#### 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 LRB: 15 ... 206 psi
- Flow rate: 21.2 ... 264.8 scfm

Produc	t Range Overvie	W															
Туре	Flow rate	Pneumatic connections		Pressure regulation range				Pressure indicator					Press	ure	Reverse		
	[scfm]			[psi]											adjus ment		flow
		Body thread	Port plate	0.7 10.3	0.7 36.8	4.4 58.8	4.4 103	7.4176	7.4 235	Cover plate (without pressure gauge)	Integrated MS pressure gauge	Adapter for pressure gauge 1/8 NPT	Adapter for pressure gauge 1/4 NPT	Pressure sensor with display	Rotary knob, lockable	Rotary knob, long	Flow direction from right to left
MS6N			AG	D2	D4	D5	D6	D7	D8	VS	AG	A8	A4	AD	AS	LD	Z
LR	77.7 264.8	1/4 NPT, 3/8 NPT, 1/2 NPT	1/4 NPT, 3/8 NPT, 1/2 NPT, 3/4 NPT	-	-			•		-		-	•		-	-	
LRB	21.2 257.7	1/2 NPT	1/4 NPT, 3/8 NPT, 1/2 NPT, 3/4 NPT	-	-							-					
LRP	28.2 176.5		1/4 NPT, 3/8 NPT, 1/2 NPT, 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	<b>→</b> 674	Technical Data	<b>→</b> 686	Technical Data	<b>→</b> 697	Technical Data	<b>→</b> 710
Dimensional Drawings	<b>→</b> 678	Dimensional Drawings	<b>→</b> 688	Dimensional Drawings	<b>→</b> 701	Dimensional Drawings	<b>→</b> 712
Ordering Data	<b>→</b> 681	Ordering Data	<b>→</b> 691	Ordering Data	<b>→</b> 705	Ordering Data	<b>→</b> 717
Accessories	<b>→</b> 684	Accessories	<b>→</b> 694	Accessories	<b>→</b> 708	Accessories	<b>→</b> 720
Replacement Parts	<b>→</b> 731						
→ www.festo.com/catalog	g/ms6n-lr	→ www.festo.com/catalog	g/ms6n-lrb	→ www.festo.com/catalog	g/ms6n-lrp	→ www.festo.com/catalog	g/ms6n-lrpb

2007/10 – Subject to change – MS Series

**FESTO** 

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



<b>General Technical Data</b>	eneral Technical Data									
Pneumatic connection 1, 2			1/4 NPT	NPT 3/8 NPT 1/2 NPT						
Supply pressure [psi]			12 294							
Pressure regulation	D5	[psi]	4.4 59							
range	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	Standard Nominal Flow Rate qnN <sup>1)</sup> [scfm]									
Pneumatic connection 1	, 2	1/4 NPT	3/8 NPT	1/2 NPT						
Pressure regulation	D5	84.7 <sup>2)</sup>	194.2 <sup>2)</sup>	264.8 <sup>2)</sup>						
range	D6	105.9	204.7	229.5						
	D7	95.3	158.9	194.2						
	D8	77.7	141.2	158.9						

<sup>1)</sup> Measured at p1 = 147 psi and p2 = 88 psi,  $\Delta$ p = 15 psi

<sup>2)</sup> Measured at p1 = 147 psi and p2 = 44 psi,  $\Delta p$  = 15 psi

## Pressure Regulators MS6N-LR — Inch Series Technical Data



Operating and Environment	al 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 <sup>1)</sup>	2	

<sup>1)</sup> 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.

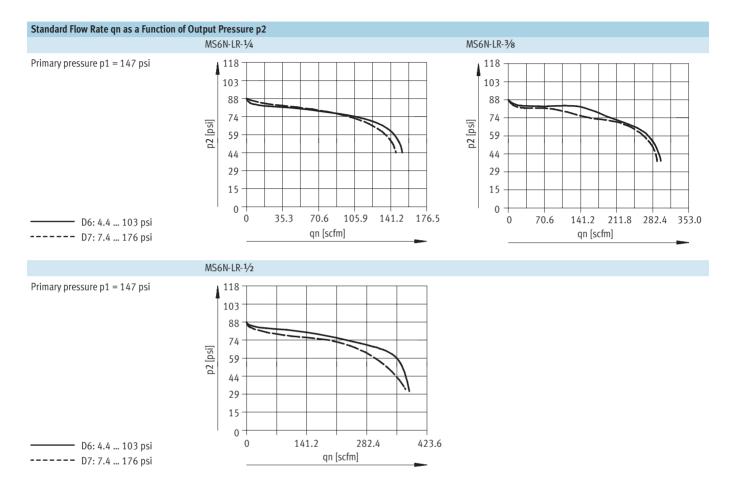
Weights [lb]	
Pressure regulator	1.46

- Wearing parts kits → 731
- For spare parts go to: www.festo.com/en/spare\_parts\_service

2007/10 – Subject to change – MS Series



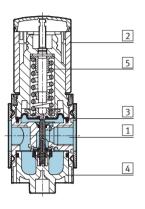
Technical Data



# Pressure Regulators MS6N-LR – Inch Series Technical Data



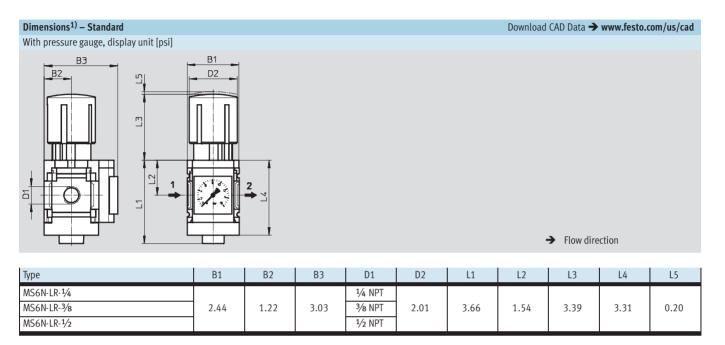
#### Materials Sectional view



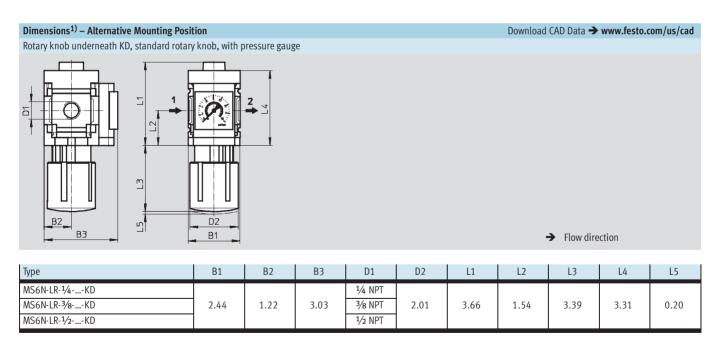
Pres	sure regulator	
1	Body	Die-cast aluminum
2	Regulating knob	Polyamide/polyacetate
3	Diaphragm	Nitrile rubber
4	Bottom cap	Polyester, fiberglass reinforced
5	Springs	Steel
-	Seals	Nitrile rubber
	Note on materials	Free of copper and PTFE only with cover
		plate VS



Dimensional Drawings



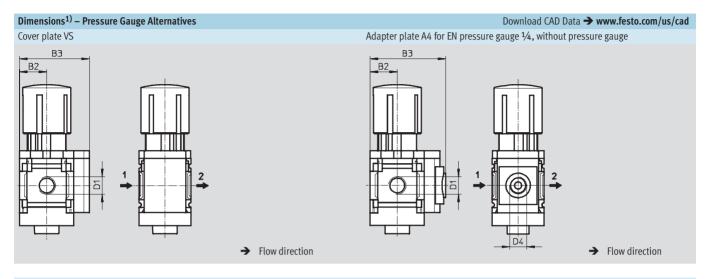
1) Dimensions are in inches, unless otherwise noted.



<sup>1)</sup> Dimensions are in inches, unless otherwise noted.

**FESTO** 

Dimensional Drawings



# Pressure sensor with display AD1 ... AD4 B3 B2 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

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

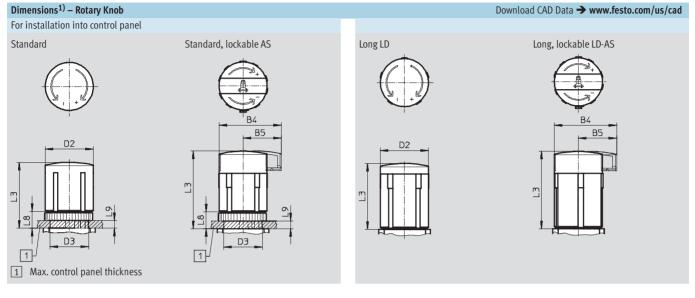
SDE1-D10-G2-MS-L-NI-M12 with 4-pin plug M12x1, 1 switching output NPN and 4 ... 20 mA analog

Туре	B2	В3	D1	D4	D6	L5	L6
MS6N-LR-1/4VS			½ NPT				
MS6N-LR-3/8VS	1.22	2.99	3/8 NPT	-	-	-	_
MS6N-LR-1/2VS			½ NPT				
MS6N-LR-1/4A4			1/4 NPT				
MS6N-LR-3/8A4	1.22	3.09	3/8 NPT	½ NPT	-	-	-
MS6N-LR-1/2A4			½ NPT				
MS6N-LR-1/4AD1/AD2			1/4 NPT				
MS6N-LR-3/8AD1/AD2	1.22	4.06	3/8 NPT	-	M8x1	1.38	1.84
MS6N-LR-1/2AD1/AD2			½ NPT				
MS6N-LR-1/4AD3/AD4			1/4 NPT				
MS6N-LR-3/8AD3/AD4	1.22	4.06	3/8 NPT	-	M12x1	1.38	2.20
MS6N-LR-1/2AD3/AD4			½ NPT				

<sup>1)</sup> Dimensions are in inches, unless otherwise noted.

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Dimensional Drawings



Туре	B4	B5	D2	D3	L3	L8	L9
				+0.04			
MS6N-LR	-	-	2.01	1.73	3.39	0.87	0.55
MS6N-LRAS	2.67	1.65	2.01	1./ )	3.76	0.67	0.55
MS6N-LRLD	-	-	2.0.1	_	3.39	_	_
MS6N-LRLD-AS	2.67	1.65	2.0.1	_	3.76	_	_

<sup>1)</sup> Dimensions are in inches, unless otherwise noted.

## Pressure Regulators MS6N-LR — Inch Series Ordering Data — Pre-configured Products



Ordering Data			
Pressure gauge, lockable standard type rota	ry knob		
Connection	Part No.	Туре	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
½ 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/s-D6-AS	1D
1/2 NPT	531449	MS6N-LR-1/2-D6-AS	1D
Pressure regulation range 7.4176 psi			
1/4 NPT	531454	MS6N-LR-1/4-D7-AS	1D
3/8 NPT	531456	MS6N-LR-3/s-D7-AS	1D
1/2 NPT	531455	MS6N-LR-½-D7-AS	1D

LT = Lead time **1D** typically ships same day/next day  ${\bf 1W}\ \ {\bf typically\ ships\ within\ 1\ week}$ **Q** request a quote for lead time

## Pressure Regulators MS6N-LR — Inch Series Ordering Data — Configurable Products



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

Ord	ering Table				
Gric	d 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 ¼ NPT		-1/4	
		Body thread 3/8 NPT		-3/8	
		Body thread ½ NPT		-1/2	
		Port plate ¼ NPT (dimensions → 726)		-AQN	
		Port plate 3/8 NPT (dimensions → 726)		-AQP	
		Port plate ½ NPT (dimensions → 726)		-AQR	
		Port plate ¾ NPT (dimensions → 726)		-AQS	
	Pressure regulation range	4.4 59 psi		-D5	
		4.4 103 psi		-D6	
		7.4 176 psi		-D7	
4		7.4 235 psi		-D8	

Transfer order co	de								
527664		MS	6	N	_	LR	-	-	

## Pressure Regulators MS6N-LR — Inch Series Ordering Data — Configurable Products

**FESTO** 

<b>→</b>	O Options											
		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 -	-	0S -	LD -	-	AS -	WB -	Z				

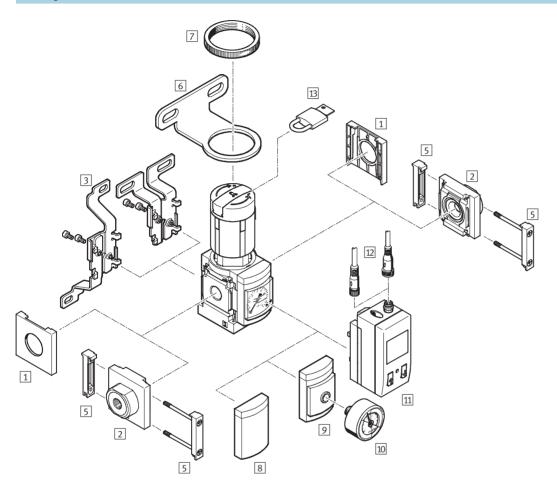
Ordering Table				
Grid dimension [mm]	62	Conditions	Code	Enter code
O Pressure gauge alternatives	Cover plate		-VS	
	Adapter plate for EN pressure gauge 1/4, without pressure gauge		-A4	
	Pressure sensor with display, plug M8, 1 switch output PNP, 3-pin	1	-AD1	
	Pressure sensor with display, plug M8, 1 switch output NPN, 3-pin	1	-AD2	
	Pressure sensor with display, plug M12, 1 switch output PNP, 4-pin,	1	-AD3	
	analog output 4 20 mA			
	Pressure sensor with display, plug M12, 1 switch output NPN, 4-pin,	1	-AD4	
	analog output 4 20 mA			
Alternative pressure gauge scale	bar	2	-BAR	
	MPa	2	-MPA	
Secondary venting	Without secondary venting		-0S	
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	4 5	WR WP, WPM	Not with long rotary knob LD Only with port plate AQN, AQP, AQR or AQ
2 BAR, MPA	Not with pressure gauge alternatives VS, A4, AD1, AD2, AD3, AD4			
3 <b>KD</b>	Not with alternative pressure gauge scale MPA.			
	Not with mounting type WP			

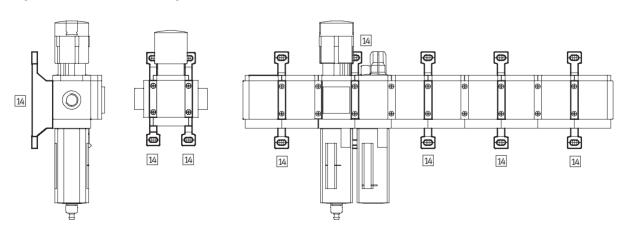
	Transfer order code								
-	-	- [	-	-	-[	-	-	-	



#### **Mounting Attachments and Accessories**



Single unit and combination unit mounting brackets.



## Pressure Regulators MS6N-LR – Inch Series Accessories Overview



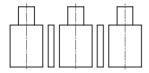
loui	nting Attachments and Accessories	le: 1 ·		le 11 0 - 11 3	24.40	1.50
		Single unit		Combination unit ->		→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap					725
	MS6-END	_	_	_	_	
2	Port plate					726
	MS6N-AQ	_	_	_	_	
3	Mounting bracket					723
	MS6-WB	_	_	_	_	
5	Body connector		•	•		726
	MS6-MV	_	_		-	
6	Regulator wall bracket					724
	MS6-WR	•	_	_	_	
7	Knurled nut (included in scope of delivery)					
	MS-LR	•	_	_	_	
8	Cover plate			•	•	682
	VS	•	_		_	
9	Adapter for EN pressure gauge 1/4			•		682
	A4	•	_		_	
10	Pressure gauge	•		•	•	730
	MA	_	_	_	_	
11	Pressure sensor SDE1MS	_		•		682
	AD1 AD4	•	_		_	
12	Plug socket with cable			•	•	730
	SIM-M8-3/SIM-M12-4	•	•	•	•	
13	Padlock	_	_	_	_	730
	LRVS-D	•	•	•	•	
14	Mounting bracket			•	•	727
	MS6-WP/WPB/WPM	_	•	•	•	

Technical Data

**FESTO** 

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	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	D5	[psi]	4.4 59
range	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 <sup>1)</sup> [scfm]									
Variant		Standard	Angled outlet block	Angled outlet block					
			QS-5/16-U	QS-3/8-U					
Pressure regulation	D5	257.7 <sup>2)</sup>	21.2 <sup>2)</sup>	26.5 <sup>2)</sup>					
range	D6	222.4	31.1	35.3					
	D7	194.2	28.2	33.5					
	D8	158.9	26.5	30.0					

<sup>1)</sup> Measured at p1 = 147 psi and p2 = 88 psi,  $\Delta p$  = 15 psi

<sup>2)</sup> Measured at p1 = 147 psi and p2 = 44 psi,  $\Delta p$  = 15 psi



Technical Data

Operating and Environment	al 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 <sup>1)</sup>	2	

<sup>1)</sup> 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.

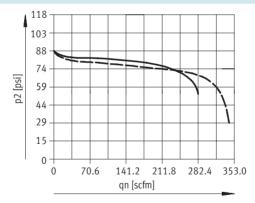
Weights [lb]	
Pressure regulator	1.49

- 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

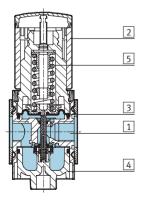
Primary pressure p1 = 147 psi



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

#### Materials

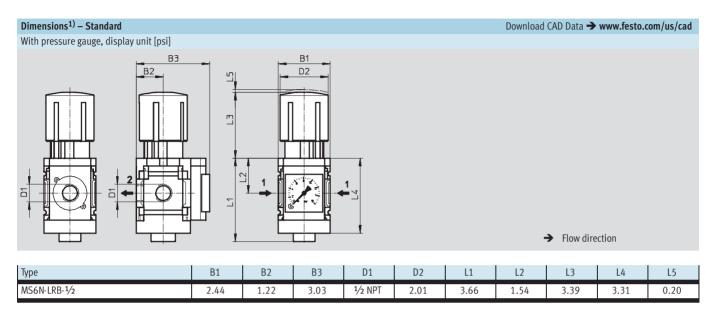
Sectional view



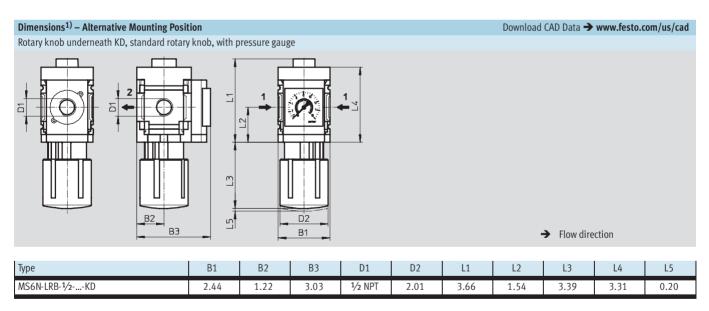
Pressure regulator (manifold assembly)									
1	Body	Die-cast aluminum							
2	Regulating knob	Polyamide/polyacetate							
3	Diaphragm	Nitrile rubber							
4	Bottom cap	Polyester, fiberglass reinforced							
5	Springs	Steel							
-	Seals	Nitrile rubber							
	Note on materials	Free of copper and PTFE only with cover plate VS							
		piace 13							



Dimensional Drawings



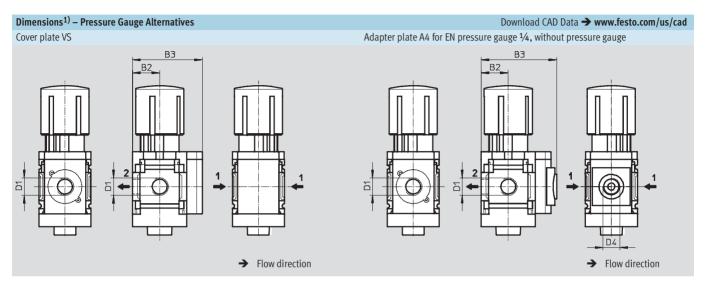
<sup>1)</sup> Dimensions are in inches, unless otherwise noted.

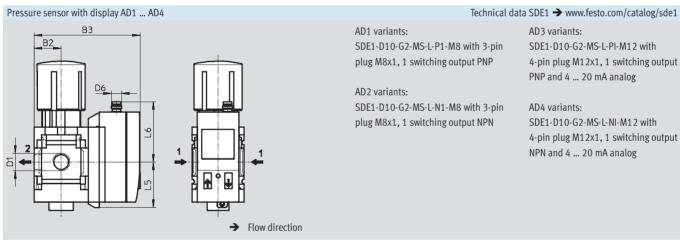


<sup>1)</sup> Dimensions are in inches, unless otherwise noted.

**FESTO** 

Dimensional Drawings





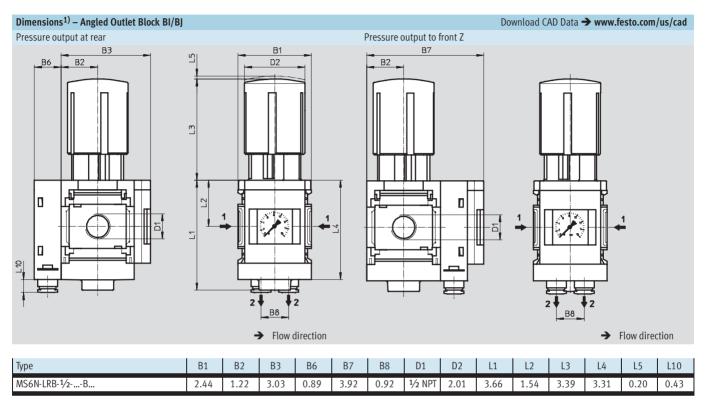
Туре	B2	В3	D1	D4	D6	L5	L6
MS6N-LRB-1/2VS	1.22	2.99	1/2 NPT	-	-	-	-
MS6N-LRB-1/2A4	1.22	3.09	½ NPT	1/4 NPT	-	-	-
MS6N-LRB-1/2AD1/AD2	1.22	4.06	½ NPT	-	M8x1	1.38	1.84
MS6N-LRB-1/2AD3/AD4	1.22	4.06	½ NPT	_	M12x1	1.38	2.20

<sup>1)</sup> Dimensions are in inches, unless otherwise noted.

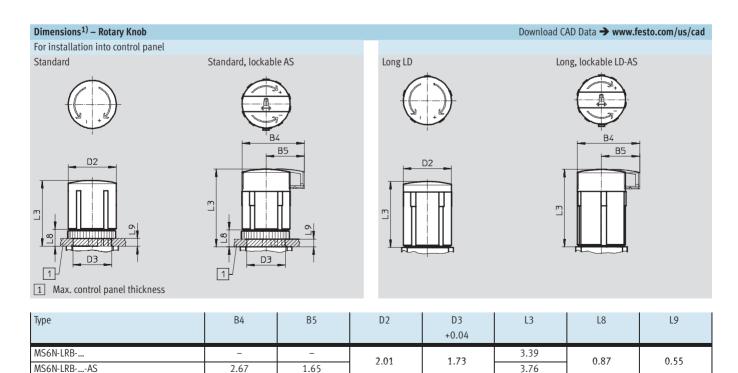
2007/10 – Subject to change – MS Series

**FESTO** 

Dimensional Drawings



<sup>1)</sup> Dimensions are in inches, unless otherwise noted.



2.01

2.67

1.65

MS6N-LRB-...-LD

MS6N-LRB-...-LD-AS

3.39

3.76

## Pressure Regulators MS6N-LRB — Inch Series Ordering Data — Pre-configured Products



Ordering Data					
Pressure gauge, lockable standard type rota	ary knob				
Connection	Pressure o	utput to rear without angled outlet block		Pressure output to rear with angled outlet block QS-5/16-L	J
	Part No.	Туре	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 sta	ındard-type rotary knob	
Connection	Pressure or	utput to rear without angled outlet block	
	Part No.	Туре	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	<b>1D</b> typically ships same day/next day	<b>1W</b> typically ships within 1 week	<b>Q</b> request a quote for lead time
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2007/10 - Subject to change - MS Series

# Pressure Regulators MS6N-LRB – Inch Series Ordering Data – Configurable Products



M Mandatory Da	ıta						O Options →
Part No.	Series	Size	Thread	Function	Connection size	Pressure regulation range	Pressure gauge alternatives
527666	MS	6	N	LRB	1/ <sub>2</sub> AQN	D5 D6	VS A4
					AQP AQR	D7 D8	AD1 AD2
					AQS		AD3 AD4
Order example	MC			LDD	100	Dr	
527666	MS	6	N -	LRB -	AQP –	D5 -	A4

10	dering Table				
Gr	id 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 ½ NPT (dimensions → 726)		-AQR	
		Port plate ¾ 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	
0	Pressure gauge alternatives	Cover plate	1	-VS	
		Adapter plate for EN pressure gauge ¼, without pressure gauge	2	-A4	
		Pressure sensor with display, plug M8, 1 switching output PNP, 3-pin	2 3	-AD1	
		Pressure sensor with display, plug M8, 1 switching output NPN, 3-pin	2 3	-AD2	
		Pressure sensor with display, plug M12, 1 switching output PNP, 4-pin,	2 3	-AD3	
		analog output 4 20 mA			
		Pressure sensor with display, plug M12, 1 switching output NPN, 4-pin,	2 3	-AD4	
Ψ		analog output 4 20 mA			

1 <b>VS</b>	Must be selected if alternative flow direction Z is selected without alternative	2	A4, AD1 A	ND4
	assembly position KD and without pressure output BI, BJ.			In combination with alterna
	Must be selected if alternative assembly position KD is selected without alternative	3	AD1 AD4	Measuring range max, 147

ative flow direction Z only with alternative assembly position KD

flow direction Z and without pressure output BI, BJ Not with pressure regulation range D8

Transfer order co	de									
527666		MS	6	N	-	LRB	-	-	-	

# Pressure Regulators MS6N-LRB — Inch Series Ordering Data — Configurable Products



	O 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
-		0S -	LD -		AS -	BJ –	WP -	

Ordering Table				
Grid dimension [mm]	62	Conditions	Code	Enter code
◆ Alternative pressure gauge scale	bar	4	-BAR	
0	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	Angled outlet block QS-5/16-U		-BI	
(p <sub>max</sub> = 147 psi)	Angled outlet block QS-3/8-U		-BJ	
Type of mounting	Mounting bracket with knurled nut for regulator head (dimensions → 724)	6 7	-WR	
	Mounting bracket (dimensions → 727)	89	-WP	
	Mounting bracket (dimensions → 727)	68	-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.	6	WR, WPM, W	/B
	•	Not with alternative assembly position KD.			In combination with alternative flow direction Z not with alternative assembly position KD
		In combination with alternative flow direction Z only with pressure output BI, BJ	7	WR	Only with alternative flow direction Z.
5	KD	With alternative pressure gauge scale BAR only if alternative flow direction Z or			Not with rotary knob alternative LD
		pressure output BI, BJ has been selected.	8	WP, WPM, W	PB
		Not with mounting type WP, WPB.			Only with port plate AQN, AQP, AQR, AQS
		In combination with mounting type WR, WPM, WB not with alternative flow	9	WP	Only with alternative flow direction Z and/or only with pressure output BI, BJ
		direction Z.	10	WPB	Not with alternative flow direction Z.
		In combination with pressure gauge alternatives A4, AD1, AD2, AD3, AD4 only with			Not with pressure output BI, BJ
		alternative flow direction Z			

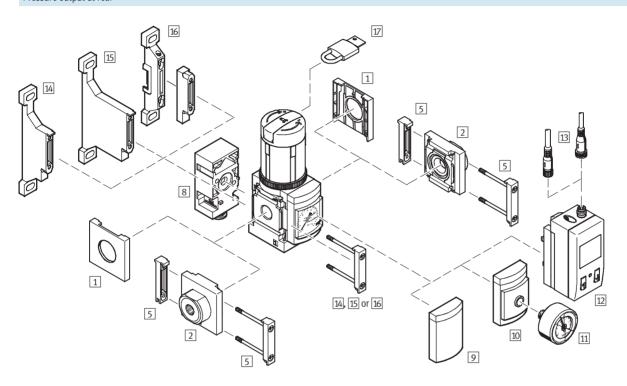
	Transfer order cod										
-		-	-	- [	_	_	- [	_	_	_	

# Pressure Regulators MS6N-LRB – Inch Series Accessories Overview

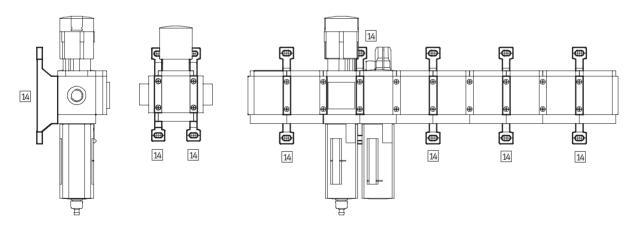


#### **Mounting Attachments and Accessories**

Pressure output at rear



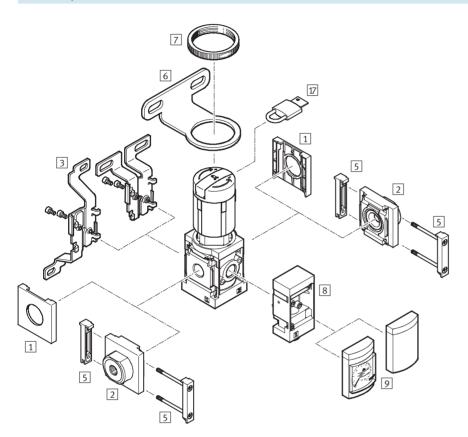
Single unit and combination unit mounting brackets.



# Pressure Regulators MS6N-LRB – Inch Series Accessories Overview

**FESTO** 

#### Pressure output at front



# Pressure Regulators MS6N-LRB – Inch Series Accessories Overview



		Single unit		Combination unit ->	3.1-49	→ Page
		without port plate	with port plate	without port plate	with port plate	
1	Cover cap	_		_		725
	MS6-END	•	_	•	_	
2	Port plate		_		_	726
	MS6N-AQ	_	•	_	•	
3	Mounting bracket		•			723
	MS6-WB	•	_	-	_	
5	Body connector		•	•	_	726
	MS6-MV	-	_	•	•	
6	Regulator wall bracket			_	_	724
	MS6-WR	•	_	_	_	
7	Knurled nut (included in scope of delivery)		•	_	_	-
	MS-LR	•	_	_	_	
8	Angled outlet block		•			693
	В	•	_	-	_	
9	Cover plate					692
	VS	•	_	-	_	
10	Adapter for EN pressure gauge 1/4			•	•	692
	A4	_	_	_	_	
1	Pressure gauge		•			730
	MA	•	_	-	_	
2	Pressure sensor SDE1MS				•	692
	AD1 AD4	•	_	-	_	
3	Plug socket with cable					730
	SIM-M8-3/SIM-M12-4	_	_	_	_	
4	Mounting bracket	_				727
	MS6-WP		_	_	_	
5	Mounting bracket			•	•	727
	MS6-WPB	_	_	_	•	
6	Mounting bracket		•	•	•	727
	MS6-WPM	_	_	•	•	
7	Padlock	_	•			730
	LRVS-D	•	•	•	•	



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

Standard Nominal Flow Rate qnN [scfm]						
Pneumatic connection 1, 2		1/4 NPT	3/8 NPT	1/2 NPT		
Pressure regulation D2		28.2 <sup>1)</sup>	38.81)	56.5 <sup>1)</sup>		
range	D4	38.8 <sup>2)</sup>	49.4 <sup>2)</sup>	81.2 <sup>2)</sup>		
	D5	49.4 <sup>3)</sup>	60.0 <sup>3)</sup>	105.9 <sup>3)</sup>		
	D7	105.9 <sup>4)</sup>	116.5 <sup>4)</sup>	176.5 <sup>4)</sup>		

<sup>1)</sup> Measured at p1 = 147 psi and p2 = 7.4 psi,  $\Delta p$  = 1.5 psi

Measured at p1 = 147 psi and p2 = 22 psi, Δp = 1.5 psi
 Measured at p1 = 147 psi and p2 = 37 psi, Δp = 1.5 psi

<sup>4)</sup> Measured at p1 = 147 psi and p2 = 88 psi,  $\Delta$ p = 1.5 psi



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 <sup>1)</sup>	2				

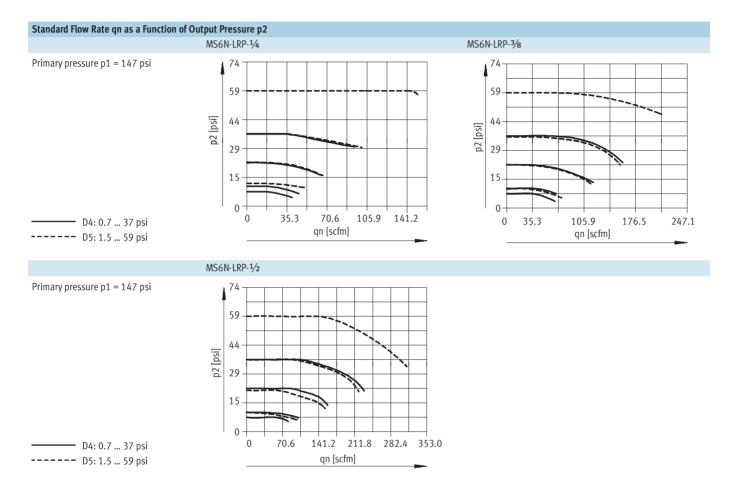
<sup>1)</sup> Corrosion resistance class 2 to Festo standard 940 070 Components subject to moderate corrosion stress. Externally visible parts with primarily decorative surface requirements which are in direct contact with a normal industrial environment or media such as coolants or lubricating agents.

Weight [lb]	
Precision pressure regulator	2.00

• For spare parts go to: www.festo.com/en/spare\_parts\_service



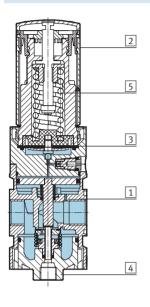
Technical Data



# Precision Pressure Regulators MS6N-LRP – Inch Series Technical Data



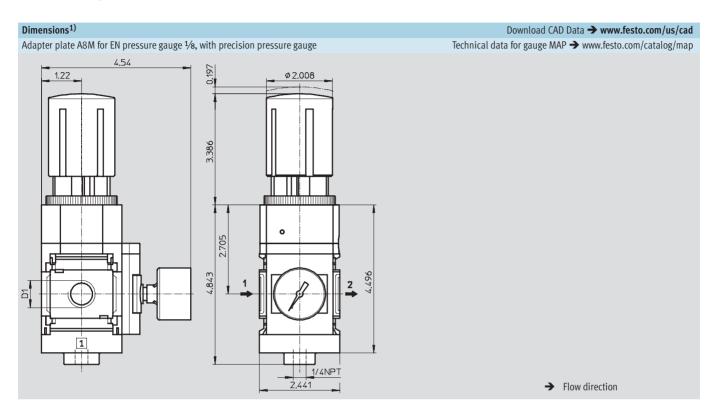
#### Materials Sectional view



Prec	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)						



Dimensional Drawings



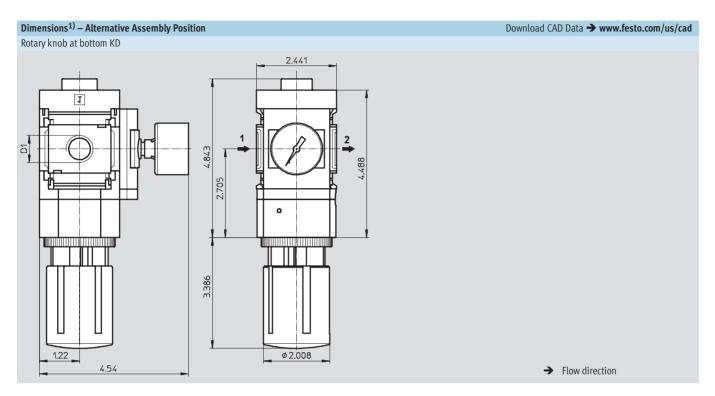
Туре	D1
MS6N-LRP-1/4A8M	1/4 NPT
MS6N-LRP-3/8A8M	3/8 NPT
MS6N-LRP-1/2A8M	1/2 NPT

<sup>1)</sup> Dimensions are in inches, unless otherwise noted.

2007/10 – Subject to change – MS Series

# Precision Pressure Regulators MS6N-LRP – Inch Series Dimensional Drawings



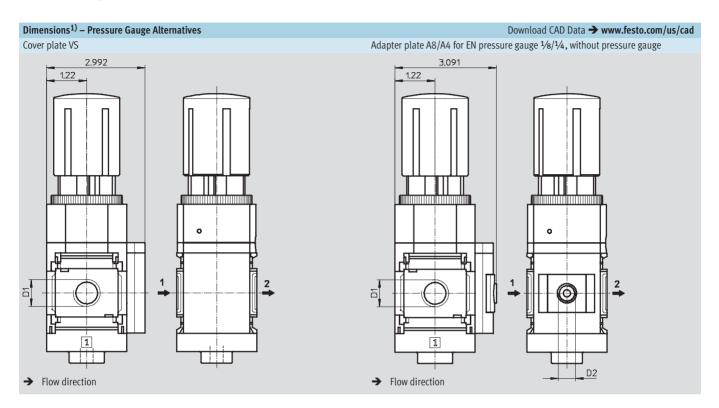


Туре	D1
MS6N-LRP-1/4KD	1/4 NPT
MS6N-LRP-3/8KD	3/8 NPT
MS6N-LRP-1/2KD	1/2 NPT

<sup>1)</sup> Dimensions are in inches, unless otherwise noted.



Dimensional Drawings

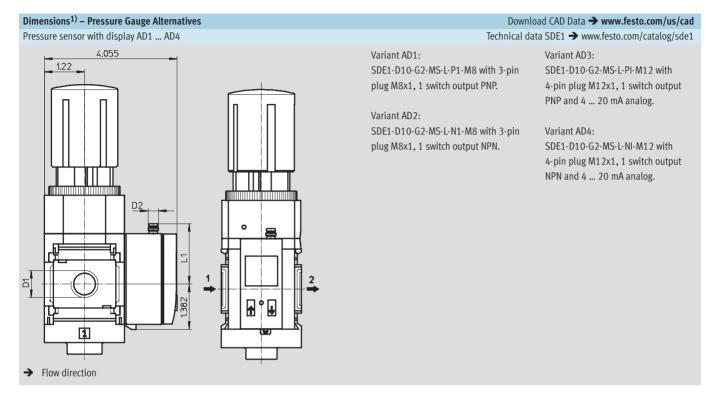


Type	D1	D2
MS6N-LRP-1/4VS	1/4 NPT	
MS6N-LRP-3/8VS	3/8 NPT	-
MS6N-LRP-1/2VS	1/2 NPT	
MS6N-LRP-1/4A8	1/4 NPT	
MS6N-LRP-3/8A8	3/8 NPT	1/8 NPT
MS6N-LRP-1/2A8	1/2 NPT	
MS6N-LRP-1/4A4	1/4 NPT	
MS6N-LRP- <sup>3</sup> / <sub>8</sub> A4	3/8 NPT	½ NPT
MS6N-LRP-1/2A4	1/ <sub>2</sub> NPT	

<sup>1)</sup> Dimensions are in inches, unless otherwise noted.



Dimensional Drawings

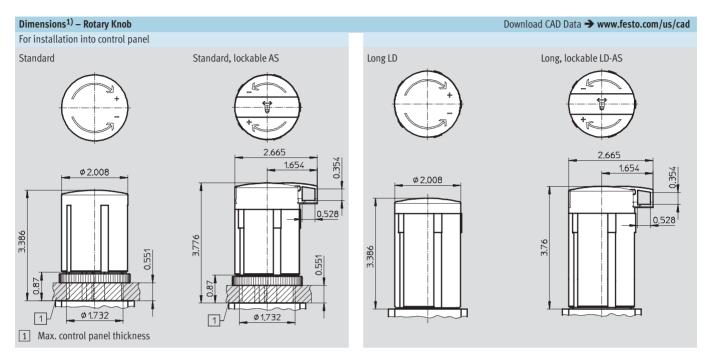


Туре	D1	D2	L1
MS6N-LRP-1/4AD1/AD2	½ NPT		
MS6N-LRP-3/8AD1/AD2	3/8 NPT	M8x1	1.84
MS6N-LRP-1/2AD1/AD2	½ NPT		
MS6N-LRP-1/4AD3/AD4	1/4 NPT		
MS6N-LRP-3/8AD3/AD4	3/8 NPT	M12x1	2.20
MS6N-LRP-1/2AD3/AD4	½ NPT		

<sup>1)</sup> 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 rotar	knob	
Connection	Part No.	Туре	LT
Pressure regulation range 0.7 10	psi		
1/4 NPT	538029	MS6N-LRP-1/4-D2-A8 <sup>2)</sup>	Q
3/8 NPT	538037	MS6N-LRP-3/8-D2-A8 <sup>2)</sup>	Q
1/2 NPT	538045	MS6N-LRP-1/2-D2-A8 <sup>2</sup> )	Q
Pressure regulation range 0.7 37	psi		
1/4 NPT	538031	MS6N-LRP-1/4-D4-A8 <sup>2)</sup>	Q
3/8 NPT	538039	MS6N-LRP-3/8-D4-A8 <sup>2)</sup>	Q
1/2 NPT	538047	MS6N-LRP-1/2-D4-A8 <sup>2)</sup>	Q
Pressure regulation range 1.5 59	psi		
1/4 NPT	538033	MS6N-LRP-1/4-D5-A8 <sup>2)</sup>	Q
3/8 NPT	538041	MS6N-LRP-3/8-D5-A8 <sup>2)</sup>	Q
1/2 NPT	538049	MS6N-LRP-1/2-D5-A8 <sup>2)</sup>	Q
Pressure regulation range 1.5 17	6 psi		
1/4 NPT	538035	MS6N-LRP-1/4-D7-A8 <sup>2)</sup>	Q
3/8 NPT	538043	MS6N-LRP-3/8-D7-A8 <sup>2)</sup>	Q
1/2 NPT	538051	MS6N-LRP-1/2-D7-A8 <sup>2)</sup>	Q

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

2007/10 - Subject to change - MS Series

<sup>2)</sup> Free of copper and PTFE

# Precision Pressure Regulators MS6N-LRP – Inch Series Ordering Data – Configurable Products



M 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

Or	Ordering Table								
Gri	d 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 ½ NPT		-1/2					
		Port plate ¼ NPT (dimensions → 726)		-AQN					
		Port plate ¾ NPT (dimensions → 726)		-AQP					
		Port plate 1/2 NPT (dimensions → 726)		-AQR					
		Port plate ¾ 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 ¼, 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,	1	-AD3					
		analog output 4 20 mA							
		Pressure sensor with display, plug M12, 1 switch output NPN, 4-pin,	1	-AD4					
Ψ		analog output 4 20 mA							

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



<b>→</b>	O 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										
(	Grio	d dimension [mm]	62	Conditions	Code		Enter code			
	)	Rotary knob alternative		-LD						
		Alternative assembly position	Rotary knob at bottom	2	-KD					
		Security	ecurity Lockable rotary knob							
		Type of mounting	pe of mounting Mounting bracket with knurled nut for regulator head (dimensions → 724)		-WR					
			Mounting bracket (dimensions → 727)		-WP					
	Mounting bracket (dimensions → 727)		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					

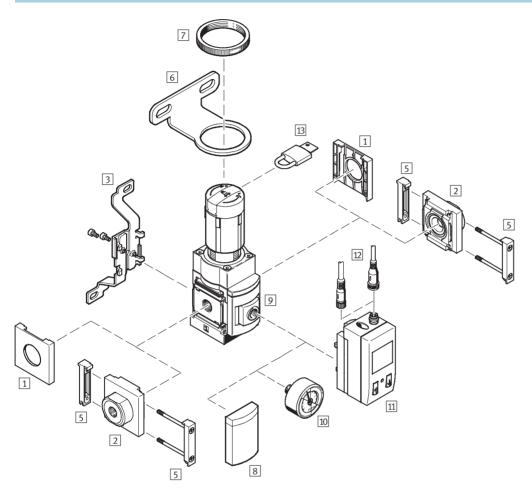
2	KD	Not with mounting type WP
3	WR	Not with long rotary knob LD

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

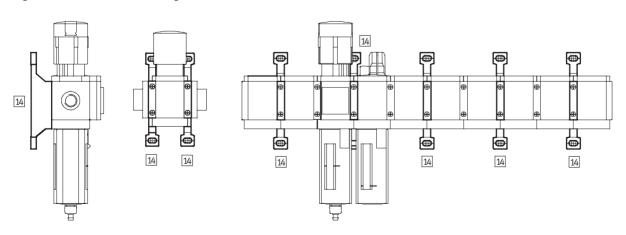
	Transfer order code					
-		-	-	_	ı –	

Accessories Overview

#### **Mounting Attachments and Accessories**



Single unit and combination unit mounting brackets.



# Precision Pressure Regulators MS6N-LRP – Inch Series Accessories Overview



709

		Single unit		Combination unit ->	→ 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 SDE1MS 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

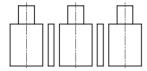
2007/10 - Subject to change - MS Series



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			1/4 NPT			
secondary venting						
Supply pressure		[psi]	15 206			
Pressure regulation	D2	[psi]	0.7 10			
range	D4	[psi]	0.7 37			
D5 [psi]		[psi]	1.5 59			
D7 [psi]		[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	D2	56.5 <sup>1)</sup>				
range	D4	81.2 <sup>2)</sup>				
	D5	105.9 <sup>3)</sup>				
	D7	176.5 <sup>4)</sup>				

<sup>1)</sup> Measured at p1 = 147 psi and p2 = 7.4 psi,  $\Delta p$  = 1.5 psi

<sup>2)</sup> Measured at p1 = 147 psi and p2 = 22 psi,  $\Delta$ p = 1.5 psi

<sup>3)</sup> Measured at p1 = 147 psi and p2 = 27 psi,  $\Delta p$  = 1.5 psi

<sup>4)</sup> Measured at p1 = 147 psi and p2 = 88 psi,  $\Delta$ p = 1.5 psi



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 <sup>1)</sup>	2				

<sup>1)</sup> 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.

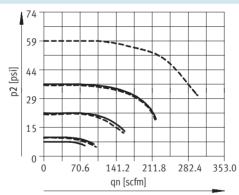
Weight [lb]	
Precision pressure regulator	2.00

• 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



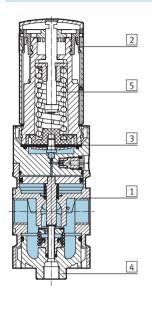
D4: 0.7 ... 37 psi ---- D5: 1.5 ... 59 psi



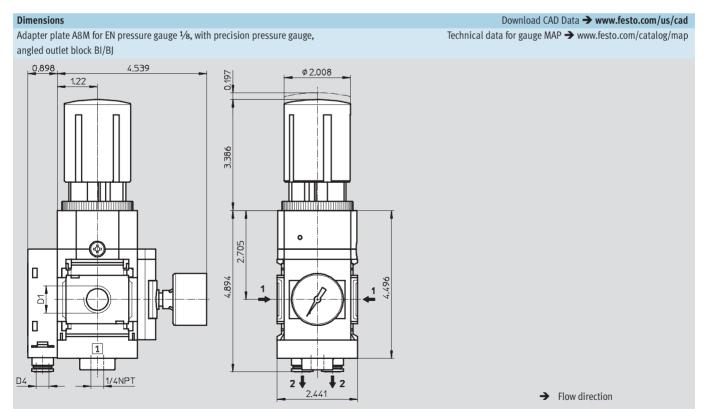
Technical Data, Dimensional Drawings

## Materials

Sectional view



Prec	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)						



D1

1/2 NPT

MS6N-LRPB-1/2-...-A8M-BI

MS6N-LRPB-1/2-...-A8M-BJ

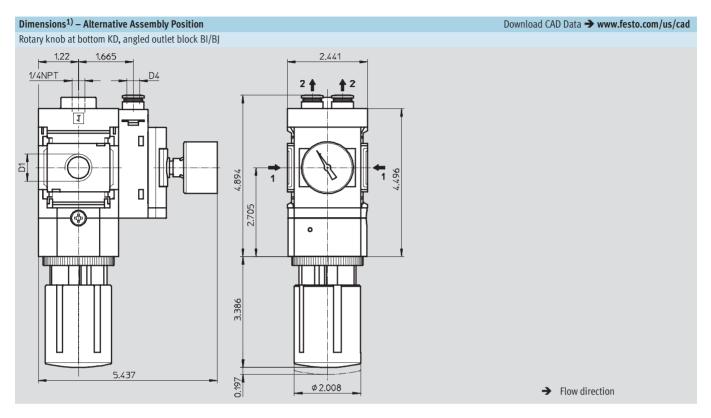
D4

QS-5/16-U

QS-3/8-U

# **Precision Pressure Regulators MS6N-LRPB – Inch Series** Dimensional Drawings





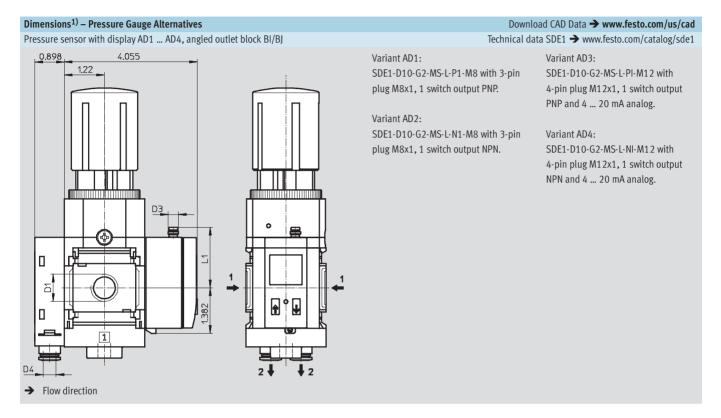
Туре	D1	D4	
MS6N-LRPB-1/2KD-BI	1/2 NPT	QS-5/16-U	
MS6N-LRPB-1/2KD-BJ	72 IVF1	QS-3/8-U	

<sup>1)</sup> Dimensions are in inches, unless otherwise noted.

2007/10 – Subject to change – MS Series



Dimensional Drawings

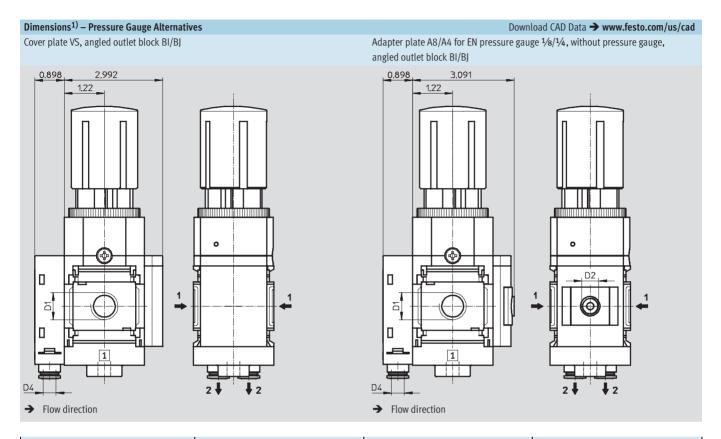


Туре	D1	D3	D4	L1	
MS6N-LRPB-1/2AD1/AD2-BI	1/2 NPT	M8x1	QS-5/16-U	1.84	
MS6N-LRPB-1/2AD1/AD2-BJ	72 NF1	MOXI	QS-3/8-U	1.04	
MS6N-LRPB-1/2AD3/AD4-BI	1/2 NPT	M12x1	QS-5/16-U	2.20	
MS6N-LRPB-1/2AD3/AD4-BJ	72 111 1	WIIZXI	QS-¾-U	2.20	

<sup>1)</sup> Dimensions are in inches, unless otherwise noted.



Dimensional Drawings



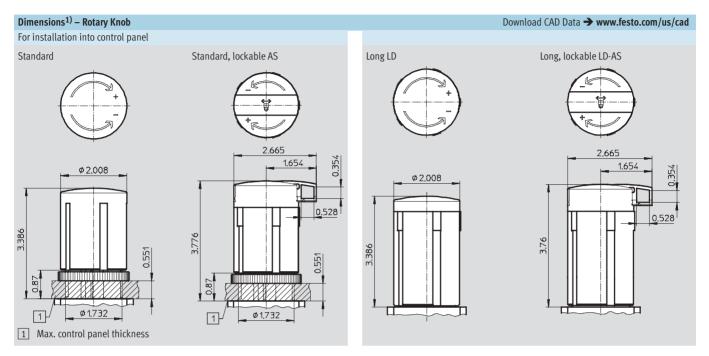
Туре	D1 D2		D4
MS6N-LRPB-1/2VS-BI	1/2 NPT	_	QS-5/16-U
MS6N-LRPB-1/2VS-BJ	72 INF I	_	QS-3/8-U
MS6N-LRPB-1/2A8-BI	¹∕2 NPT	½ NPT	QS-5/16-U
MS6N-LRPB-1/2A8-BJ	72 INF I	70 INF I	QS-3/8-U
MS6N-LRPB-1/2A4-BI	1/2 NPT	1/4 NPT	QS-5/16-U
MS6N-LRPB-1/2A4-BJ	/2 INT 1	/4 INT I	QS-3/8-U

<sup>1)</sup> Dimensions are in inches, unless otherwise noted.

2007/10 – Subject to change – MS Series

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Dimensional Drawings



<sup>1)</sup> 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 ro	tary knob				
Connection	Pressure o	utput to rear without angled outlet block				
	Part No.	Туре	LT			
Pressure regulation range 0.7 10 psi						
1/2 NPT	534983	MS6N-LRPB-1/2-D2-A8 <sup>1)</sup>	Q			
Pressure regulation range 0.7 37 psi						
1/2 NPT	534986	MS6N-LRPB-1/2-D4-A81)	Q			
Pressure regulation range 1.5 59 psi						
1/2 NPT	534989	MS6N-LRPB-1/2-D5-A8 <sup>1)</sup>	Q			
Pressure regulation range 1.5 176 psi						
1/2 NPT	534992	MS6N-LRPB-1/2-D7-A81)	Q			

Ordering Data							
Adapter plate A8 for EN pressure gauge 1/8, standard rotary knob							
Connection	Pressure ou	utput to rear with angled outlet block QS-5/16-U	J		Pressure output to rear with angled outlet block QS-3/8-U		
	Part No.	Туре	LT		Part No. Type	.T	
Pressure regulation range 0.7 10 psi							
1/2 NPT	534937	MS6N-LRPB-1/2-D2-A8-BI <sup>1)</sup>	Q		534985 MS6N-LRPB-1/2-D2-A8-BJ <sup>1</sup> )	Ĵ	
Pressure regulation range 0.7 37 psi							
1/2 NPT	534940	MS6N-LRPB-1/2-D4-A8-BI <sup>1)</sup>	Q		534988 MS6N-LRPB-½-D4-A8-BJ <sup>1)</sup>	Ĵ	
Pressure regulation range 1.5 59 psi							
1/2 NPT	534943	MS6N-LRPB-1/2-D5-A8-BI <sup>1)</sup>	Q		534991 MS6N-LRPB-½-D5-A8-BJ¹)	Ĵ	
Pressure regulation range 1.5 176 psi							
1/2 NPT	534946	MS6N-LRPB-1/2-D7-A8-BI <sup>1)</sup>	Q		534994 MS6N-LRPB-½-D7-A8-BJ <sup>1)</sup>	J	

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

<sup>1)</sup> Free of copper and PTFE

2007/10 - Subject to change - MS Series 717

# Precision Pressure Regulators MS6N-LRPB – Inch Series Ordering Data – Configurable Products



M Mandatory D	ata						<b>→</b>
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	NC.		N	LDDD	100	Dr	NC.
535008	MS	6	N -	LRPB -	- AQR -	- D5	– VS

	dering Table				
Gri	d 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 ½ NPT (dimensions → 726)		-AQR	
		Port plate ¾ 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 ¼, 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	23	-AD2	
		Pressure sensor with display, plug M12, 1 switch output PNP, 4-pin,	23	-AD3	
		analog output 4 20 mA			
		Pressure sensor with display, plug M12, 1 switch output NPN, 4-pin,	2 3	-AD4	
Ψ		analog output 4 20 mA			

1 <b>VS</b>	Must be selected with alternative flow direction Z without alternative assembly position	2	A8, A8M, A4	, AD1 AD4
	KD or without alternative pressure output BI, BJ.			In combination with alternative flow direction $\boldsymbol{Z}$ only with alternative assembly position $\boldsymbol{K}\boldsymbol{D}$
	$\label{thm:must} \mbox{Must be selected with alternative assembly position KD without alternative flow direction}$	3	AD1 AD4	Measuring range max. 147 psi.
	Z or without alternative pressure output BI, BI			Not with pressure regulation range D2, D4.

Transfer order co									
535008	MS	6	N	-	LRPB	-	-	-	

# Precision Pressure Regulators MS6N-LRPB – Inch Series Ordering Data – Configurable Products



<b>→</b>	O 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

10	dering Table				
Gr	id 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)	78	-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	

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

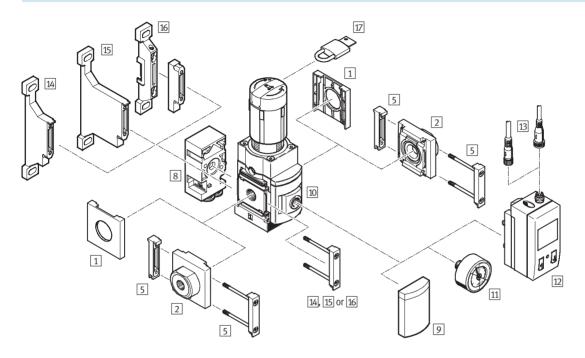
	Transfer order code						
- [		-	-	-	-	-	



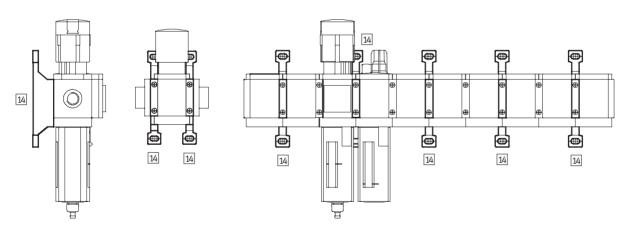
Accessories Overview

## **Mounting Attachments and Accessories**

Pressure output at rear



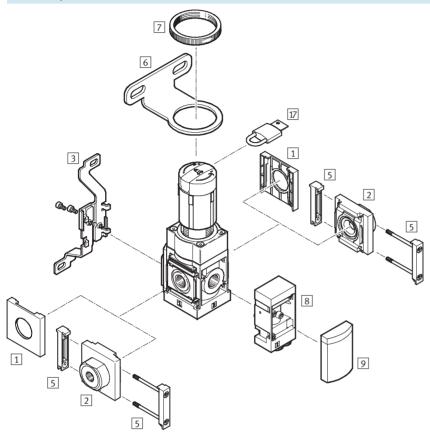
Single unit and combination unit mounting brackets.



# Precision Pressure Regulators MS6N-LRPB – Inch Series Accessories Overview



## Pressure output at front



# Precision Pressure Regulators MS6N-LRPB – Inch Series Accessories Overview



	Attachments and Accessories	Single unit		Combination unit ->	3.1-49	→ Page
		without port plate	with port plate	without port plate	with port plate	
1 Co	ver cap	_		_		725
	S6-END	•	-	•	-	
2 Po	rt plate		_		_	726
MS	56N-AQ	_	•	-	-	
B Mo	ounting bracket		•			723
MS	56-WB	•	_	_	_	
Во	dy connector		•			726
MS	56-MV	_	_	•	_	
6 Re	gulator wall bracket		•			724
MS	56-WR	•	_	_	_	
' Kn	urled nut (included in scope of delivery)		•			-
	S-LR	•	_	_	_	
3 An	gled outlet block					719
В	•	•	_	_	•	
Co	ver plate		•			718
VS		•	_	_	•	
) Ad	apter for EN pressure gauge ½/1/4					718
A8	s/A4	_	_	_	_	
1 Pre	ecision pressure gauge					718
	M/MAP	_	_	_	_	
Pre	essure sensor SDE1MS			•		718
	01 AD4	_	_	_	_	
B Plu	ug socket with cable					730
	M-M8-3/SIM-M12-4	_	_	_	_	
	ounting bracket	_				727
	S6-WP		_	_	_	
Mo	ounting bracket	_				727
	S6-WPB					
	ounting bracket	_				727
	S6-WPM		_			
_	dlock					730
LR'	VS-D	•	_	•	_	

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

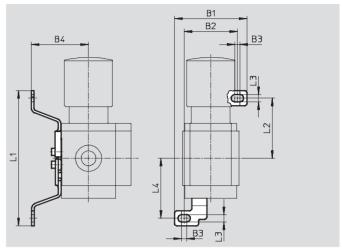
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## 3 Mounting bracket MS6-WB

For wall mounting

Material: Steel





<b>Dimensions</b> a	Dimensions and Ordering Data											
B1	B2	В3	B4	L1	L2	L3		Weight [lb]	Part No.	Туре		
3.13	2.44	0.18	2.17	6.20	2.80	0.26	2.80	0.24	532196	MS6-WB		

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Accessories

## 6 Mounting bracket MS6-WR

 For wall mounting a filter regulator and pressure regulator

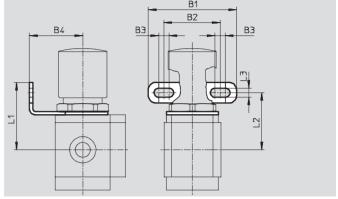
Material:

Steel

#### Note

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





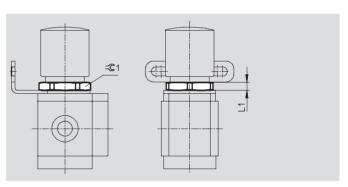
Dimensions an	imensions and Ordering Data											
B1	B2	B3	B4	L1	L2		Weight [lb]	Part No.	Туре			
2.76	1.65	0.32	1.57	2.64	2.24	0.28	0.18	526075	MS6-WR			

### Hex nut MS6-WRS

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

Material: Aluminum





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

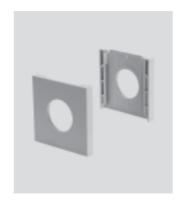


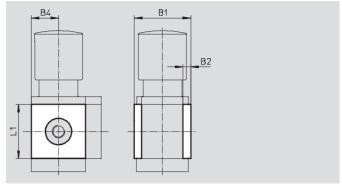
Accessories

## 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





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

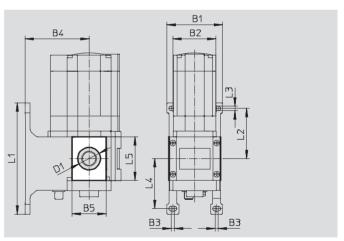
### Mounting plate MS6-AEND

(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





Dimens	Dimensions and Ordering Data														
B1	B2	В3	В	4	B5	D1	L1	L2	L3	L4	L5	CRC <sup>1)</sup>	Weight	Part No.	Туре
			WP	WPB		Ø							[lb]		
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

<sup>1)</sup> 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.

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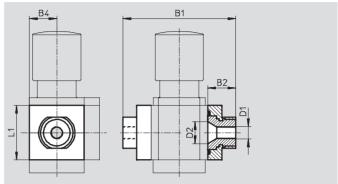
Accessories

## 2 Port plate MS6N-AQ...

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

Material: Aluminum





Dimensions and C	Ordering Data							
B1	B2	B4	D1	D2	L1	Weight [lb]	Part No.	Туре
			½ NPT				526076	MS6N-AQN
4.53	1.04	1.22	3/8 NPT	0.94	2.44	0.60	526077	MS6N-AQP
4.55	1.04	1.22	½ NPT	0.94	2.44	0.00	526078	MS6N-AQR
			3/4 NPT				526079	MS6N-AQS

### 5 Body connector MS...-MV

• For connecting modules

Material:

Stainless steel/polyacetate



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

Number of units



Accessories

## 14 Mounting Bracket MS6-WP...

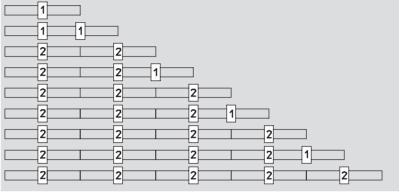
Suggested placement of wall mounting brackets when mounting air preparation combinations

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

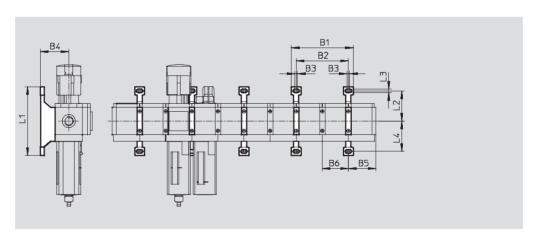
1 2 3 4 5 6 7 8 9 10



# Mounting bracket WP, WPB or WPM-D Mounting bracket

2 Mounting bracket WP, WPB or WPM-2D

#### Mounting dimensions



Туре	B1	B2	В3	B4	B5	В6	L1	L2	L3	L4
MS6-WP	5.55	4.88	0.18	2.13	2.54	2.44	6 22	2.80		2.80
MS6-WPB	5.55	4.00	0.10	3.56	2.54	2.44	0.22	2.00	0.26	2.00
MS6-WPMD	6.61	5.43	0.69	2.13	2.58	2.72	3.88	1.63		1.63



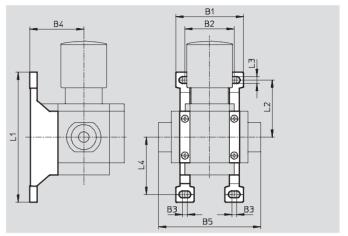
Accessories

### 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	Dimensions and Ordering Data											
B1	B2	В3	B4	B5	L1	L2	L3		Weight [lb]	Part No.	Туре	
3.11	2.44	0.18	2.13	4.53	6.22	2.80	0.26	2.80	0.15	532195	MS6-WP	

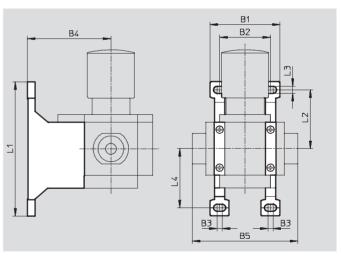
#### 15 Mounting bracket MS6-WPB

- 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 Orderin	g Data									
B1	B2	В3	B4	B5	L1	L2	L3	L4	Weight [lb]	Part No.	Туре
3.11	2.44	0.18	3.56	4.53	6.22	2.80	0.26	2.80	0.23	526074	MS6-WPB

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Accessories

## 16 Mounting bracket MS6-WPM

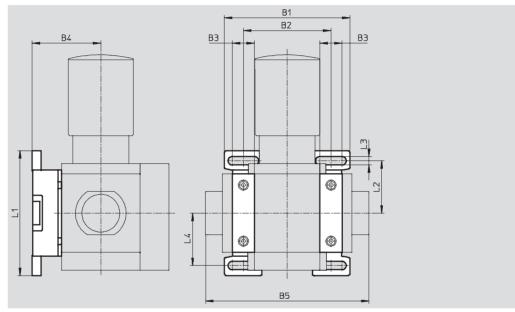
- To connect the modules for wall mounting
- In combination with a port plate MS-AG... for mounting an individual unit on a wall
- Speedy attachment and detachment
- For installation of modules with regulating knob pointing downwards

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





Dimensio	ns and Orde	ering Data										
B1	B2	В3	B4	B5	L1	L2	L3	L4	Clearance	Weight	Part No.	Туре
										[lb]		
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	0.09	2.13	7.80	5.00	1.05	0.20	1.05	4.88	0.31	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.	Туре
MS6	532801	MS6-MVM

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



13 Ordering Data	a – Plug Socket with Cable SIM-M8		Technical d	lata → www.festo.com/catalog/sim-m8
	Electrical connection	Cable length	Part No.	Туре
		[ft]		
	M8x1, 3-pin	8.2	159420	SIM-M8-3GD-2,5-PU
		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	16.4	164259 SIM-M12-4GD-5-PU
Se la	M12x1, 4-pin	16.4	164258 SIM-M12-4WD-5-PU

11 Ordering Da	ata – Pressure Gauge MA					
	Nominal size	Pneumatic connection	Indicating range		Part No.	Туре
			[bar]	[psi]		
(P)	Pressure gauge MA, DI	N EN 837-1	Techn	ical data → www.festo.com/catalog/ma		
	1.57	1/4 NPT	0 16	0 232	183908	MA-40-16-N <sup>1</sup> / <sub>4</sub> -EN
	Pressure gauge MA, DI	N EN 837-1, with red-green	range		Techn	ical data → www.festo.com/catalog/ma
	1.57	1/8 NPT	-	0 232	530388	MA-40-232-N <sup>1</sup> / <sub>8</sub> -PSI-E-RG
	1.97	1/4 NPT	-	0 232	530391	MA-50-232-N <sup>1</sup> / <sub>4</sub> -PSI-E-RG
	Precision pressure gau	ige MAP, DIN EN 837-1			Technic	cal data → www.festo.com/catalog/map
	1.57	R <sup>1</sup> /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.	Туре		
1 /XII	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.	Туре			
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

### **FESTO**

## **Product Range and Company Overview**

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**Custom Control Cabinets**Comprehensive engineering support and on-site services



**Complete Systems**Shipment, stocking and storage services

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



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

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

#### Quality Assurance, ISO 9001 and ISO 14001 Certifications

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

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



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