pressure Regulators MS6N-LRP – Inch Series

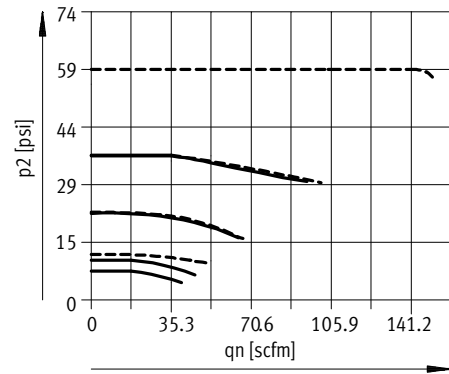
Technical Data



Standard Flow Rate q_n as a Function of Output Pressure p_2

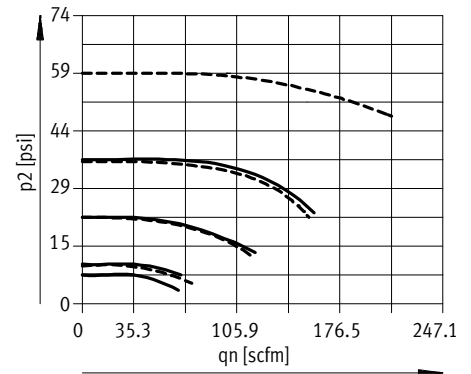
Primary pressure $p_1 = 147$ psi

MS6N-LRP-1/4



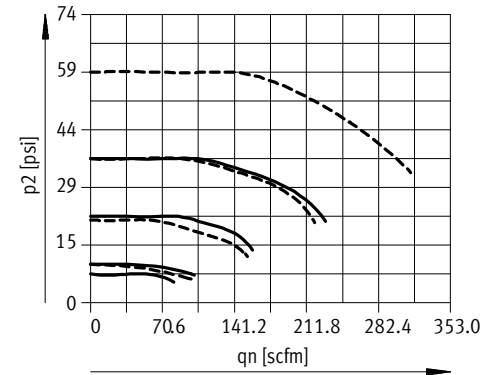
— D4: 0.7 ... 37 psi
 - - - D5: 1.5 ... 59 psi

MS6N-LRP-3/8



MS6N-LRP-1/2

Primary pressure $p_1 = 147$ psi



— D4: 0.7 ... 37 psi
 - - - D5: 1.5 ... 59 psi

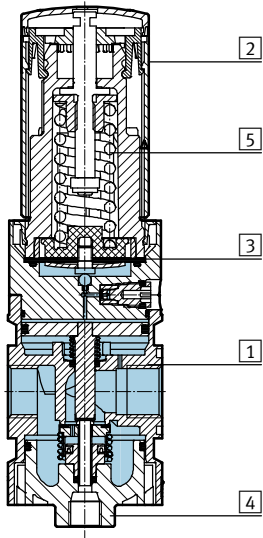
Precision Pressure Regulators MS6N-LRP – Inch Series

Technical Data



Materials

Sectional view

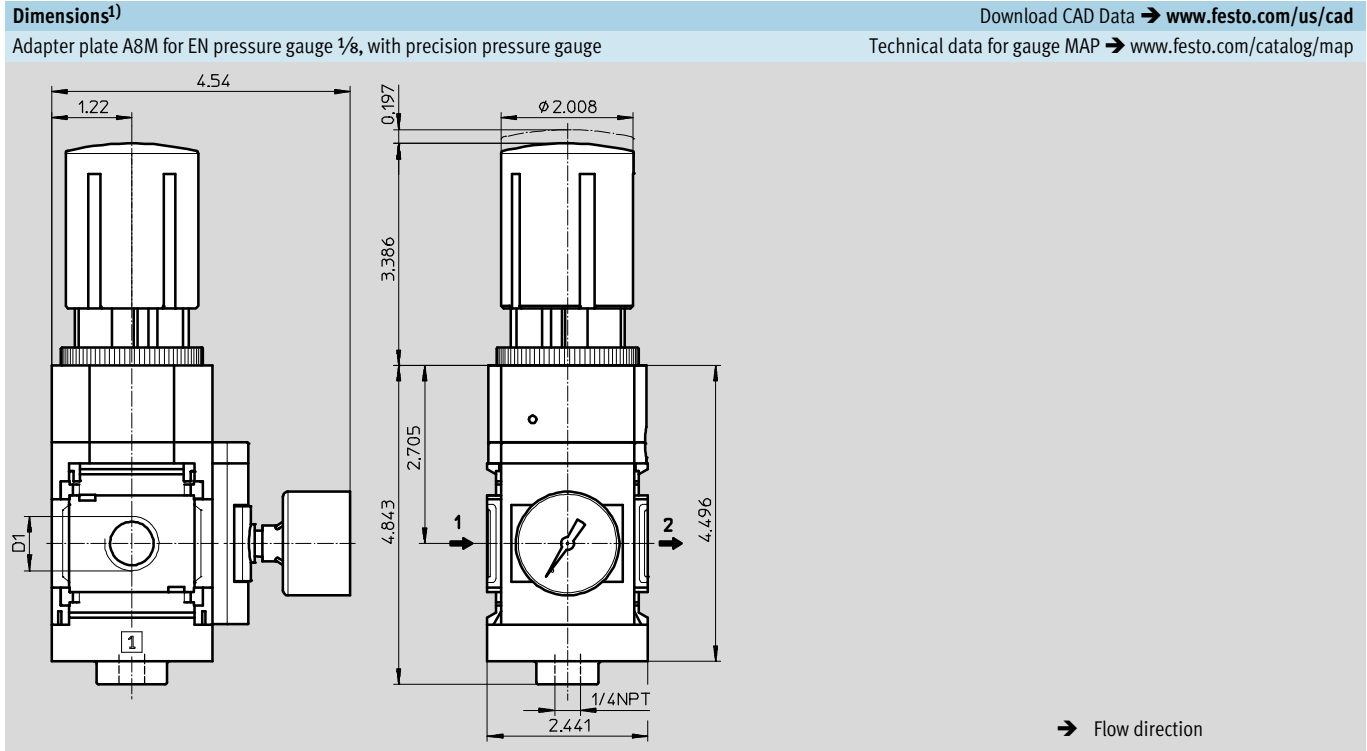


Precision pressure regulator		
1	Housing	Die-cast aluminum
2	Regulating knob	Polyamide/polyacetate
3	Diaphragm	Nitrile rubber
4	Cap, bottom	Polyester, fiberglass reinforced
5	Springs	Steel
-	Seals	Nitrile rubber
Note on materials		Free of copper and PTFE (not with variants A8M or AD...)

Precision Pressure Regulators MS6N-LRP – Inch Series



Dimensional Drawings



Type	D1
MS6N-LRP-1/4-...-A8M	1/4 NPT
MS6N-LRP-3/8-...-A8M	3/8 NPT
MS6N-LRP-1/2-...-A8M	1/2 NPT

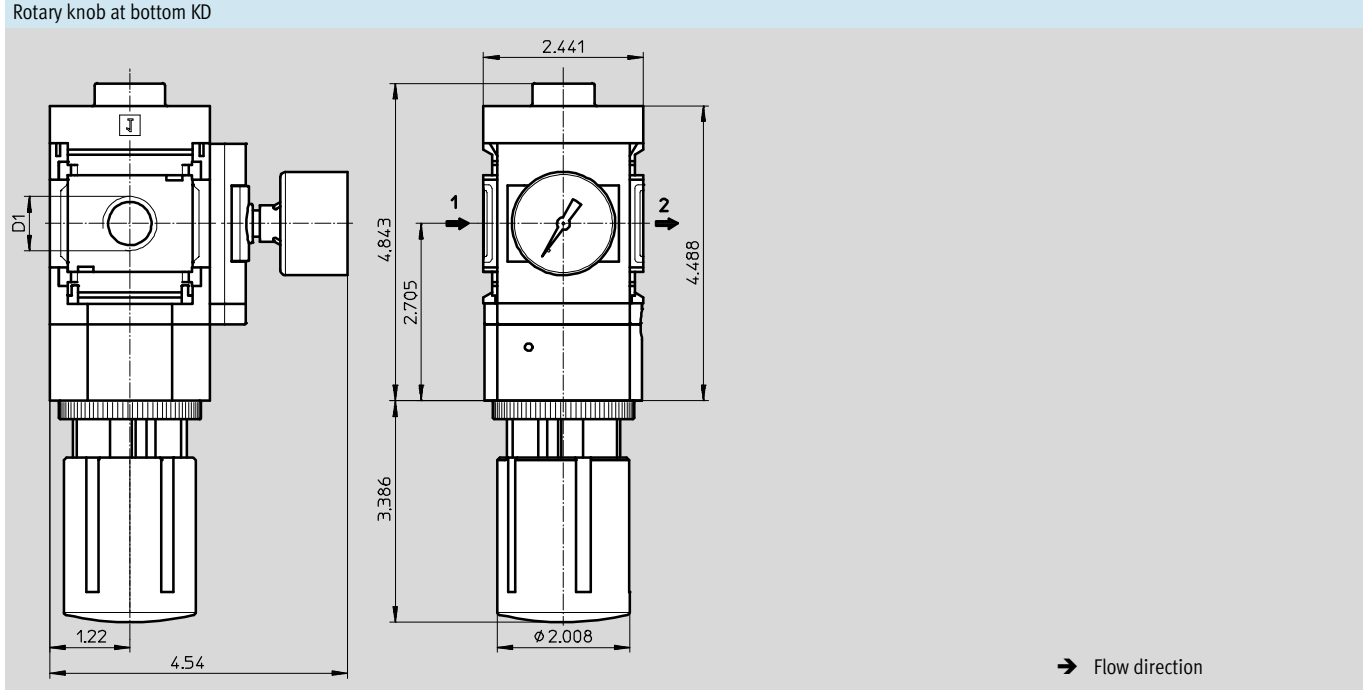
1) Dimensions are in inches, unless otherwise noted.

Precision Pressure Regulators MS6N-LRP – Inch Series



Dimensional Drawings

Dimensions¹⁾ – Alternative Assembly Position Download CAD Data → www.festo.com/us/cad

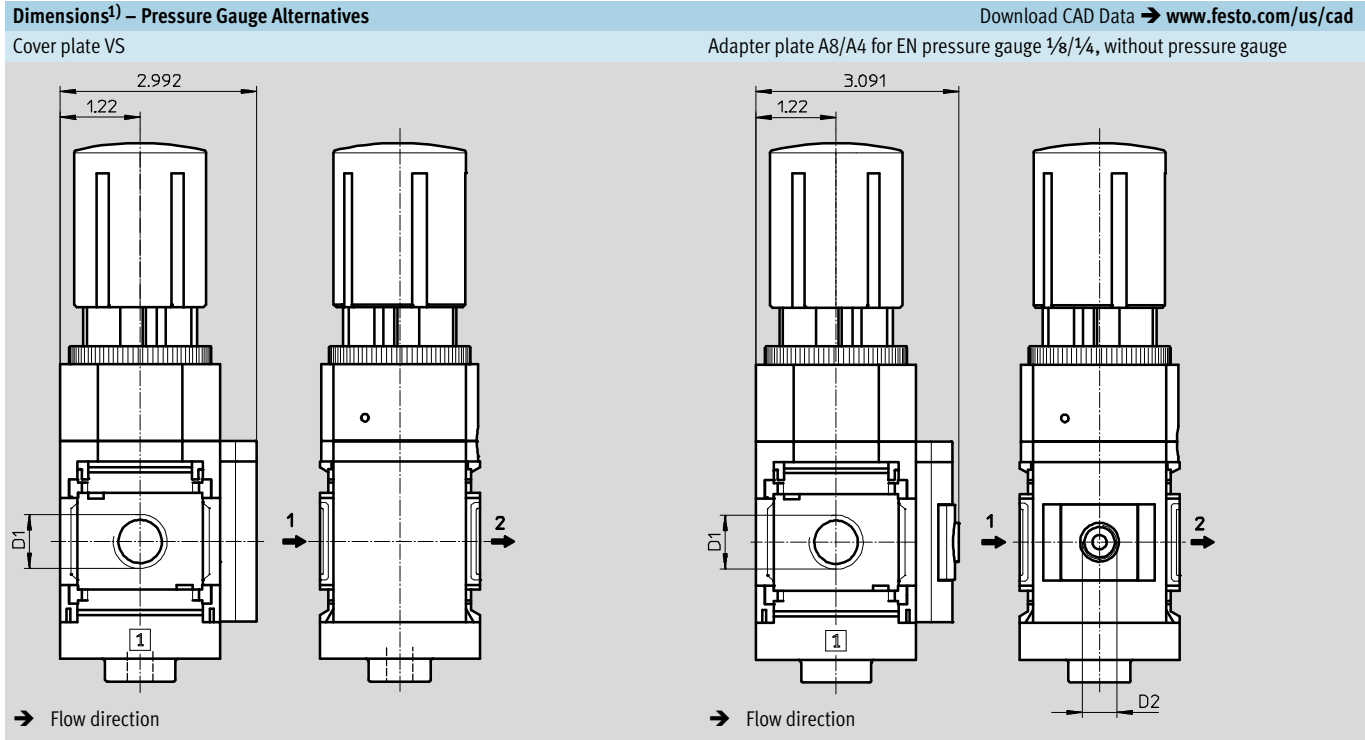


Type	D1
MS6N-LRP-1/4-...-KD	1/4 NPT
MS6N-LRP-3/8-...-KD	3/8 NPT
MS6N-LRP-1/2-...-KD	1/2 NPT

1) Dimensions are in inches, unless otherwise noted.

Precision Pressure Regulators MS6N-LRP – Inch Series

Dimensional Drawings



Type	D1	D2
MS6N-LRP-1/4-...-VS	1/4 NPT	-
MS6N-LRP-3/8-...-VS	3/8 NPT	
MS6N-LRP-1/2-...-VS	1/2 NPT	
MS6N-LRP-1/4-...-A8	1/4 NPT	G1/8
MS6N-LRP-3/8-...-A8	3/8 NPT	
MS6N-LRP-1/2-...-A8	1/2 NPT	
MS6N-LRP-1/4-...-A4	1/4 NPT	G1/4
MS6N-LRP-3/8-...-A4	3/8 NPT	
MS6N-LRP-1/2-...-A4	1/2 NPT	

1) Dimensions are in inches, unless otherwise noted.

Precision Pressure Regulators MS6N-LRP – Inch Series

Dimensional Drawings

Dimensions¹⁾ – Pressure Gauge Alternatives Download CAD Data → www.festo.com/us/cad
 Pressure sensor with display AD1 ... AD4 Technical data SDE1 → www.festo.com/catalog/sde1

Variant AD1:
SDE1-D10-G2-MS-L-P1-M8 with 3-pin plug M8x1, 1 switch output PNP.

Variant AD2:
SDE1-D10-G2-MS-L-N1-M8 with 3-pin plug M8x1, 1 switch output NPN.

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

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

→ Flow direction

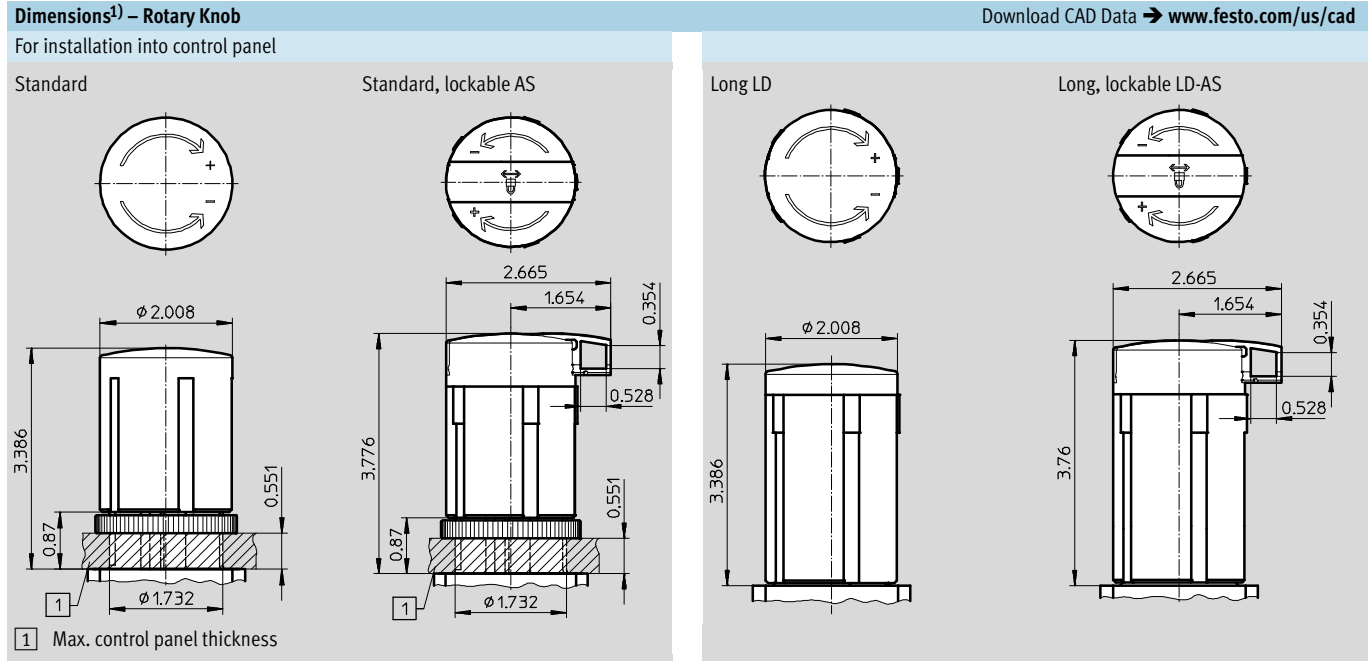
Type	D1	D2	L1
MS6N-LRP-1/4-...-AD1/AD2	1/4 NPT	M8x1	1.84
MS6N-LRP-3/8-...-AD1/AD2	3/8 NPT		
MS6N-LRP-1/2-...-AD1/AD2	1/2 NPT		
MS6N-LRP-1/4-...-AD3/AD4	1/4 NPT	M12x1	2.20
MS6N-LRP-3/8-...-AD3/AD4	3/8 NPT		
MS6N-LRP-1/2-...-AD3/AD4	1/2 NPT		

1) Dimensions are in inches, unless otherwise noted.

Precision Pressure Regulators MS6N-LRP – Inch Series



Dimensional Drawings, Ordering Data – Pre-configured Products



1) Dimensions are in inches, unless otherwise noted.

Ordering Data			
Adapter plate for EN pressure gauge 1/8, standard rotary knob			
Connection	Part No.	Type	LT
Pressure regulation range 0.7 ... 10 psi			
1/4 NPT	538029	MS6N-LRP-1/4-D2-A8 ²⁾	Q
3/8 NPT	538037	MS6N-LRP-3/8-D2-A8 ²⁾	Q
1/2 NPT	538045	MS6N-LRP-1/2-D2-A8 ²⁾	Q
Pressure regulation range 0.7 ... 37 psi			
1/4 NPT	538031	MS6N-LRP-1/4-D4-A8 ²⁾	Q
3/8 NPT	538039	MS6N-LRP-3/8-D4-A8 ²⁾	Q
1/2 NPT	538047	MS6N-LRP-1/2-D4-A8 ²⁾	Q
Pressure regulation range 1.5 ... 59 psi			
1/4 NPT	538033	MS6N-LRP-1/4-D5-A8 ²⁾	Q
3/8 NPT	538041	MS6N-LRP-3/8-D5-A8 ²⁾	Q
1/2 NPT	538049	MS6N-LRP-1/2-D5-A8 ²⁾	Q
Pressure regulation range 1.5 ... 176 psi			
1/4 NPT	538035	MS6N-LRP-1/4-D7-A8 ²⁾	Q
3/8 NPT	538043	MS6N-LRP-3/8-D7-A8 ²⁾	Q
1/2 NPT	538051	MS6N-LRP-1/2-D7-A8 ²⁾	Q

LT = Lead time 1D typically ships same day/next day 3D typically ships within 3 days

2) Free of copper and PTFE

Precision Pressure Regulators MS6N-LRP – Inch Series



Ordering Data – Configurable Products

Mandatory Data →

Part No.	Series	Size	Thread	Function	Connection size	Pressure regulation range	Pressure gauge alternatives
538053	MS	6	N	LRP	1/4, 3/8, 1/2, AQN, AQP, AQR, AQS	D2 D4 D5 D7	VS A8 A8M A4 AD1 AD2 AD3 AD4
Order example							
538053	MS	6	N	- LRP	- 1/2	- D4	- A4

Ordering Table

Grid dimension	[mm]	62	Conditions	Code	Enter code
M Part No.	538053				
Series	Standard			MS	MS
Size	6			6	6
Thread	NPT thread			N	N
Function	Precision pressure regulator			-LRP	-LRP
Connection size	Body thread 1/4 NPT			-1/4	
	Body thread 3/8 NPT			-3/8	
	Body thread 1/2 NPT			-1/2	
	Port plate 1/4 NPT (dimensions → 729)			-AQN	
	Port plate 3/8 NPT (dimensions → 729)			-AQP	
	Port plate 1/2 NPT (dimensions → 729)			-AQR	
	Port plate 3/4 NPT (dimensions → 729)			-AQS	
Pressure regulation range	0.7 ... 10 psi			-D2	
	0.7 ... 37 psi			-D4	
	1.5 ... 59 psi			-D5	
	1.5 ... 176 psi			-D7	
Pressure gauge alternatives	Cover plate			-VS	
	Adapter plate for EN pressure gauge 1/8, without pressure gauge			-A8	
	Adapter plate for EN pressure gauge 1/8, with precision pressure gauge			-A8M	
	Adapter plate for EN pressure gauge 1/4, without pressure gauge			-A4	
	Pressure sensor with display, plug M8, 1 switch output PNP, 3-pin		1	-AD1	
	Pressure sensor with display, plug M8, 1 switch output NPN, 3-pin		1	-AD2	
	Pressure sensor with display, plug M12, 1 switch output PNP, 4-pin, analog output 4 ... 20 mA		1	-AD3	
	Pressure sensor with display, plug M12, 1 switch output NPN, 4-pin, analog output 4 ... 20 mA		1	-AD4	

1 **AD1 ... AD4** Measuring range max. 147 psi.
Not with pressure regulation range D2, D4.

Transfer order code

538053	MS	6	N	- LRP	-		-		-	
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Precision Pressure Regulators MS6N-LRP – Inch Series



Ordering Data – Configurable Products

→ 0 Options

Rotary knob alternative	Alternative assembly position	Security	Type of mounting	Reverse flow direction
LD	KD	AS	WR WP WPM WB	Z
- LD	-	- AS	- WB	- Z

Ordering Table		Grid dimension [mm]	62	Conditions	Code	Enter code
0	Rotary knob alternative	Long rotary knob			-LD	
	Alternative assembly position	Rotary knob at bottom		2	-KD	
	Security	Lockable rotary knob			-AS	
	Type of mounting	Mounting bracket with knurled nut for regulator head (dimensions → 727)		3	-WR	
		Mounting bracket (dimensions → 730)		4	-WP	
		Mounting bracket (dimensions → 730)		4	-WPM	
		Mounting bracket (dimensions → 726)			-WB	
	Reverse flow direction	Flow direction from right to left (without pressure output, no pressure gauge)			-Z	

2 **KD** Not with mounting type WP
 3 **WR** Not with long rotary knob LD

4 **WP, WPM** Only with port plate AQN, AQP, AQR or AQS

Transfer order code

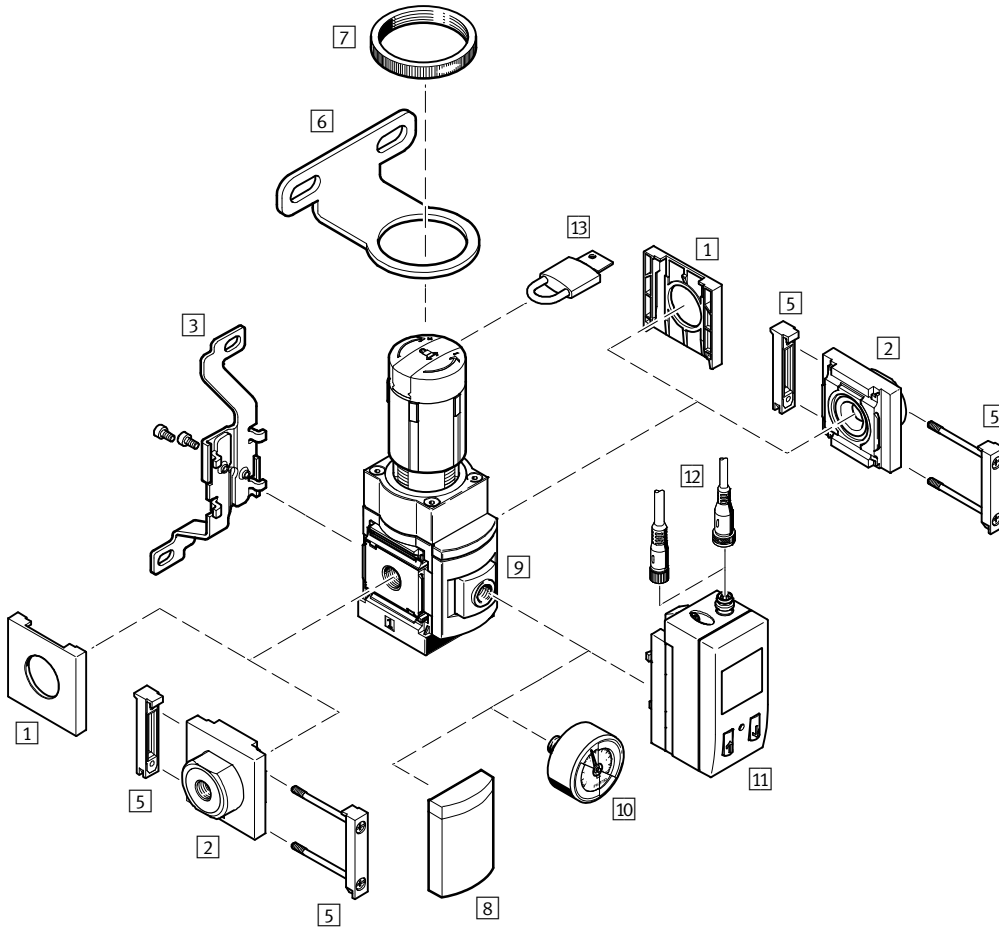
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Precision Pressure Regulators MS6N-LRP – Inch Series

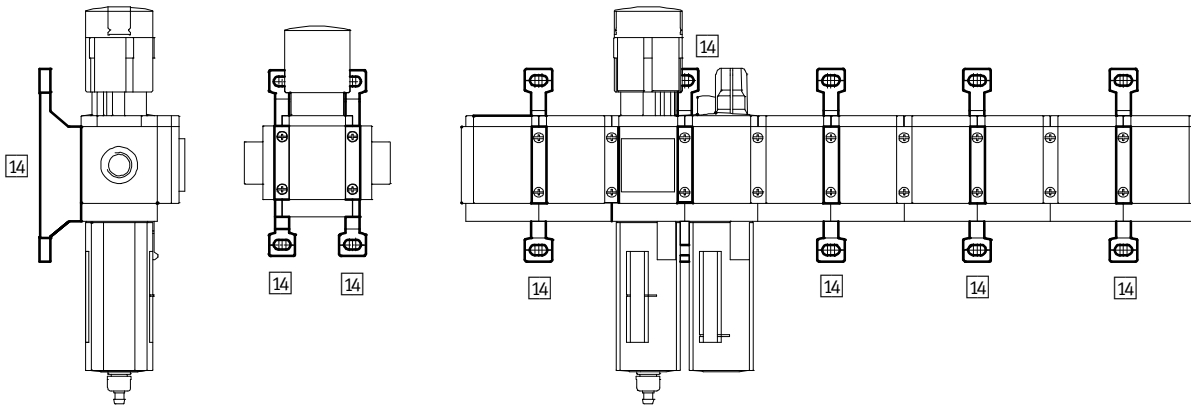
Accessories Overview



Mounting Attachments and Accessories



Single unit and combination unit mounting brackets.



Precision Pressure Regulators MS6N-LRP – Inch Series

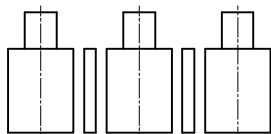
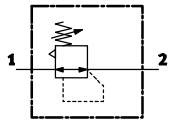
Accessories Overview

Mounting Attachments and Accessories						
		Single unit		Combination unit → 3.1-49		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS6-END	■	-	■	-	728
2	Port plate MS6N-AQ...	-	■	-	■	729
3	Mounting bracket MS6-WB	■	■	-	-	726
5	Body connector MS6-MV	-	■	■	■	729
6	Regulator wall bracket MS6-WR	■	■	-	-	727
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Cover plate VS	■	■	■	■	709
9	Adapter for EN pressure gauge 1/8/1/4 A8/A4	■	■	■	■	709
10	Precision pressure gauge A8M/MAP	■	■	■	■	709
11	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	709
12	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	733
13	Padlock LRVS-D	■	■	■	■	733
14	Mounting bracket MS6-WP/WPB/WPM	-	■	■	■	730

Precision Pressure Regulators MS6N-LRPB – Inch Series

Technical Data

ISO Symbol



LRPB combination
with through pressure supply for
manifold assembly

- The precision pressure regulator is suitable for sensitive applications with a required pressure hysteresis of 0.3 psi.
- The 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 separate, independent pressure regulation ranges
- Good control characteristics with low hysteresis and primary pressure compensation
- Setting values are secured by locking the rotary knob
- Lockable rotary knob (optional)
- Four pressure regulation ranges
- Optional pressure sensor with display
- With secondary venting



General Technical Data

Pneumatic connection 1		1/2 NPT
Pneumatic connection 2		1/2 NPT
		QS-5/16-U push-in tubing connector
		QS-3/8-U push-in tubing connector
Pneumatic connection of secondary venting		1/4 NPT
Supply pressure	[psi]	15 ... 206
Pressure regulation range	D2	[psi] 0.7 ... 10
	D4	[psi] 0.7 ... 37
	D5	[psi] 1.5 ... 59
	D7	[psi] 1.5 ... 176 (1.5 ... 147 with pressure sensor variant AD...)
Max. hysteresis	[psi]	0.3

Standard Nominal Flow Rate qnN [scfm]

Pressure regulation range	D2	56.5 ¹⁾
	D4	81.2 ²⁾
	D5	105.9 ³⁾
	D7	176.5 ⁴⁾

- 1) Measured at p1 = 147 psi and p2 = 7.4 psi, Δp = 1.5 psi
- 2) Measured at p1 = 147 psi and p2 = 22 psi, Δp = 1.5 psi
- 3) Measured at p1 = 147 psi and p2 = 37 psi, Δp = 1.5 psi
- 4) Measured at p1 = 147 psi and p2 = 88 psi, Δp = 1.5 psi

Precision Pressure Regulators MS6N-LRPB – Inch Series

Technical Data

Operating and Environmental Conditions		
Variant	Standard	Pressure sensor with display AD...
Operating medium	Compressed air, filtered, 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
Installation position	Any	
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 lubricating agents.

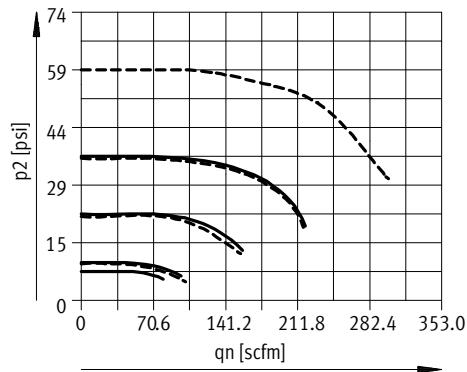
Weight [lb]	
Precision pressure regulator	2.00

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

Standard Flow Rate qn as a Function of Output Pressure p2

MS6N-LRPB-1/2

Primary pressure p1 = 147 psi



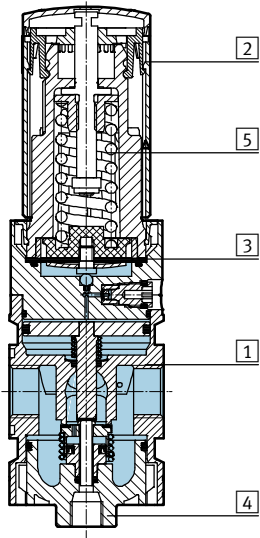
— D4: 0.7 ... 37 psi
 - - - D5: 1.5 ... 59 psi

Precision Pressure Regulators MS6N-LRPB – Inch Series

Technical Data, Dimensional Drawings

Materials

Sectional view



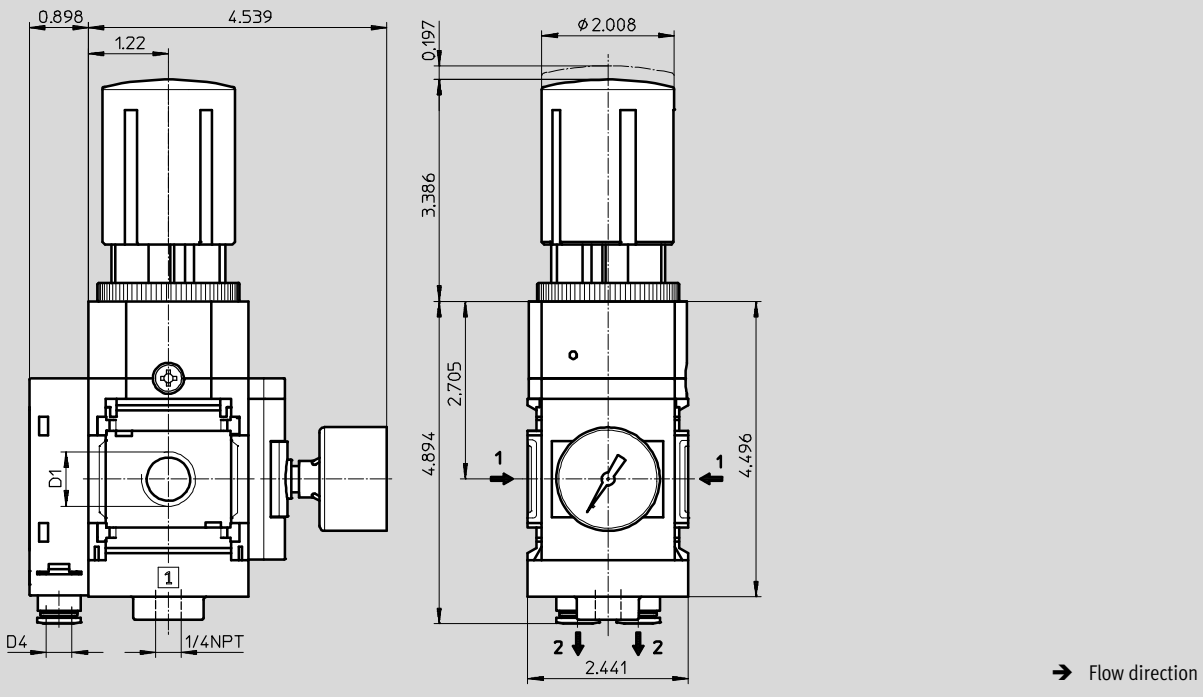
Precision pressure regulator (manifold assembly)		
1	Housing	Die-cast aluminum
2	Regulating knob	Polyamide/polyacetate
3	Diaphragm	Nitrile rubber
4	Cap, bottom	Polyester, fiberglass reinforced
5	Springs	Steel
-	Seals	Nitrile rubber
Note on materials		Free of copper and PTFE (not with variants A8M or AD...)

Dimensions

Adapter plate A8M for EN pressure gauge 1/8, with precision pressure gauge, angled outlet block BI/BJ

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

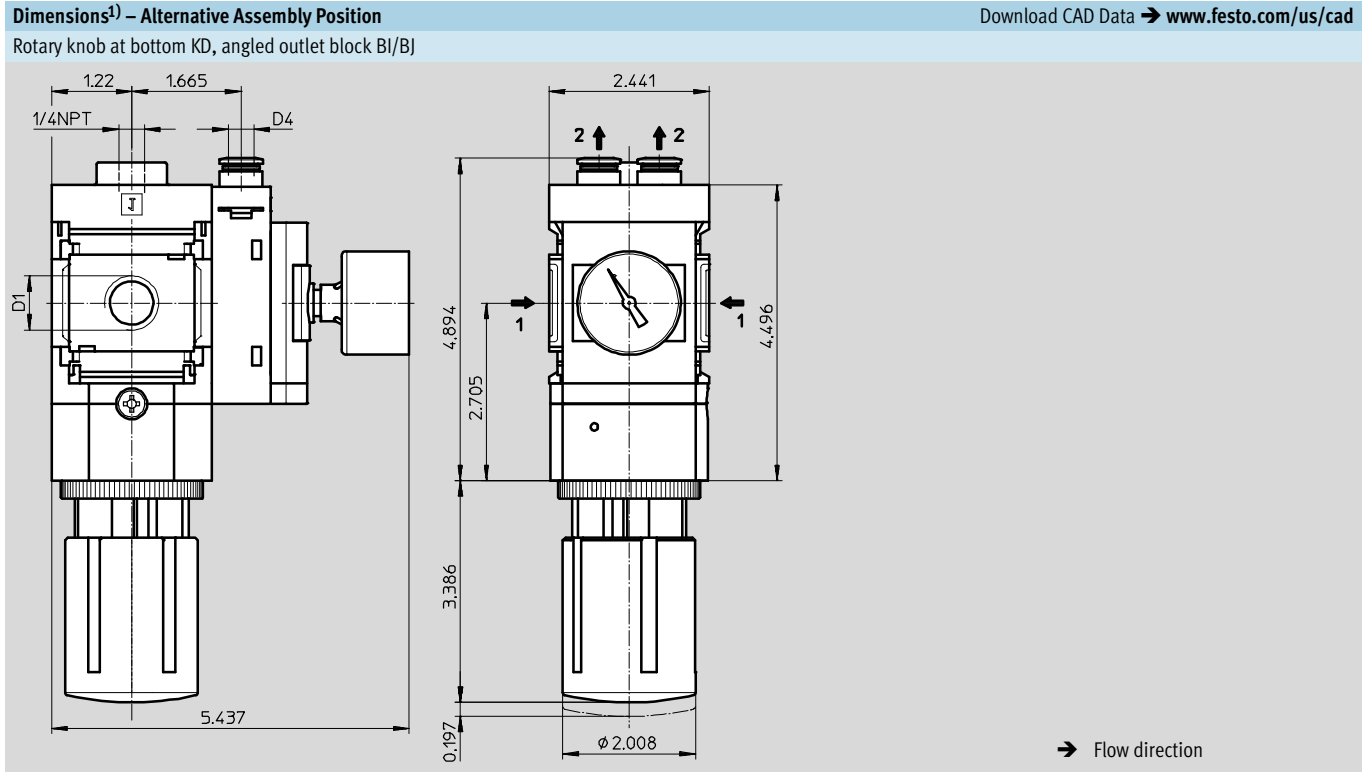
Technical data for gauge MAP → www.festo.com/catalog/map



Type	D1	D4
MS6N-LRPB-1/2-...-A8M-BI	1/2 NPT	QS-3/16-U
MS6N-LRPB-1/2-...-A8M-BJ		QS-3/8-U

Precision Pressure Regulators MS6N-LRPB – Inch Series

Dimensional Drawings



Type	D1	D4
MS6N-LRPB-1/2-...-KD-BI	1/2 NPT	QS-3/16-U
MS6N-LRPB-1/2-...-KD-BJ		QS-3/8-U

1) Dimensions are in inches, unless otherwise noted.

Precision Pressure Regulators MS6N-LRPB – Inch Series

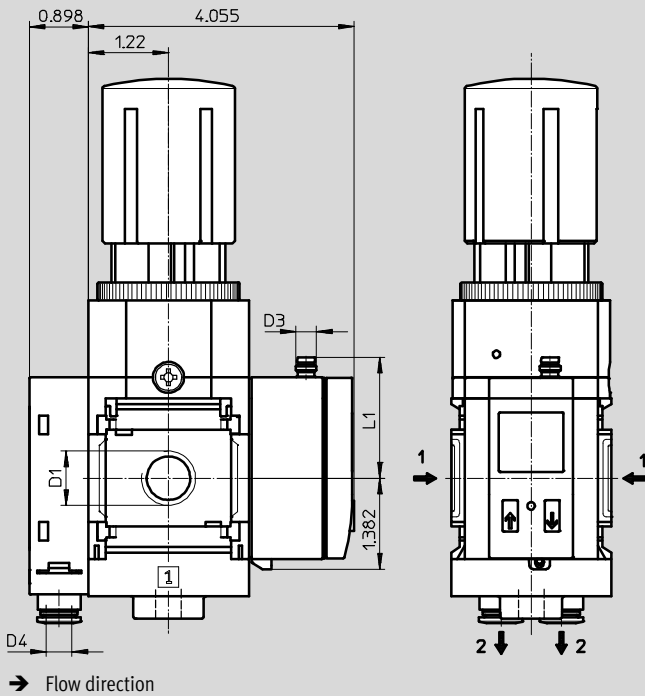
Dimensional Drawings

Dimensions¹⁾ – Pressure Gauge Alternatives

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

Pressure sensor with display AD1 ... AD4, angled outlet block BI/BJ

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



Variant AD1:
SDE1-D10-G2-MS-L-P1-M8 with 3-pin
plug M8x1, 1 switch output PNP.

Variant AD2:
SDE1-D10-G2-MS-L-N1-M8 with 3-pin
plug M8x1, 1 switch output NPN.

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

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

Type	D1	D3	D4	L1
MS6N-LRPB-1/2-...-AD1/AD2-BI	1/2 NPT	M8x1	QS-5/16-U	1.84
MS6N-LRPB-1/2-...-AD1/AD2-BJ			QS-3/8-U	
MS6N-LRPB-1/2-...-AD3/AD4-BI	1/2 NPT	M12x1	QS-5/16-U	2.20
MS6N-LRPB-1/2-...-AD3/AD4-BJ			QS-3/8-U	

1) Dimensions are in inches, unless otherwise noted.

Precision Pressure Regulators MS6N-LRPB – Inch Series

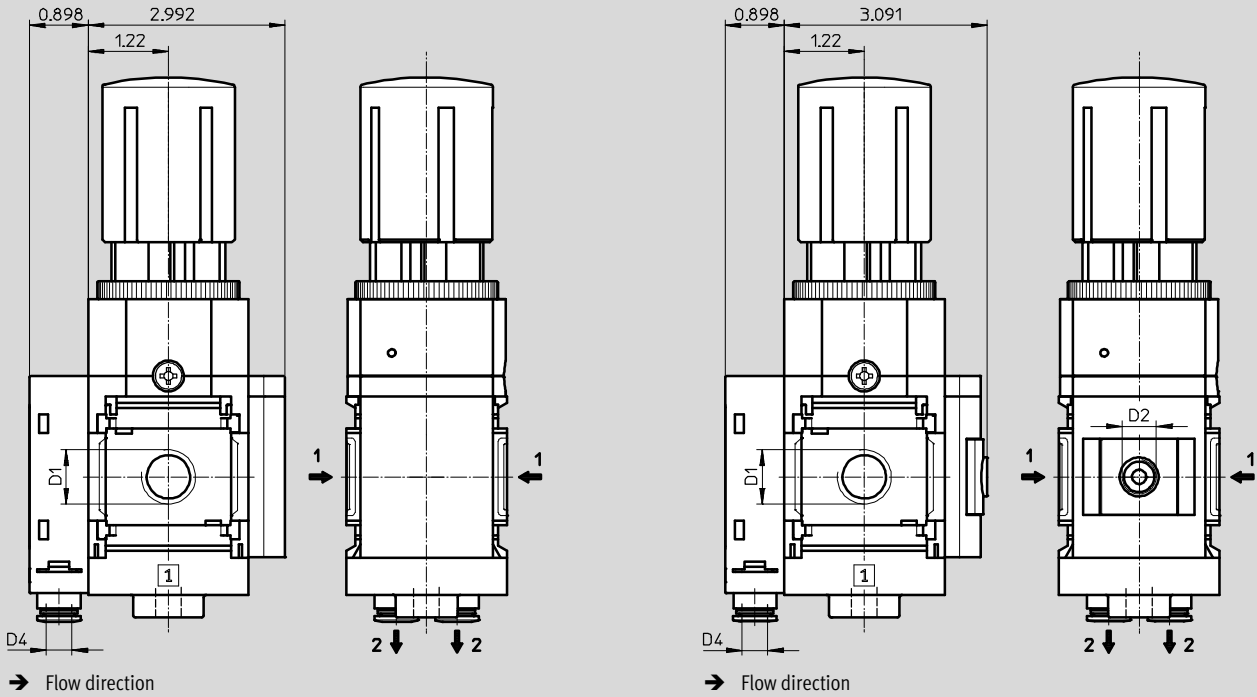
Dimensional Drawings

Dimensions¹⁾ – Pressure Gauge Alternatives

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

Cover plate VS, angled outlet block BI/BJ

Adapter plate A8/A4 for EN pressure gauge 1/8/1/4, without pressure gauge, angled outlet block BI/BJ



Type	D1	D2	D4
MS6N-LRPB-1/2-...-VS-BI	1/2 NPT	-	QS-5/16-U
MS6N-LRPB-1/2-...-VS-BJ			QS-3/8-U
MS6N-LRPB-1/2-...-A8-BI	1/2 NPT	G1/8	QS-5/16-U
MS6N-LRPB-1/2-...-A8-BJ			QS-3/8-U
MS6N-LRPB-1/2-...-A4-BI	1/2 NPT	G1/4	QS-5/16-U
MS6N-LRPB-1/2-...-A4-BJ			QS-3/8-U

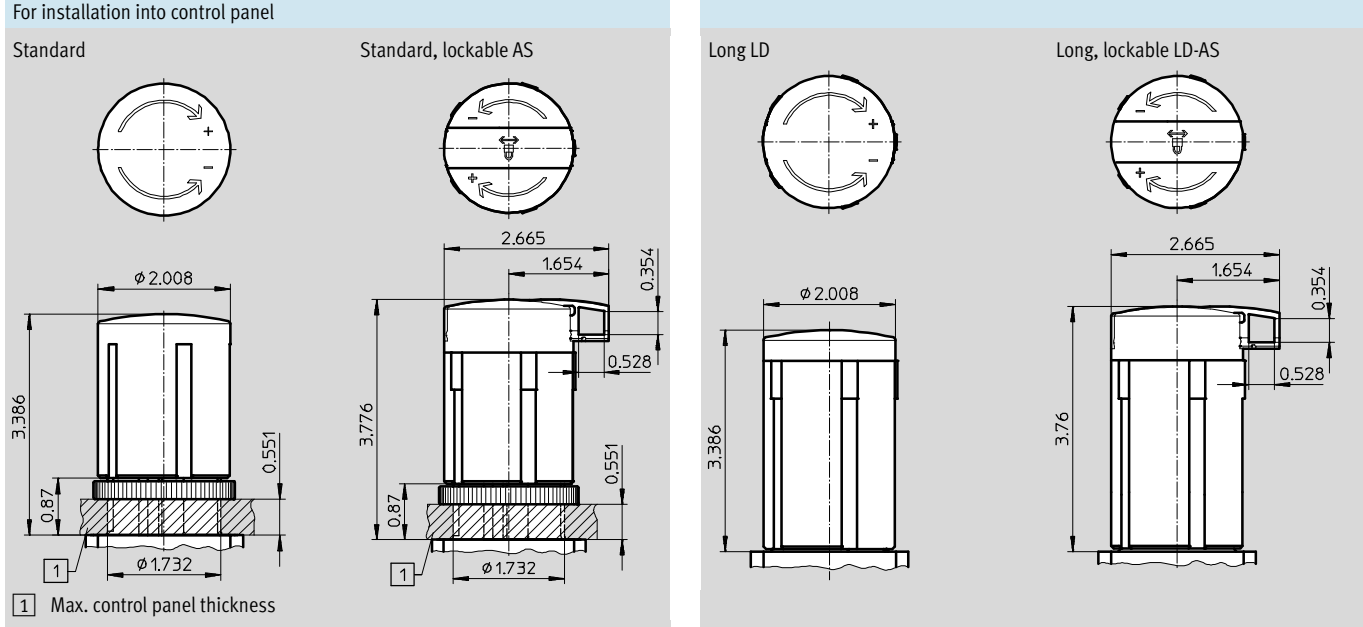
1) Dimensions are in inches, unless otherwise noted.

Precision Pressure Regulators MS6N-LRPB – Inch Series



Dimensional Drawings

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



1) Dimensions are in inches, unless otherwise noted.

Precision Pressure Regulators MS6N-LRPB – Inch Series



Ordering Data – Pre-configured Products

Ordering Data			
Adapter plate A8 for EN pressure gauge 1/8, standard rotary knob			
Connection	Pressure output to rear without angled outlet block		
	Part No.	Type	LT
Pressure regulation range 0.7 ... 10 psi			
1/2 NPT	534983	MS6N-LRPB-1/2-D2-A8 ¹⁾	Q
Pressure regulation range 0.7 ... 37 psi			
1/2 NPT	534986	MS6N-LRPB-1/2-D4-A8 ¹⁾	Q
Pressure regulation range 1.5 ... 59 psi			
1/2 NPT	534989	MS6N-LRPB-1/2-D5-A8 ¹⁾	Q
Pressure regulation range 1.5 ... 176 psi			
1/2 NPT	534992	MS6N-LRPB-1/2-D7-A8 ¹⁾	Q

Ordering Data				
Adapter plate A8 for EN pressure gauge 1/8, standard rotary knob				
Connection	Pressure output to rear with angled outlet block QS-5/16-U		Pressure output to rear with angled outlet block QS-3/8-U	
	Part No.	Type	LT	Part No. Type
Pressure regulation range 0.7 ... 10 psi				
1/2 NPT	534937	MS6N-LRPB-1/2-D2-A8-B1 ¹⁾	Q	534985 MS6N-LRPB-1/2-D2-A8-BJ ¹⁾ Q
Pressure regulation range 0.7 ... 37 psi				
1/2 NPT	534940	MS6N-LRPB-1/2-D4-A8-B1 ¹⁾	Q	534988 MS6N-LRPB-1/2-D4-A8-BJ ¹⁾ Q
Pressure regulation range 1.5 ... 59 psi				
1/2 NPT	534943	MS6N-LRPB-1/2-D5-A8-B1 ¹⁾	Q	534991 MS6N-LRPB-1/2-D5-A8-BJ ¹⁾ Q
Pressure regulation range 1.5 ... 176 psi				
1/2 NPT	534946	MS6N-LRPB-1/2-D7-A8-B1 ¹⁾	Q	534994 MS6N-LRPB-1/2-D7-A8-BJ ¹⁾ Q

LT = Lead time 1D typically ships same day/next day 3D typically ships within 3 days

1) Free of copper and PTFE

Precision Pressure Regulators MS6N-LRPB – Inch Series



Ordering Data – Configurable Products

Mandatory Data →

Part No.	Series	Size	Thread	Function	Connection size	Pressure regulation range	Pressure gauge alternatives
535008	MS	6	N	LRPB	1/2, AQN, AQP, AQR, AQS	D2 D4 D5 D7	VS A8 A8M A4 AD1 AD2 AD3 AD4
Order example							
535008	MS	6	N	-LRPB	-AQR	-D5	-VS

Ordering Table

Grid dimension	[mm]	62	Conditions	Code	Enter code
M Part No.	535008				
Series	Standard			MS	MS
Size	6			6	6
Thread	NPT thread			N	N
Function	Precision pressure regulator for manifold assembly			-LRPB	-LRPB
Connection size	Body thread 1/2 NPT			-1/2	
	Port plate 1/4 NPT (dimensions → 729)			-AQN	
	Port plate 3/8 NPT (dimensions → 729)			-AQP	
	Port plate 1/2 NPT (dimensions → 729)			-AQR	
	Port plate 3/4 NPT (dimensions → 729)			-AQS	
Pressure regulation range	0.7 ... 10 psi			-D2	
	0.7 ... 37 psi			-D4	
	1.5 ... 59 psi			-D5	
	1.5 ... 176 psi			-D7	
Pressure gauge alternatives	Cover plate		[1]	-VS	
	Adapter plate for EN pressure gauge 1/8, without pressure gauge		[2]	-A8	
	Adapter plate for EN pressure gauge 1/8, with precision pressure gauge		[2]	-A8M	
	Adapter plate for EN pressure gauge 1/4, without pressure gauge		[2]	-A4	
	Pressure sensor with display, plug M8, 1 switch output PNP, 3-pin		[2] [3]	-AD1	
	Pressure sensor with display, plug M8, 1 switch output NPN, 3-pin		[2] [3]	-AD2	
	Pressure sensor with display, plug M12, 1 switch output PNP, 4-pin, analog output 4 ... 20 mA		[2] [3]	-AD3	
	Pressure sensor with display, plug M12, 1 switch output NPN, 4-pin, analog output 4 ... 20 mA		[2] [3]	-AD4	

- [1] **VS** Must be selected with alternative flow direction Z without alternative assembly position KD or without alternative pressure output Bl, Bj.
- [2] **A8, A8M, A4, AD1 ... AD4** In combination with alternative flow direction Z only with alternative assembly position KD
- [3] **AD1 ... AD4** Measuring range max. 147 psi. Not with pressure regulation range D2, D4.
- Must be selected with alternative assembly position KD without alternative flow direction Z or without alternative pressure output Bl, Bj.

Transfer order code

535008	MS	6	N	-LRPB	-		-		-	
---------------	-----------	----------	----------	--------------	---	--	---	--	---	--

Precision Pressure Regulators MS6N-LRPB – Inch Series



Ordering Data – Configurable Products

→ 0 Options

Rotary knob alternative	Alternative assembly position	Security	Alternative pressure output	Type of mounting	Reverse flow direction
LD	KD	AS	BI BJ	WR WP WPM WPB WB	Z
- LD	-	- AS	- BJ	- WP	- Z

Ordering Table		Grid dimension [mm]	62	Conditions	Code	Enter code
0	Rotary knob alternative	Long rotary knob			-LD	
	Alternative assembly position	Rotary knob at bottom		4	-KD	
	Security	Lockable rotary knob			-AS	
	Alternative pressure output	Angled outlet block QS- $\frac{3}{16}$ -U			-BI	
		Angled outlet block QS- $\frac{3}{8}$ -U			-BJ	
	Type of mounting	Mounting bracket with knurled nut for regulator head (dimensions → 727)		5 6	-WR	
		Mounting bracket (dimensions → 730)		7 8	-WP	
		Mounting bracket (dimensions → 730)		5 7	-WPM	
		Mounting bracket for large wall gap (dimensions → 730)		7 9	-WPB	
		Mounting bracket (dimensions → 726)		5	-WB	
	Reverse flow direction	Pressure output at front (without pressure output, no pressure gauge)			-Z	

4 **KD** In combination with pressure gauge alternatives A8, A4, AD1, AD2, AD3, AD4 only with alternative flow direction Z

5 **WR, WPM, WB** Either only with alternative flow direction Z or only with alternative assembly position KD

6 **WR** Only with alternative flow direction Z. Not with long rotary knob LD

7 **WP, WPM, WPB**

Only with port plate AQN, AQP, AQR or AQS

8 **WP** Not with alternative assembly position KD

Either only with alternative flow direction Z or only with alternative pressure output BI, BJ

9 **WPB** Not with alternative assembly position KD

Not with alternative pressure output BI, BJ

Not with alternative flow direction Z

Transfer order code

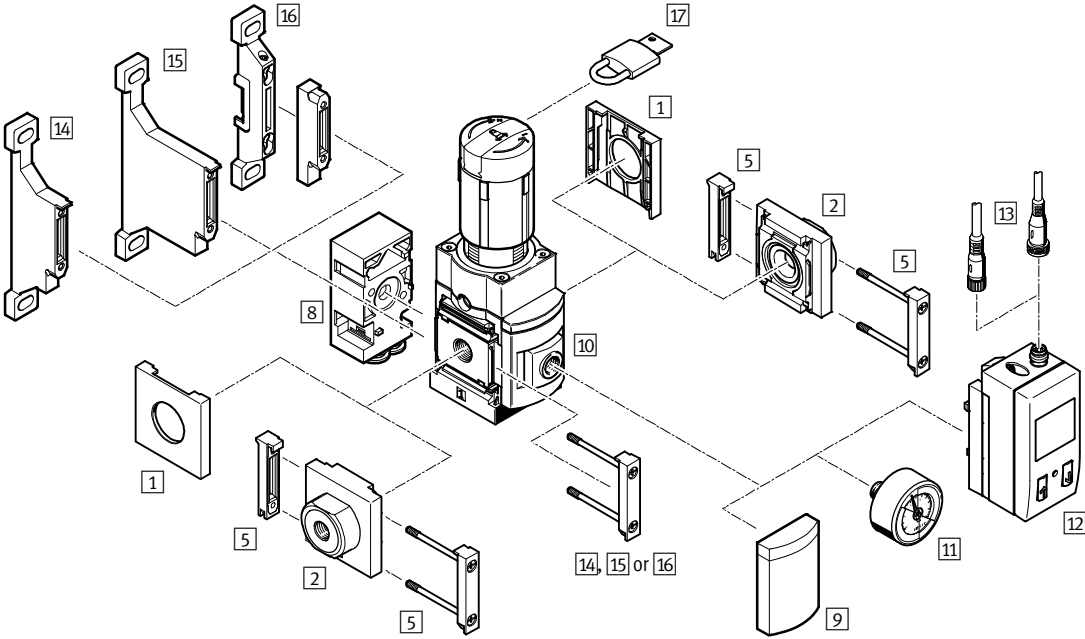
- [] - [] - [] - [] - [] - []

Precision Pressure Regulators MS6N-LRPB – Inch Series

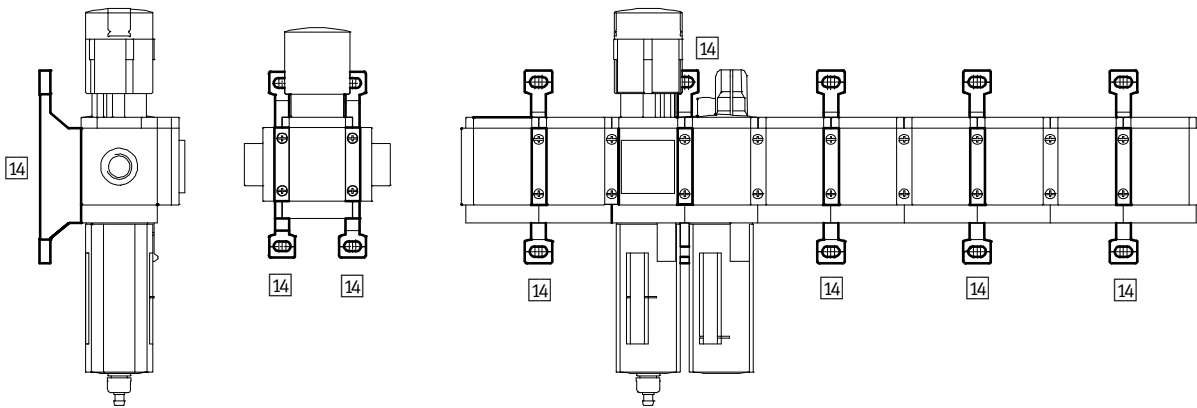
Accessories Overview

Mounting Attachments and Accessories

Pressure output at rear



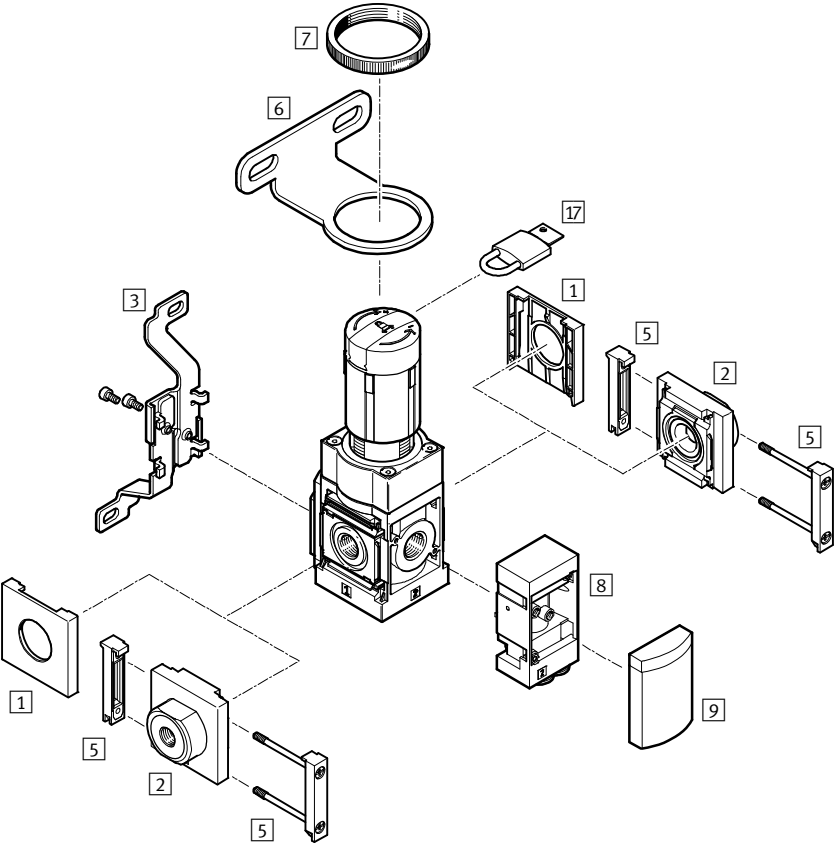
Single unit and combination unit mounting brackets.



Precision Pressure Regulators MS6N-LRPB – Inch Series

Accessories Overview

Pressure output at front



Precision Pressure Regulators MS6N-LRPB – Inch Series

Accessories Overview

Mounting Attachments and Accessories						
		Single unit		Combination unit → 3.1-49		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS6-END	■	-	■	-	728
2	Port plate MS6N-AQ...	-	■	-	■	729
3	Mounting bracket MS6-WB	■	■	-	-	726
5	Body connector MS6-MV	-	■	■	■	729
6	Regulator wall bracket MS6-WR	■	■	-	-	727
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Angled outlet block B...	■	■	■	■	722
9	Cover plate VS	■	■	■	■	721
10	Adapter for EN pressure gauge 1/8/1/4 A8/A4	■	■	■	■	721
11	Precision pressure gauge A8M/MAP	■	■	■	■	721
12	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	721
13	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	733
14	Mounting bracket MS6-WP	-	■	■	■	730
15	Mounting bracket MS6-WPB	-	■	■	■	730
16	Mounting bracket MS6-WPM	-	■	■	■	730
17	Padlock LRVS-D	■	■	■	■	733

Pressure Regulators MS6N-LR/LRB/LRP/LRPB – Inch Series

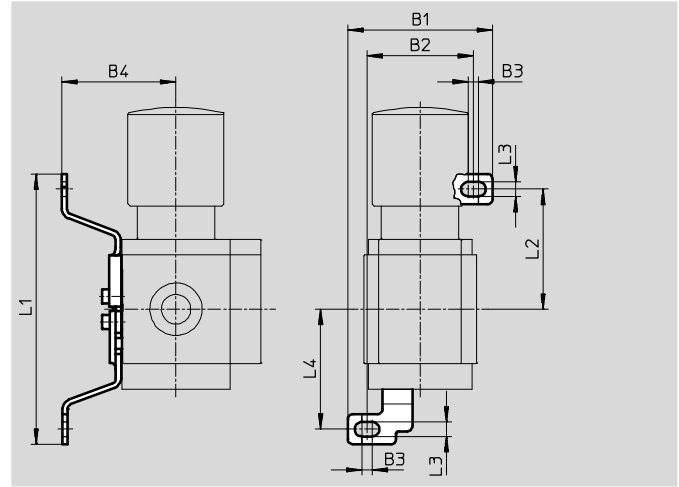


Accessories

3 Mounting bracket MS6-WB

- For wall mounting

Material:
Steel



Dimensions and Ordering Data										
B1	B2	B3	B4	L1	L2	L3	L4	Weight [lb]	Part No.	Type
3.13	2.44	0.18	2.17	6.20	2.80	0.26	2.80	0.24	532196	MS6-WB

Pressure Regulators MS6N-LR/LRB/LRP/LRPB – Inch Series

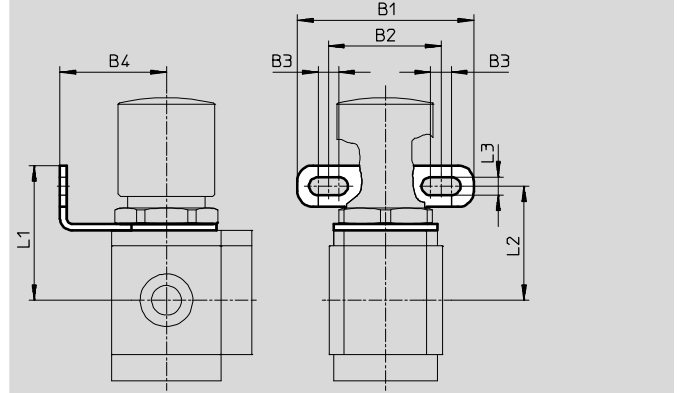
Accessories

6 Mounting bracket MS6-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.

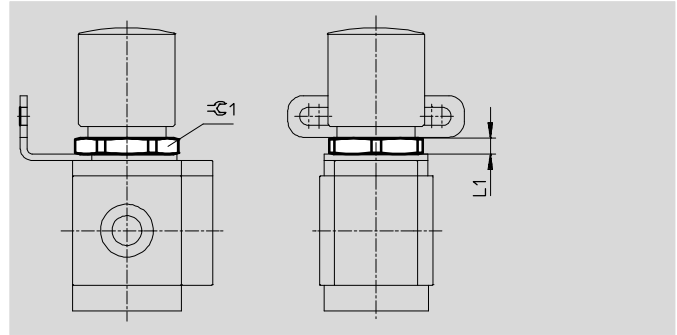


Dimensions and Ordering Data									
B1	B2	B3	B4	L1	L2	L3	Weight [lb]	Part No.	Type
2.76	1.65	0.32	1.57	2.64	2.24	0.28	0.18	526075	MS6-WR

Hex nut MS6-WRS

- For front panel mounting
- For attaching components to the mounting bracket MS...-WR

Material:
Aluminum



Dimensions and Ordering Data				
L1	±0.1	Weight [lb]	Part No.	Type
0.28	2.17	0.04	532188	MS6-WRS

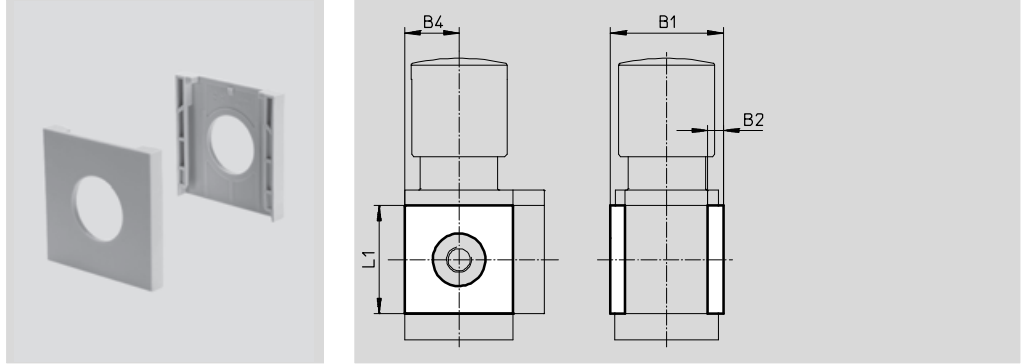
Pressure Regulators MS6N-LR/LRB/LRP/LRPB – Inch Series

Accessories

1 Cover cap MS6-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



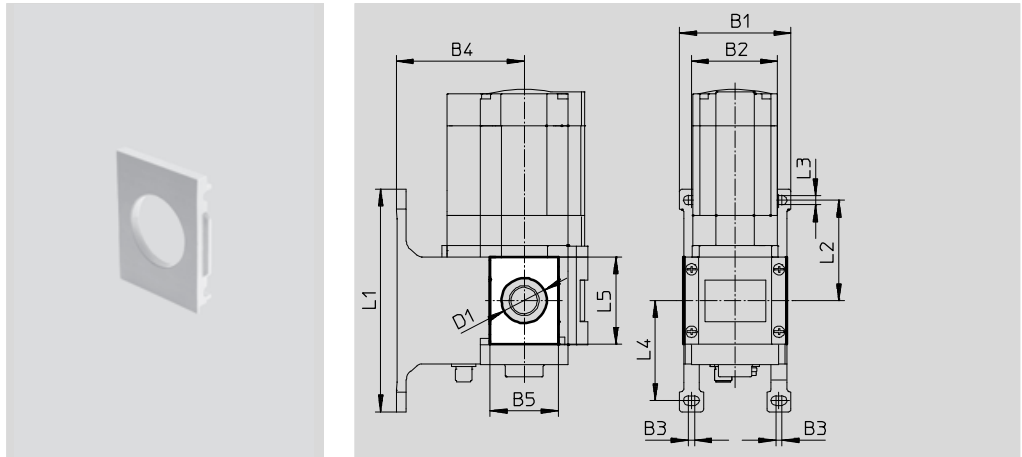
Dimensions and Ordering Data						
B1	B2	B4	L1	Part No.	Type	
2.64	0.31	1.22	2.44	538780	MS6-END	

Mounting plate MS6-AEND

(order code: WBE; scope of delivery includes mounting bracket MS6-WPB)

- 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											
3.11	2.44	0.18	2.13	3.56	1.91	1.26	6.22	2.80	0.26	2.80	2.44	2	0.03	535408	MS6-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.

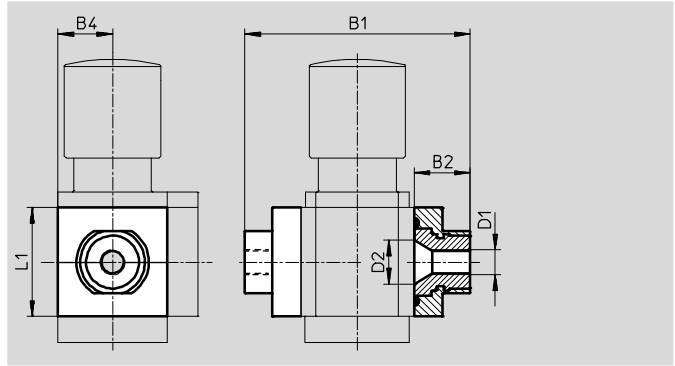
Pressure Regulators MS6N-LR/LRB/LRP/LRPB – Inch Series

Accessories

2 Port plate MS6N-AQ...

- Adapter for pneumatic connection
- MS6-AGE for implementing threaded connection 3/4 NPT

Material:
Aluminum



Dimensions and Ordering Data								
B1	B2	B4	D1	D2	L1	Weight [lb]	Part No.	Type
4.53	1.04	1.22	1/4 NPT	0.94	2.44	0.60	526076	MS6N-AQN
			3/8 NPT				526077	MS6N-AQP
			1/2 NPT				526078	MS6N-AQR
			3/4 NPT				526079	MS6N-AQS

5 Body connector MS...-MV

- For connecting modules

Material:
Stainless steel/polyacetate



Ordering Data		
Weight [lb]	Part No.	Type
0.11	532799	MS6-MV

Pressure Regulators MS6N-LR/LRB/LRP/LRPB – Inch Series

Accessories

14 Mounting Bracket MS6-WP...

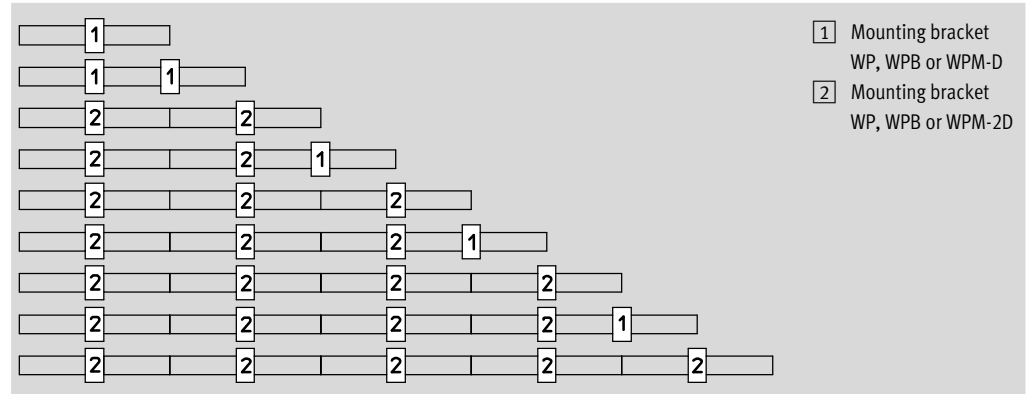
Suggested placement of wall mounting brackets when mounting air preparation combinations

1 unit: 2.44 in with WP, WPB
2.715 in with WPM-D

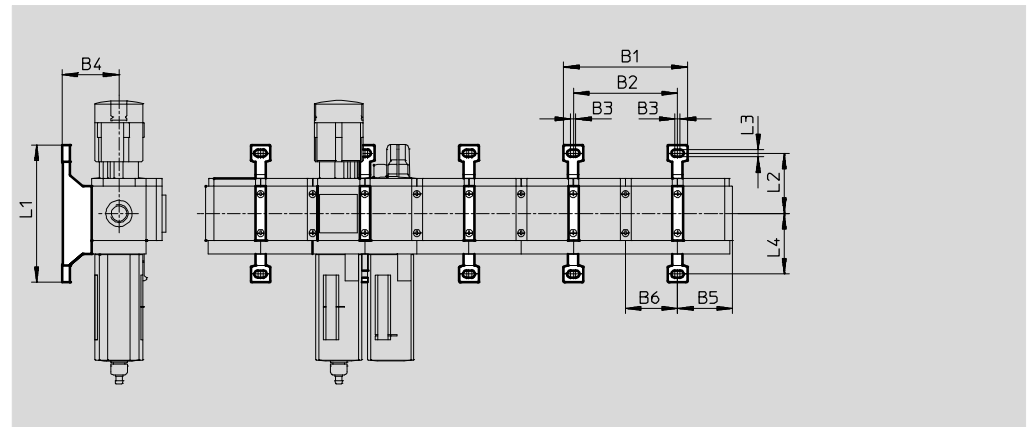
2 units: 4.88 in with WP, WPB
5.43 in with WPM-2D

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
MS6-WP	5.55	4.88	0.18	2.13	2.54	2.44	6.22	2.80	0.26	2.80
MS6-WPB				3.56						
MS6-WPM-...D	6.61	5.43	0.69	2.13	2.58	2.72	3.88	1.63		1.63

Pressure Regulators MS6N-LR/LRB/LRP/LRPB – Inch Series

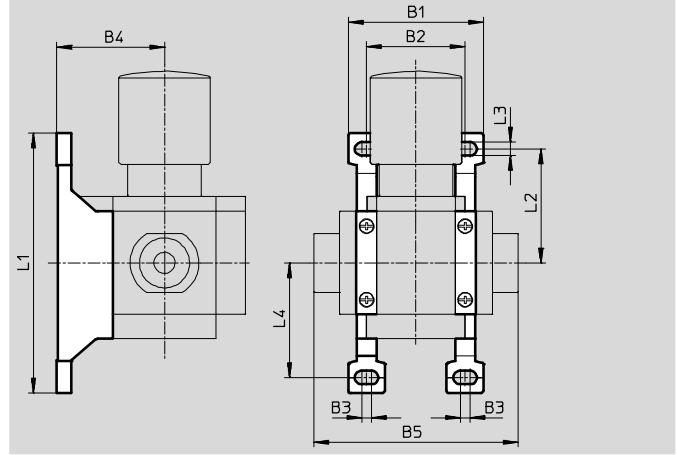


Accessories

Mounting bracket MS6-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

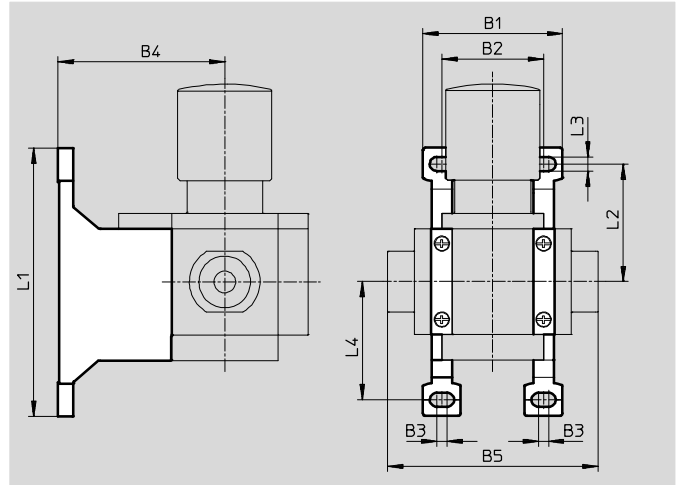


Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [lb]	Part No.	Type
3.11	2.44	0.18	2.13	4.53	6.22	2.80	0.26	2.80	0.15	532195	MS6-WP

15 Mounting bracket MS6-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
3.11	2.44	0.18	3.56	4.53	6.22	2.80	0.26	2.80	0.23	526074	MS6-WPB

Pressure Regulators MS6N-LR/LRB/LRP/LRPB – Inch Series

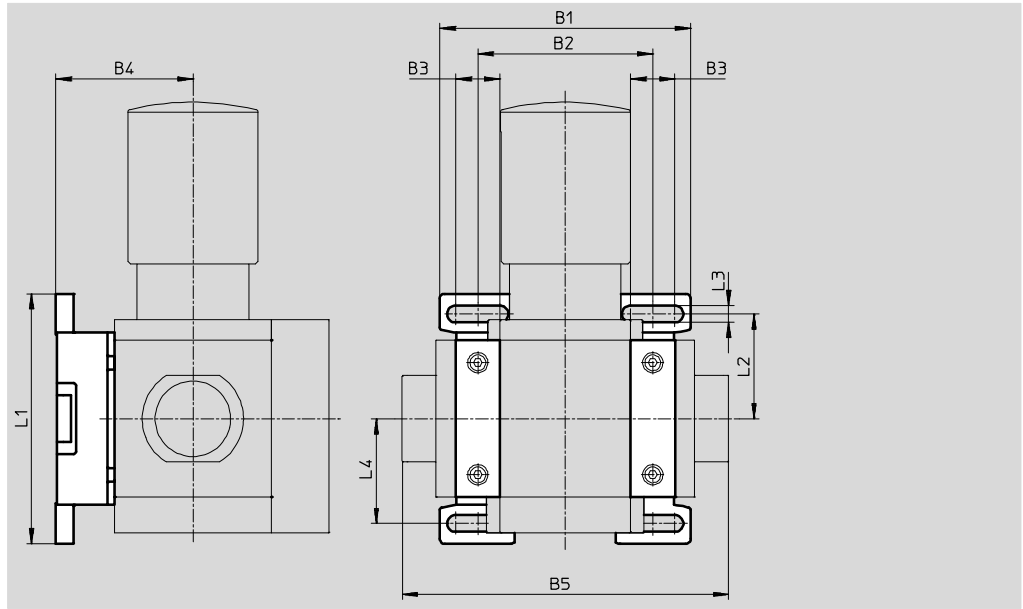
Accessories

16 Mounting bracket MS6-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
3.90	2.72	0.69	2.13	5.08	3.88	1.63	0.26	1.63	2.44	0.29	526073	MS6-WPM-D
6.61	5.43			7.80					4.88			

Body connector MS6-MVM

- For installation of modules with regulating knob pointing downwards

Material:
Die-cast aluminum







Ordering Data		
Size	Part No.	Type
MS6	532801	MS6-MVM


Pressure Regulators MS6N-LR/LRB/LRP/LRPB – Inch Series


Accessories



13 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

11 Ordering Data – Pressure Gauge MA						
	Nominal size	Pneumatic connection	Indicating range		Part No.	Type
			[bar]	[psi]		
	Pressure gauge MA, DIN EN 837-1				Technical data → www.festo.com/catalog/ma	
	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
	Precision pressure gauge MAP, DIN EN 837-1				Technical data → www.festo.com/catalog/map	
	1.57	R1/8	0 ... 1	0 ... 15	161126	MAP-40-1-1/8-EN
			0 ... 4	0 ... 58	162842	MAP-40-4-1/8-EN
			0 ... 6	0 ... 87	161127	MAP-40-6-1/8-EN
			0 ... 16	0 ... 232	161128	MAP-40-16-1/8-EN

17 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 MS6N-LR/LRB/LRP/LRPB – Inch Series



Replacement Parts

Ordering Data – Wearing Parts Kits			
Size	Description	Part No.	Type
MS6	Snap-ring, membrane, bellows, O-rings, screws, stem	673650	MS6-LR/LRB

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

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