

Pressure Regulators MS6-LR/LRB, MS6-LRP/LRPB – Metric 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
 - MS6-LR
 - MS6-LRB, manifold units
 - MS6-LRP, precision
 - MS6-LRPB, precision, manifold units
- Pneumatic connection: G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$, G $\frac{3}{4}$
- Supply pressure
 - LR and LRB: 0.8 ... 20 bar
 - LRP and LRPB: 1 ... 14 bar
- Flow rate: 600 ... 7,500 l/min

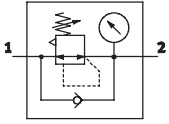
Product Range Overview																	
Type	Flow rate [l/min]	Pneumatic connections		Pressure regulation range [bar]						Pressure indicator					Pressure adjustment		Reverse flow
		Body thread	Port plate	0.05 ... 0.7	0.05 ... 2.5	0.3 ... 4	0.3 ... 7	0.5 ... 12	0.5 ... 16	Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter for pressure gauge G $\frac{1}{8}$	Adapter for pressure gauge G $\frac{1}{4}$	Pressure sensor with display	Rotary knob, lockable	Rotary knob, long	
MS6			AG...	D2	D4	D5	D6	D7	D8	VS	AG	A8	A4	AD...	AS	LD	Z
LR	2,200 ... 7,500	G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$	G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$, G $\frac{3}{4}$	-	-	■	■	■	■	■	■	-	■	■	■	■	■
LRB	600 ... 7,300	G $\frac{1}{2}$	G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$, G $\frac{3}{4}$	-	-	■	■	■	■	■	■	-	■	■	■	■	■
LRP	800 ... 5,000	G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$	G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$, G $\frac{3}{4}$	■	■	■	-	■	-	■	-	■	■	■	■	■	■
LRPB	1,600 ... 5,000	G $\frac{1}{2}$	G $\frac{1}{4}$, G $\frac{3}{8}$, G $\frac{1}{2}$, G $\frac{3}{4}$	■	■	■	-	■	-	■	-	■	■	■	■	■	■

Contents			
MS6-LR	MS6-LRB	MS6-LRP	MS6-LRPB
Technical Data → 614	Technical Data → 626	Technical Data → 637	Technical Data → 650
Dimensional Drawings → 618	Dimensional Drawings → 628	Dimensional Drawings → 641	Dimensional Drawings → 652
Ordering Data → 621	Ordering Data → 631	Ordering Data → 645	Ordering Data → 657
Accessories → 624	Accessories → 634	Accessories → 648	Accessories → 660
Replacement Parts → 671	Replacement Parts → 671	Replacement Parts → 671	Replacement Parts → 671
→ www.festo.com/catalog/ms6-lr	→ www.festo.com/catalog/ms6-lrb	→ www.festo.com/catalog/ms6-lrp	→ www.festo.com/catalog/ms6-lrpb

Pressure Regulators MS6-LR – Metric Series

Technical Data

ISO Symbol



- 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
- 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



General Technical Data			
Pneumatic connection 1, 2		G1/4	G3/8
Supply pressure	[bar]	0.8 ... 20	
Pressure regulation range	D5	[bar]	0.3 ... 4
	D6	[bar]	0.3 ... 7
	D7	[bar]	0.5 ... 12 (0.5 ... 10 with variant pressure sensor AD...)
	D8	[bar]	0.5 ... 16
Max. hysteresis	[bar]	0.25	

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Standard Nominal Flow Rate $q_{nN}^{1)}$ [l/min]			
Pneumatic connection 1, 2		G1/4	G3/8
Pressure regulation range	D5	2,400 ²⁾	5,500 ²⁾
	D6	3,000	5,800
	D7	2,700	4,500
	D8	2,200	4,000

1) Measured at $p_1 = 10$ bar and $p_2 = 6$ bar, $\Delta p = 1$ bar

2) Measured at $p_1 = 10$ bar and $p_2 = 3$ bar, $\Delta p = 1$ bar

Pressure Regulators MS6-LR – Metric 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 [°C]	-10 ... +60	0 ... +50
Temperature of medium [°C]	-10 ... +60	0 ... +50
Storage temperature [°C]	-10 ... +60	-10 ... +60
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 [g]	
Pressure regulator	730

- Wearing parts kits → 671
- For spare parts go to: www.festo.com/en/spare_parts_service

Pressure Regulators MS6-LR – Metric Series

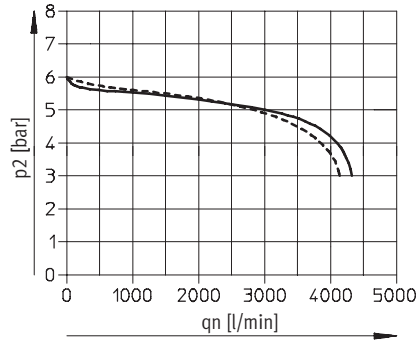
Technical Data



Standard Flow Rate q_n as a Function of Output Pressure p_2

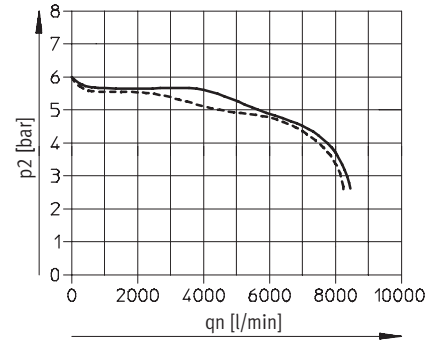
MS6-LR-1/4

Primary pressure $p_1 = 10$ bar



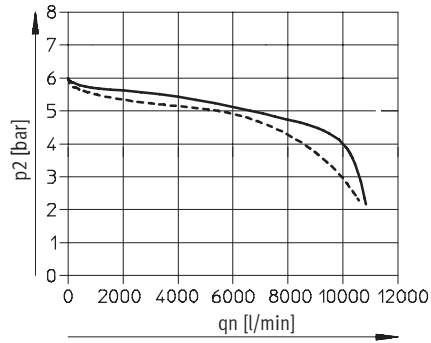
— D6: 0.3 ... 7 bar
 - - - D7: 0.5 ... 12 bar

MS6-LR-3/8



MS6-LR-1/2

Primary pressure $p_1 = 10$ bar



— D6: 0.3 ... 7 bar
 - - - D7: 0.5 ... 12 bar

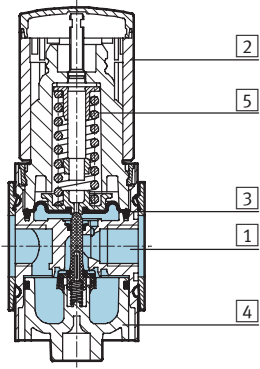
Pressure Regulators MS6-LR – Metric Series

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 MS6-LR – Metric Series

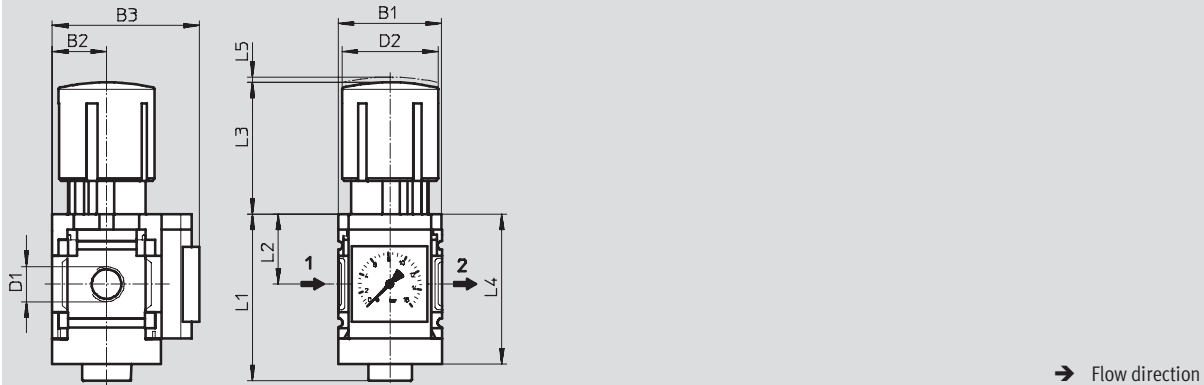
Dimensional Drawings



Dimensions¹⁾ – Standard

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

With pressure gauge, display unit [bar]



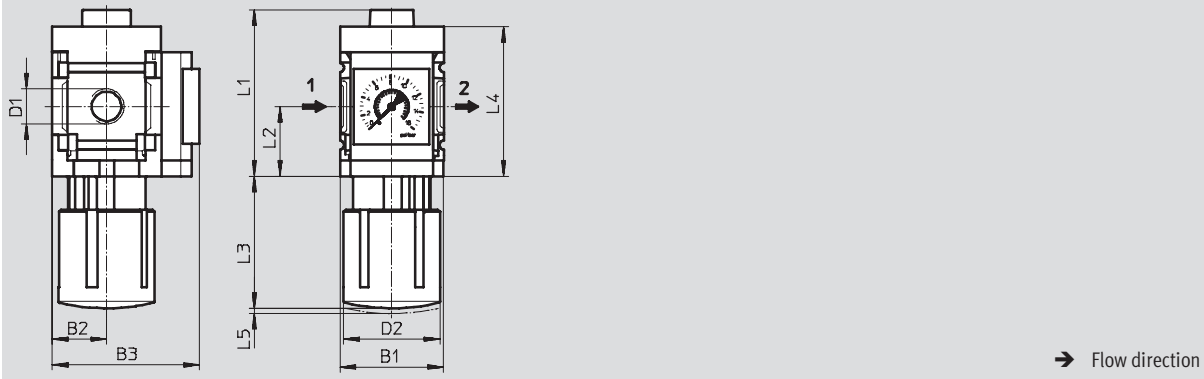
Type	B1	B2	B3	D1	D2	L1	L2	L3	L4	L5
MS6-LR-1/4	62	31	77	G1/4	51	93	39	86	84	5
MS6-LR-3/8				G3/8						
MS6-LR-1/2				G1/2						

1) Dimensions are in millimeters, 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
MS6-LR-1/4-...-KD	62	31	77	G1/4	51	93	39	86	84	5
MS6-LR-3/8-...-KD				G3/8						
MS6-LR-1/2-...-KD				G1/2						

1) Dimensions are in millimeters, unless otherwise noted.

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Pressure Regulators MS6-LR – Metric Series



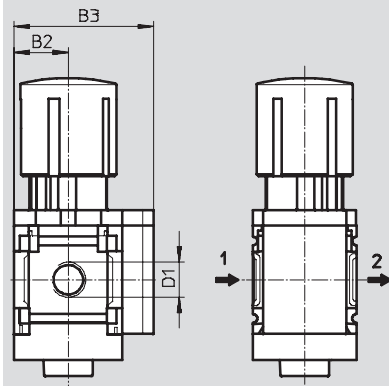
Dimensional Drawings

Dimensions¹⁾ – Pressure Gauge Alternatives

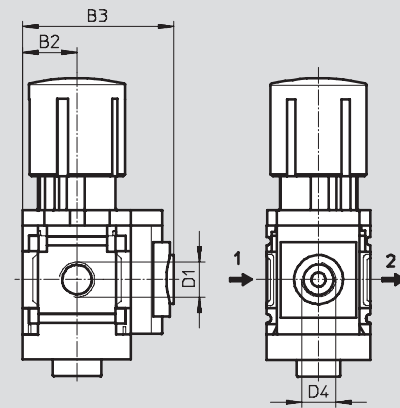
Download CAD Data → www.festo.com/us/cad

Cover plate VS

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



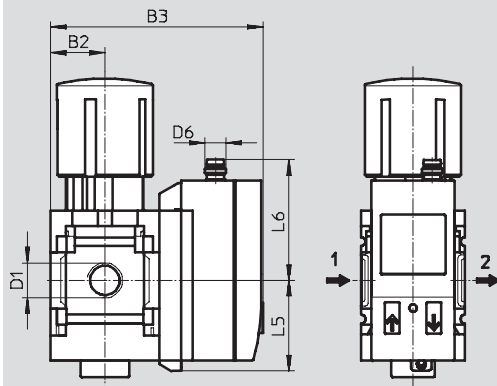
→ Flow direction



→ 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
MS6-LR-1/4-...-VS	31	76	G1/4	-	-	-	-
MS6-LR-3/8-...-VS			G3/8				
MS6-LR-1/2-...-VS			G1/2				
MS6-LR-1/4-...-A4	31	78.5	G1/4	G1/4	-	-	-
MS6-LR-3/8-...-A4			G3/8				
MS6-LR-1/2-...-A4			G1/2				
MS6-LR-1/4-...-AD1/AD2	31	103	G1/4	-	M8x1	35.1	46.7
MS6-LR-3/8-...-AD1/AD2			G3/8				
MS6-LR-1/2-...-AD1/AD2			G1/2				
MS6-LR-1/4-...-AD3/AD4	31	103	G1/4	-	M12x1	35.1	55.8
MS6-LR-3/8-...-AD3/AD4			G3/8				
MS6-LR-1/2-...-AD3/AD4			G1/2				

1) Dimensions are in millimeters, unless otherwise noted.

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Pressure Regulators MS6-LR – Metric Series

Dimensional Drawings



Dimensions¹⁾ – Rotary Knob

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

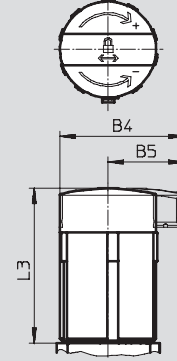
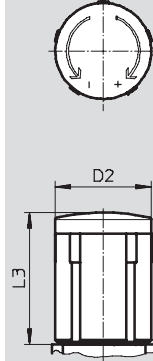
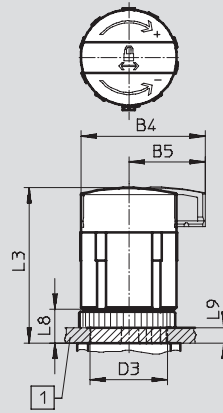
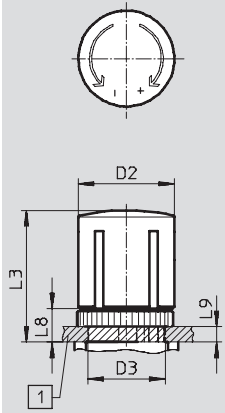
For installation into control panel

Standard

Standard, lockable AS

Long LD

Long, lockable LD-AS



1 Max. control panel thickness

Type	B4	B5	D2	D3 +1	L3	L8	L9
MS6-LR-...	-	-	51	44	86	22	14
MS6-LR-...-AS	67.7	42			95.5		
MS6-LR-...-LD	-	-	51	-	86	-	-
MS6-LR-...-LD-AS	67.7	42			95.5		

1) Dimensions are in millimeters, unless otherwise noted.

Pressure Regulators MS6-LR – Metric Series

FESTO

Ordering Data – Pre-configured Products

Ordering Data			
Pressure gauge, lockable standard type rotary knob			
Connection	Part No.	Type	LT
Pressure regulation range 0.3 ... 4 bar			
G $\frac{1}{4}$	529995	MS6-LR- $\frac{1}{4}$ -D5-AS	1D
G $\frac{3}{8}$	530001	MS6-LR- $\frac{3}{8}$ -D5-AS	1D
G $\frac{1}{2}$	529989	MS6-LR- $\frac{1}{2}$ -D5-AS	1D
Pressure regulation range 0.3 ... 7 bar			
G $\frac{1}{4}$	529997	MS6-LR- $\frac{1}{4}$ -D6-AS	1D
G $\frac{3}{8}$	530003	MS6-LR- $\frac{3}{8}$ -D6-AS	1D
G $\frac{1}{2}$	529991	MS6-LR- $\frac{1}{2}$ -D6-AS	1D
Pressure regulation range 0.5 ... 12 bar			
G $\frac{1}{4}$	529999	MS6-LR- $\frac{1}{4}$ -D7-AS	1D
G $\frac{3}{8}$	530005	MS6-LR- $\frac{3}{8}$ -D7-AS	1D
G $\frac{1}{2}$	529993	MS6-LR- $\frac{1}{2}$ -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 MS6-LR – Metric Series



Ordering Data – Configurable Products

Mandatory Data →

Part No.	Series	Size	Function	Connection size	Pressure regulation range
527663	MS	6	LR	1/4, 3/8, 1/2, AGB, AGC, AGD, AGE	D5 D6 D7 D8
Order example					
527663	MS	6	- LR	- AGB	- D6

Ordering Table		Grid dimension [mm]	62	Conditions	Code	Enter code
M	Part No.	527663				
	Series	Standard			MS	MS
	Size	6			6	6
	Function	Pressure regulator			-LR	-LR
	Connection size	Body thread G1/4			-1/4	
		Body thread G3/8			-3/8	
		Body thread G1/2			-1/2	
		Port plate G1/4 (dimensions → 665)			-AGB	
		Port plate G3/8 (dimensions → 665)			-AGC	
		Port plate G1/2 (dimensions → 665)			-AGD	
		Port plate G3/4 (dimensions → 665)			-AGE	
	Pressure regulation range	0.3 ... 4 bar			-D5	
		0.3 ... 7 bar			-D6	
		0.5 ... 12 bar			-D7	
		0.5 ... 16 bar			-D8	

Transfer order code

527663	MS	6	- LR	-		
--------	----	---	------	---	--	--

Pressure Regulators MS6-LR – Metric 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	PSI 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	psi	2		-PSI	
		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 → 664)	4		-WR		
	Mounting bracket (dimensions → 667)	5		-WP		
	Mounting bracket (dimensions → 667)	5		-WPM		
	Mounting bracket (dimensions → 663)			-WB		
Reverse flow direction	Flow direction from right to left			-Z		

- 1 **AD1 ... AD4** Measuring range max. 10 bar.
Not with pressure regulation range D8
- 2 **PSI, MPA** Not with pressure gauge alternatives VS, A4, AD1, AD2, AD3, AD4
- 3 **KD** Not with alternative pressure gauge scale PSI, MPA.
Not with mounting type WP
- 4 **WR** Not with long rotary knob LD
- 5 **WP, WPM** Only with port plate AGB, AGC, AGD or AGE

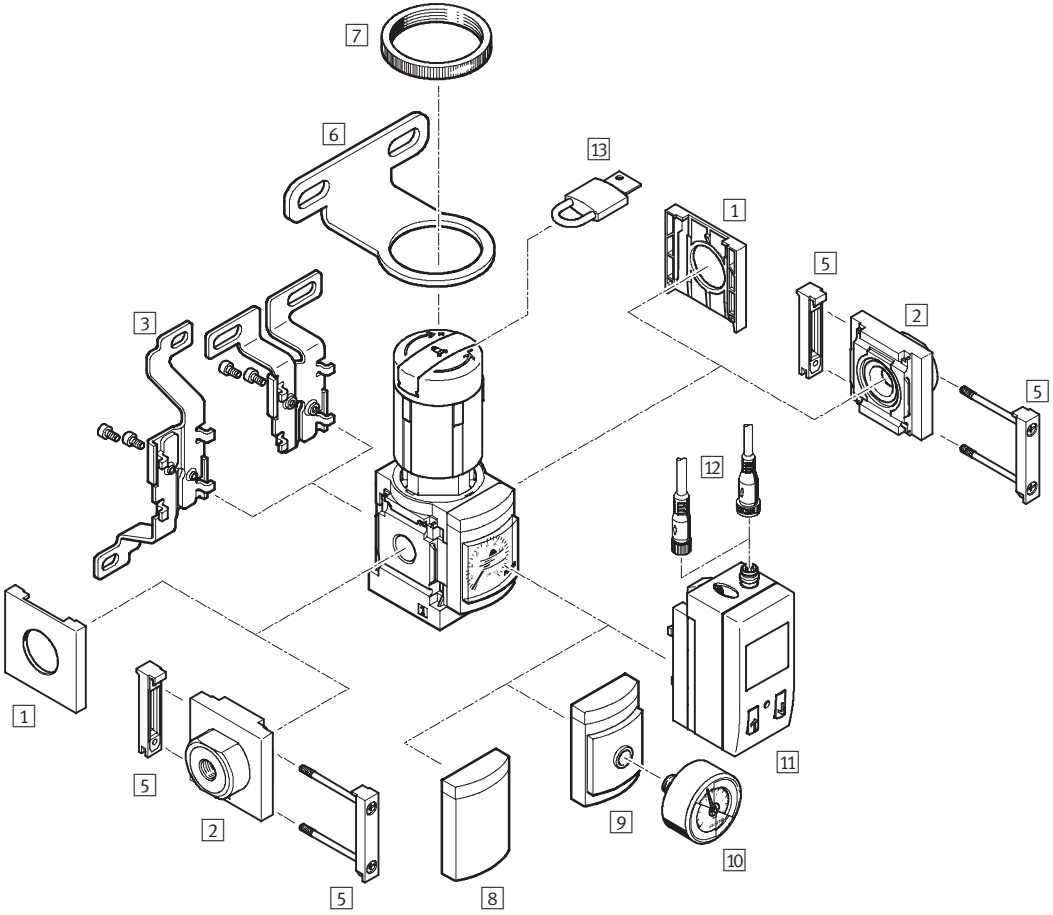
Transfer order code

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

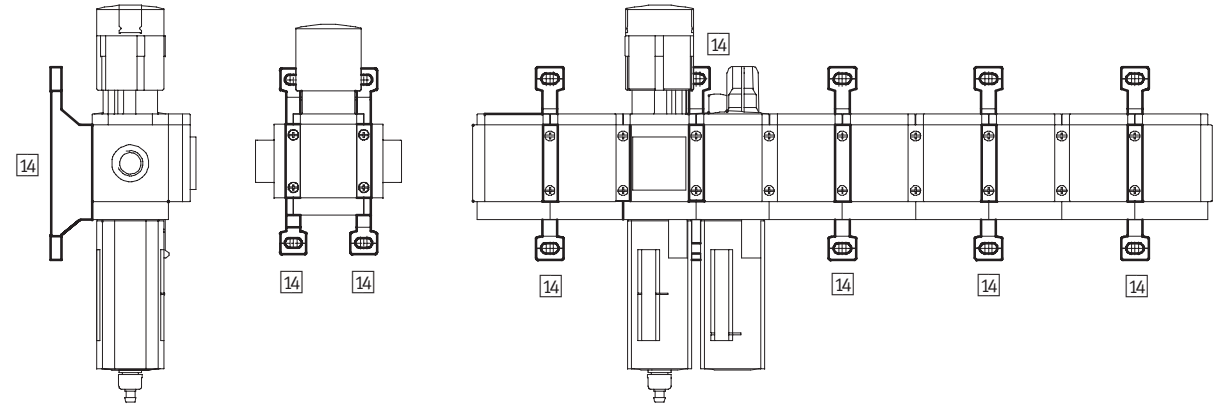
Pressure Regulators MS6-LR – Metric Series

Accessories Overview

Mounting Attachments and Accessories



Single unit and combination unit mounting brackets.



Pressure Regulators MS6-LR – Metric Series

Accessories Overview

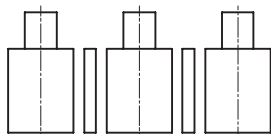
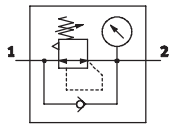


Mounting Attachments and Accessories						
		Single unit		Combination unit → 3.1-1		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS6-END	■	-	■	-	665
2	Port plate MS6-AG...	-	■	-	■	665
3	Mounting bracket MS6-WB	■	■	-	-	663
5	Body connector MS6-MV	-	■	■	■	666
6	Regulator wall bracket MS6-WR	■	■	-	-	664
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Cover plate VS	■	■	■	■	622
9	Adapter for EN pressure gauge 1/4 A4	■	■	■	■	622
10	Pressure gauge MA	■	■	■	■	670
11	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	622
12	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	670
13	Padlock LRVS-D	■	■	■	■	670
14	Mounting bracket MS6-WP/WPB/WPM	-	■	■	■	667

Pressure Regulators MS6-LRB – Metric 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		
Pneumatic connection 1		G½
Pneumatic connection 2		G½
		QS-8 push-in tubing connector
		QS-10 push-in tubing connector
Supply pressure	[bar]	0.8 ... 20
Pressure regulation range	D5 [bar]	0.3 ... 4
	D6 [bar]	0.3 ... 7
	D7 [bar]	0.5 ... 12 (0.5 ... 10 with variant pressure sensor AD...)
	D8 [bar]	0.5 ... 16
Max. hysteresis	[bar]	0.25

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Standard Nominal Flow Rate qnN ¹⁾ [l/min]				
Variant		Standard	Angled outlet block	
			QS-8	QS-10
Pressure regulation range	D5	7,300 ²⁾	600 ²⁾	750 ²⁾
	D6	6,300	880	1,000
	D7	5,500	800	950
	D8	4,500	750	850

1) Measured at p1 = 10 bar and p2 = 6 bar, Δp = 1 bar
 2) Measured at p1 = 10 bar and p2 = 3 bar, Δp = 1 bar

Pressure Regulators MS6-LRB – Metric 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 [°C]	-10 ... +60	0 ... +50
Temperature of medium [°C]	-10 ... +60	0 ... +50
Storage temperature [°C]	-10 ... +60	-10 ... +60
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.

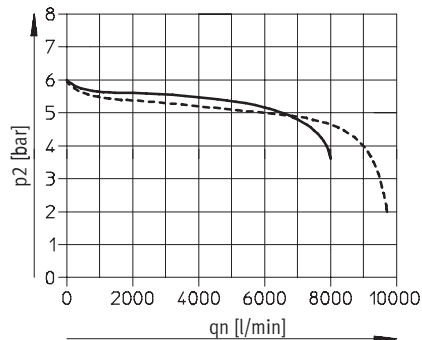
Weights [g]	
Pressure regulator	747

- Wearing parts kits → 671
- For spare parts go to: www.festo.com/en/spare_parts_service

Standard Flow Rate q_n as a Function of Output Pressure p_2

MS6-LRB-1/2

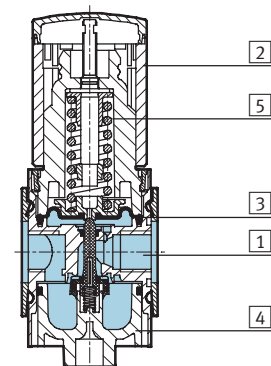
Primary pressure $p_1 = 10$ bar



— D6: 0.3 ... 7 bar
- - - D7: 0.5 ... 12 bar

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

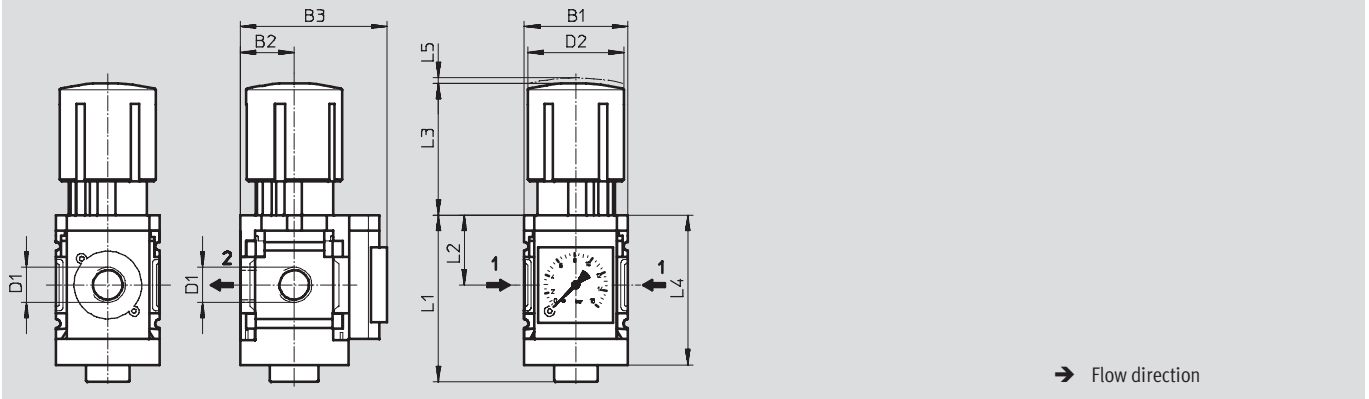
Pressure Regulators MS6-LRB – Metric Series

Dimensional Drawings

Dimensions¹⁾ – Standard

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

With pressure gauge, display unit [bar]



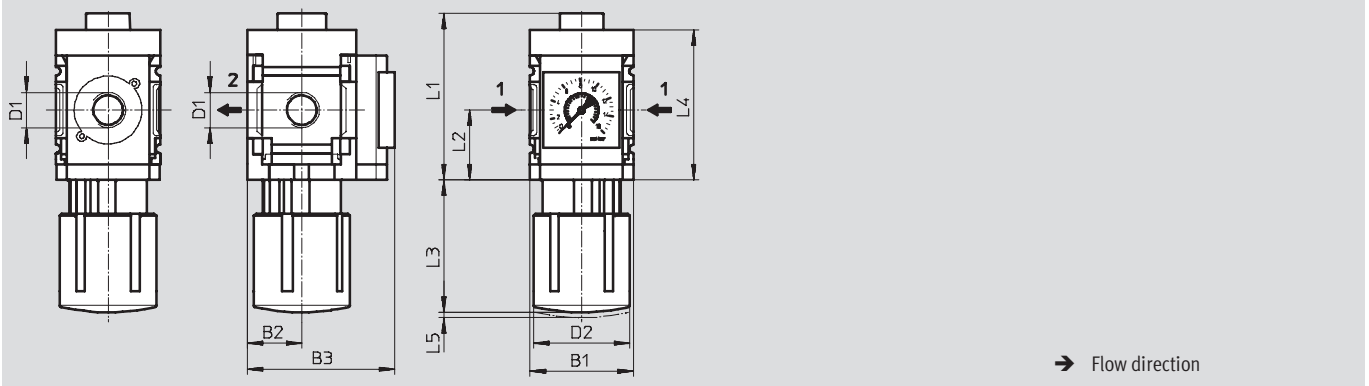
Type	B1	B2	B3	D1	D2	L1	L2	L3	L4	L5
MS6-LRB-1/2	62	31	77	G1/2	51	93	39	86	84	5

1) Dimensions are in millimeters, 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
MS6-LRB-1/2-...-KD	62	31	77	G1/2	51	93	39	86	84	5

1) Dimensions are in millimeters, unless otherwise noted.

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Pressure Regulators MS6-LRB – Metric Series

Dimensional Drawings

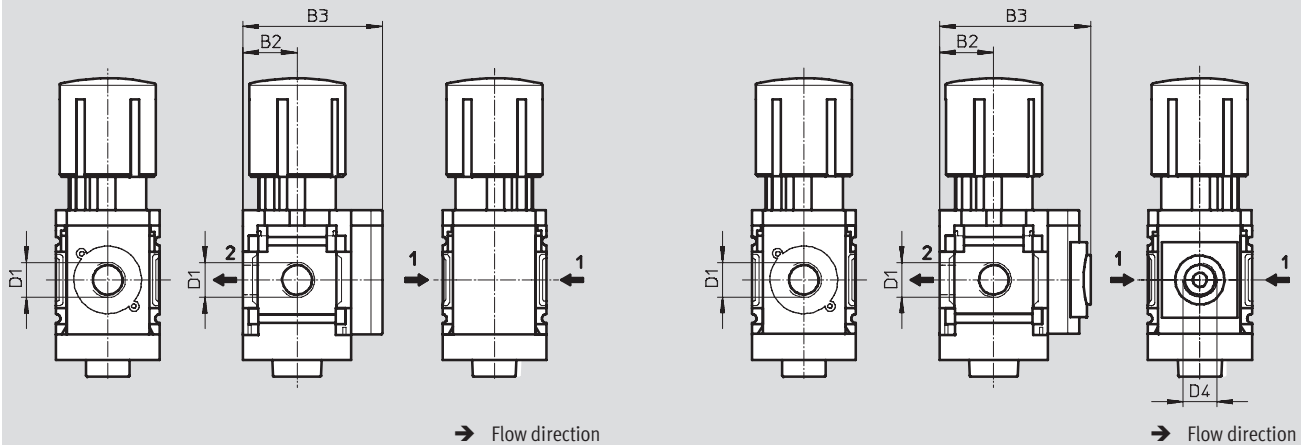


Dimensions¹⁾ – Pressure Gauge Alternatives

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

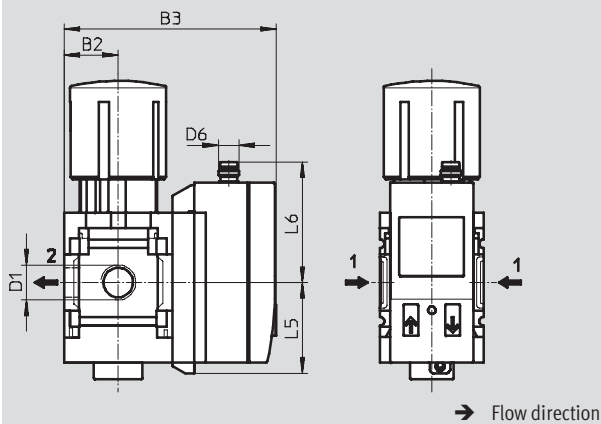
Cover plate VS

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



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

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

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

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

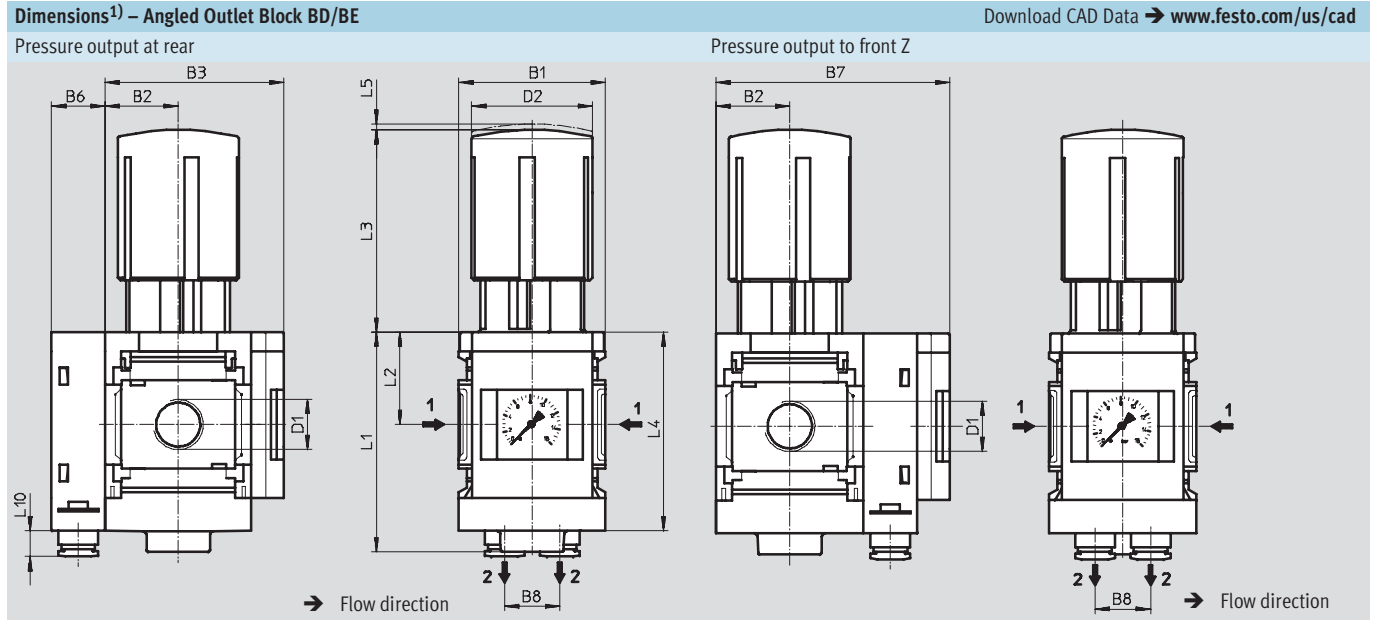
Type	B2	B3	D1	D4	D6	L5	L6
MS6-LRB-1/2-...-VS	31	76	G1/2	-	-	-	-
MS6-LRB-1/2-...-A4	31	78.5	G1/2	G1/4	-	-	-
MS6-LRB-1/2-...-AD1/AD2	31	103	G1/2	-	M8x1	35.1	46.7
MS6-LRB-1/2-...-AD3/AD4	31	103	G1/2	-	M12x1	35.1	55.8

1) Dimensions are in millimeters, unless otherwise noted.

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Pressure Regulators MS6-LRB – Metric Series

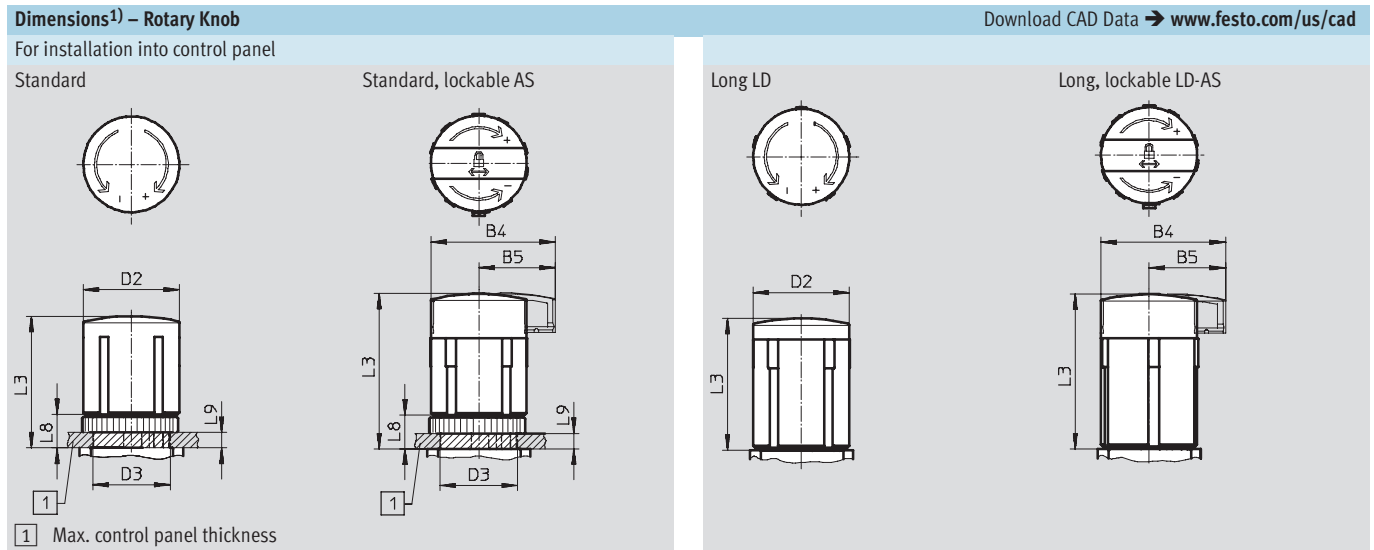
Dimensional Drawings



Type	B1	B2	B3	B6	B7	B8	D1	D2	L1	L2	L3	L4	L5	L10
MS6-LRB-1/2-...-B...	62	31	77	22.6	99.6	23.4	G1/2	51	93	39	86	84	5	11

1) Dimensions are in millimeters, unless otherwise noted.

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.



Type	B4	B5	D2	D3 +1	L3	L8	L9
MS6-LRB-...	-	-	51	44	86	22	14
MS6-LRB-...-AS	67.7	42			95.5		
MS6-LRB-...-LD	-	-	51	-	86	-	-
MS6-LRB-...-LD-AS	67.7	42			95.5		

Pressure Regulators MS6-LRB – Metric 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-8	
	Part No.	Type	LT	Part No.	Type
Pressure regulation range 0.3 ... 4 bar					
G $\frac{1}{2}$	530322	MS6-LRB- $\frac{1}{2}$ -D5-AS	1D	530323	MS6-LRB- $\frac{1}{2}$ -D5-AS-BD
Pressure regulation range 0.3 ... 7 bar					
G $\frac{1}{2}$	530328	MS6-LRB- $\frac{1}{2}$ -D6-AS	1D	530329	MS6-LRB- $\frac{1}{2}$ -D6-AS-BD
Pressure regulation range 0.5 ... 12 bar					
G $\frac{1}{2}$	530334	MS6-LRB- $\frac{1}{2}$ -D7-AS	1D	530335	MS6-LRB- $\frac{1}{2}$ -D7-AS-BD

Ordering Data					
Adapter plate A4 for EN pressure gauge $\frac{1}{4}$, lockable standard-type rotary knob					
Connection	Pressure output to rear without angled outlet block				
	Part No.	Type	LT		
Pressure regulation range 0.3 ... 4 bar					
G $\frac{1}{2}$	530320	MS6-LRB- $\frac{1}{2}$ -D5-A4-AS			Q
Pressure regulation range 0.3 ... 7 bar					
G $\frac{1}{2}$	530326	MS6-LRB- $\frac{1}{2}$ -D6-A4-AS			Q
Pressure regulation range 0.5 ... 12 bar					
G $\frac{1}{2}$	530332	MS6-LRB- $\frac{1}{2}$ -D7-A4-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 MS6-LRB – Metric Series



Ordering Data – Configurable Products

M Mandatory Data						O Options →
Part No.	Series	Size	Function	Connection size	Pressure regulation range	Pressure gauge alternatives
527665	MS	6	LRB	1/2 AGB AGC AGD AGE	D5 D6 D7 D8	VS A4 AD1 AD2 AD3 AD4
Order example						
527665	MS	6	- LRB	- AGC	- D5	- A4

Ordering Table		Grid dimension [mm]	62	Conditions	Code	Enter code
M	Part No.	527665				
	Series	Standard			MS	MS
	Size	6			6	6
	Function	Pressure regulator for manifold assembly			-LRB	-LRB
	Connection size	Body thread G1/2			-1/2	
		Port plate G1/4 (dimensions → 665)			-AGB	
		Port plate G3/8 (dimensions → 665)			-AGC	
		Port plate G1/2 (dimensions → 665)			-AGD	
		Port plate G3/4 (dimensions → 665)			-AGE	
	Pressure regulation range	0.3 ... 4 bar			-D5	
		0.3 ... 7 bar			-D6	
		0.5 ... 12 bar			-D7	
		0.5 ... 16 bar			-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 BD, BE.
- 2 A4, AD1 ... AD4 In combination with alternative flow direction Z only with alternative assembly position KD
- 3 AD1 ... AD4 Measuring range max. 10 bar. Not with pressure regulation range D8

Transfer order code

527665	MS	6	- LRB	-	-	-	-
--------	----	---	-------	---	---	---	---

Pressure Regulators MS6-LRB – Metric 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
PSI MPA	OS	LD	KD	AS	BD BE	WR WP WPM WPB WB	Z
-	- OS	- LD	-	- AS	- BE	- WP	-

Ordering Table							
Grid dimension	[mm]	62	Conditions	Code	Enter code		
Alternative pressure gauge scale	psi		4	-PSI			
	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 ($p_{max} = 10$ bar)	Angled outlet block QS-8			-BD			
	Angled outlet block QS-10			-BE			
Type of mounting	Mounting bracket with knurled nut for regulator head (dimensions → 664)		6 7	-WR			
	Mounting bracket (dimensions → 667)		8 9	-WP			
	Mounting bracket (dimensions → 667)		6 8	-WPM			
	Mounting bracket for large wall gap (dimensions → 667)		8 10	-WPB			
	Mounting bracket (dimensions → 663)		6	-WB			
Reverse flow direction	Pressure output at front (for gauge connection an angled outlet block is required)			-Z			

- 4 **PSI, 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 BD, BE
- 5 **KD** Not with alternative pressure gauge scale PSI, MPA.
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, WB** 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 AGB, AGC, AGD, AGE
- 9 **WP** Only with alternative flow direction Z and/or only with pressure output BD, BE
- 10 **WPB** Not with alternative flow direction Z.
Not with pressure output BD, BE

Transfer order code

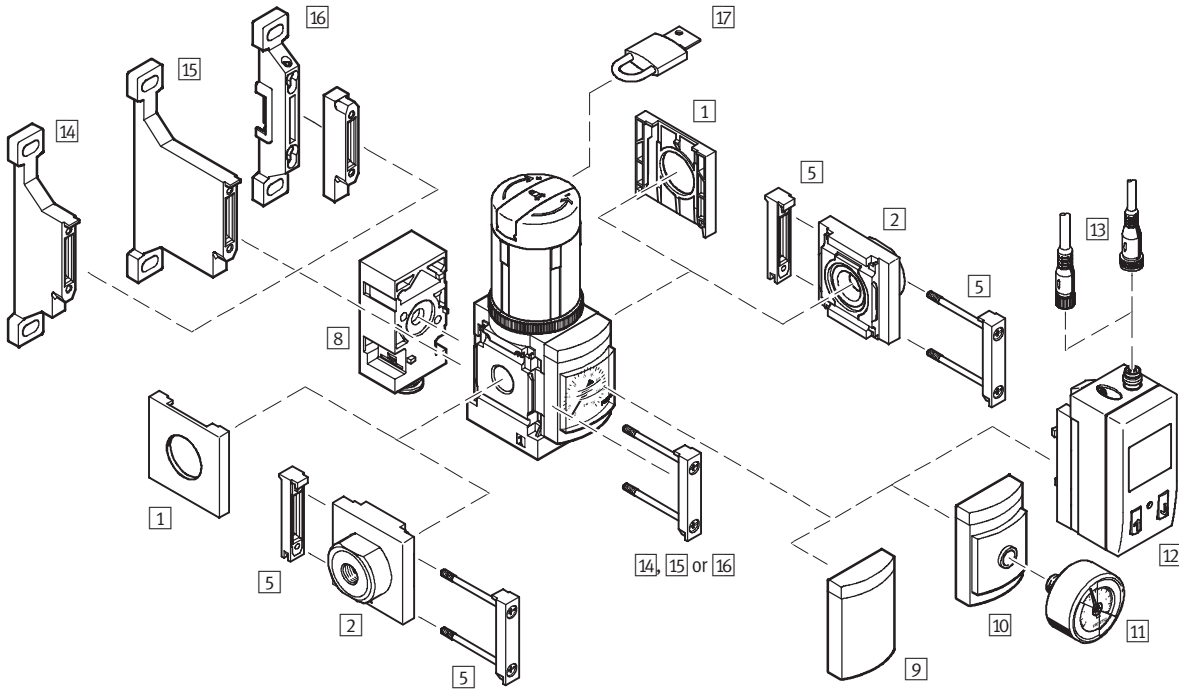
- [] - [] - [] - [] - [] - [] - [] - []

Pressure Regulators MS6-LRB – Metric Series

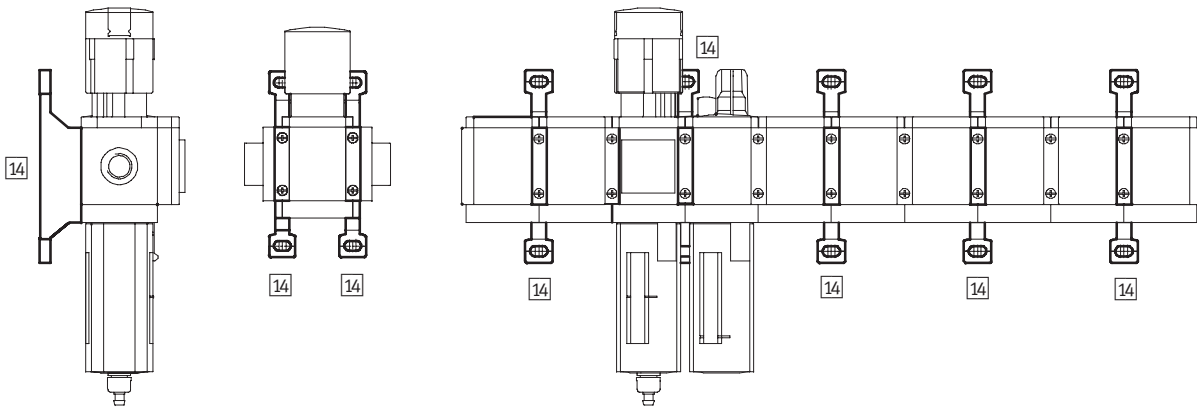
Accessories Overview

Mounting Attachments and Accessories

Pressure output at rear



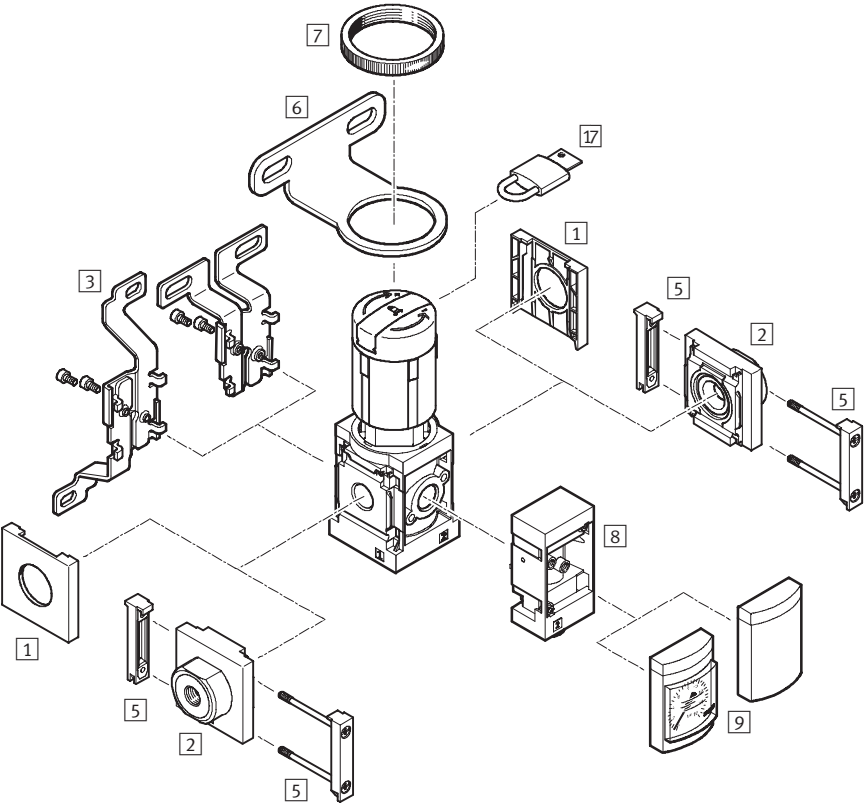
Single unit and combination unit mounting brackets.



Pressure Regulators MS6-LRB – Metric Series

Accessories Overview

Pressure output at front



Pressure Regulators MS6-LRB – Metric Series

Accessories Overview

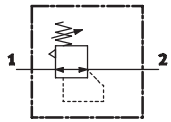


Mounting Attachments and Accessories						
		Single unit		Combination unit → 3.1-1		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS6-END	■	-	■	-	665
2	Port plate MS6-AG...	-	■	-	■	665
3	Mounting bracket MS6-WB	■	■	-	-	663
5	Body connector MS6-MV	-	■	■	■	666
6	Regulator wall bracket MS6-WR	■	■	-	-	664
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Angled outlet block B...	■	■	■	■	633
9	Cover plate VS	■	■	■	■	632
10	Adapter for EN pressure gauge 1/4 A4	■	■	■	■	632
11	Pressure gauge MA	■	■	■	■	632
12	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	632
13	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	670
14	Mounting bracket MS6-WP	-	■	■	■	667
15	Mounting bracket MS6-WPB	-	■	■	■	667
16	Mounting bracket MS6-WPM	-	■	■	■	667
17	Padlock LRVS-D	■	■	■	■	670

Precision Pressure Regulators MS6-LRP – Metric Series

Technical Data

ISO Symbol



- The precision pressure regulator is suitable for sensitive applications with a required pressure hysteresis of 0.02 bar.
- 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				
Pneumatic connection 1, 2		G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$
Pneumatic connection of secondary venting		G $\frac{1}{4}$		
Supply pressure	[bar]	1 ... 14		
Pressure regulation range	D2 [bar]	0.05 ... 0.7		
	D4 [bar]	0.05 ... 2.5		
	D5 [bar]	0.1 ... 4		
	D7 [bar]	0.1 ... 12 (0.1 ... 10 with pressure sensor variant AD...)		
Max. hysteresis	[bar]	0.02		

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Standard Nominal Flow Rate q _N [l/min]				
Pneumatic connection 1, 2		G $\frac{1}{4}$	G $\frac{3}{8}$	G $\frac{1}{2}$
Pressure regulation range	D2	800 ¹⁾	1,100 ¹⁾	1,600 ¹⁾
	D4	1,100 ²⁾	1,400 ²⁾	2,300 ²⁾
	D5	1,400 ³⁾	1,700 ³⁾	3,000 ³⁾
	D7	3,000 ⁴⁾	3,300 ⁴⁾	5,000 ⁴⁾

- 1) Measured at p₁ = 10 bar and p₂ = 0.5 bar, Δp = 0.1 bar
- 2) Measured at p₁ = 10 bar and p₂ = 1.5 bar, Δp = 0.1 bar
- 3) Measured at p₁ = 10 bar and p₂ = 2.5 bar, Δp = 0.1 bar
- 4) Measured at p₁ = 10 bar and p₂ = 6.0 bar, Δp = 0.1 bar

Precision Pressure Regulators MS6-LRP – Metric 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 [°C]	-10 ... +60	0 ... +50
Temperature of medium [°C]	-10 ... +60	0 ... +50
Storage temperature [°C]	-10 ... +60	-10 ... +60
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 [g]	
Precision pressure regulator	1,000

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

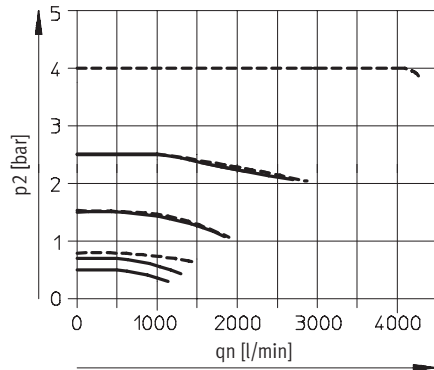
Precision Pressure Regulators MS6-LRP – Metric Series

Technical Data

Standard Flow Rate q_n as a Function of Output Pressure p_2

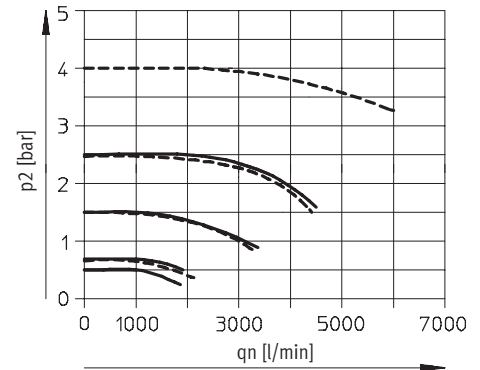
MS6-LRP-1/4

Primary pressure $p_1 = 10$ bar



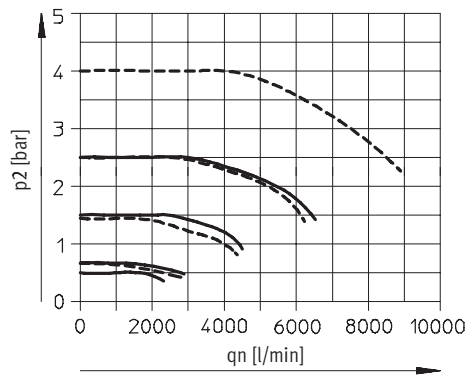
— D4: 0.05 ... 2.5 bar
 - - - D5: 0.1 ... 4 bar

MS6-LRP-3/8



MS6-LRP-1/2

Primary pressure $p_1 = 10$ bar



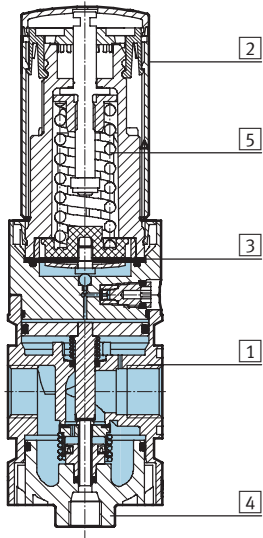
— D4: 0.05 ... 2.5 bar
 - - - D5: 0.1 ... 4 bar

Precision Pressure Regulators MS6-LRP – Metric 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 MS6-LRP – Metric Series

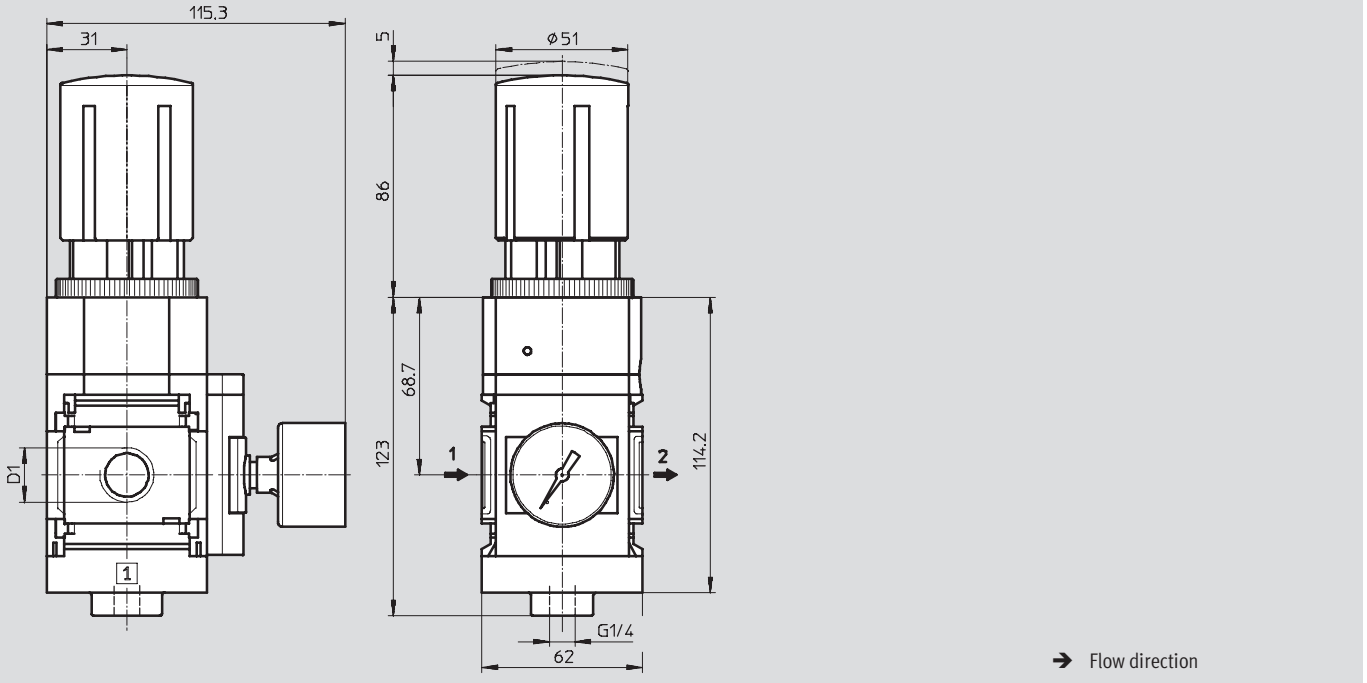
Dimensional Drawings

Dimensions¹⁾

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

Adapter plate A8M for EN pressure gauge 1/8, with precision pressure gauge

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



→ Flow direction

Type	D1
MS6-LRP-1/4-...-A8M	G1/4
MS6-LRP-3/8-...-A8M	G3/8
MS6-LRP-1/2-...-A8M	G1/2

1) Dimensions are in millimeters, unless otherwise noted.

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

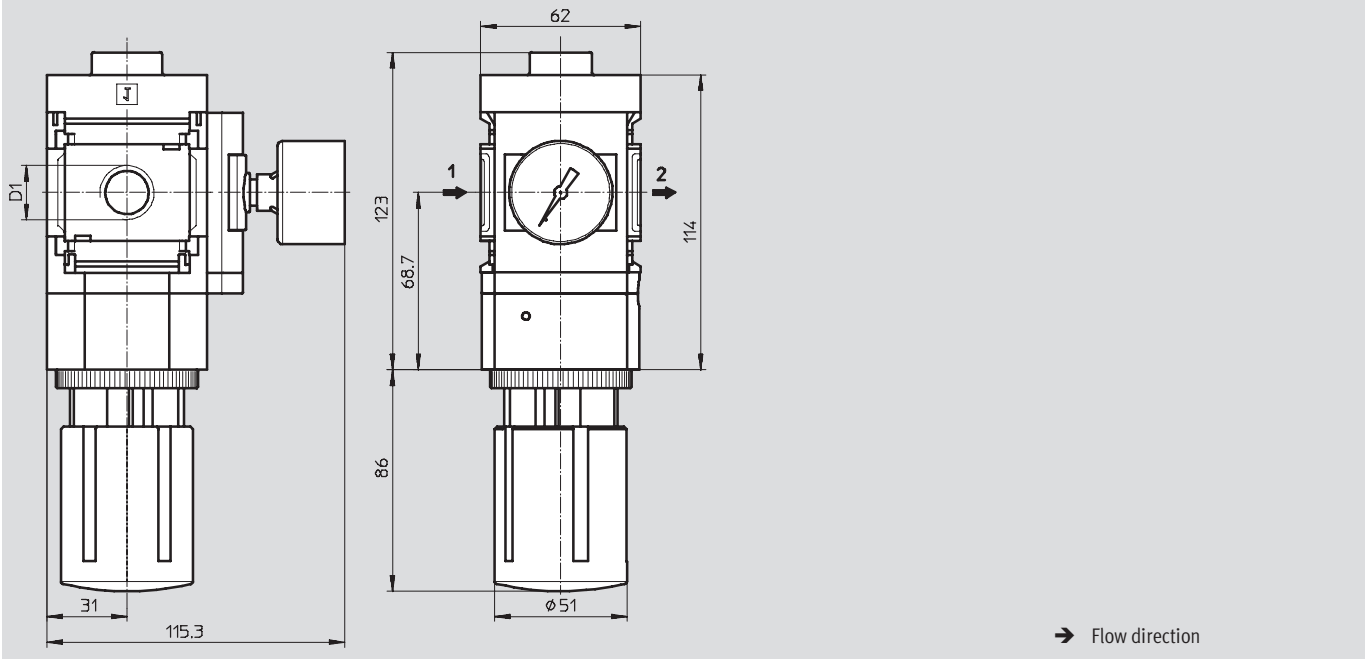
Precision Pressure Regulators MS6-LRP – Metric Series

Dimensional Drawings

Dimensions¹⁾ – Alternative Assembly Position

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

Rotary knob at bottom KD



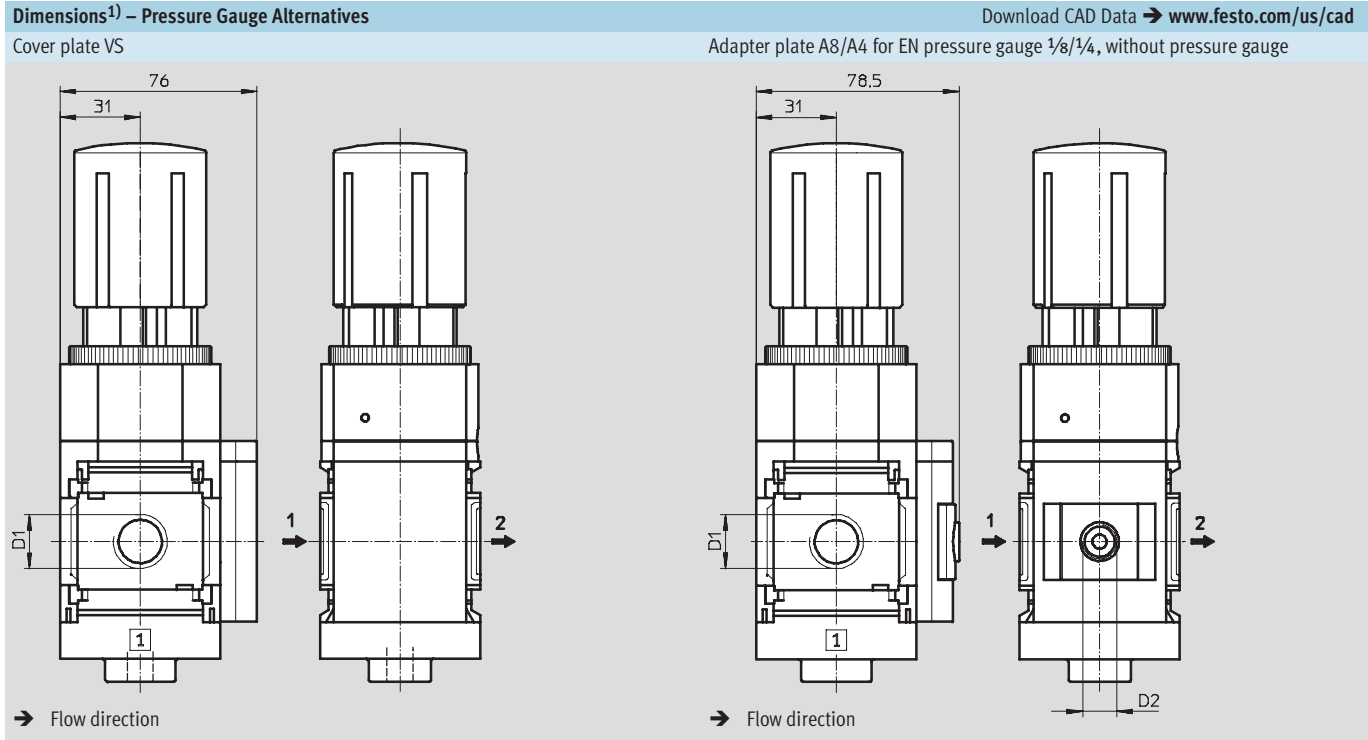
Type	D1
MS6-LRP-1/4-...-KD	G1/4
MS6-LRP-3/8-...-KD	G3/8
MS6-LRP-1/2-...-KD	G1/2

1) Dimensions are in millimeters, unless otherwise noted.

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Precision Pressure Regulators MS6-LRP – Metric Series

Dimensional Drawings



Type	D1	D2
MS6-LRP-1/4-...-VS	G1/4	-
MS6-LRP-3/8-...-VS	G3/8	
MS6-LRP-1/2-...-VS	G1/2	
MS6-LRP-1/4-...-A8	G1/4	G1/8
MS6-LRP-3/8-...-A8	G3/8	
MS6-LRP-1/2-...-A8	G1/2	
MS6-LRP-1/4-...-A4	G1/4	G1/4
MS6-LRP-3/8-...-A4	G3/8	
MS6-LRP-1/2-...-A4	G1/2	

1) Dimensions are in millimeters, unless otherwise noted.

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Precision Pressure Regulators MS6-LRP – Metric Series



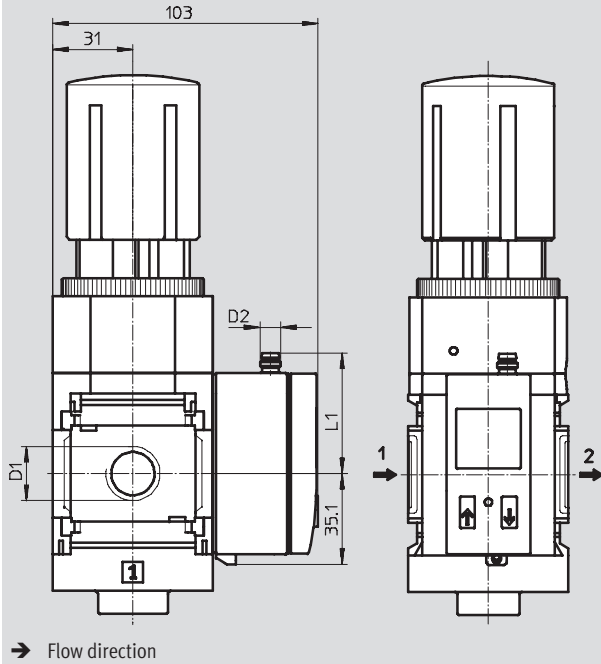
Dimensional Drawings

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.

Type	D1	D2	L1
MS6-LRP-1/4-...-AD1/AD2	G1/4	M8x1	46.7
MS6-LRP-3/8-...-AD1/AD2	G3/8		
MS6-LRP-1/2-...-AD1/AD2	G1/2		
MS6-LRP-1/4-...-AD3/AD4	G1/4	M12x1	55.8
MS6-LRP-3/8-...-AD3/AD4	G3/8		
MS6-LRP-1/2-...-AD3/AD4	G1/2		

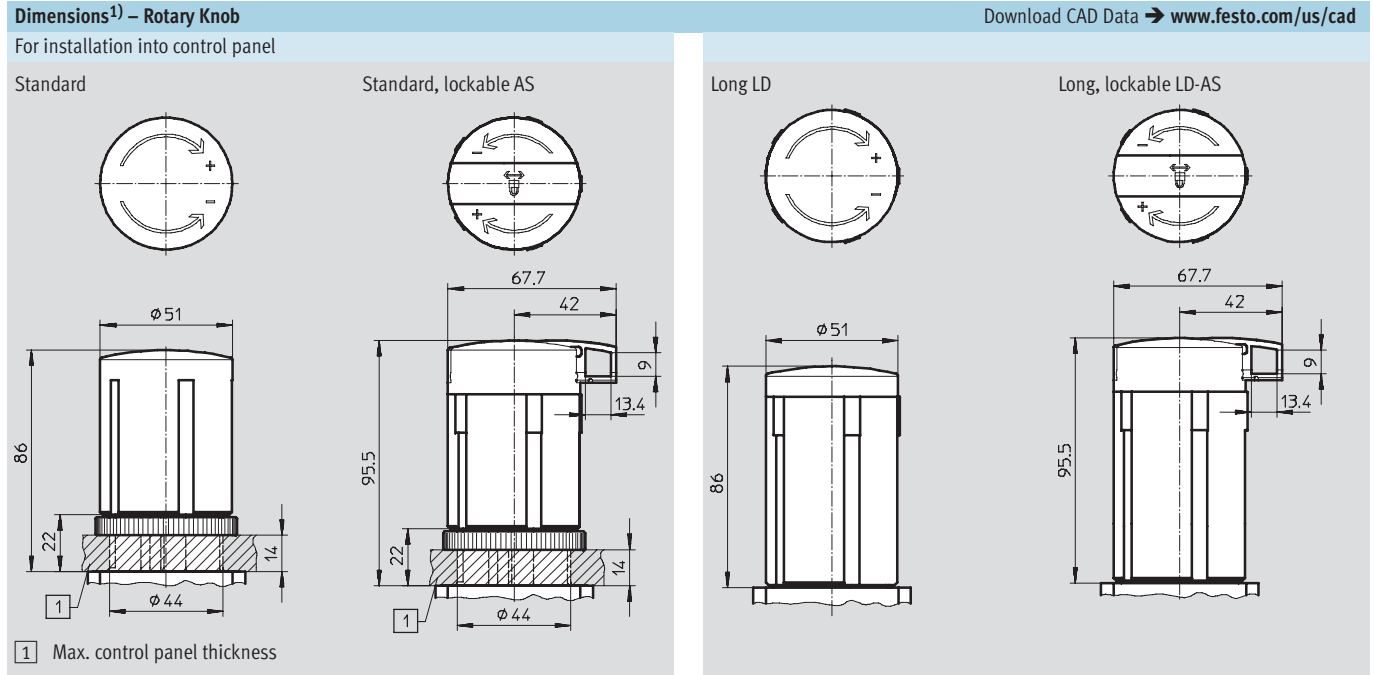
1) Dimensions are in millimeters, unless otherwise noted.

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Precision Pressure Regulators MS6-LRP – Metric Series



Dimensional Drawings, Ordering Data – Pre-configured Products



1) Dimensions are in millimeters, unless otherwise noted.

Ordering Data			
Adapter plate for EN pressure gauge 1/8, standard rotary knob			
Connection	Part No.	Type	LT
Pressure regulation range 0.05 ... 0.7 bar			
G1/4	538004	MS6-LRP-1/4-D2-A8 ²⁾	Q
G3/8	538012	MS6-LRP-3/8-D2-A8 ²⁾	Q
G1/2	538020	MS6-LRP-1/2-D2-A8 ²⁾	Q
Pressure regulation range 0.05 ... 2.5 bar			
G1/4	538006	MS6-LRP-1/4-D4-A8 ²⁾	Q
G3/8	538014	MS6-LRP-3/8-D4-A8 ²⁾	Q
G1/2	538022	MS6-LRP-1/2-D4-A8 ²⁾	Q
Pressure regulation range 0.1 ... 4 bar			
G1/4	538008	MS6-LRP-1/4-D5-A8 ²⁾	Q
G3/8	538016	MS6-LRP-3/8-D5-A8 ²⁾	Q
G1/2	538024	MS6-LRP-1/2-D5-A8 ²⁾	Q
Pressure regulation range 0.1 ... 12 bar			
G1/4	538010	MS6-LRP-1/4-D7-A8 ²⁾	Q
G3/8	538018	MS6-LRP-3/8-D7-A8 ²⁾	Q
G1/2	538026	MS6-LRP-1/2-D7-A8 ²⁾	Q

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

2) Free of copper and PTFE

Precision Pressure Regulators MS6-LRP – Metric Series



Ordering Data – Configurable Products

Mandatory Data →

Part No.	Series	Size	Function	Connection size	Pressure regulation range	Pressure gauge alternatives
538028	MS	6	LRP	1/4, 3/8, 1/2, AGB, AGC, AGD, AGE	D2 D4 D5 D7	VS A8 A8M A4 AD1 AD2 AD3 AD4
Order example						
538028	MS	6	- LRP	- 1/2	- D4	- A4

Ordering Table

Grid dimension	[mm]	62	Conditions	Code	Enter code
M Part No.	538028				
Series	Standard			MS	MS
Size	6			6	6
Function	Precision pressure regulator			-LRP	-LRP
Connection size	Body thread G1/4			-1/4	
	Body thread G3/8			-3/8	
	Body thread G1/2			-1/2	
	Port plate G1/4 (dimensions → 665)			-AGB	
	Port plate G3/8 (dimensions → 665)			-AGC	
	Port plate G1/2 (dimensions → 665)			-AGD	
	Port plate G3/4 (dimensions → 665)			-AGE	
Pressure regulation range	0.05 ... 0.7 bar			-D2	
	0.05 ... 2.5 bar			-D4	
	0.1 ... 4 bar			-D5	
	0.1 ... 12 bar			-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. 10 bar.
Not with pressure regulation range D2, D4.

Transfer order code

538028	MS	6	- LRP			
---------------	-----------	----------	--------------	--	--	--

Precision Pressure Regulators MS6-LRP – Metric 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 → 664)		3	-WR	
		Mounting bracket (dimensions → 667)		4	-WP	
		Mounting bracket (dimensions → 667)		4	-WPM	
		Mounting bracket (dimensions → 663)			-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 AGB, AGC, AGD or AGE

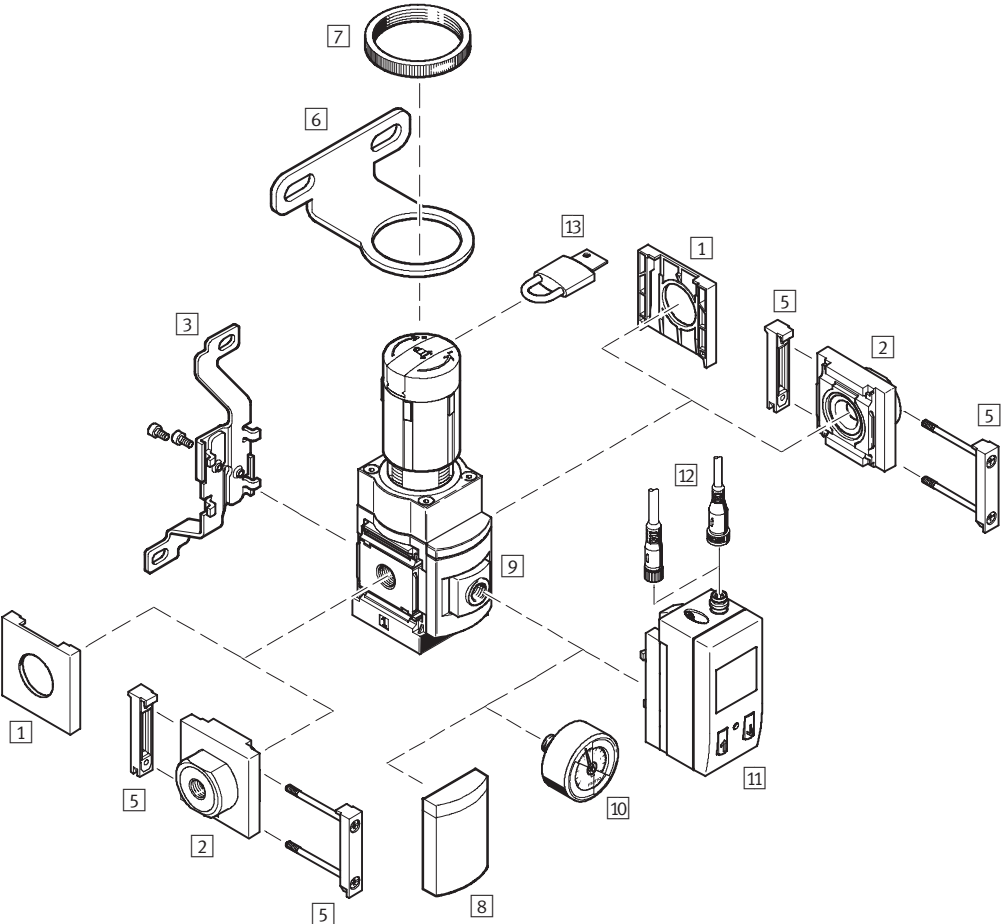
Transfer order code

- - - - -

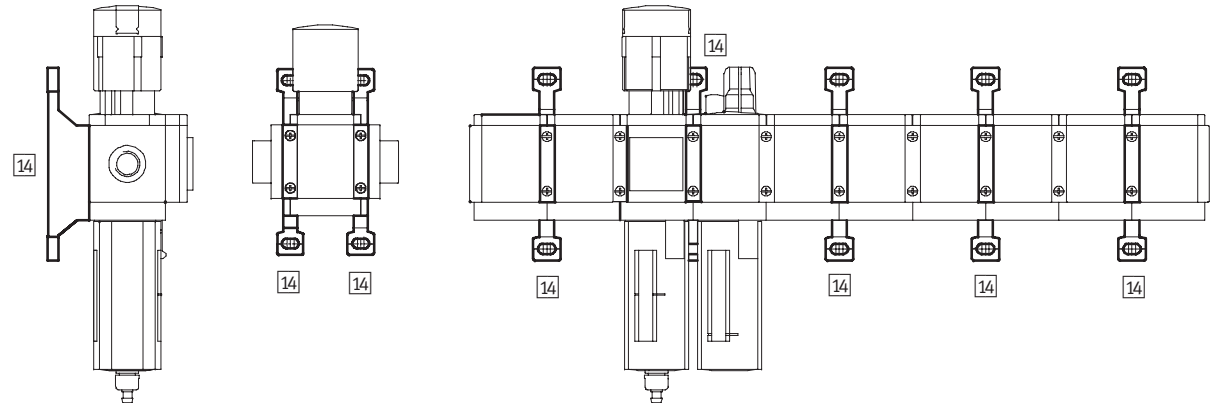
Precision Pressure Regulators MS6-LRP – Metric Series

Accessories Overview

Mounting Attachments and Accessories



Single unit and combination unit mounting brackets.



Precision Pressure Regulators MS6-LRP – Metric Series

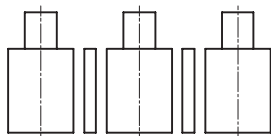
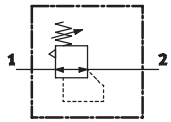
Accessories Overview

Mounting Attachments and Accessories						
		Single unit		Combination unit → 3.1-1		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS6-END	■	-	■	-	665
2	Port plate MS6-AG...	-	■	-	■	665
3	Mounting bracket MS6-WB	■	■	-	-	663
5	Body connector MS6-MV	-	■	■	■	666
6	Regulator wall bracket MS6-WR	■	■	-	-	664
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Cover plate VS	■	■	■	■	646
9	Adapter for EN pressure gauge 1/8/1/4 A8/A4	■	■	■	■	646
10	Precision pressure gauge A8M/MAP	■	■	■	■	646
11	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	646
12	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	670
13	Padlock LRVS-D	■	■	■	■	670
14	Mounting bracket MS6-WP/WPB/WPM	-	■	■	■	667

Precision Pressure Regulators MS6-LRPB – Metric 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 0.02 bar.
- 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		G1/2
Pneumatic connection 2		G1/2
		QS-8 push-in tubing connector
		QS-10 push-in tubing connector
Pneumatic connection of secondary venting		G1/4
Supply pressure	[bar]	1 ... 14
Pressure regulation range	D2 [bar]	0.05 ... 0.7
	D4 [bar]	0.05 ... 2.5
	D5 [bar]	0.1 ... 4
	D7 [bar]	0.1 ... 12 (0.1 ... 10 with pressure sensor variant AD...)
Max. hysteresis	[bar]	0.02

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Standard Nominal Flow Rate qnN [l/min]		
Pressure regulation range	D2	1,600 ¹⁾
	D4	2,300 ²⁾
	D5	3,000 ³⁾
	D7	5,000 ⁴⁾

- 1) Measured at p1 = 10 bar and p2 = 0.5 bar, Δp = 0.1 bar
- 2) Measured at p1 = 10 bar and p2 = 1.5 bar, Δp = 0.1 bar
- 3) Measured at p1 = 10 bar and p2 = 2.5 bar, Δp = 0.1 bar
- 4) Measured at p1 = 10 bar and p2 = 6.0 bar, Δp = 0.1 bar

Precision Pressure Regulators MS6-LRPB – Metric 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 [°C]	-10 ... +60	0 ... +50
Temperature of medium [°C]	-10 ... +60	0 ... +50
Storage temperature [°C]	-10 ... +60	-10 ... +60
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.

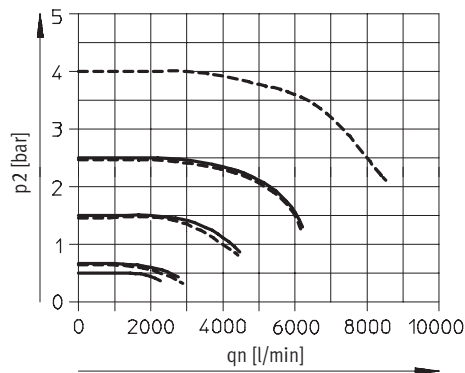
Weight [g]	
Precision pressure regulator	1,000

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

Standard Flow Rate qn as a Function of Output Pressure p2

MS6-LRPB-1/2

Primary pressure p1 = 10 bar



— D4: 0.05 ... 2.5 bar

- - - D5: 0.1 ... 4 bar

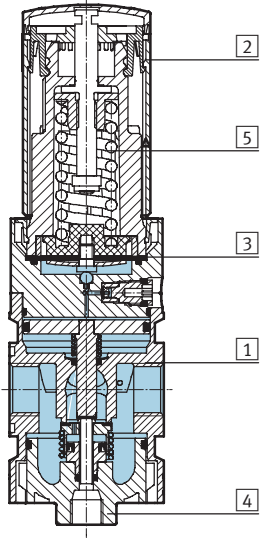
Precision Pressure Regulators MS6-LRPB – Metric Series

Technical Data, Dimensional Drawings



Materials

Sectional view



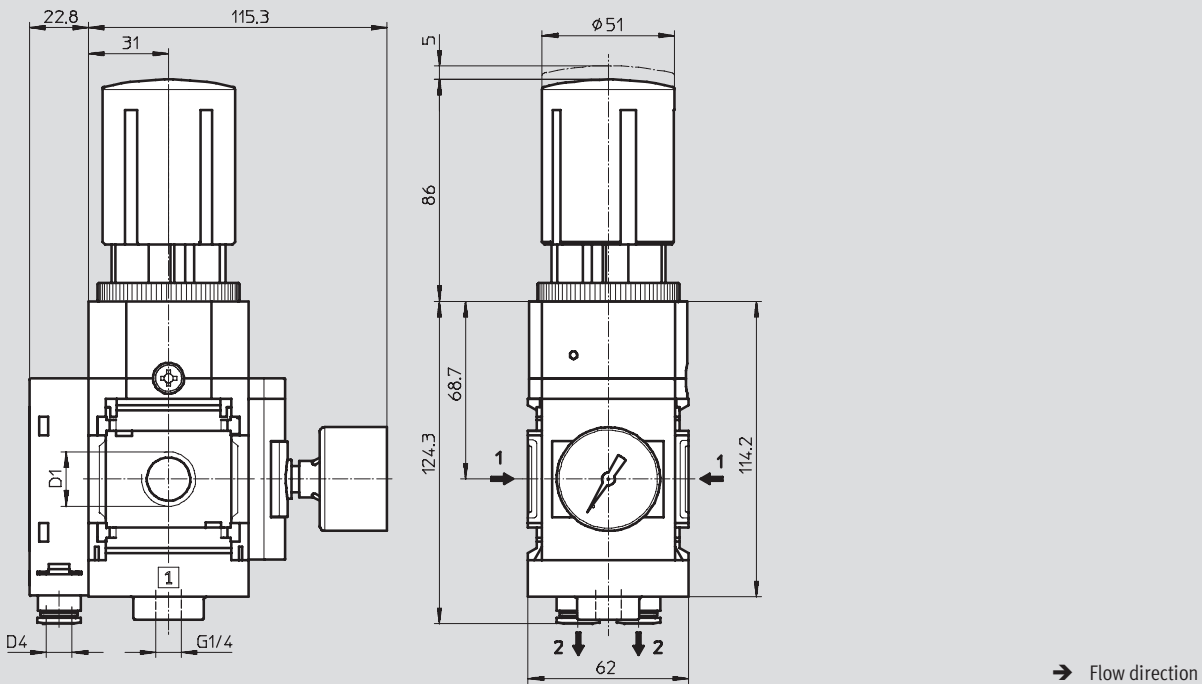
Precision pressure regulator (manifold assembly)		
1	Housing	Die-cast aluminum
2	Regulating knob	Polyamide/polyacetate
3	Diaphragm	Nitrile rubber
4	Cap, bottom	Polyester, fiberglass reinforced
5	Springs	Steel
-	Seals	Nitrile rubber
Note on materials		Free of copper and PTFE (not with variants A8M or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

Dimensions

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

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

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



Type	D1	D4
MS6-LRPB-1/2-...-A8M-BD	G1/2	QS-8
MS6-LRPB-1/2-...-A8M-BE		QS-10

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

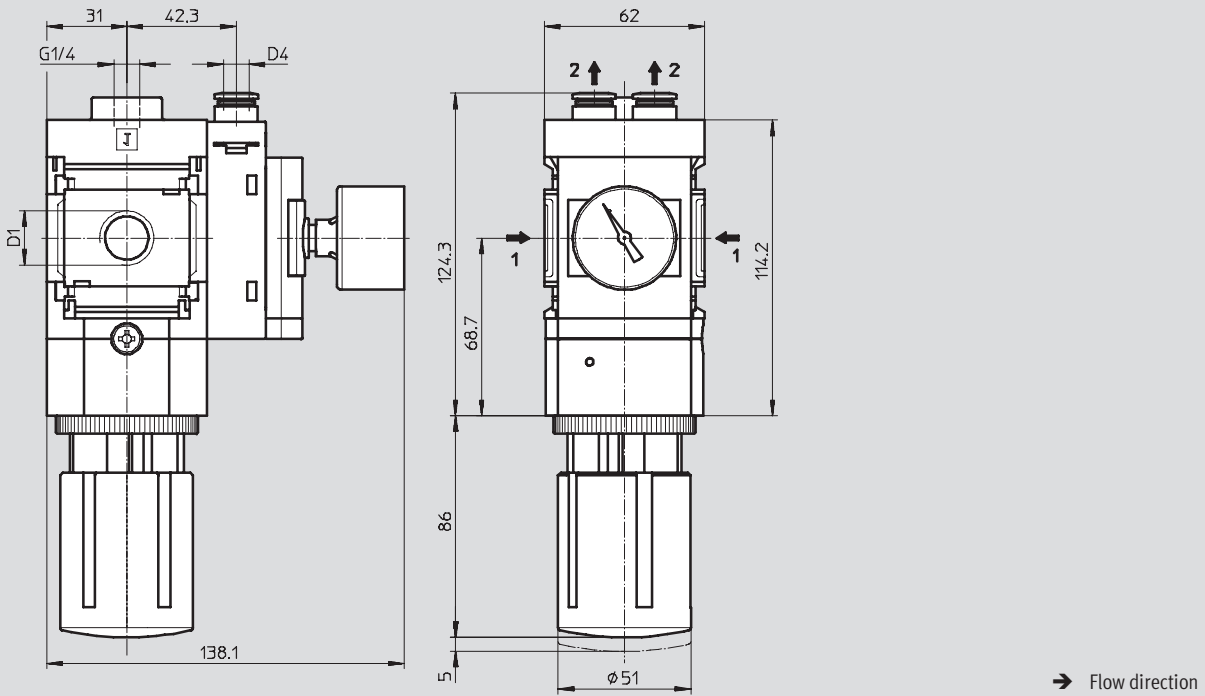
Precision Pressure Regulators MS6-LRPB – Metric Series

Dimensional Drawings

Dimensions¹⁾ – Alternative Assembly Position

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

Rotary knob at bottom KD, angled outlet block BD/BE



Type	D1	D4
MS6-LRPB-1/2-...-KD-BD	G1/2	QS-8
MS6-LRPB-1/2-...-KD-BE		QS-10

1) Dimensions are in millimeters, unless otherwise noted.

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Precision Pressure Regulators MS6-LRPB – Metric Series



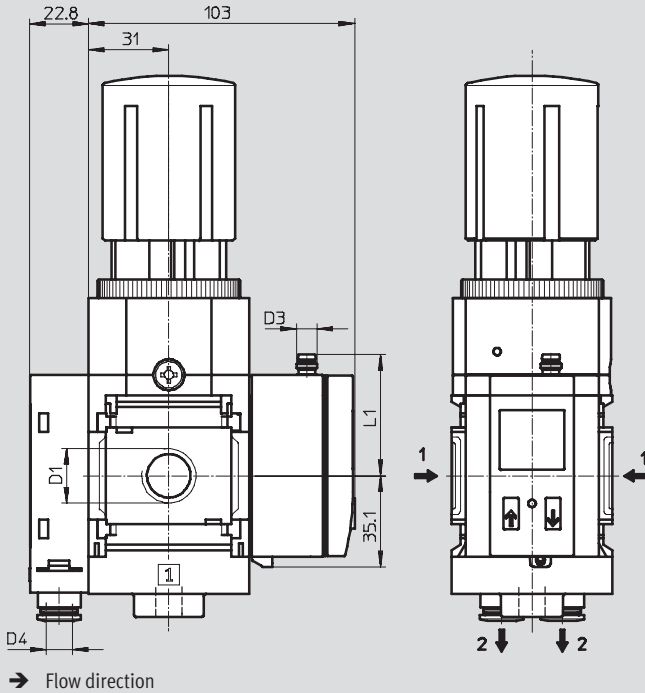
Dimensional Drawings

Dimensions¹⁾ – Pressure Gauge Alternatives

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

Pressure sensor with display AD1 ... AD4, angled outlet block BD/BE

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
MS6-LRPB-1/2-...-AD1/AD2-BD	G1/2	M8x1	QS-8	46.7
MS6-LRPB-1/2-...-AD1/AD2-BE			QS-10	
MS6-LRPB-1/2-...-AD3/AD4-BD	G1/2	M12x1	QS-8	55.8
MS6-LRPB-1/2-...-AD3/AD4-BE			QS-10	

1) Dimensions are in millimeters, unless otherwise noted.

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Precision Pressure Regulators MS6-LRPB – Metric Series

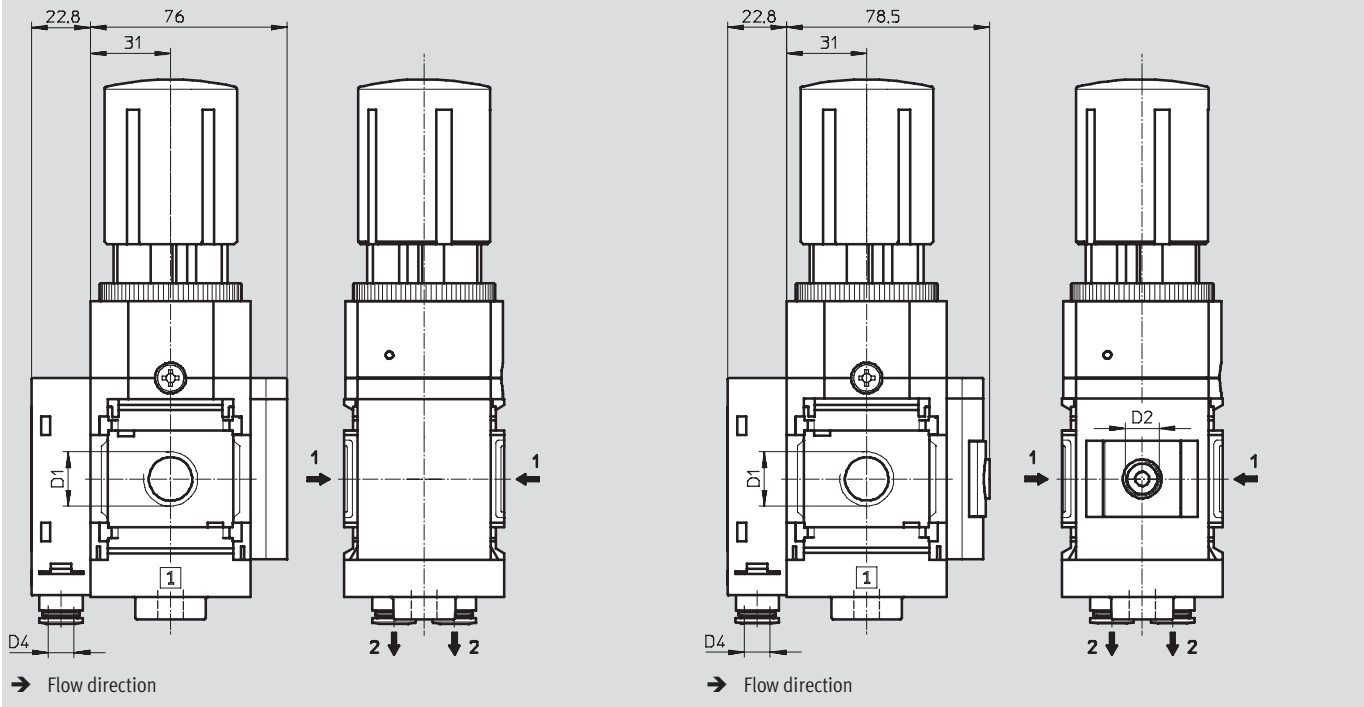
Dimensional Drawings

Dimensions¹⁾ – Pressure Gauge Alternatives

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

Cover plate VS, angled outlet block BD/BE

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



Type	D1	D2	D4
MS6-LRPB-1/2-...-VS-BD	G1/2	-	QS-8
MS6-LRPB-1/2-...-VS-BE			QS-10
MS6-LRPB-1/2-...-A8-BD	G1/2	G1/8	QS-8
MS6-LRPB-1/2-...-A8-BE			QS-10
MS6-LRPB-1/2-...-A4-BD	G1/2	G1/4	QS-8
MS6-LRPB-1/2-...-A4-BE			QS-10

1) Dimensions are in millimeters, unless otherwise noted.

Note: This product conforms with the ISO 1179-1 standard and the ISO 228-1 standard.

Precision Pressure Regulators MS6-LRPB – Metric Series



Dimensional Drawings

Dimensions¹⁾ – Rotary Knob

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

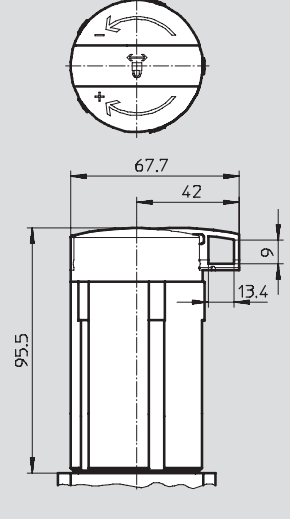
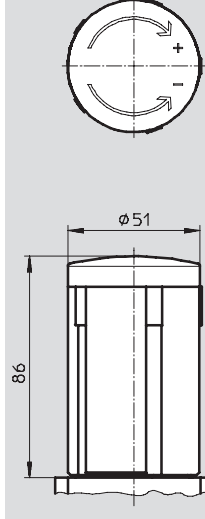
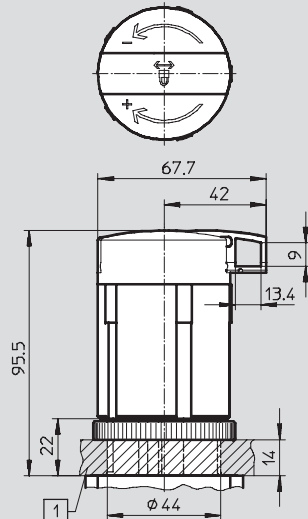
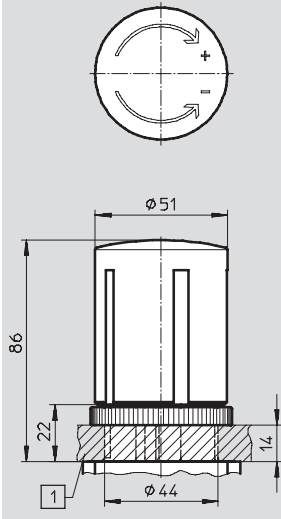
For installation into control panel

Standard

Standard, lockable AS

Long LD

Long, lockable LD-AS



1 Max. control panel thickness

1) Dimensions are in millimeters, unless otherwise noted.

Precision Pressure Regulators MS6-LRPB – Metric 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 0.05 ... 0.7 bar			
G1/2	534911	MS6-LRPB-1/2-D2-A8 ¹⁾	Q
Pressure regulation range 0.05 ... 2.5 bar			
G1/2	534914	MS6-LRPB-1/2-D4-A8 ¹⁾	Q
Pressure regulation range 0.1 ... 4 bar			
G1/2	534917	MS6-LRPB-1/2-D5-A8 ¹⁾	Q
Pressure regulation range 0.1 ... 12 bar			
G1/2	534920	MS6-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-8		Pressure output to rear with angled outlet block QS-10
	Part No.	Type	LT
Pressure regulation range 0.05 ... 0.7 bar			
G1/2	534865	MS6-LRPB-1/2-D2-A8-BD ¹⁾	Q
Pressure regulation range 0.05 ... 2.5 bar			
G1/2	534868	MS6-LRPB-1/2-D4-A8-BD ¹⁾	Q
Pressure regulation range 0.1 ... 4 bar			
G1/2	534871	MS6-LRPB-1/2-D5-A8-BD ¹⁾	Q
Pressure regulation range 0.1 ... 12 bar			
G1/2	534874	MS6-LRPB-1/2-D7-A8-BD ¹⁾	Q

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

1) Free of copper and PTFE

Precision Pressure Regulators MS6-LRPB – Metric Series



Ordering Data – Configurable Products

Mandatory Data →

Part No.	Series	Size	Function	Connection size	Pressure regulation range	Pressure gauge alternatives
535007	MS	6	LRPB	1/2, AGB, AGC, AGD, AGE	D2 D4 D5 D7	VS A8 A8M A4 AD1 AD2 AD3 AD4
Order example						
535007	MS	6	- LRPB	- AGD	- D5	- VS

Ordering Table

Grid dimension	[mm]	62	Conditions	Code	Enter code
M Part No.	535007				
Series	Standard			MS	MS
Size	6			6	6
Function	Precision pressure regulator for manifold assembly			-LRPB	-LRPB
Connection size	Body thread G1/2			-1/2	
	Port plate G1/4 (dimensions → 665)			-AGB	
	Port plate G3/8 (dimensions → 665)			-AGC	
	Port plate G1/2 (dimensions → 665)			-AGD	
	Port plate G3/4 (dimensions → 665)			-AGE	
Pressure regulation range	0.05 ... 0.7 bar			-D2	
	0.05 ... 2.5 bar			-D4	
	0.1 ... 4 bar			-D5	
	0.1 ... 12 bar			-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 BD, BE. **2 A8, A8M, A4, AD1 ... AD4** In combination with alternative flow direction Z only with alternative assembly position KD. Must be selected with alternative assembly position KD without alternative flow direction Z or without alternative pressure output BD, BE. **3 AD1 ... AD4** Measuring range max. 10 bar. Not with pressure regulation range D2, D4.

Transfer order code

535007	MS	6	- LRPB			
---------------	-----------	----------	---------------	--	--	--

Precision Pressure Regulators MS6-LRPB – Metric 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	BD BE	WR WP WPM WPB WB	Z
- LD	-	- AS	- BE	- 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-8			-BD	
		Angled outlet block QS-10			-BE	
	Type of mounting	Mounting bracket with knurled nut for regulator head (dimensions → 664)		5 6	-WR	
		Mounting bracket (dimensions → 667)		7 8	-WP	
		Mounting bracket (dimensions → 667)		5 7	-WPM	
		Mounting bracket for large wall gap (dimensions → 667)		7 9	-WPB	
		Mounting bracket (dimensions → 663)		5	-WB	
	Reverse flow direction	Pressure output at front (without pressure output, no pressure gauge)			-Z	

- | | |
|--|---|
| <p>4 KD In combination with pressure gauge alternatives A8, A4, AD1, AD2, AD3, AD4 only with alternative flow direction Z</p> <p>5 WR, WPM, WB Either only with alternative flow direction Z or only with alternative assembly position KD</p> <p>6 WR Only with alternative flow direction Z.
Not with long rotary knob LD</p> | <p>7 WP, WPM, WPB Only with port plate AGB, AGC, AGD or AGE</p> <p>8 WP Not with alternative assembly position KD
Either only with alternative flow direction Z or only with alternative pressure output BD, BE</p> <p>9 WPB Not with alternative assembly position KD
Not with alternative pressure output BD, BE
Not with alternative flow direction Z</p> |
|--|---|

Transfer order code

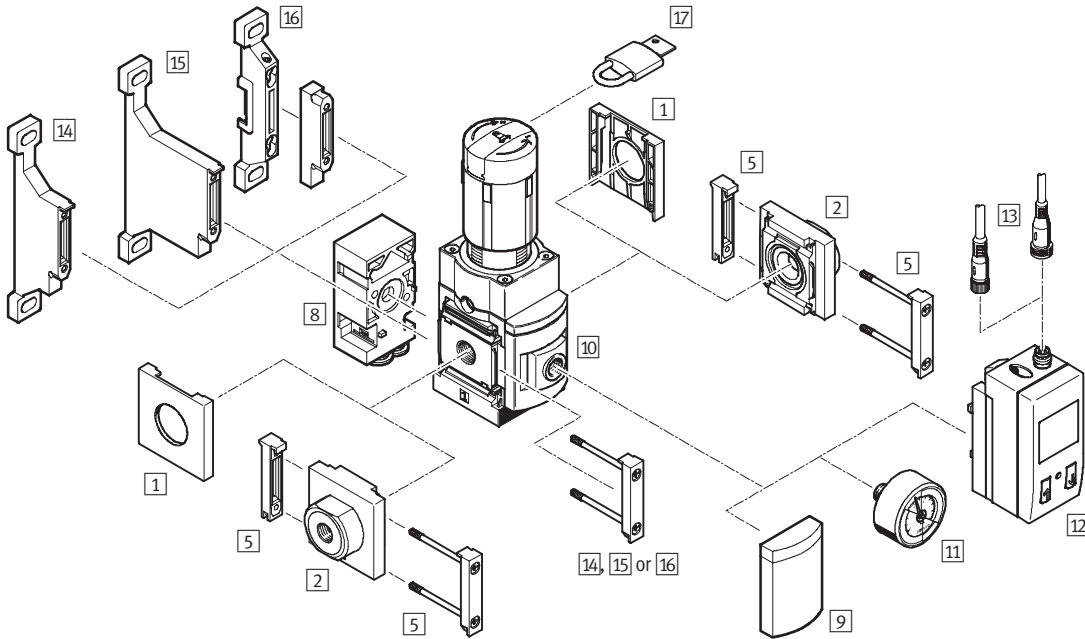
- [] - [] - [] - [] - [] - []

Precision Pressure Regulators MS6-LRPB – Metric Series

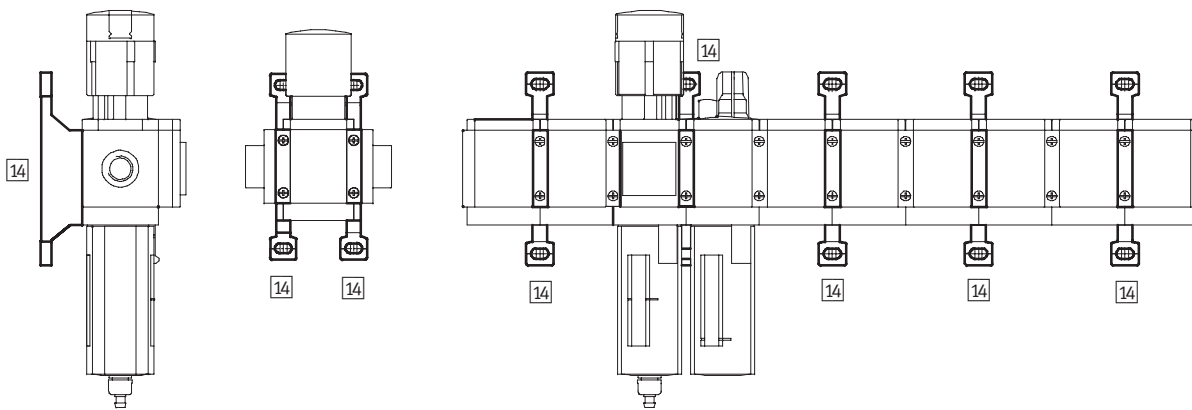
Accessories Overview

Mounting Attachments and Accessories

Pressure output at rear



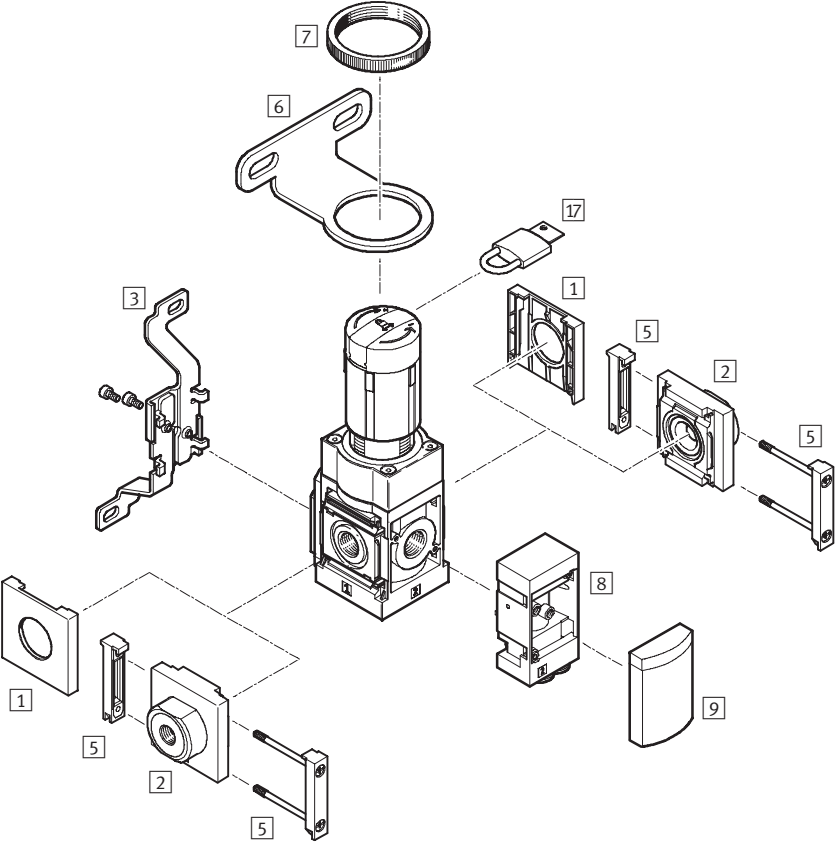
Single unit and combination unit mounting brackets.



Precision Pressure Regulators MS6-LRPB – Metric Series

Accessories Overview

Pressure output at front



Precision Pressure Regulators MS6-LRPB – Metric Series

Accessories Overview

Mounting Attachments and Accessories						
		Single unit		Combination unit → 3.1-1		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS6-END	■	-	■	-	665
2	Port plate MS6-AG...	-	■	-	■	665
3	Mounting bracket MS6-WB	■	■	-	-	663
5	Body connector MS6-MV	-	■	■	■	666
6	Regulator wall bracket MS6-WR	■	■	-	-	664
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Angled outlet block B...	■	■	■	■	659
9	Cover plate VS	■	■	■	■	658
10	Adapter for EN pressure gauge 1/8/1/4 A8/A4	■	■	■	■	658
11	Precision pressure gauge A8M/MAP	■	■	■	■	658
12	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	658
13	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	670
14	Mounting bracket MS6-WP	-	■	■	■	667
15	Mounting bracket MS6-WPB	-	■	■	■	667
16	Mounting bracket MS6-WPM	-	■	■	■	667
17	Padlock LRVS-D	■	■	■	■	670

Pressure Regulators MS6-LR/LRB/LRP/LRPB – Metric Series

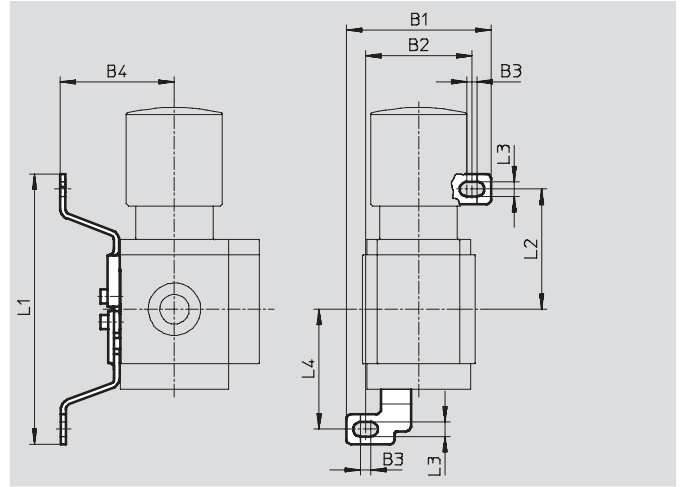


Accessories

3 Mounting bracket MS6-WB

- For wall mounting

Material:
Steel



Dimensions and Ordering Data										
B1	B2	B3	B4	L1	L2	L3	L4	Weight [g]	Part No.	Type
79.4	61.9	4.5	55	157.6	71	6.6	71	121	532196	MS6-WB

Pressure Regulators MS6-LR/LRB/LRP/LRPB – Metric Series

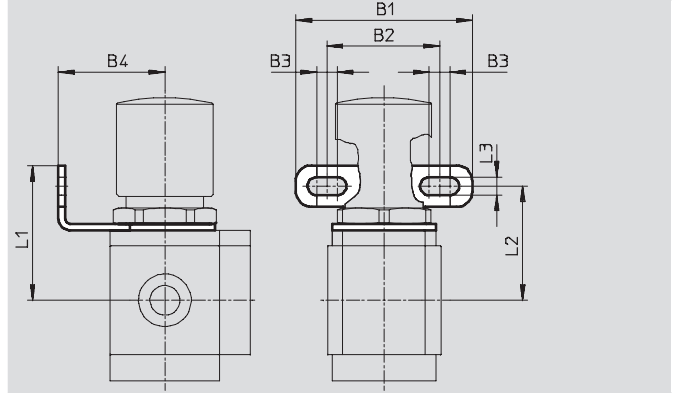
Accessories

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.

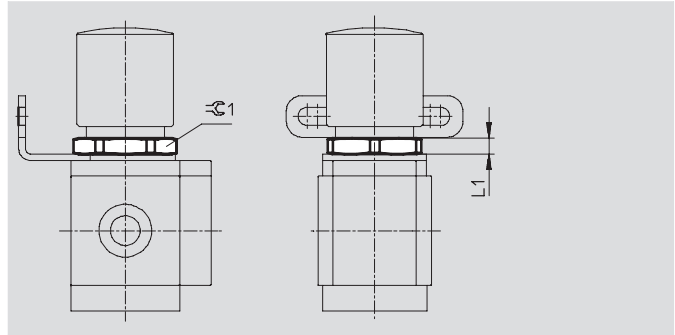


Dimensions and Ordering Data								Weight	Part No.	Type
B1	B2	B3	B4	L1	L2	L3	[g]			
70	42	8.2	40	67	57	7.1	90	526075	MS6-WR	

Hex nut MS6-WRS

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

Material:
Aluminum



Dimensions and Ordering Data				Weight	Part No.	Type
L1	≈ 1			[g]		
7	55			20.9	532188	MS6-WRS

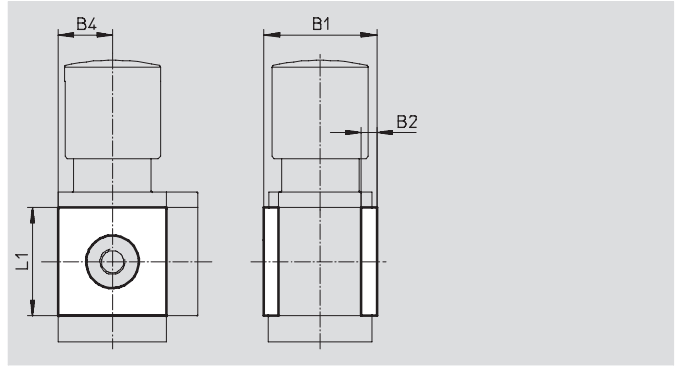
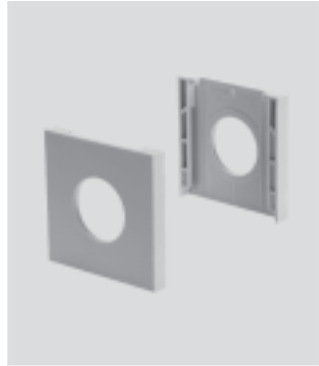
Pressure Regulators MS6-LR/LRB/LRP/LRPB – Metric Series

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



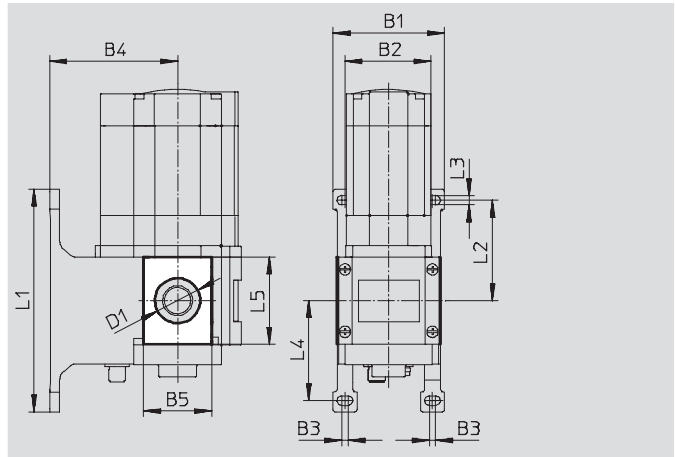
Dimensions and Ordering Data						
B1	B2	B4	L1	Part No.	Type	
67	8	31	62	538780	MS6-END	

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 [g]	Part No.	Type
			WP	WPB											
79	62	4.5	54	90.5	48.4	32	158	71	6.6	71	62	2	17	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.

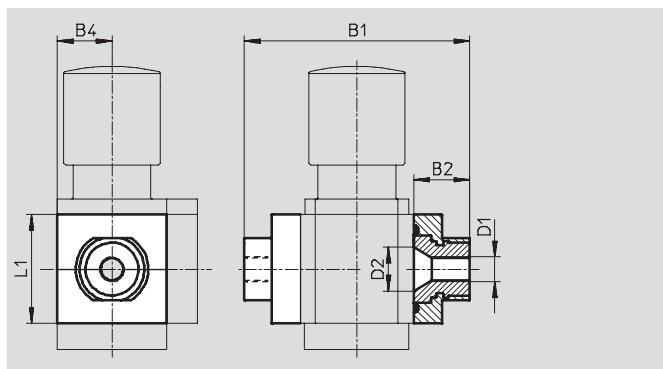
Pressure Regulators MS6-LR/LRB/LRP/LRPB – Metric Series

Accessories

2 Port plate MS6-AG...

- Adapter for pneumatic connection
- MS6-AGE for implementing threaded connection G $\frac{3}{4}$

Material:
Aluminum



Dimensions and Ordering Data								
B1	B2	B4	D1	D2	L1	Weight [g]	Part No.	Type
115	26.5	31	G $\frac{1}{4}$	24	62	300	526080	MS6-AGB
			G $\frac{3}{8}$				526081	MS6-AGC
			G $\frac{1}{2}$				526082	MS6-AGD
			G $\frac{3}{4}$				526083	MS6-AGE

5 Body connector MS...-MV

- For connecting modules

Material:
Stainless steel/polyacetate



Ordering Data		
Weight [g]	Part No.	Type
54	532799	MS6-MV

Pressure Regulators MS6-LR/LRB/LRP/LRPB – Metric Series

Accessories

14 Mounting Bracket MS6-WP...

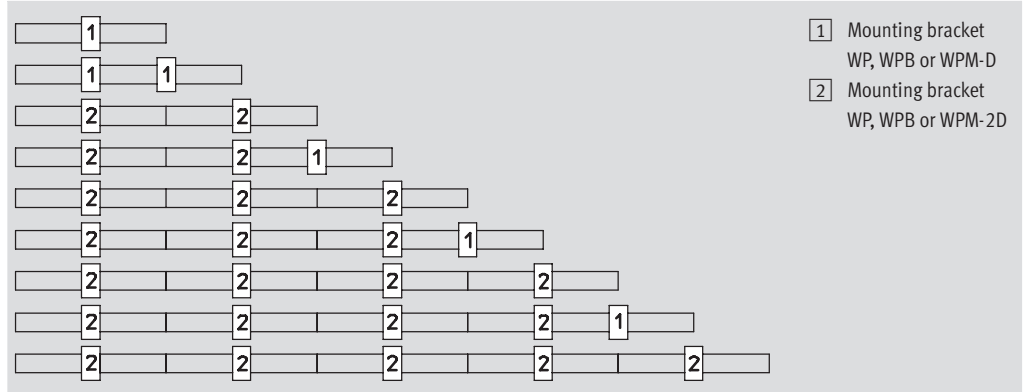
Suggested placement of wall mounting brackets when mounting air preparation combinations

1 unit: 62 mm with WP, WPB
69 mm with WPM-D

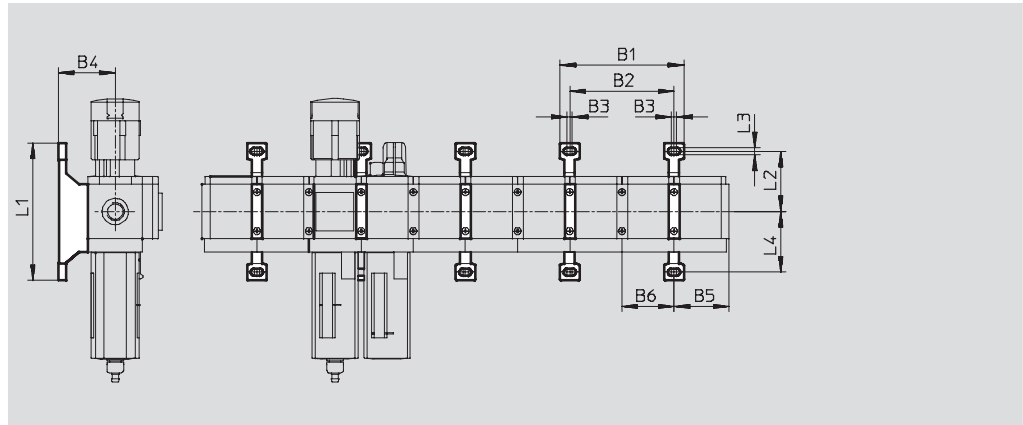
Number of units

1 2 3 4 5 6 7 8 9 10

2 units: 124 mm with WP, WPB
138 mm with WPM-2D



Mounting dimensions



Type	B1	B2	B3	B4	B5	B6	L1	L2	L3	L4
MS6-WP	141	124	4.5	54	64.5	62	158	71	6.6	71
MS6-WPB				90.5						41.3
MS6-WPM-...D	168	138	17.5	54	65.5	69	98.6	41.3		

Pressure Regulators MS6-LR/LRB/LRP/LRPB – Metric Series

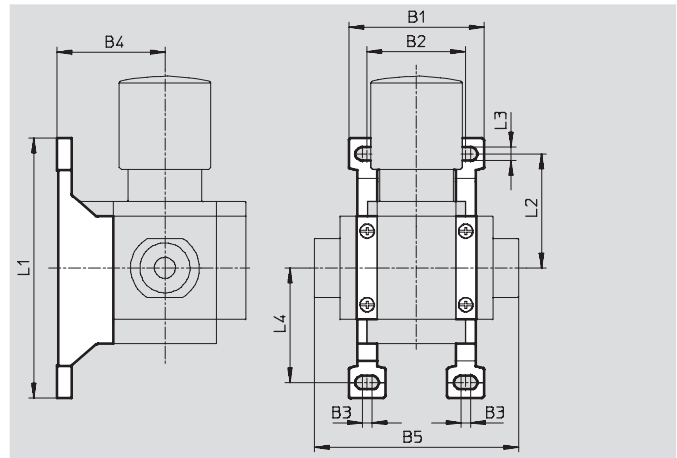


Accessories

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

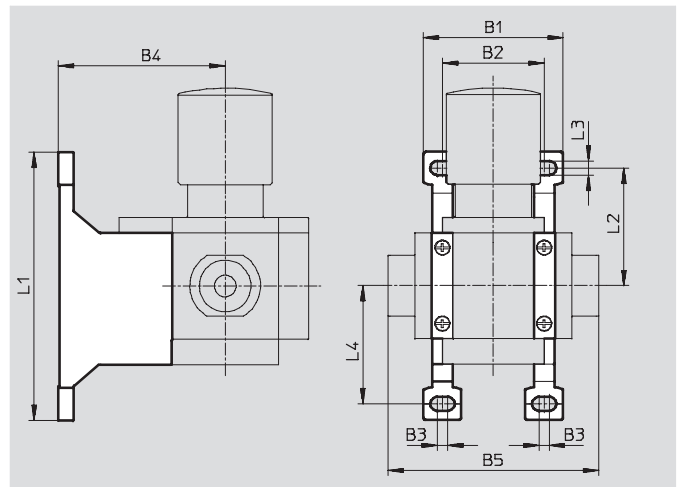


Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [g]	Part No.	Type
79	62	4.5	54	115	158	71	6.6	71	76	532195	MS6-WP

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 [g]	Part No.	Type
79	62	4.5	90.5	115	158	71	6.6	71	115	526074	MS6-WPB

Pressure Regulators MS6-LR/LRB/LRP/LRPB – Metric Series

Accessories

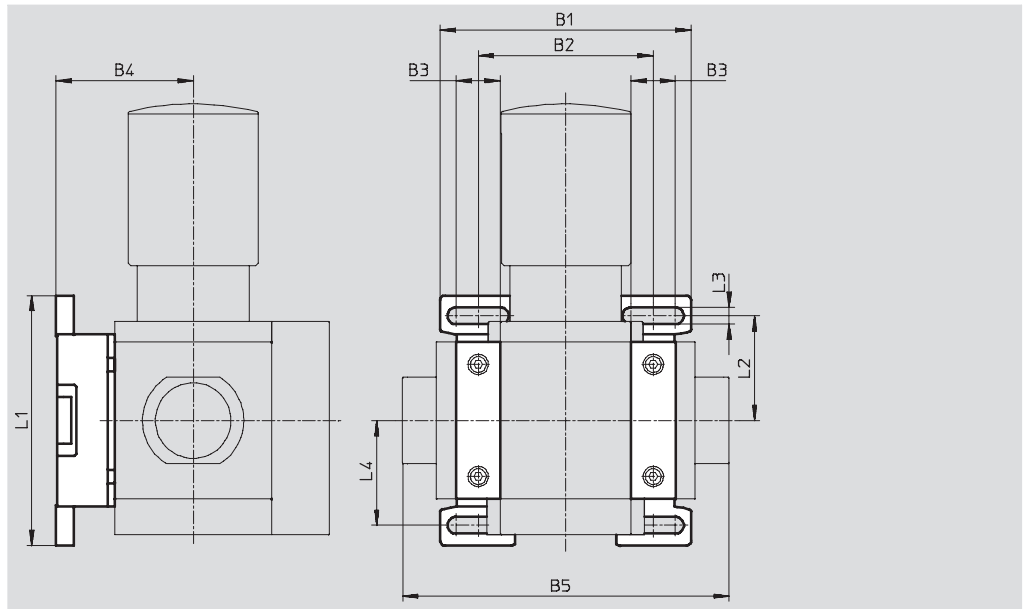
16 Mounting bracket MS6-WPM

(order code: 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 [g]	Part No.	Type
99	69	17.5	54	129	98.6	41.3	6.6	41.3	62	144	526073	MS6-WPM-D
168	138			198					124	154	532186	MS6-WPM-2D

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 MS6-LR/LRB/LRP/LRPB – Metric Series


FESTO

Accessories

13 Ordering Data – Plug Socket with Cable SIM-M8			Technical data → www.festo.com/catalog/sim-m8	
	Electrical connection	Cable length [m]	Part No.	Type
				M8x1, 3-pin
		5	159421	SIM-M8-3GD-5-PU
		10	192964	SIM-M8-3GD-10-PU
	M8x1, 3-pin	2.5	159422	SIM-M8-3WD-2,5-PU
		5	159423	SIM-M8-3WD-5-PU
		10	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 [m]	Part No.	Type
				M12x1, 4-pin
	M12x1, 4-pin	5	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	
	40	G $\frac{1}{4}$	0 ... 16	0 ... 232	183901	MA-40-16-G $\frac{1}{4}$ -EN
	Pressure gauge MA, DIN EN 837-1, with red-green range				Technical data → www.festo.com/catalog/ma	
	40	R $\frac{1}{8}$	0 ... 16	–	525726	MA-40-16-R $\frac{1}{8}$ -E-RG
	50	R $\frac{1}{4}$	0 ... 16	–	525729	MA-50-16-R $\frac{1}{4}$ -E-RG
	Precision pressure gauge MAP, DIN EN 837-1				Technical data → www.festo.com/catalog/map	
	40	R $\frac{1}{8}$	0 ... 1	0 ... 15	161126	MAP-40-1- $\frac{1}{8}$ -EN
		0 ... 4	0 ... 58	162842	MAP-40-4- $\frac{1}{8}$ -EN	
		0 ... 6	0 ... 87	161127	MAP-40-6- $\frac{1}{8}$ -EN	
		0 ... 16	0 ... 232	161128	MAP-40-16- $\frac{1}{8}$ -EN	

17 Ordering Data – Padlock LRV5-D			
	Description	Weight [g]	Part No. Type
	for regulators, filter/regulators and manual on-off valves	120	193786 LRV5-D

Pressure Regulators MS6-LR/LRB/LRP/LRPB – Metric 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

Pressure Regulators MS6N-LR/LRB, MS6N-LRP/LRPB – 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
 - 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 LRPB: 15 ... 206 psi
- Flow rate: 21.2 ... 264.8 scfm

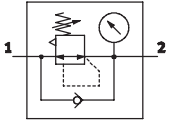
Product Range Overview																	
Type	Flow rate [scfm]	Pneumatic connections		Pressure regulation range								Pressure indicator				Pressure adjust- ment	Reverse flow
				[psi]													
		Body thread	Port plate	D2	D4	D5	D6	D7	D8	VS	AG	A8	A4	AD...	AS	LD	Z
MS6N			AG...														
LR	77.7 ... 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 → 674	Technical Data → 686	Technical Data → 697	Technical Data → 710
Dimensional Drawings → 678	Dimensional Drawings → 688	Dimensional Drawings → 701	Dimensional Drawings → 712
Ordering Data → 681	Ordering Data → 691	Ordering Data → 705	Ordering Data → 717
Accessories → 684	Accessories → 694	Accessories → 708	Accessories → 720
Replacement Parts → 731	Replacement Parts → 731	Replacement Parts → 731	Replacement Parts → 731
→ 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 qnN 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 → 731
- For spare parts go to: www.festo.com/en/spare_parts_service

Pressure Regulators MS6N-LR – Inch Series

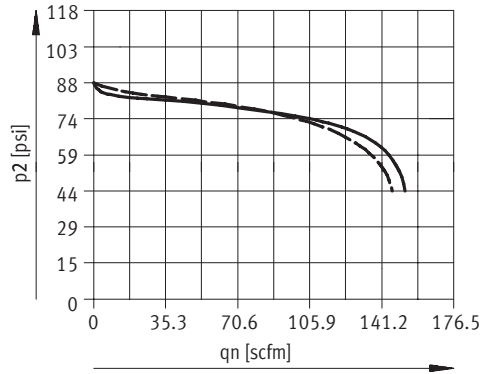
Technical Data



Standard Flow Rate q_n as a Function of Output Pressure p_2

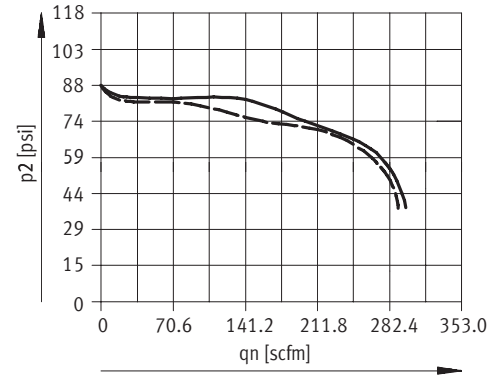
MS6N-LR-1/4

Primary pressure $p_1 = 147$ psi



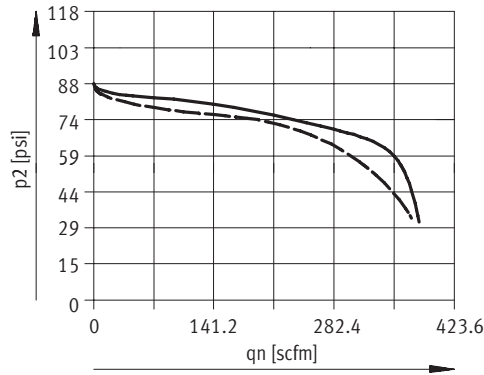
— D6: 4.4 ... 103 psi
 - - - D7: 7.4 ... 176 psi

MS6N-LR-3/8



MS6N-LR-1/2

Primary pressure $p_1 = 147$ psi



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

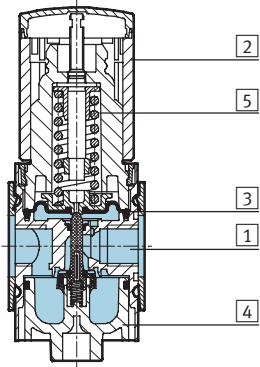
Pressure Regulators MS6N-LR – Inch Series

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

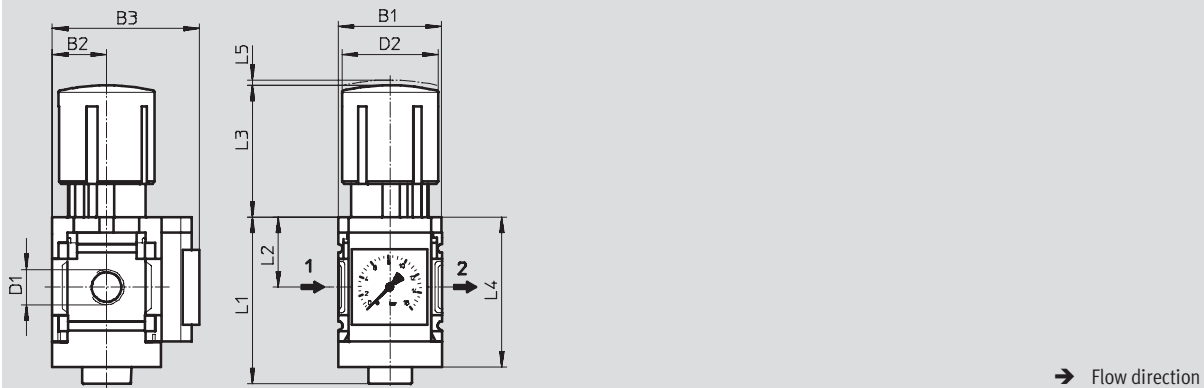
Dimensional Drawings



Dimensions¹⁾ – Standard

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

With pressure gauge, display unit [psi]



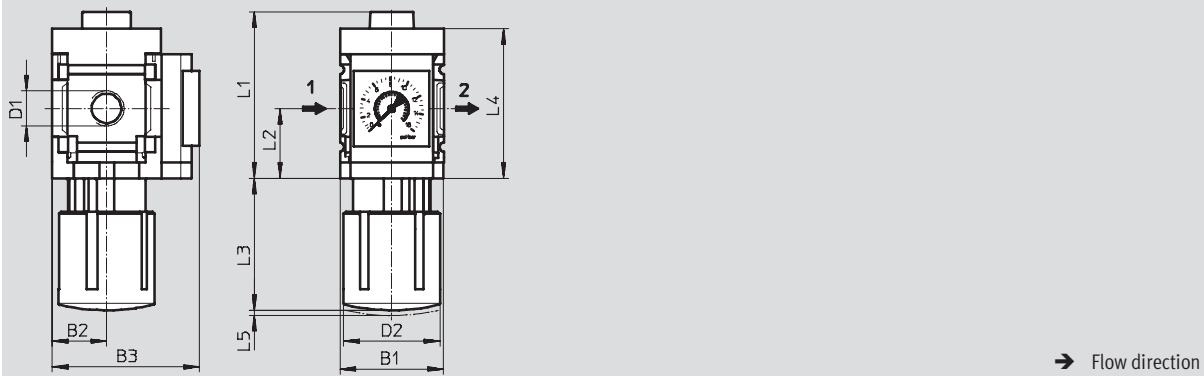
Type	B1	B2	B3	D1	D2	L1	L2	L3	L4	L5
MS6N-LR-1/4	2.44	1.22	3.03	1/4 NPT	2.01	3.66	1.54	3.39	3.31	0.20
MS6N-LR-3/8				3/8 NPT						
MS6N-LR-1/2				1/2 NPT						

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	1/4 NPT	-	-	-
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

FESTO

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

1W typically ships within 1 week

Q request a quote for lead time

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 → 726)			-AQN	
		Port plate 3/8 NPT (dimensions → 726)			-AQP	
		Port plate 1/2 NPT (dimensions → 726)			-AQR	
		Port plate 3/4 NPT (dimensions → 726)			-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	-		-	
--------	----	---	---	------	---	--	---	--

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 → 724)			4	-WR		
	Mounting bracket (dimensions → 727)			5	-WP		
	Mounting bracket (dimensions → 727)			5	-WPM		
	Mounting bracket (dimensions → 723)				-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

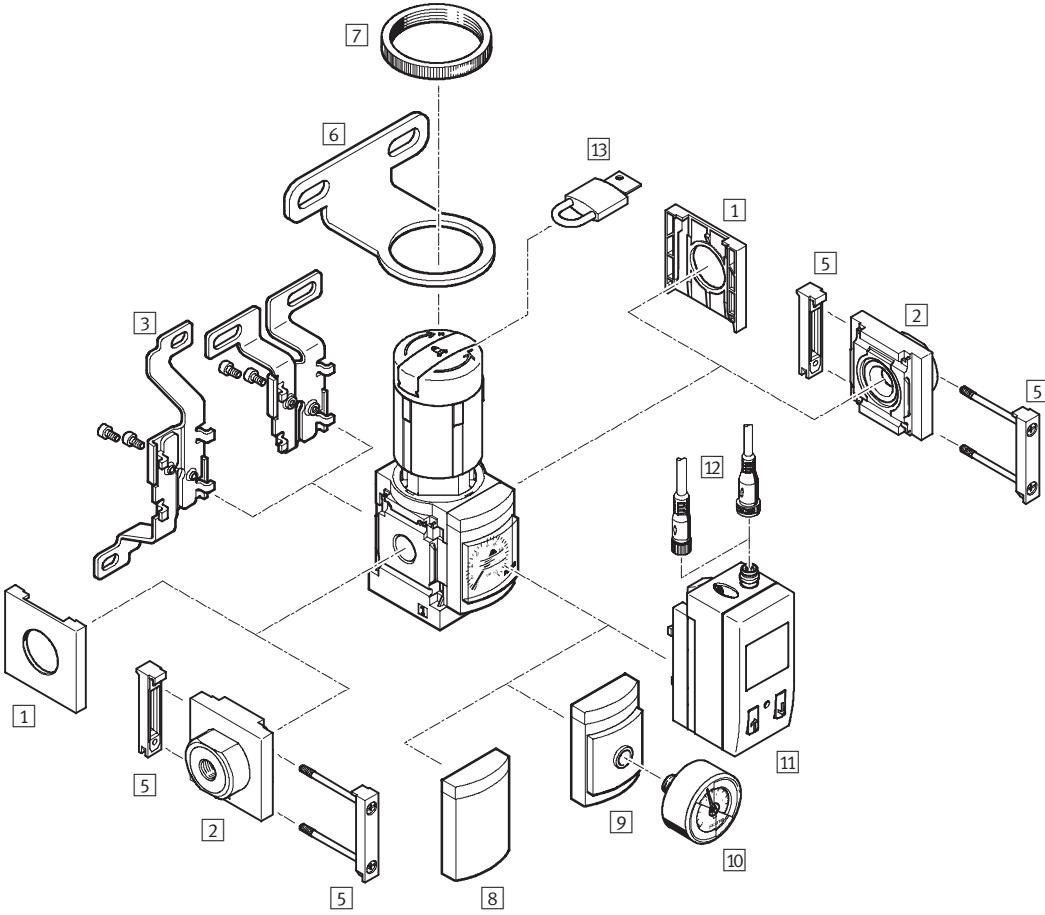
Transfer order code

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

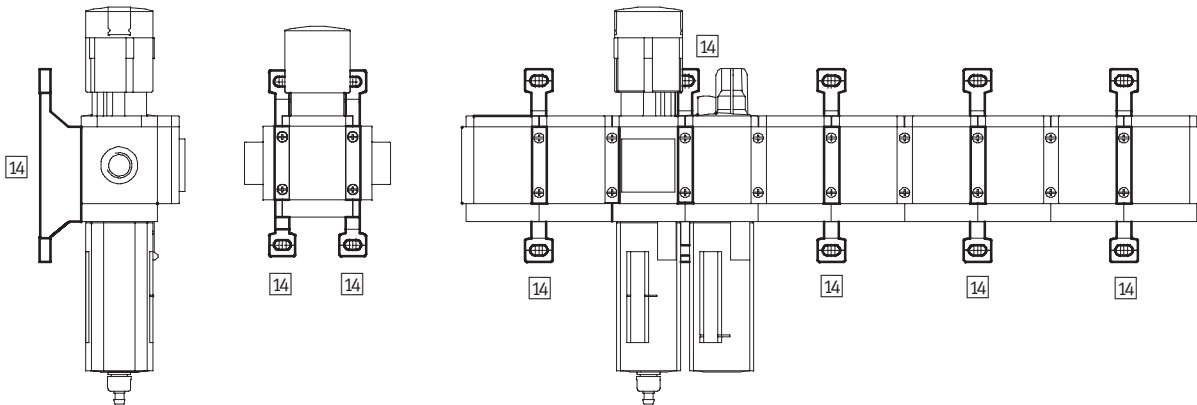
Pressure Regulators MS6N-LR – Inch Series

Accessories Overview

Mounting Attachments and Accessories



Single unit and combination unit mounting brackets.



Pressure Regulators MS6N-LR – Inch Series

Accessories Overview

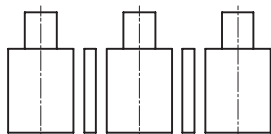
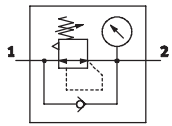


Mounting Attachments and Accessories						
		Single unit		Combination unit → 3.1-49		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS6-END	■	-	■	-	725
2	Port plate MS6N-AQ...	-	■	-	■	726
3	Mounting bracket MS6-WB	■	■	-	-	723
5	Body connector MS6-MV	-	■	■	■	726
6	Regulator wall bracket MS6-WR	■	■	-	-	724
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Cover plate VS	■	■	■	■	682
9	Adapter for EN pressure gauge 1/4 A4	■	■	■	■	682
10	Pressure gauge MA	■	■	■	■	730
11	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	682
12	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	730
13	Padlock LRVS-D	■	■	■	■	730
14	Mounting bracket MS6-WP/WPB/WPM	-	■	■	■	727

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 q _N ¹⁾ [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.

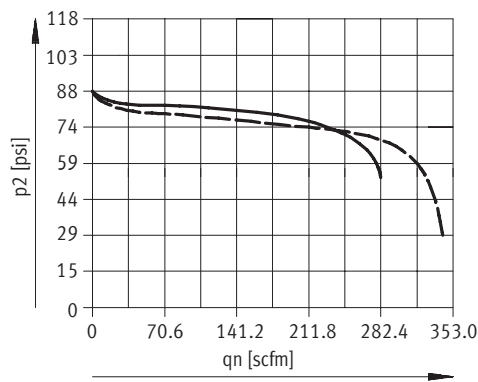
Weights [lb]	
Pressure regulator	1.49

- Wearing parts kits → 731
- 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

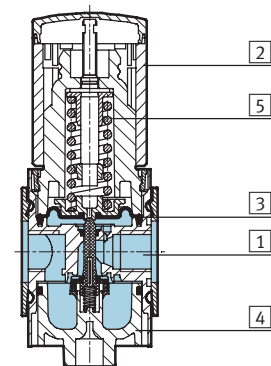
Primary pressure p1 = 147 psi



- 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

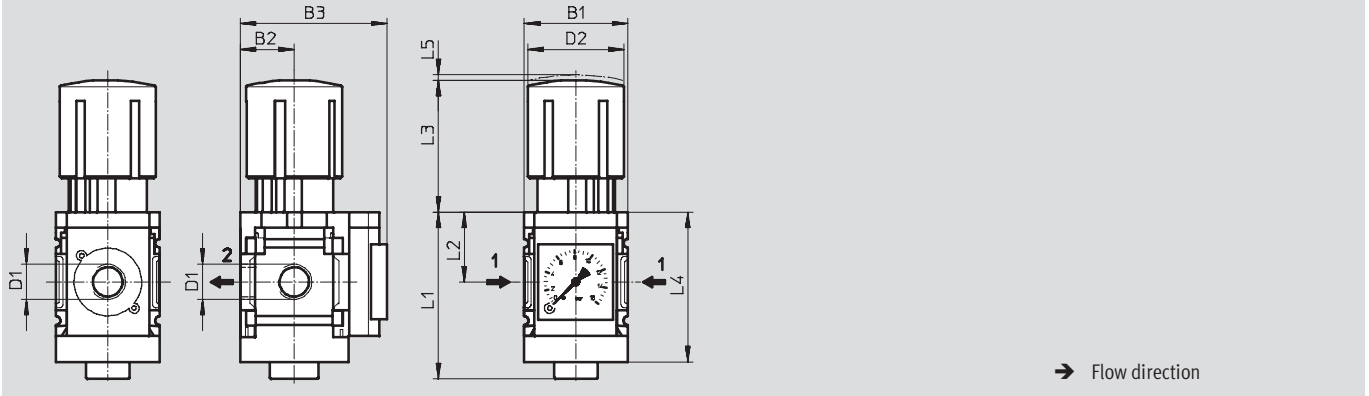
Dimensional Drawings

FESTO

Dimensions¹⁾ – Standard

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

With pressure gauge, display unit [psi]



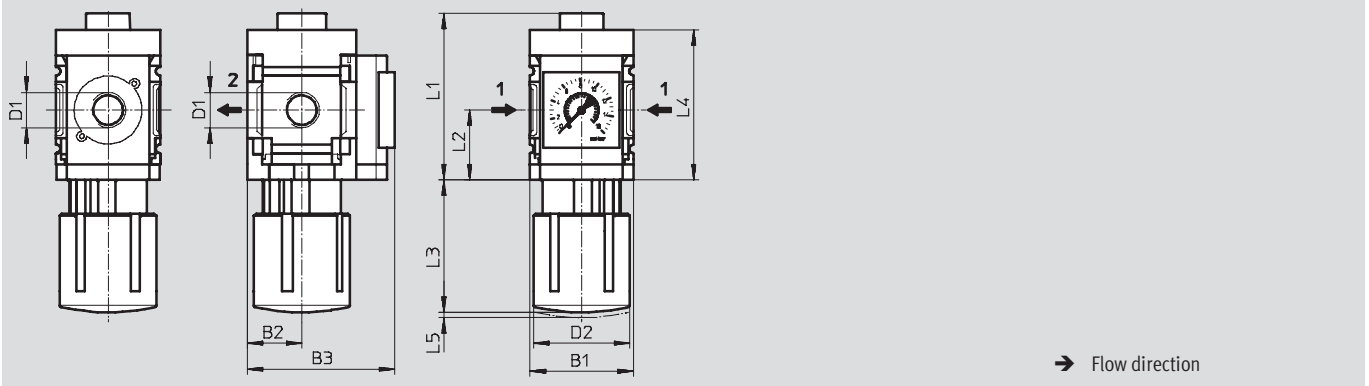
Type	B1	B2	B3	D1	D2	L1	L2	L3	L4	L5
MS6N-LRB-1/2	2.44	1.22	3.03	1/2 NPT	2.01	3.66	1.54	3.39	3.31	0.20

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

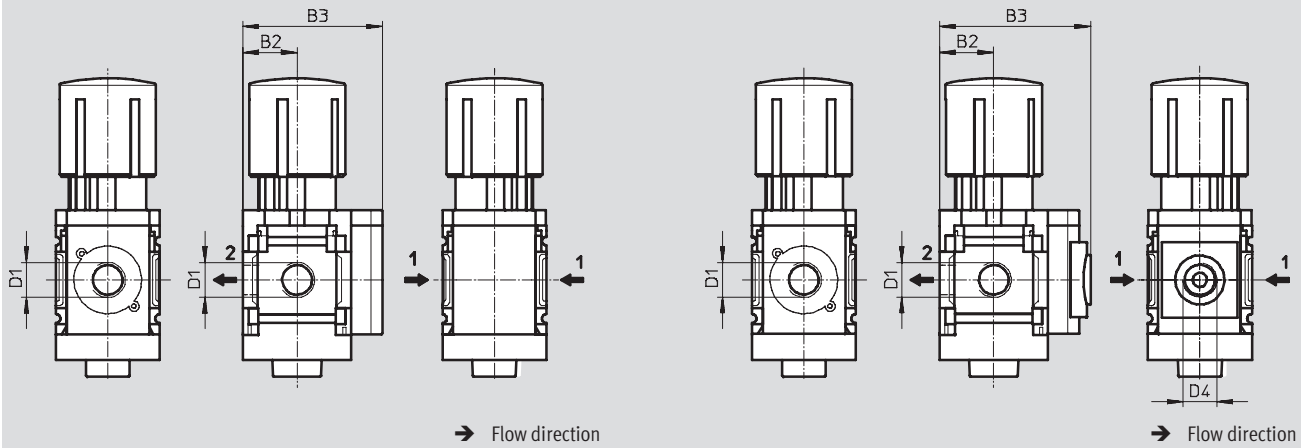


Dimensions¹⁾ – Pressure Gauge Alternatives

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

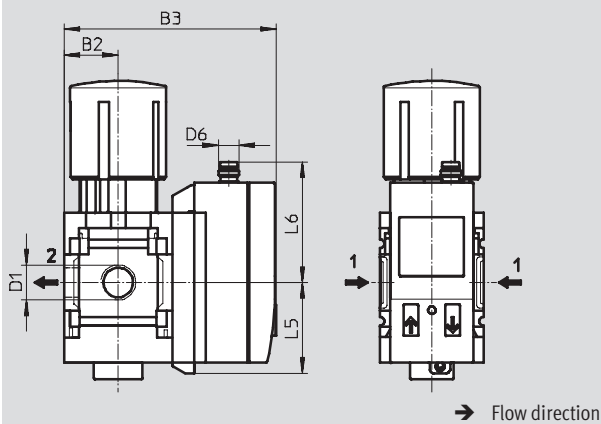
Cover plate VS

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



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

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

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

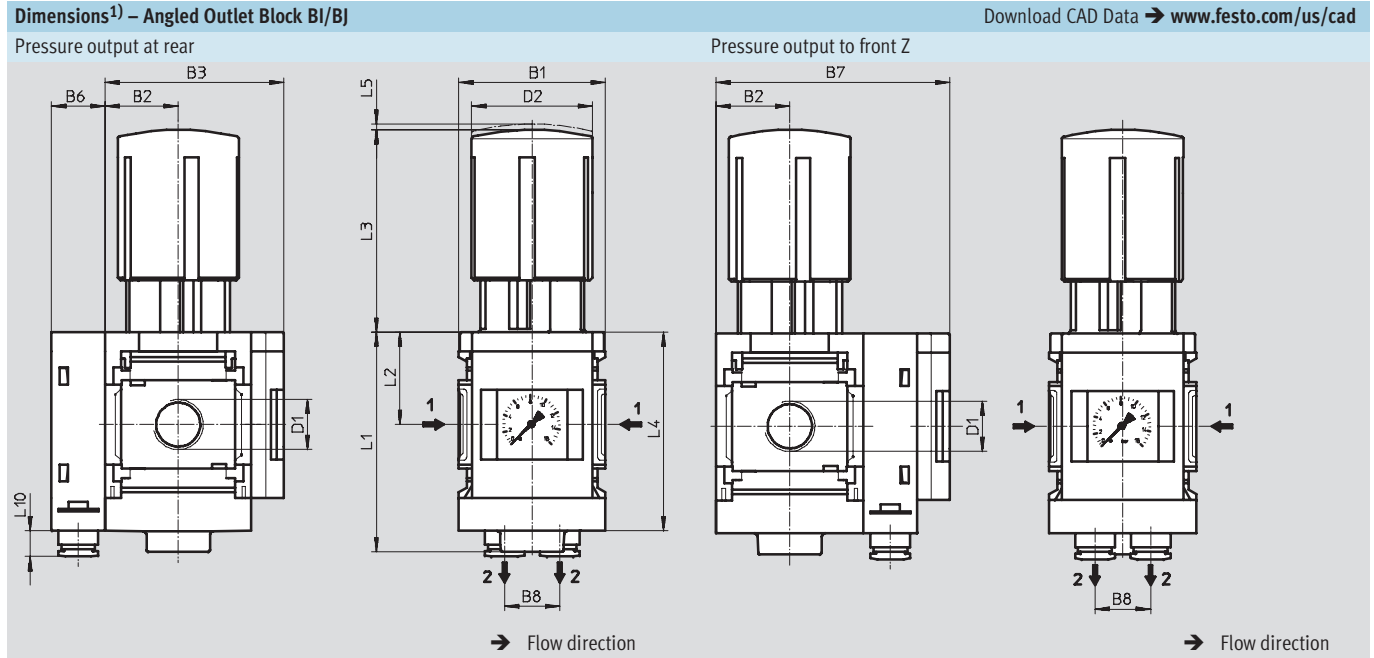
AD4 variants:
SDE1-D10-G2-MS-L-NI-M12 with 4-pin plug M12x1, 1 switching output NPN and 4 ... 20 mA analog

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	1/4 NPT	-	-	-
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.

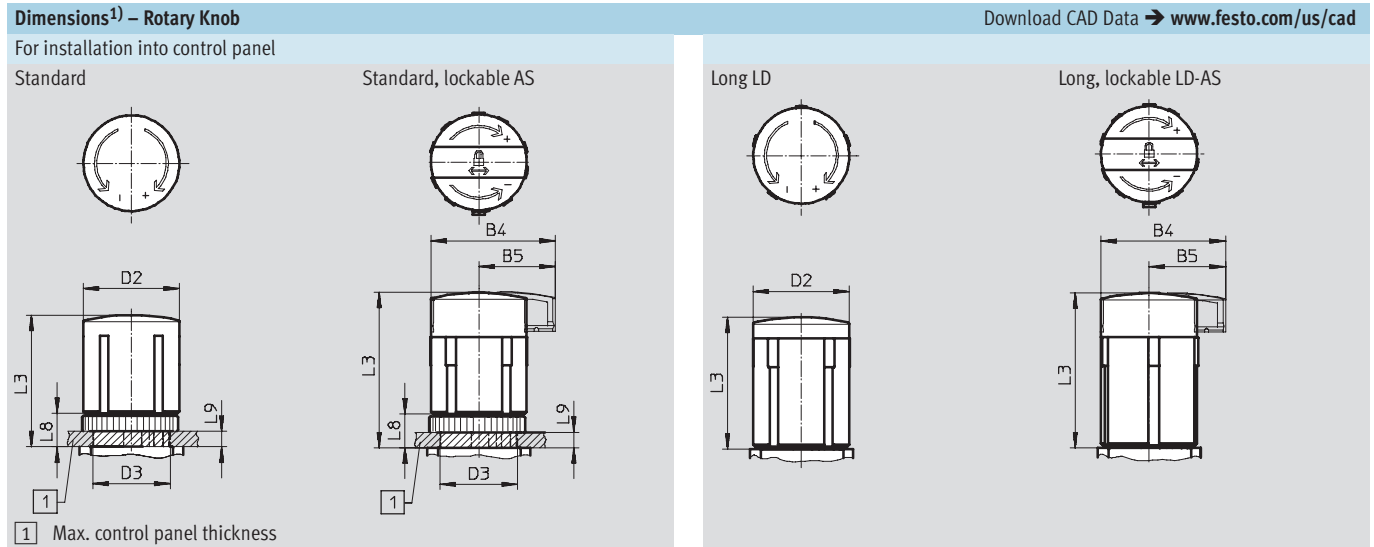
Pressure Regulators MS6N-LRB – Inch Series

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 1W typically ships within 1 week Q request a quote for lead time

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 → 726)			-AQN	
		Port plate 3/8 NPT (dimensions → 726)			-AQP	
		Port plate 1/2 NPT (dimensions → 726)			-AQR	
		Port plate 3/4 NPT (dimensions → 726)			-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



→ 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	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 ($p_{max} = 147 \text{ psi}$)	Angled outlet block QS- $\frac{5}{16}$ -U			-BI			
	Angled outlet block QS- $\frac{3}{8}$ -U			-BJ			
Type of mounting	Mounting bracket with knurled nut for regulator head (dimensions → 724)		6 7	-WR			
	Mounting bracket (dimensions → 727)		8 9	-WP			
	Mounting bracket (dimensions → 727)		6 8	-WPM			
	Mounting bracket for large wall gap (dimensions → 727)		8 10	-WPB			
	Mounting bracket (dimensions → 723)		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

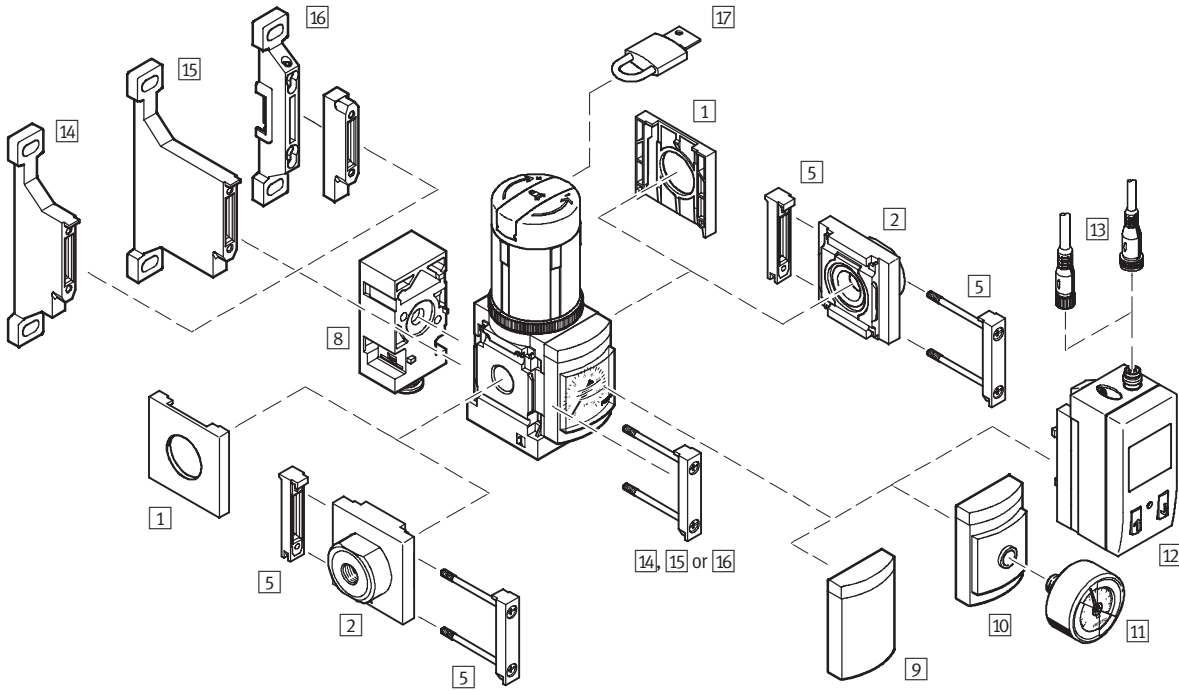
- [] - [] - [] - [] - [] - [] - [] - []

Pressure Regulators MS6N-LRB – Inch Series

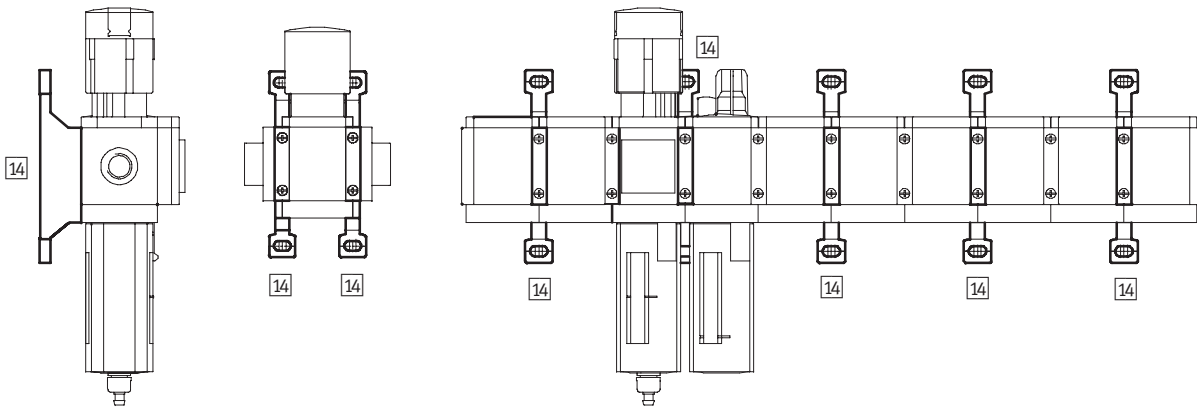
Accessories Overview

Mounting Attachments and Accessories

Pressure output at rear



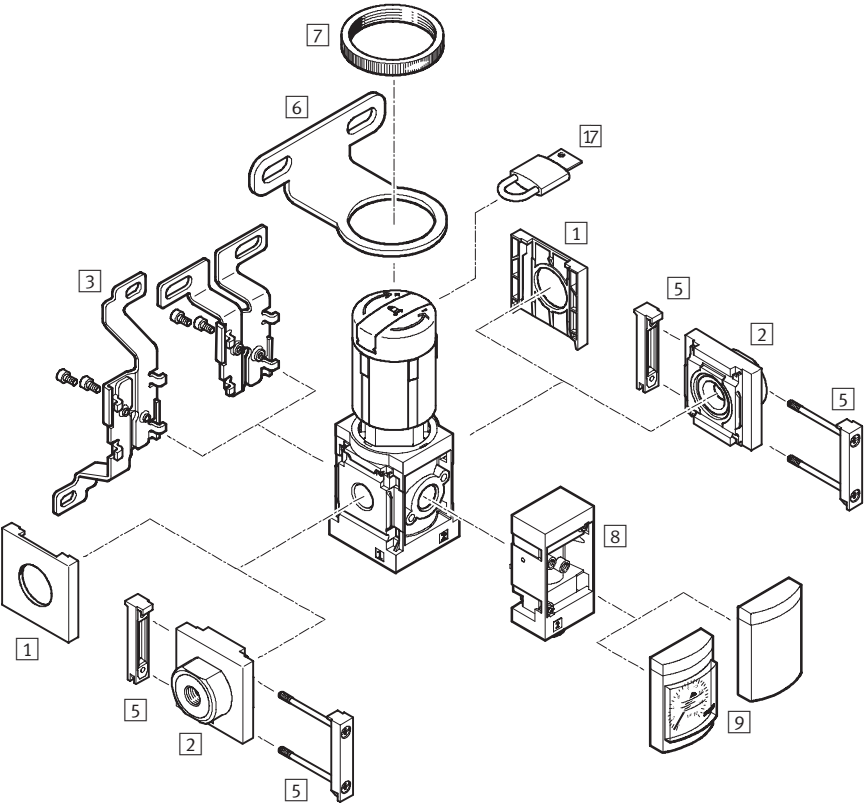
Single unit and combination unit mounting brackets.



Pressure Regulators MS6N-LRB – Inch Series

Accessories Overview

Pressure output at front



Pressure Regulators MS6N-LRB – Inch Series

Accessories Overview

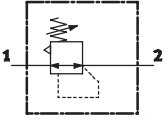


Mounting Attachments and Accessories						
		Single unit		Combination unit → 3.1-49		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap MS6-END	■	-	■	-	725
2	Port plate MS6N-AQ...	-	■	-	■	726
3	Mounting bracket MS6-WB	■	■	-	-	723
5	Body connector MS6-MV	-	■	■	■	726
6	Regulator wall bracket MS6-WR	■	■	-	-	724
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Angled outlet block B...	■	■	■	■	693
9	Cover plate VS	■	■	■	■	692
10	Adapter for EN pressure gauge 1/4 A4	■	■	■	■	692
11	Pressure gauge MA	■	■	■	■	730
12	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	692
13	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	730
14	Mounting bracket MS6-WP	-	■	■	■	727
15	Mounting bracket MS6-WPB	-	■	■	■	727
16	Mounting bracket MS6-WPM	-	■	■	■	727
17	Padlock LRVS-D	■	■	■	■	730

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 qn [scfm]			1/4 NPT	3/8 NPT	1/2 NPT
Pneumatic connection 1, 2			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

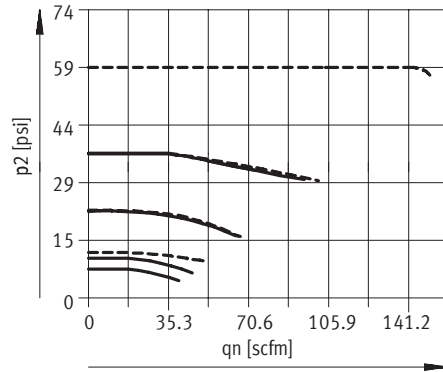
Technical Data



Standard Flow Rate q_n as a Function of Output Pressure p_2

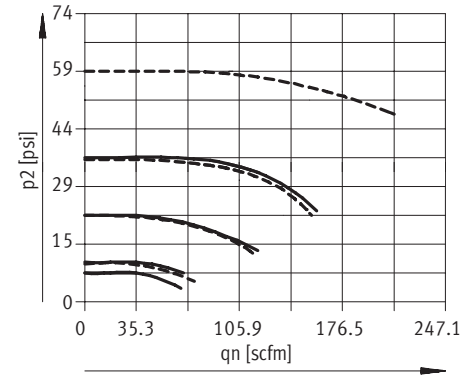
MS6N-LRP-1/4

Primary pressure $p_1 = 147$ psi



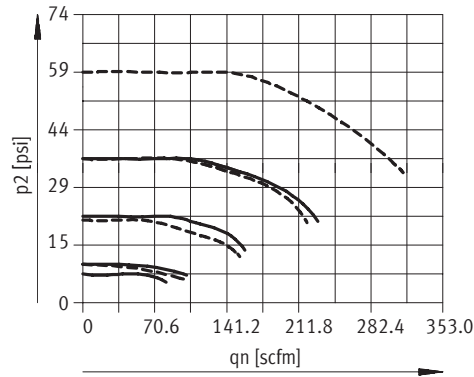
— D4: 0.7 ... 37 psi
 - - - D5: 1.5 ... 59 psi

MS6N-LRP-3/8



MS6N-LRP-1/2

Primary pressure $p_1 = 147$ psi



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

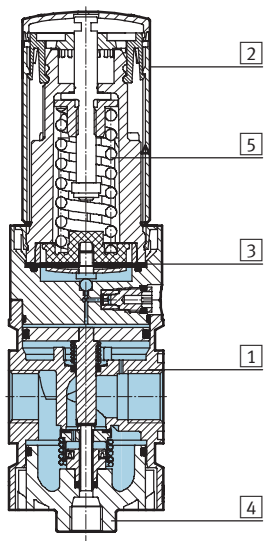
Precision Pressure Regulators MS6N-LRP – Inch Series

Technical Data



Materials

Sectional view

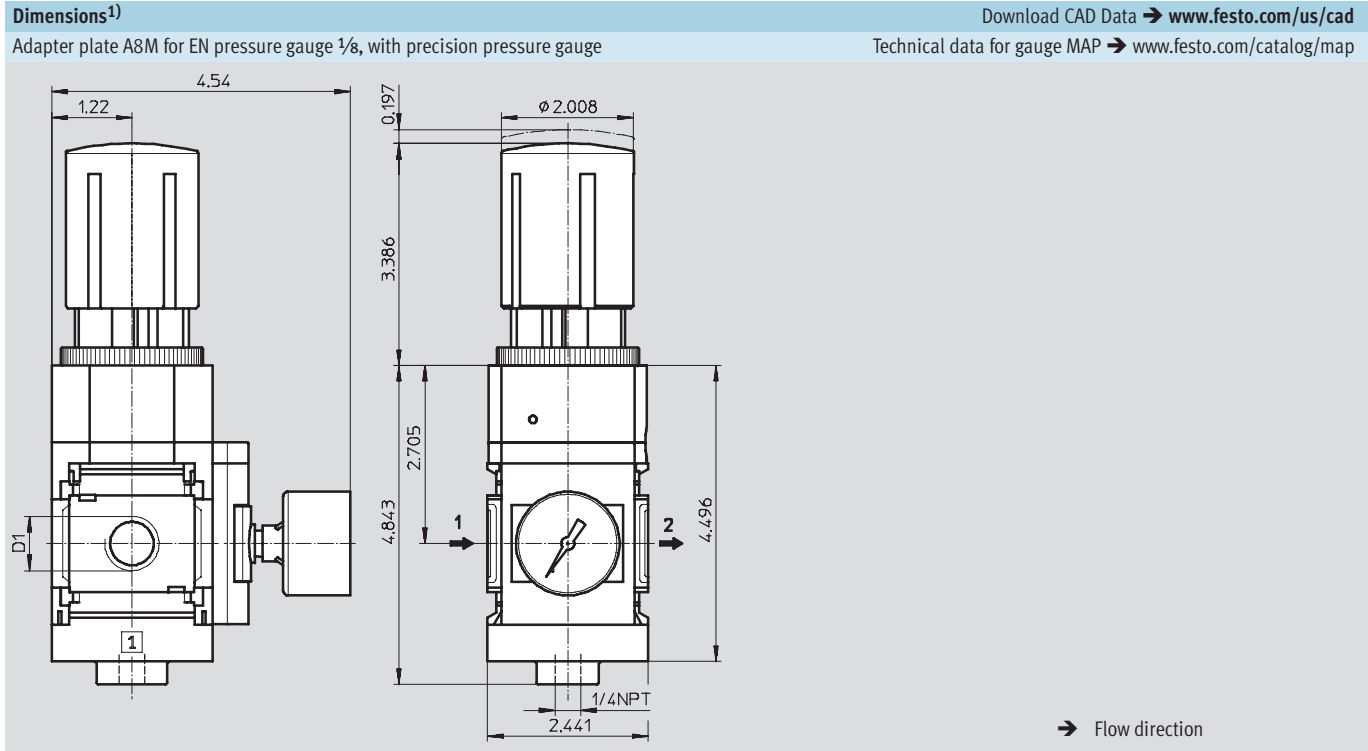


Precision pressure regulator		
1	Housing	Die-cast aluminum
2	Regulating knob	Polyamide/polyacetate
3	Diaphragm	Nitrile rubber
4	Cap, bottom	Polyester, fiberglass reinforced
5	Springs	Steel
-	Seals	Nitrile rubber
Note on materials		Free of copper and PTFE (not with variants A8M or AD...)

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

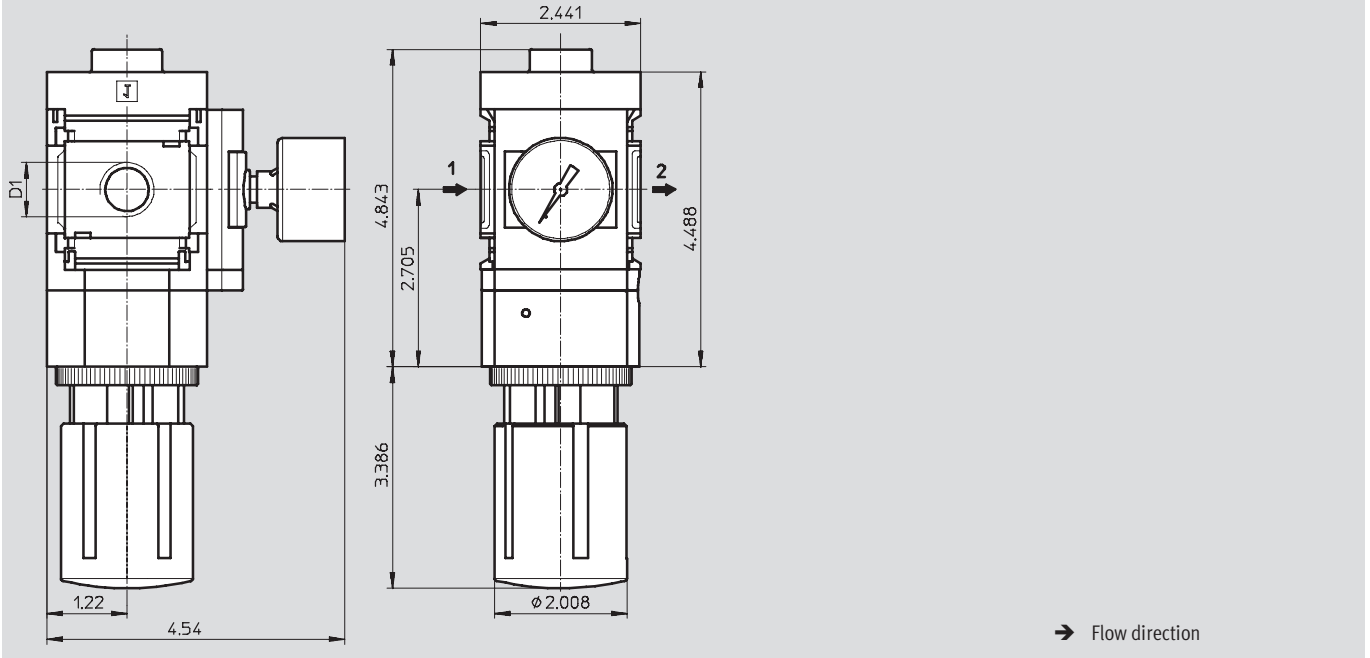


Dimensional Drawings

Dimensions¹⁾ – Alternative Assembly Position

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

Rotary knob at bottom KD

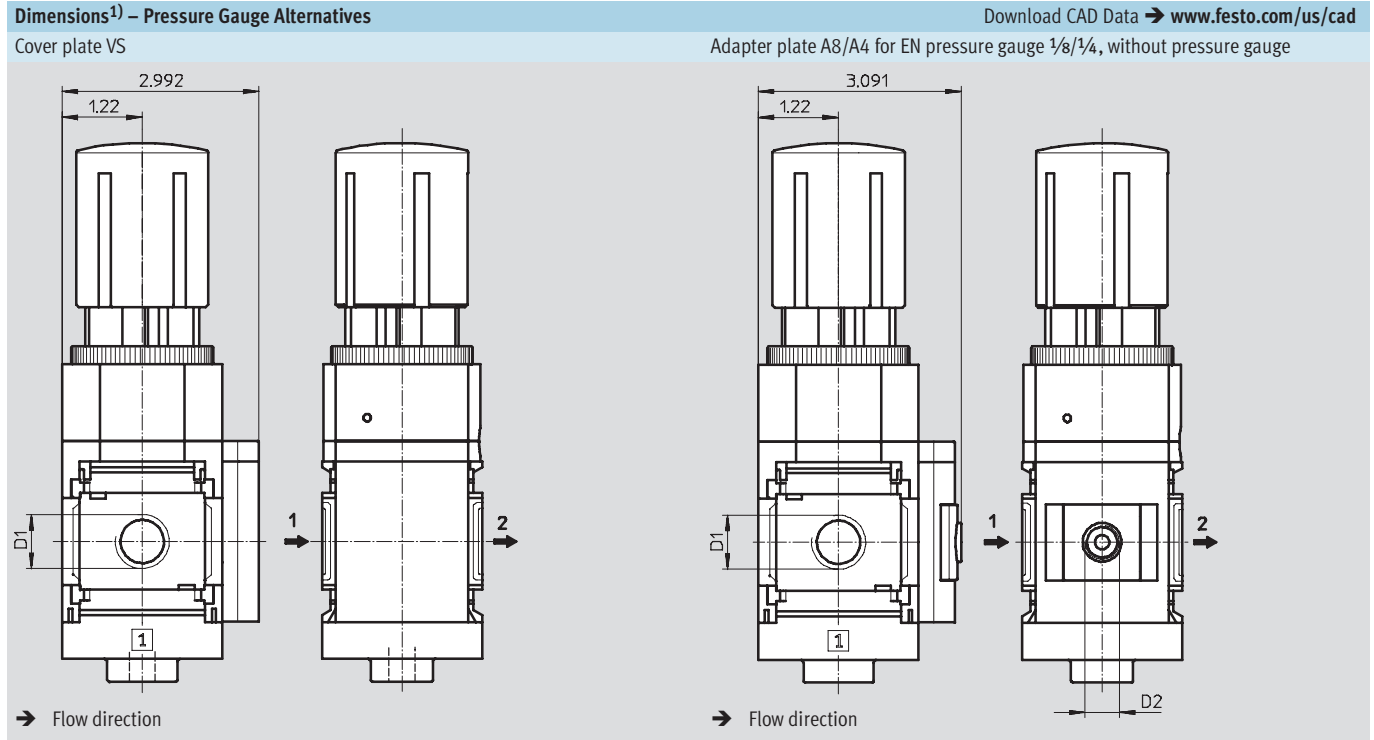


Type	D1
MS6N-LRP-1/4-...-KD	1/4 NPT
MS6N-LRP-3/8-...-KD	3/8 NPT
MS6N-LRP-1/2-...-KD	1/2 NPT

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	1/8 NPT
MS6N-LRP-3/8-...-A8	3/8 NPT	
MS6N-LRP-1/2-...-A8	1/2 NPT	
MS6N-LRP-1/4-...-A4	1/4 NPT	1/4 NPT
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



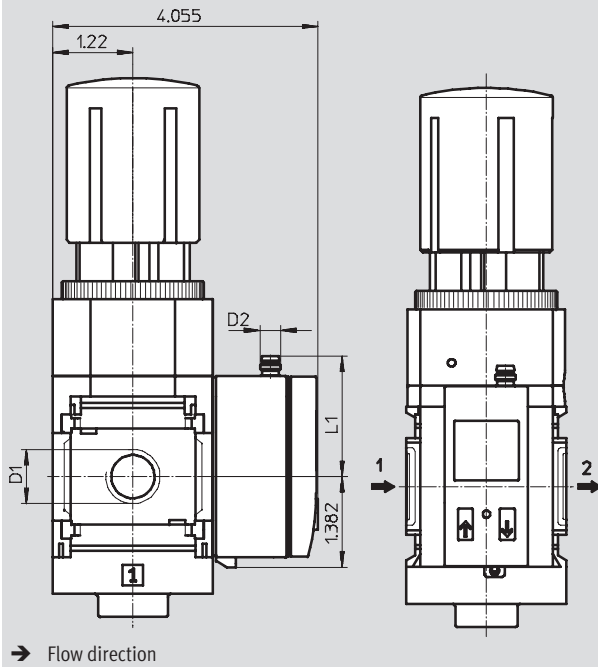
Dimensional Drawings

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.

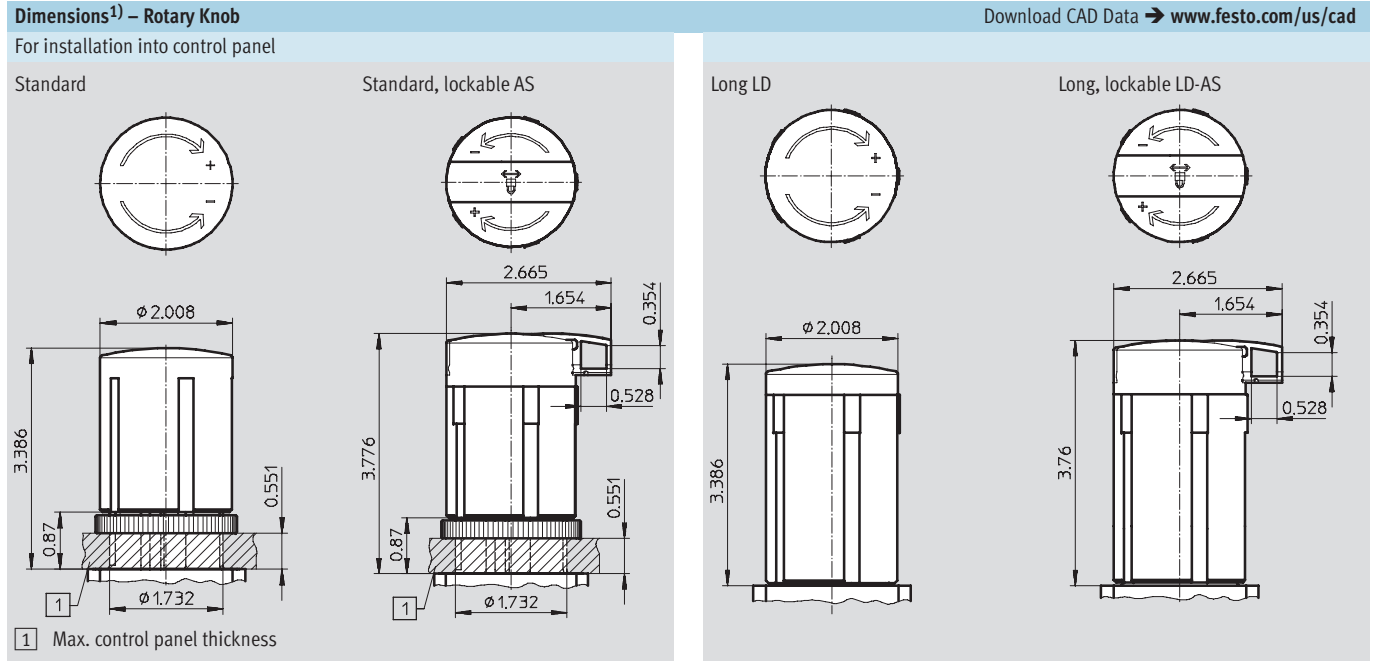
Type	D1	D2	L1
MS6N-LRP-1/4-...-AD1/AD2	1/4 NPT	M8x1	1.84
MS6N-LRP-3/8-...-AD1/AD2	3/8 NPT		
MS6N-LRP-1/2-...-AD1/AD2	1/2 NPT		
MS6N-LRP-1/4-...-AD3/AD4	1/4 NPT	M12x1	2.20
MS6N-LRP-3/8-...-AD3/AD4	3/8 NPT		
MS6N-LRP-1/2-...-AD3/AD4	1/2 NPT		

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 1W typically ships within 1 week Q request a quote for lead time

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 → 726)			-AQN	
		Port plate 3/8 NPT (dimensions → 726)			-AQP	
		Port plate 1/2 NPT (dimensions → 726)			-AQR	
		Port plate 3/4 NPT (dimensions → 726)			-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	-		-		-	
---------------	-----------	----------	----------	--------------	---	--	---	--	---	--

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 → 724)		3	-WR	
		Mounting bracket (dimensions → 727)		4	-WP	
		Mounting bracket (dimensions → 727)		4	-WPM	
		Mounting bracket (dimensions → 723)			-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, AQR, AQR or AQS

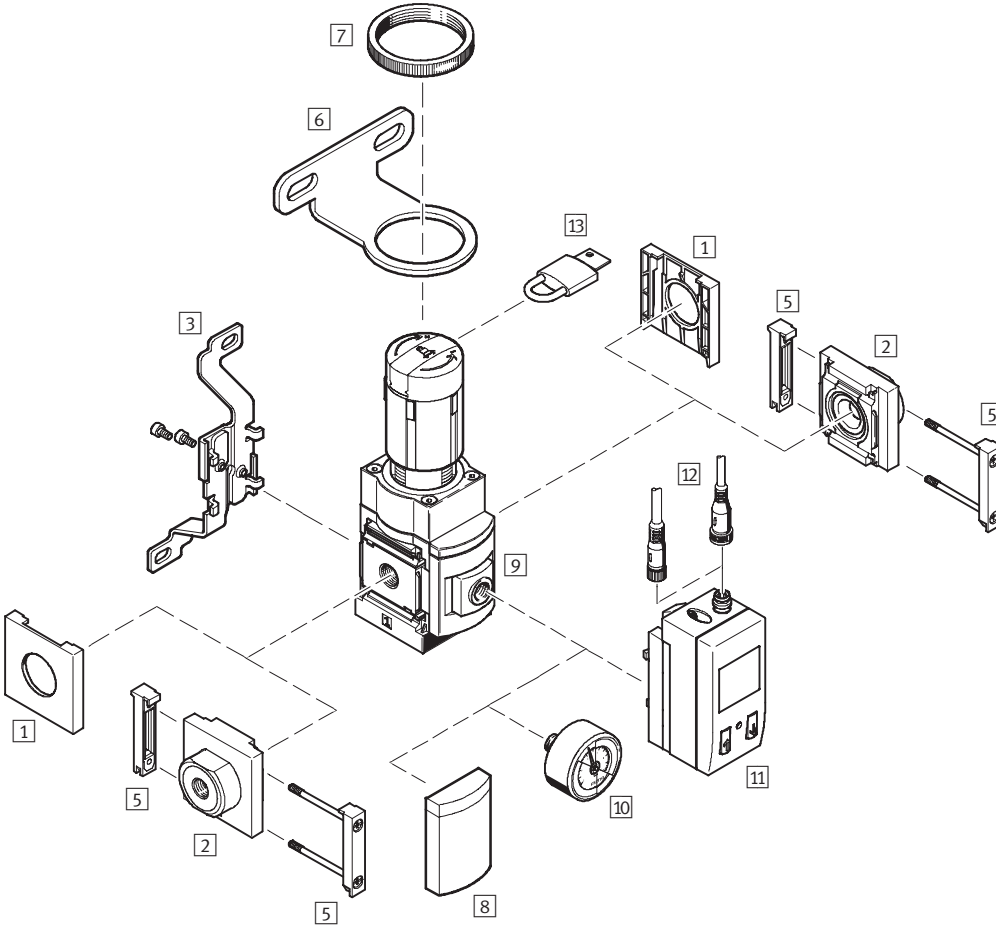
Transfer order code

- - - - -

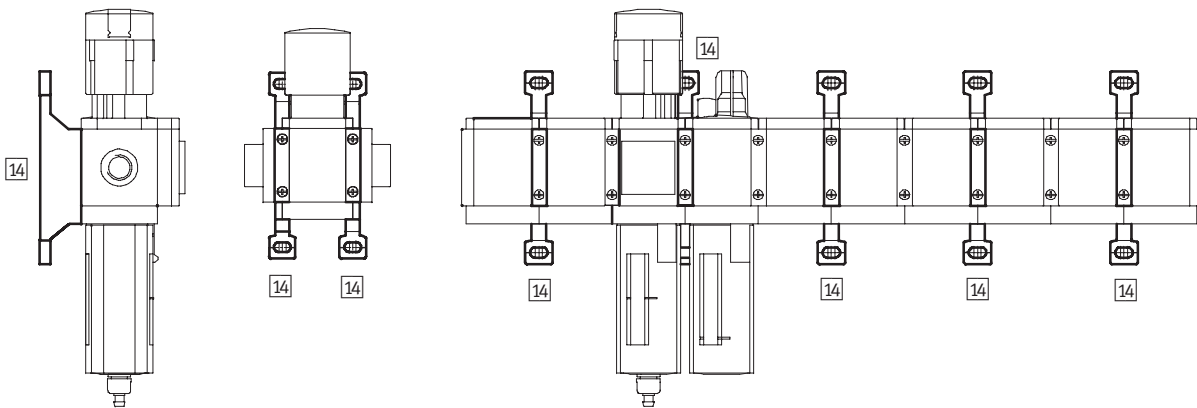
Precision Pressure Regulators MS6N-LRP – Inch Series

Accessories Overview

Mounting Attachments and Accessories



Single unit and combination unit mounting brackets.



Precision Pressure Regulators MS6N-LRP – Inch Series

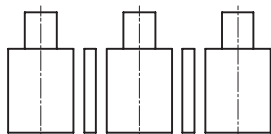
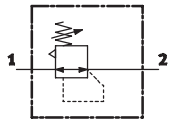
Accessories Overview

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	■	-	■	-	725
2	Port plate MS6N-AQ...	-	■	-	■	726
3	Mounting bracket MS6-WB	■	■	-	-	723
5	Body connector MS6-MV	-	■	■	■	726
6	Regulator wall bracket MS6-WR	■	■	-	-	724
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Cover plate VS	■	■	■	■	706
9	Adapter for EN pressure gauge 1/8/1/4 A8/A4	■	■	■	■	706
10	Precision pressure gauge A8M/MAP	■	■	■	■	706
11	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	706
12	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	730
13	Padlock LRVS-D	■	■	■	■	730
14	Mounting bracket MS6-WP/WPB/WPM	-	■	■	■	727

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.

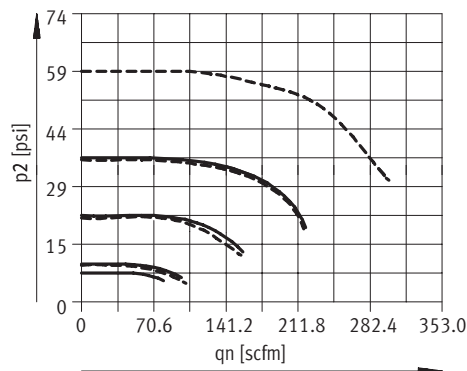
Weight [lb]	
Precision pressure regulator	2.00

- 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

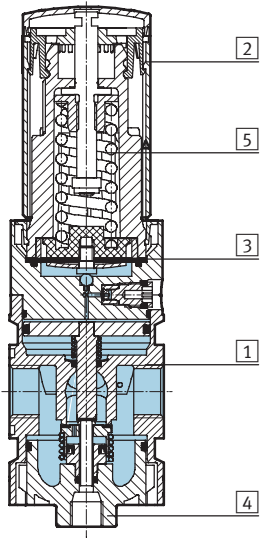
Precision Pressure Regulators MS6N-LRPB – Inch Series

Technical Data, Dimensional Drawings



Materials

Sectional view



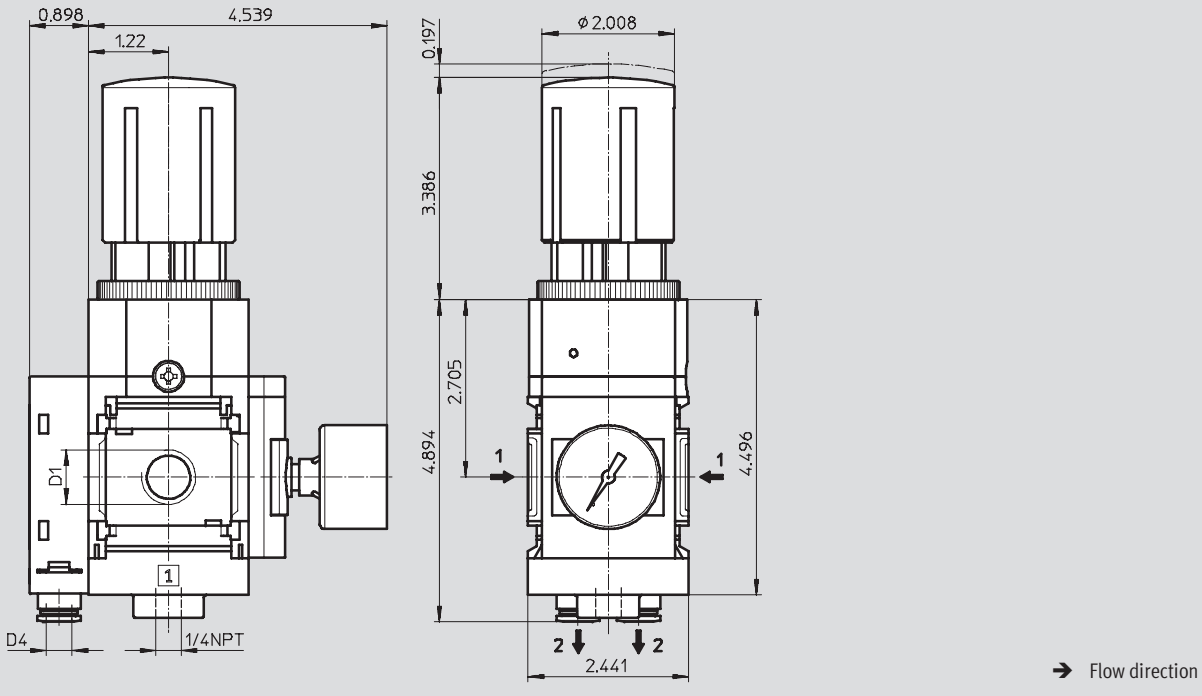
Precision pressure regulator (manifold assembly)		
1	Housing	Die-cast aluminum
2	Regulating knob	Polyamide/polyacetate
3	Diaphragm	Nitrile rubber
4	Cap, bottom	Polyester, fiberglass reinforced
5	Springs	Steel
-	Seals	Nitrile rubber
Note on materials		Free of copper and PTFE (not with variants A8M or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

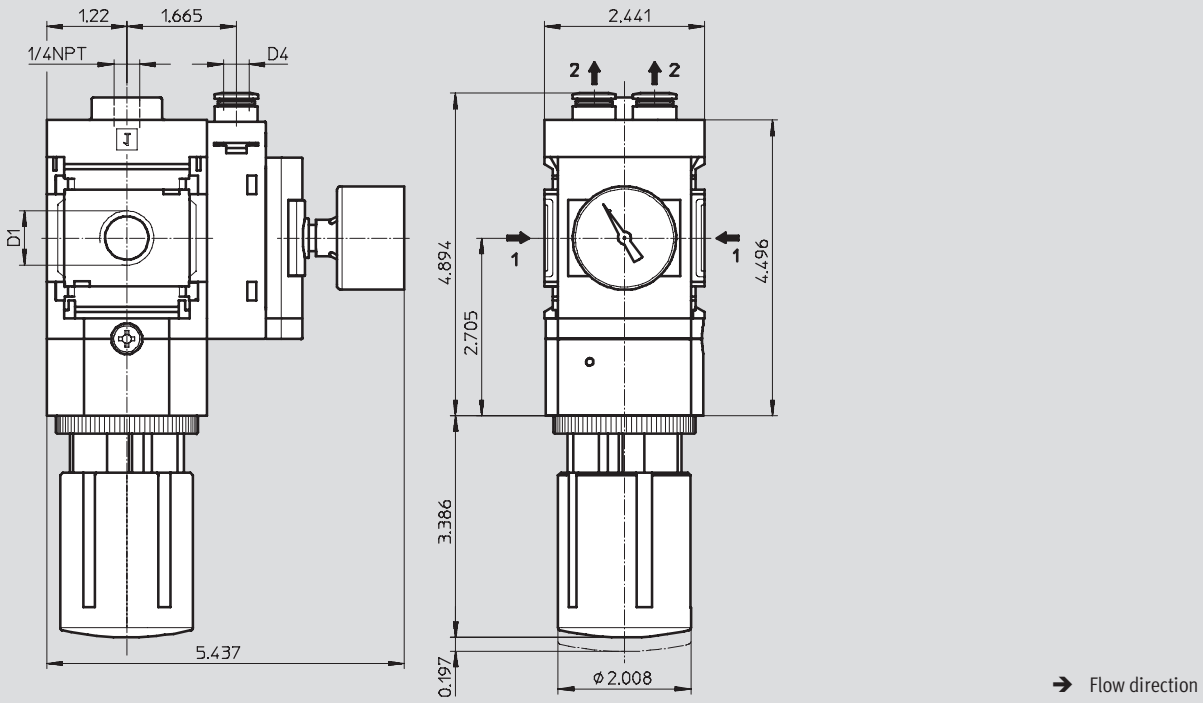
Dimensional Drawings



Dimensions¹⁾ – Alternative Assembly Position

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

Rotary knob at bottom KD, angled outlet block BI/BJ



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



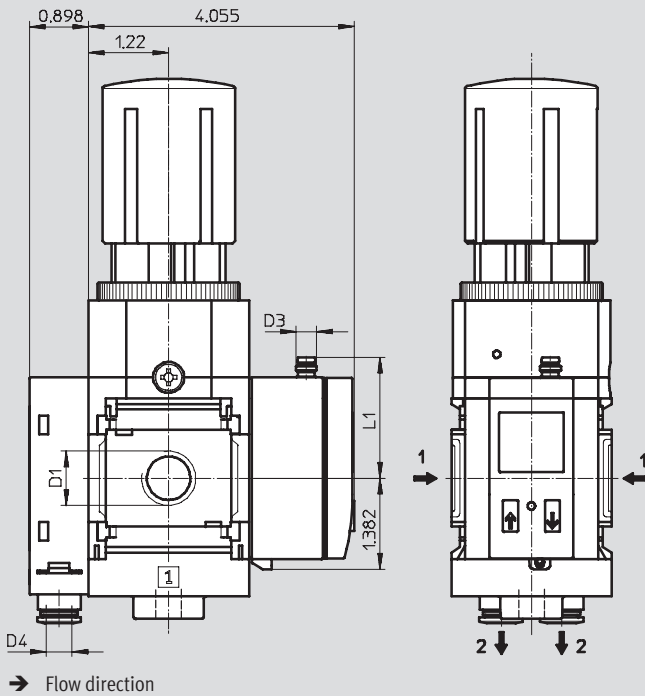
Dimensional Drawings

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

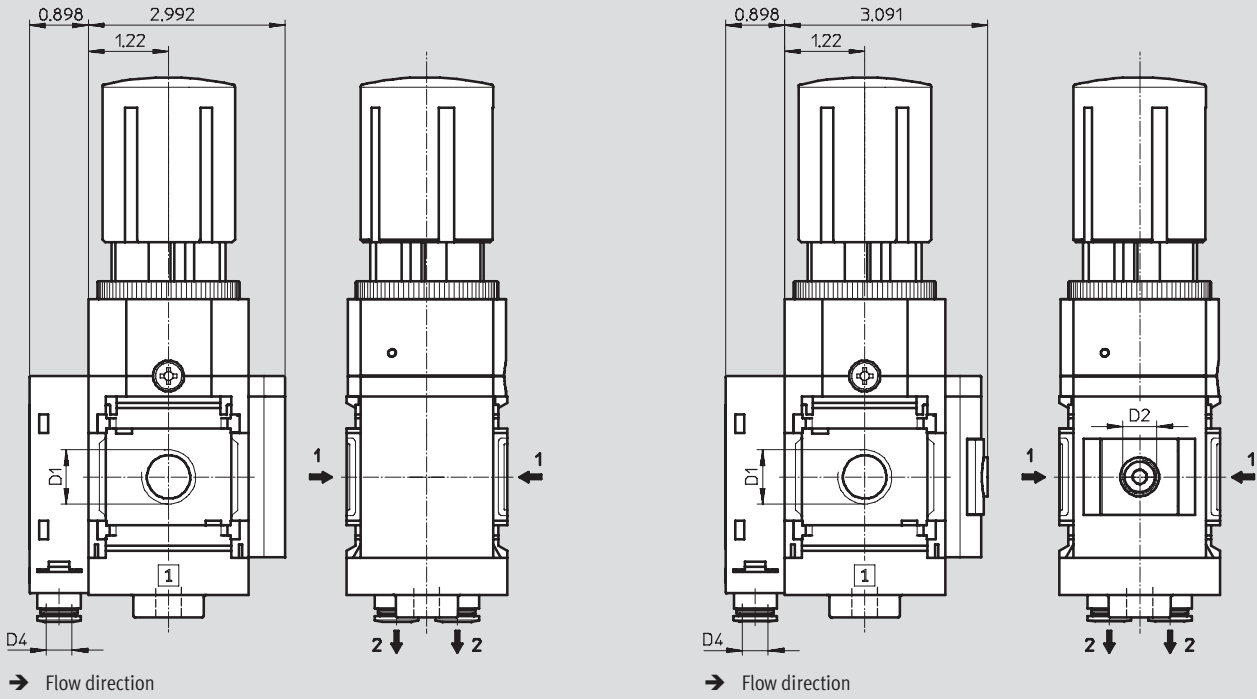
Dimensional Drawings

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



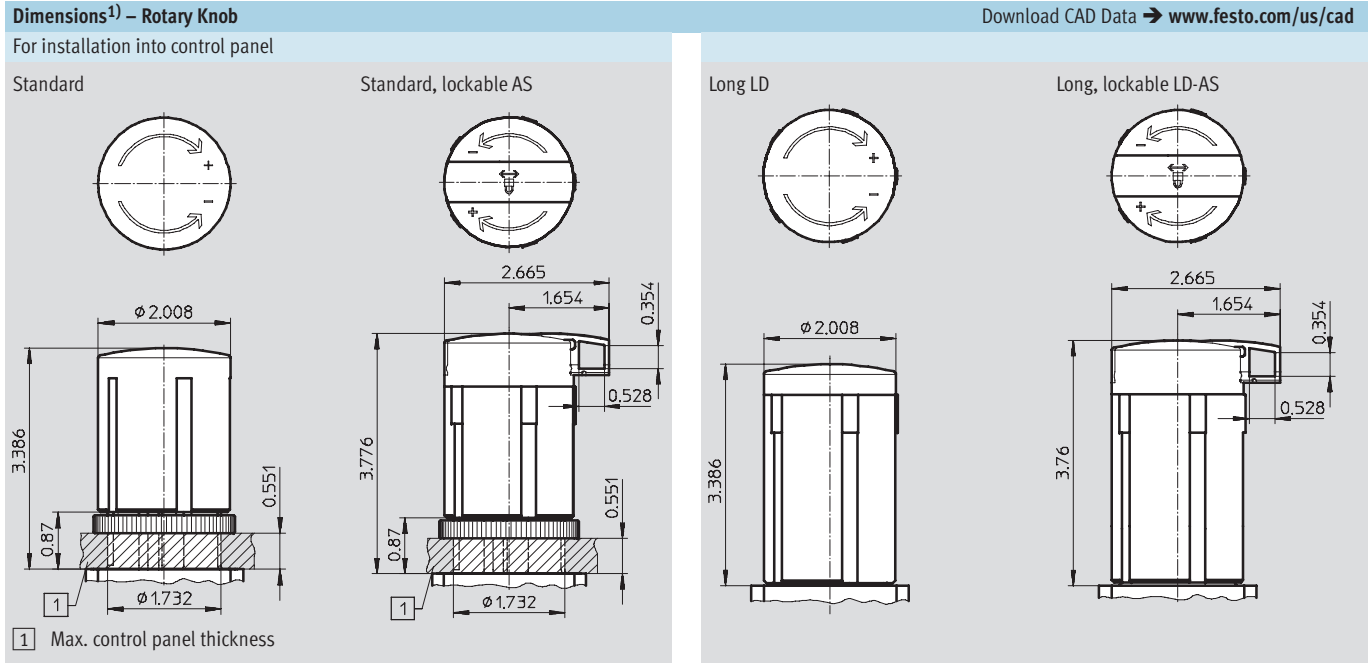
Type	D1	D2	D4
MS6N-LRPB-1/2-...-VS-BI	1/2 NPT	-	QS-5/16-U
MS6N-LRPB-1/2-...-VS-BJ			QS-3/8-U
MS6N-LRPB-1/2-...-A8-BI	1/2 NPT	1/8 NPT	QS-5/16-U
MS6N-LRPB-1/2-...-A8-BJ			QS-3/8-U
MS6N-LRPB-1/2-...-A4-BI	1/2 NPT	1/4 NPT	QS-5/16-U
MS6N-LRPB-1/2-...-A4-BJ			QS-3/8-U

1) Dimensions are in inches, unless otherwise noted.

Precision Pressure Regulators MS6N-LRPB – Inch Series



Dimensional Drawings



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-1/16-U		Pressure output to rear with angled outlet block QS-3/8-U			
	Part No.	Type	LT	Part No.	Type	LT
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 1W typically ships within 1 week Q request a quote for lead time

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 → 726)			-AQN	
		Port plate 3/8 NPT (dimensions → 726)			-AQP	
		Port plate 1/2 NPT (dimensions → 726)			-AQR	
		Port plate 3/4 NPT (dimensions → 726)			-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
 Must be selected with alternative assembly position KD without alternative flow direction Z or without alternative pressure output Bl, Bj.
3 **AD1 ... AD4** Measuring range max. 147 psi.
 Not with pressure regulation range D2, D4.

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-5/16-U			-BI	
		Angled outlet block QS-3/8-U			-BJ	
	Type of mounting	Mounting bracket with knurled nut for regulator head (dimensions → 724)		5 6	-WR	
		Mounting bracket (dimensions → 727)		7 8	-WP	
		Mounting bracket (dimensions → 727)		5 7	-WPM	
		Mounting bracket for large wall gap (dimensions → 727)		7 9	-WPB	
		Mounting bracket (dimensions → 723)		5	-WB	
	Reverse flow direction	Pressure output at front (without pressure output, no pressure gauge)			-Z	

- | | |
|--|---|
| <p>4 KD In combination with pressure gauge alternatives A8, A4, AD1, AD2, AD3, AD4 only with alternative flow direction Z</p> <p>5 WR, WPM, WB Either only with alternative flow direction Z or only with alternative assembly position KD</p> <p>6 WR Only with alternative flow direction Z.
Not with long rotary knob LD</p> | <p>7 WP, WPM, WPB Only with port plate AQN, AQP, AQR or AQS</p> <p>8 WP Not with alternative assembly position KD</p> <p>9 WPB Not with alternative assembly position KD
Not with alternative pressure output BI, BJ
Not with alternative flow direction Z</p> |
|--|---|

Transfer order code

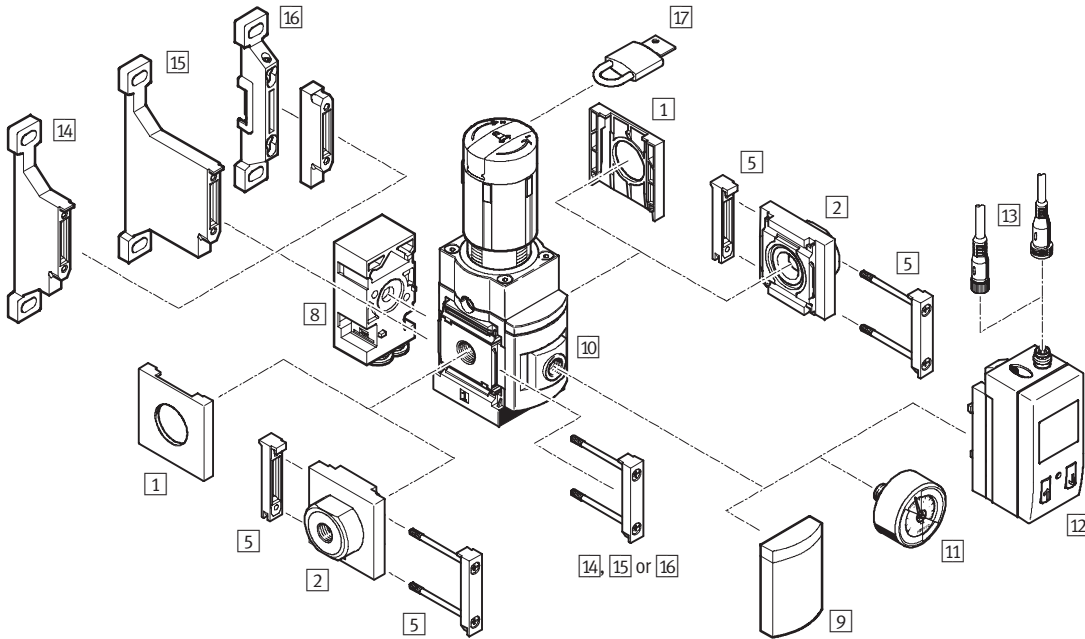
- [] - [] - [] - [] - [] - []

Precision Pressure Regulators MS6N-LRPB – Inch Series

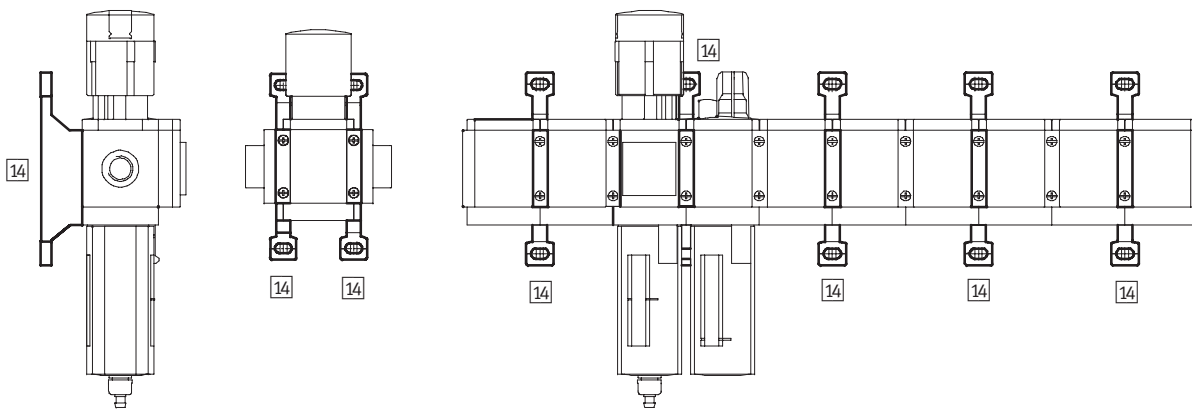
Accessories Overview

Mounting Attachments and Accessories

Pressure output at rear



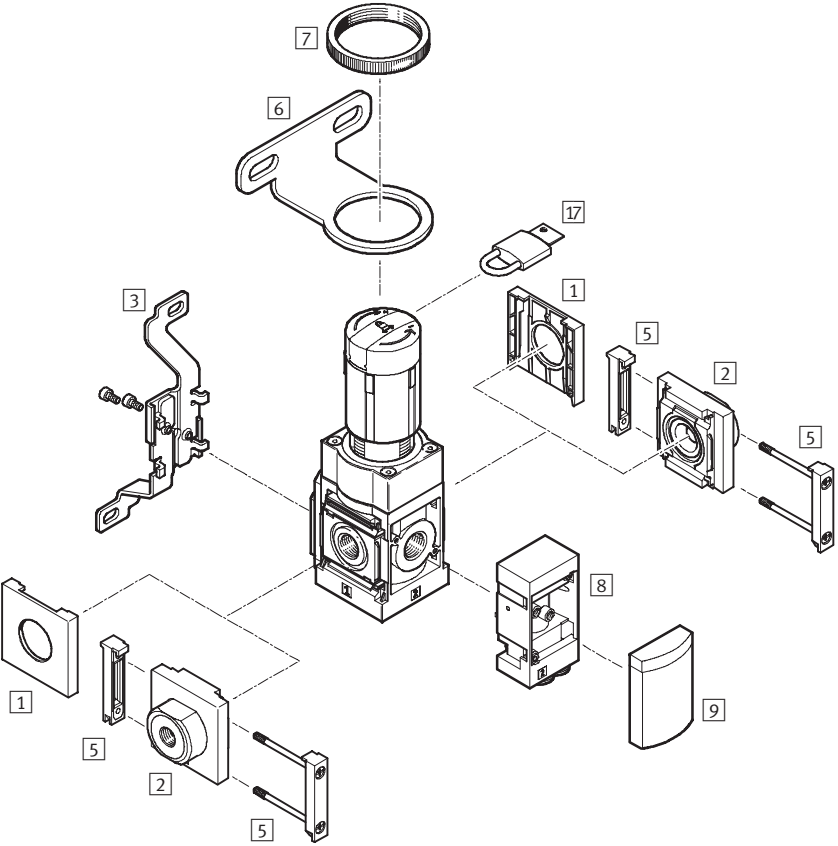
Single unit and combination unit mounting brackets.



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	■	-	■	-	725
2	Port plate MS6N-AQ...	-	■	-	■	726
3	Mounting bracket MS6-WB	■	■	-	-	723
5	Body connector MS6-MV	-	■	■	■	726
6	Regulator wall bracket MS6-WR	■	■	-	-	724
7	Knurled nut (included in scope of delivery) MS-LR	■	■	-	-	-
8	Angled outlet block B...	■	■	■	■	719
9	Cover plate VS	■	■	■	■	718
10	Adapter for EN pressure gauge 1/8/1/4 A8/A4	■	■	■	■	718
11	Precision pressure gauge A8M/MAP	■	■	■	■	718
12	Pressure sensor SDE1-...-MS AD1 ... AD4	■	■	■	■	718
13	Plug socket with cable SIM-M8-3.../SIM-M12-4...	■	■	■	■	730
14	Mounting bracket MS6-WP	-	■	■	■	727
15	Mounting bracket MS6-WPB	-	■	■	■	727
16	Mounting bracket MS6-WPM	-	■	■	■	727
17	Padlock LRVS-D	■	■	■	■	730

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



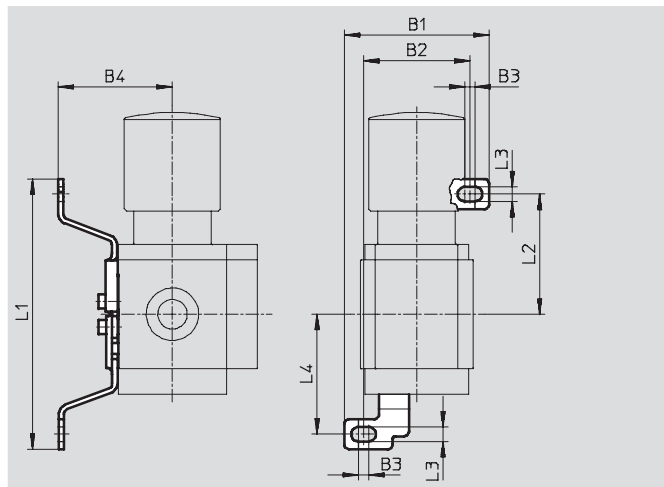
Accessories

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



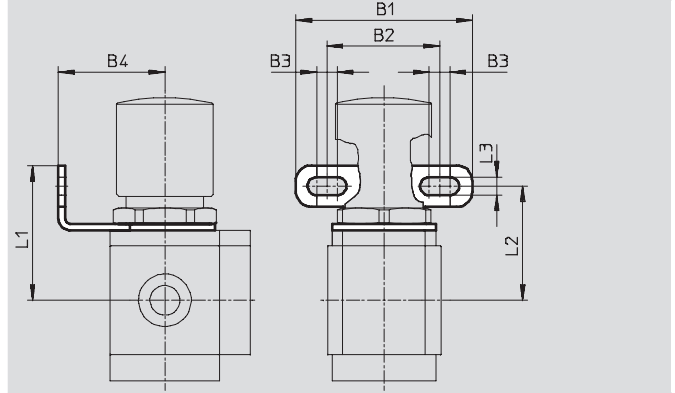
Accessories

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.

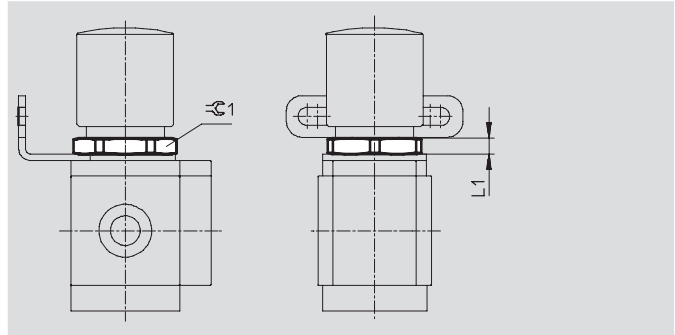


Dimensions and Ordering Data								Weight [lb]	Part No.	Type
B1	B2	B3	B4	L1	L2	L3				
2.76	1.65	0.32	1.57	2.64	2.24	0.28	0.18	526075	MS6-WR	

Hex nut MS6-WRS

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

Material:
Aluminum



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

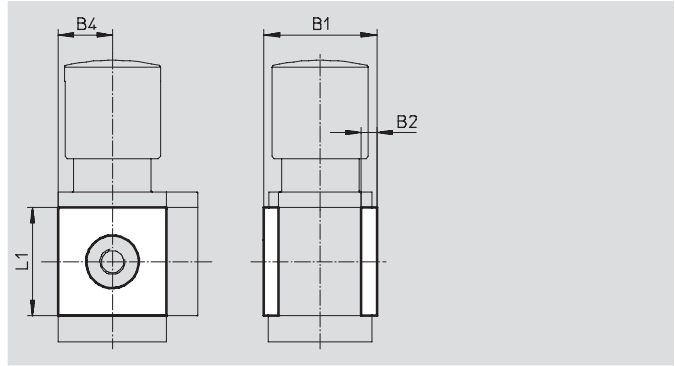
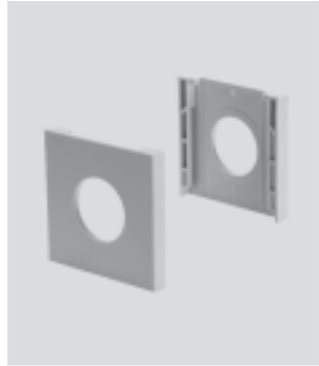
Pressure Regulators MS6N-LR/LRB/LRP/LRPB – Inch Series

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



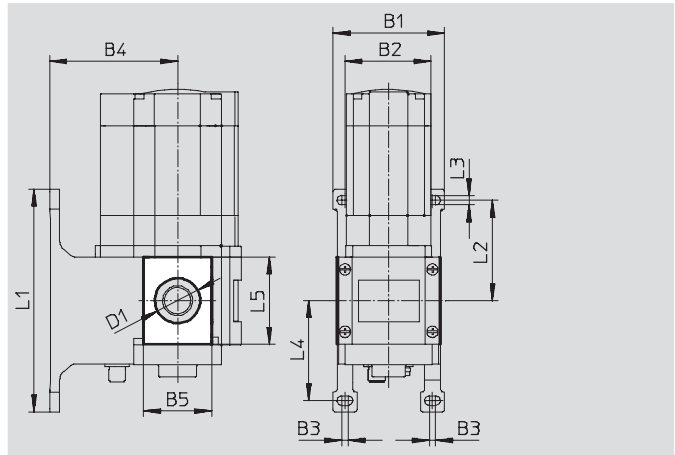
Dimensions and Ordering Data						
B1	B2	B4	L1	Part No.	Type	
2.64	0.31	1.22	2.44	538780	MS6-END	

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

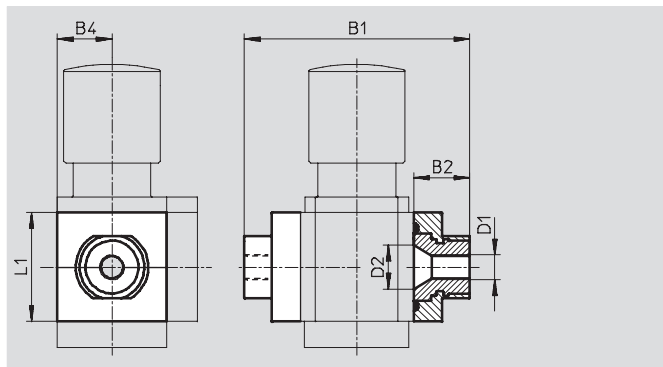
FESTO

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...

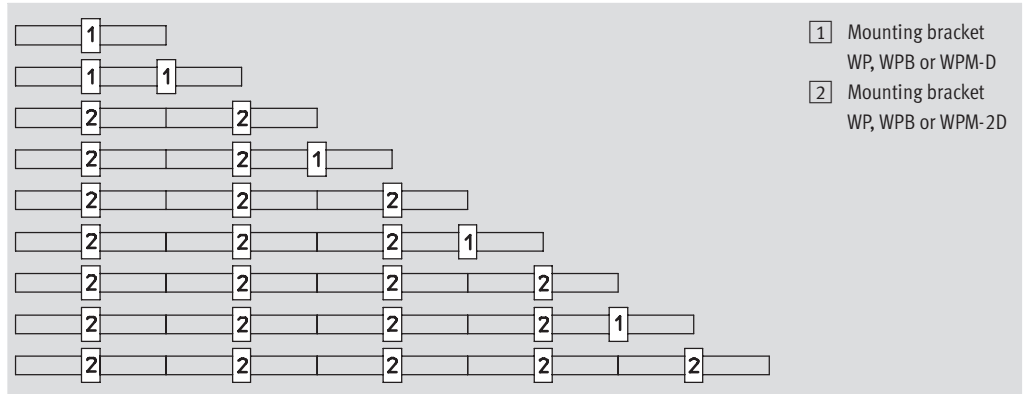
Suggested placement of wall mounting brackets when mounting air preparation combinations

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

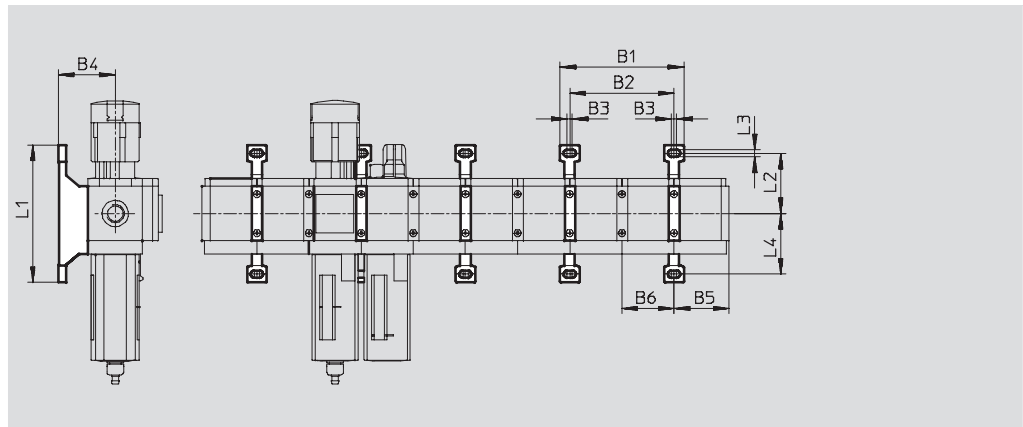
2 units: 4.88 in with WP, WPB
5.43 in with WPM-2D

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

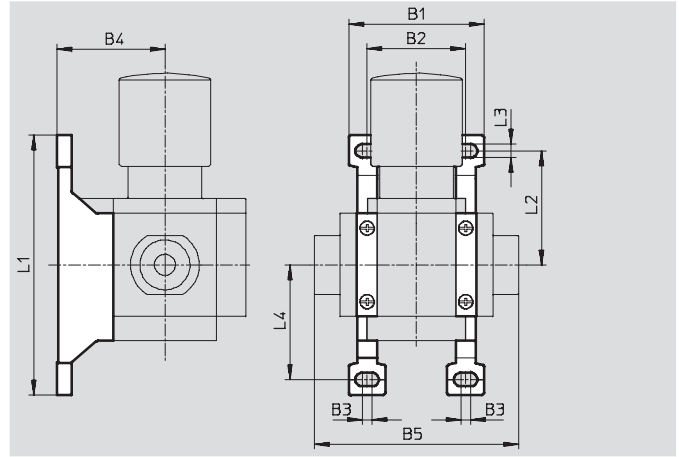


Accessories

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

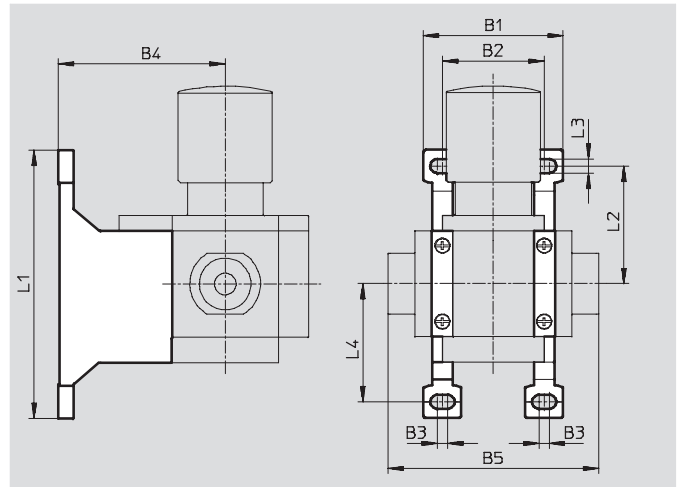


Dimensions and Ordering Data											
B1	B2	B3	B4	B5	L1	L2	L3	L4	Weight [lb]	Part No.	Type
3.11	2.44	0.18	2.13	4.53	6.22	2.80	0.26	2.80	0.15	532195	MS6-WP

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

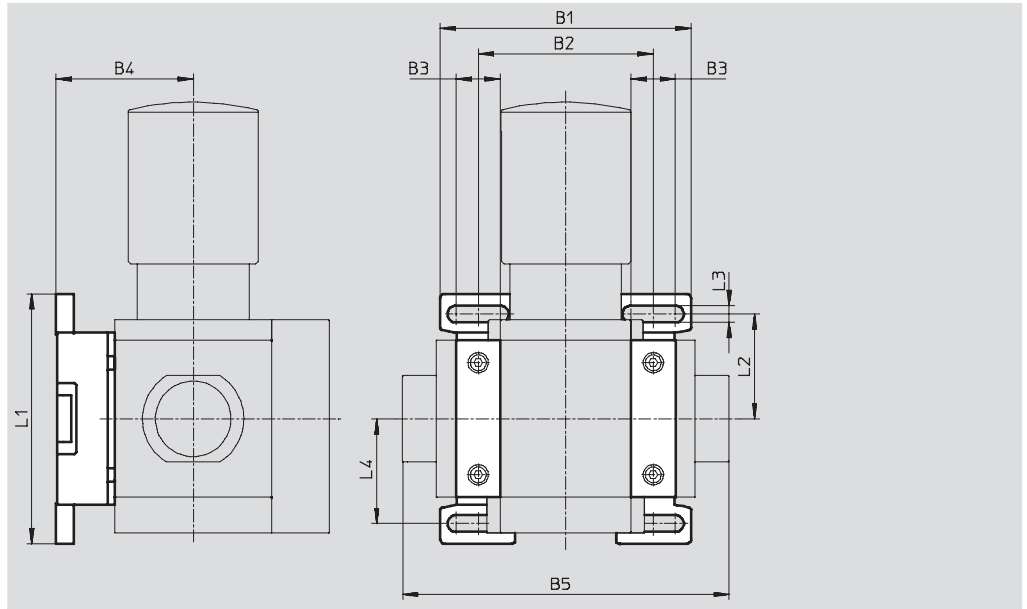
Accessories

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				Technical data → www.festo.com/catalog/ma	
	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 LRVS-D			
	Description	Weight [lb]	Part No. Type
	for regulators, filter/regulators and manual on-off valves	0.24	193786 LRVS-D

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



Replacement Parts

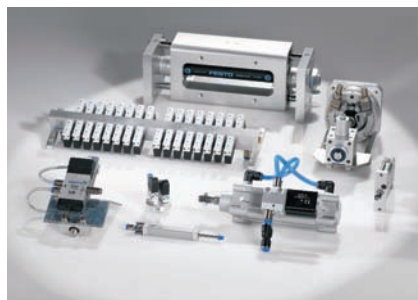
Ordering Data – Wearing Parts Kits			
Size	Description	Part No.	Type
MS6	Snap-ring, membrane, bellows, O-rings, screws, stem	673650	MS6-LR/LRB

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

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



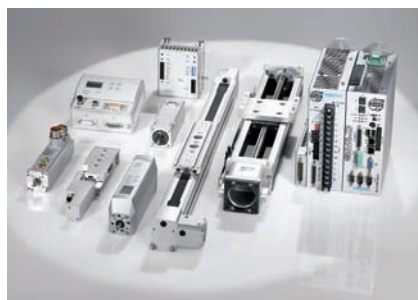
Custom Control Cabinets
Comprehensive engineering support
and on-site services



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 11,500 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 Certification

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

All Festo locations within the United States are registered to ISO 9001.



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

2800 Collier Canyon Road
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: 2800 Collier Canyon Road, 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