



The **SONOFLOW Display RD.10** shows the current flow rate, the volume, the sensor temperature, the minimum flow, the maximum flow as well as the measuring state of sensors SONOFLOW CO.55 V2.0 and IL.52 V2.0.

The zero reset of the sensors via display can be used to control dosing processes.

The display is suitable for applications in fields with strict hygienic standards e.g. the medical technology, biotechnology and pharmaceutical industry as well as chemical and semiconductor industry.

Overview general data

Specification	Dimensions (L x W x H)	Weight	Order-No.
Display RD.10	68 x 44 x 27 mm	85 g	200 08 0053
Cable (optional)		Length	Order-No.
Specification:		2 m	400 01 0168
Cable for SONOFLOW Display RD.10, connector M12x1 8-pole, PVC		5 m	400 01 0169

Technical data

Remote Display RD.10	
For Flow Sensors SONOFLOW CO.55 V2.0 and IL.52 V2.0	
Display materials	Front foil: Polyester; Housing: PVC-C grey; Potting: PUR blue
Display format	128 x 64 Dots
Numeric display of values	Maximum 5 numerals, dynamic decimal point (9999.9 10000 ... 99999) Value > +99999 = "+ over" value < -99999 = "- over"
Display colour	White on black screen
Measuring screen	Flow Volume Temperature Min. Flow Max. Flow
Settings	Measurement units, sleep mode, display contrast, zero reset of sensor
Viewing area (W x H)	23.7 x 12.8 mm

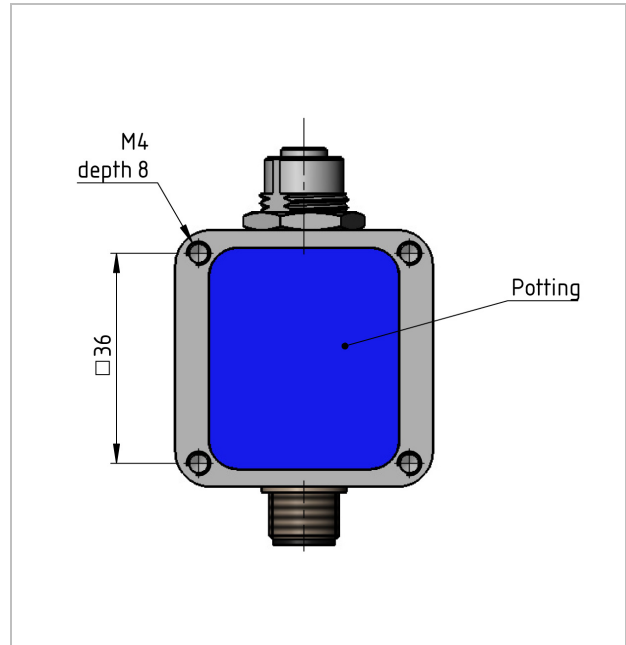
Operating voltage	12 ... 30 V, maximum ripple 10 %, protection against reverse-polarity
Current consumption	Maximum 15 mA
Electrical connection	8-pin M12 Connector, DIN EN 61076-2-101:2012
Shielding	Required: for both cables
Interfaces	<ul style="list-style-type: none"> • Current output for flow rate: 0/4 ... 20 mA • Frequency output for flow rate: 0 ... 20 kHz, 5 V digital • RS485 interface: bus-capable • Switching output: configurable as PNP / NPN / Push-Pull, 0 ... 30 V • Digital input
Ambient- / Media temp.	0 ... 50 °C, other temperatures available on request
Storage temperature	-20 ... +70 °C
Protection class	IP65
Directives, standards	RoHS: 011/65/EU, exception: III 7cl/ IV 15
Maintenance	Maintenance-free
Scope of delivery	<ul style="list-style-type: none"> • Display RD.10 for SONOFLOW Sensors V2.0 • 8-pin M12 connecting cable, 1.5 m / 3m (optional) • Data sheet

Electrical connection



M12 connecting cable	Pin	Colour	Connection
Assignment	1	White	Ground
	2	Brown	Operating voltage +12 ... 30 VDC
	3	Green	Current output (0/4 ... 20 mA)
	4	Yellow	RS485 B
	5	Grey	RS485 A
	6	Pink	Frequency output 0 ... 20 kHz
	7	Blue	Switching output: PNP / NPN / Push-Pull
	8	Red	Digital input

Technical drawings

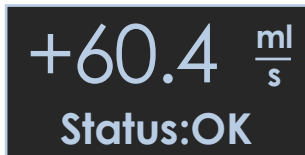


Display status, navigation in menu and reset values



Start screen:

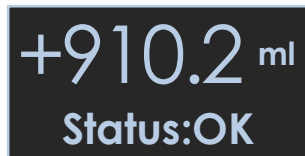
- Displayed for 1 second
- Shows information about the identity of display



Measuring screen 1: Flow (default)

- Shows the current flow rate and the measuring state of sensor SONOFLOW

⏮ → Jump to volume display



Measuring screen 2: Volume:

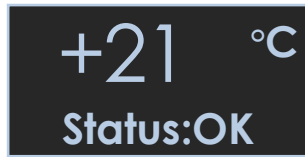
- Shows the current volume and the measuring state

To reset the volume (in the sensor):

- Press ●
- Confirm the question “Reset volume – are you sure?” with ● (or cancel the reset with ▲ or ▼)

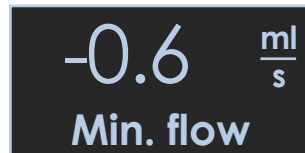
⏮ → Jump to temperature display

Display of “Reset” indicates that the value is reset.

**Measuring screen 3: Temperature**

- Shows the current temperature and the measuring state

→ Jump to min. flow display

**Measuring screen 4: Minimum Flow**

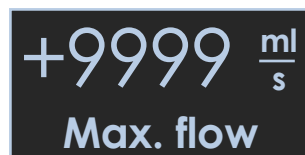
- Shows the minimum measured flow and the measuring state

To reset the value:

- Press
- Confirm the question “Clear min – are you sure?” with (or cancel the reset with or)

Display of “Clear” indicates that the value is reset.

→ Jump to max. flow display

**Measuring screen 5: Maximum Flow**

- Shows the maximum measured flow rate and the measuring state

To reset the value:

- Press
- Confirm the question “Clear max – are you sure?” with (or cancel the reset with or)

Display of “Clear” indicates that the value is reset.

→ Jump to flow display

**Missing connection to sensor:**

- The display checks every 5 seconds the connection to sensor

→ Check if the sensor is connected accurately.

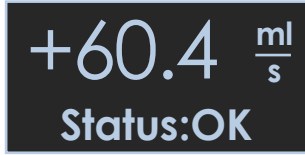
The message “Link?” disappears after the connection is found.

**Error screen:**

- Shows error codes (page 6)

In case of displayed errors document the error codes contact the manufacturer.

Change settings and perform zero reset



Measuring screen 1 / 2 / 3 / 4 / 5

- Shows the current value and the measuring state of sensor SONOFLOW

To change settings:

→ Press longer than 5 sec.

5 different settings and exit from settings are available



Adapt settings

The setting is locked and the current value is shown

→ Press to unlock the setting → “Setting: free” is displayed

→ Use the button and to select a value

→ Confirm by pressing

The setting is activated and locked.

→ Jump to next setting

→ Jump to previous setting

1

Unit flow

Select values:

µl/s | **ml/s** | ml/min | lt/s | lt/min | lt/hr | m³/min | m³/hr

2

Unit temperature

Select values:

°C | K | °F

3

Sleep

Select time interval for starting display sleep mode:

off | 10 s | 20 s | ... | 2400 s (in steps of 10 s)

To wake up the display: Press any button.

4

Contrast

Select values:





50 %, 0 ... 100 % (in steps of 10 %)

5

Zero reset

Perform zero reset of sensor:

⚠ **NOTE:** Carrying out the zero reset changes the sensor parameters.
Make sure, that the flow is 0 ml/s or in the range you want to set the zero point for your measurement.


- Press  to perform zero reset
- Confirm the question “Set zero flow – are you sure?” with  (or cancel the procedure with  or 

Display of “Zero” indicates that the value is written to sensor.

6

Exit

Exit the setup menu:

- Press  to turn back to measuring screen

Error codes

Error code	Error	Possible causes and recommended measures
F 0x00	No Measuring error	
F 0x01	Signal value not plausible	Check if: <ul style="list-style-type: none"> • the tubing is firmly secured in the sensor and cannot move? • the tubing is filled with a liquid, without large gas bubbles? • the lid of the sensor is closed?
F 0x10	Signal value not plausible	
F 0x81 or higher	Signal value not plausible, no measurement possible	
G 0x00	No device error	
G 0x01	Checksum error in parameters	Recheck parameters. (SONOTEC monitor software can be used).
G 0x02	At least one invalid parameter	
G 0x04	Temperature sensor failed	Power OFF/ power ON the sensor. If the error persists, return the sensor for repair.
G 0x08	DAC failed	
G 0x10	Display failed	

Information is subject to change without notice!

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