

# Reddy Compact<sup>®</sup>



Gas Mass Flow Meters,  
Switches and Regulators



Lifetime  
**NO-DRIFT**  
Sensor  
WARRANTY



# Drop in Replacement The Mass Flow Advantage.



Rotameters also known as “Sight Glass” Variable Area (VA) meters, are used across nearly every industry where economical gas flow metering and flow regulation is required.

Rotameters are volumetric flow meters and only capture the gas flow volume, not gas mass flow rate. All volumetric flow meters and regulators are sensitive to gas pressure and temperature changes—a pressure change of just 1 Bar generates flow rate error of up to 50%.

We designed our Redy-Compact to be the ultimate alternative. A true thermal mass flow meter, RedyCompact is for those that want the highest accuracy and repeatability and need a drop-in replacement for a Rotameter.

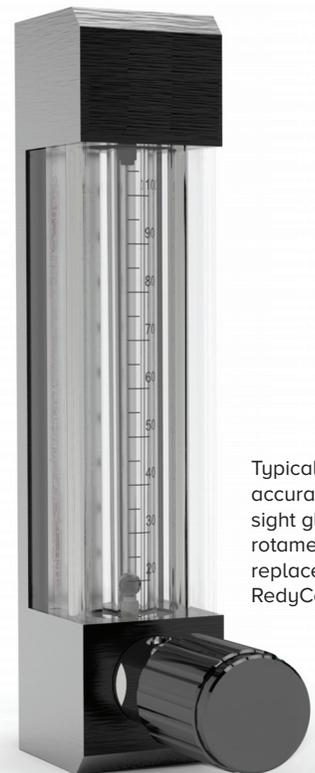
Battery powered, with a large touch-screen, Redy-Compact is easy to read from a distance. Regulate flow rate with the high-resolution valve by dialing in your manual setpoint. Two standard AA batteries give the meter months of operation. An optional Micro-USB power plug is also available.

## Superior Physics for Lifetime No-Drift Warranty

RedyCompact comes with our Lifetime No-Drift Sensor Warranty made possible from high-precision MEMS (Micro-ElectroMechanical Systems) technology

utilizing an advanced, ultra-stable no-drift CMOS (Complementary Metal Oxide Semiconductor) sensor.

The use of MEMS techniques allows both electronic circuits and mechanical devices to be manufactured on a silicon chip, similar to the process used for integrated circuits.



Typical low accuracy sight glass rotameter replaced by RedyCompact.

### Instrument Versions

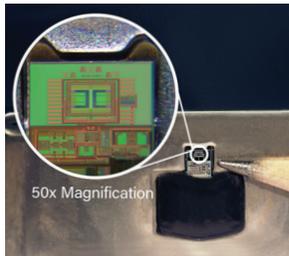
	Touch Display*	Auto display alignment (position sensor)	Choose between multiple home screens	Totalizer	Multigas (up to 3)	Manual valve	Alarm functions	Micro-USB power supply (DIN62684)	Battery power	24 Vdc supply
<b>compact meter GCM</b>	●	●	●	●	○			●	●	○
<b>compact regulator GCR</b>	●	●	●	●	○	●		●	●	○
<b>compact switch GCS</b>	●	●	●	●	○		●			●
<b>compact all-in GCA</b>	●	●	●	●	○	●	●			●

● Standard ○ Option

\*backlight not available for battery use; backlighted only with external power supply (Micro-USB or 24 Vdc)

# Making the Ultimate Thermal Mass Flow Meter

At the macro level, RedyCompact can be conceptualized in five core technologies, each of which contributes to unparalleled accuracy, adaptability and reliability.



## Gas Mass Flow Sensor Accurate and Reliable MEMS Technology

Our Lifetime No-Drift Sensor Warranty is backed by high-precision MEMS technology utilizing an advanced CMOS sensor for stable gas mass flow rate measurement.



## Large Touch-Screen Easy Viewing of Data

Intuitive navigation at the touch and swipe of a finger, the large screen is visible from across the room. A big improvement over hard to read sight-glass rotameters.

## Battery Operated Off the Grid

Operate for months on a single double AA battery.



Lifetime  
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WARRANTY



## Flow Control Precision Needle Valve

Get precise mass flow control with the needle valve dial located on the front of the instrument.

## Advanced Calibration NIST-traceable

Each unit is calibrated over its entire flow range to assure accuracy and repeatability over the life of the device. A fully automated system capable of calibrating hundreds of units at once eliminates any human error during the calibration process.



Auto-Calibration System

## HIGHLIGHTS

### Compact Footprint

As the name suggests, RedyCompact has a small footprint that accommodates drop-in replacement for any Rotameter in the market.

### Touch-Screen Display

The touch screen display offers intuitive navigation. The many variables that make the unit flexible are easily accessible. Automatic display alignment is possible due to a position sensor.

### No-Drift Warranty

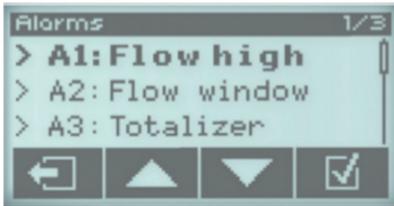
Lifetime No-Drift Sensor Warranty. If drift occurs, instrument will be repaired or replaced free of charge.

### Flow Units

Choose between a large number of standardized and normalized flow units from Imperial, US customary and SI, all with user adjustable reference conditions.

### Alarm Functions

The following triggers are available: Low alarm, high alarm, window alarm and totalizer alarm. The alarms can be configured with different parameters: Normally open,



normally closed, hysteresis, auto/manual/remote reset, delay and alarm duration.

## Device Information & Notifications

Display of complete device information including all configuration settings. Alerts and notifications show up on the home screen.

### Panel Mount

Two mounting kits are available for convenient mounting into an instrument panel.



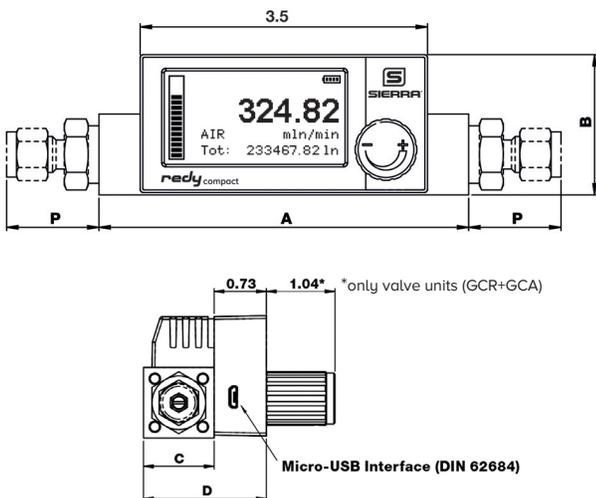
### Warranty

3-year operating warranty.

## APPLICATIONS

- Burner control (furnace construction)
- Welding (welding gas monitoring)
- Leak measurements (quality, environment)
- Coating (equipment construction)
- Regulation of gaseous atmospheres (biotechnology)
- Measurement of gas consumption (hospitals)
- Test equipment (production maintenance)
- Flow rate monitoring (laboratories)
- Cutting (steel sheets)
- Billing
- Analytical equipment
- Aeration / sparging (food products, ice cream / edible oils)
- Blanketing (food)
- Fermentation (food, biotechnology, pharma)

## FOOTPRINT



Type/Body	Length (inch)				Length of fitting P
	A	B	C	D	
GCM 1/4" GCR 1/4" GCS 1/4" GCA 1/4"	4.49	1.73	0.98	1.73	We offer a range of different inlet/outlet fittings.
GCM 1/2" GCS 1/2"	6.3	2.13	1.38	2.13	
GCR 1/2" GCA 1/2"	8.15	2.13	1.38	2.13	

# TECHNICAL DATA

## INSTRUMENT TYPES



**Compact Meter GCM**  
Mass Flow Meter  
**Compact Switch GCS**  
Mass Flow Meter with Alarm Functions



**Compact Regulator GCR**  
Mass Flow Meter with Manual Valve  
**Compact All-in GCA**  
Mass Flow Meter with Alarm Functions & Valve



**Compact G 1/2" versions**  
For 1/2" size with Manual Valve  
Valve is Flange Mounted

## MEASURING RANGES

(full scale freely selectable)

Type	Measuring Range (air)
GCX/1/4"	from 0 ... 27 SCCM to 0 ... 64 SLPM
GCX/1/2"	from 0 ... 65 SLPM to 0 ... 480 SLPM

## PERFORMANCE DATA

<b>Media (real gas calibration)</b>	Air, O <sub>2</sub> *, N <sub>2</sub> *, He, Ar, CO <sub>2</sub> , H <sub>2</sub> , CH <sub>4</sub> , C <sub>3</sub> H <sub>8</sub> (other gases and gas mixtures on request) *O <sub>2</sub> & N <sub>2</sub> are calibrated with air
<b>Accuracy (air &amp; equivalents)</b>	Eco: ± 2.0% of full scale; ranges > 200 SLPM ± 3.0% of full scale Special: ± 1.0% of full scale up to 50 SLPM
<b>Turndown Ratio</b>	Eco: 1 : 50 Special: 1 : 100
<b>Response Time</b>	Max. 300 msec (depending on filter settings)
<b>Flow Update by Sensor</b>	40 msec (battery mode 500 msec)
<b>Display Update</b>	240 msec (battery mode 500 msec)
<b>Repeatability</b>	± 0.5% of full scale
<b>Longterm Stability</b>	< 1% of measured value / year
<b>Power Supply Meter GCM &amp; Regulator GCR</b>	Standard AA battery (lifetime in months depending on operation) or Micro-USB power supply (DIN 62684) Option: External power +8...30 Vdc (power consumption max. 120mA)
<b>Power Supply Switch GCS &amp; All-in GCA</b>	External power +8...30 Vdc (power consumption max. 300mA) or Micro-USB power supply (DIN 62684)
<b>Operation Pressure</b>	3 - 160 psia (0.2 - 11 bara)
<b>Temperature (environment/gas)</b>	32 - 122°F (0 - 50°C)
<b>Materials</b>	Anodized aluminum, optional stainless steel electropolished
<b>Seals</b>	FKM, optional EPDM (FDA)
<b>Pressure Sensitivity</b>	<0.014%/psi (<0.2%/bar) of reading (typical N <sub>2</sub> )
<b>Temperature Sensitivity</b>	<0.012% FS measuring range type per 1°F (<0.025% per 1°C)
<b>Warm-up Time</b>	< 1 sec. for full accuracy

## INTEGRATION

<b>Display</b>	Touch & swipe display (128x64 px) with automatic position adjustment (position sensor) Backlighted only with external power supply (Micro-USB or 24 Vdc)
<b>Process Connection</b>	G1/4" (BSPP* female) up to 64 SLPM, G1/2" (BSPP* female) up to 480 SLPM *British Standard Pipe Parallel
<b>Inlet Section</b>	None required
<b>Mounting Orientation</b>	Any position (consult manufacturer above 73 psi/5 bar or vertical mounting)
<b>Connection Cable</b>	For external power supply: 6.5 ft with fly leads

## SAFETY

<b>Test Pressure</b>	240 psia (16 bara)
<b>Leak Rate</b>	< 1 x 10 <sup>-6</sup> mbar l/s He
<b>Environmental Protection</b>	IP50 (conforms to NEMA 1)
<b>EMC</b>	EN 61326-1

## OPTIONS



Panel Mounting Kit



Vacuum Fittings



Various Inlet and Outlet Fittings



**SIERRA**<sup>®</sup>

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