

General specifications							
Device name	LIPS.R – massflow controller						
Model name	LFR2						
Order number	92.xxx						
Measuring ranges	<ul style="list-style-type: none"> • 200 Nml/min • 500 Nml/min • 1000 Nml/min 						
Accuracy	± 1% rd. + 0,5% fs.						
Dynamics	1:10 (10...100%)						
Resolution (switchable)	<table border="1"> <tr> <td>0,001 / 0,01 Nml/min</td> <td>up to 30 Nml/min</td> </tr> <tr> <td>0,01 / 0,1 Nml/min</td> <td>up to 300 Nml/min</td> </tr> <tr> <td>0,1 / 1 Nml/min</td> <td>up to 3000 Nml/min</td> </tr> </table>	0,001 / 0,01 Nml/min	up to 30 Nml/min	0,01 / 0,1 Nml/min	up to 300 Nml/min	0,1 / 1 Nml/min	up to 3000 Nml/min
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Additional selectable units	l/h, cm ³ /min, cm ³ /sec, in ³ /min						
Adjustable control behavior	<ul style="list-style-type: none"> • High (fast response) • Medium • Low (slow, accurate response) 						
Adjustable gas standards	<ul style="list-style-type: none"> • Din 1343 – (1013mbar / 0°C) • Din 102 – (981mbar / 20°C) • 936mbar / 20°C • 1013mbar / 20°C • 760mmHg / 25°C • ISO 2533 – (1013mbar / 15°C) 						
Sensor technology	Unidirectional sensor, temperature compensated						
Flow direction	Only positive flow Calibrated at DIN 1343						

Setpoint	
Analog	<ul style="list-style-type: none"> • 0..10V signal input, external
Digital	<ul style="list-style-type: none"> • USB-interface, external
Internal	<ul style="list-style-type: none"> • Incremental encoder, internal

Signal outputs	
Digital output	USB serial converter integrated, bidirectional communication

Power supply	
Power supply	24V DC / regulated
Power consumption	Up to 240mA at 24V, depending on the control behavior
Electrical connection	5 pin. connector, type MC000091

Operating limits	
Temperature range	0...50°C
Max. permissible flow	20 l/min
Max. permissible both side pressure	<ul style="list-style-type: none"> • 25 PSI • 100 PSI – optional*
Warm-up time	30 min min for optimal results
Medium	Air and dry, non corrosive gases

USB interface											
USB port	USB type B / mini										
Transmission parameters	<table border="0"> <tr> <td>Baud rate:</td> <td>9600</td> </tr> <tr> <td>Data bits:</td> <td>8</td> </tr> <tr> <td>Stop bits:</td> <td>1</td> </tr> <tr> <td>Parity:</td> <td>none</td> </tr> <tr> <td>Flow control:</td> <td>Xon / Xoff</td> </tr> </table>	Baud rate:	9600	Data bits:	8	Stop bits:	1	Parity:	none	Flow control:	Xon / Xoff
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Mechanical properties	
Pressure connections	Hose connection with union nut: <ul style="list-style-type: none"> • 6/4 (4mm inside) – standard Plug-in hose connection: <ul style="list-style-type: none"> • 6/4 (4mm inside)
Dimensions	155 x 80 x 70 mm
Weight	400 g
Housing material	ABS
Mounting position	Any
Protection class	Splash-proof IP65

Scope of supply	
Accessories (included)	Connector 5-pin, Typ MC000059

Options	
Current output	4...20mA
Digital output	Bluetooth, virtual com-port

* On request (not available for all devices / see onlineshop)