

Redy® Compact Product Line



Gas Mass Flow Meters,
Switches and Regulators



Drop in Replacement

The Mass Flow Advantage.



| | Touch Display ¹ | Auto display alignment (position sensor) | Choose between multiple home screens | Totalizer | Multigas (up to 3) | Manual valve | Alarm functions | Micro-USB power supply (DIN6284) | Battery power | 24 Vdc supply |
|-----------------------|----------------------------|---|---|-----------|--------------------|--------------|-----------------|-------------------------------------|---------------|---------------|
| compact meter GCM | ● | ● | ● | ● | ○ | | | ● | ● | ○ |
| compact regulator GCR | ● | ● | ● | ● | ○ | ● | | ● | ● | ○ |
| compact switch GCS | ● | ● | ● | ● | ○ | | ● | | | ● |
| compact all-in GCA | ● | ● | ● | ● | ○ | ● | ● | | | ● |

● Standard

○ Option

¹backlight not available for battery use; backlit only with external power supply (Micro-USB or 24 Vdc)

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 RedyCompact 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.

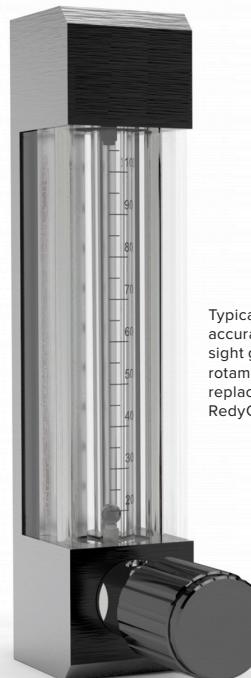
Battery powered, with a large touch-screen, RedyCompact is easy to read from a distance. Regulate flow rate with the high-resolution valve by dialing in your manual setpoint. Two standard AA batteries give the meter months of operation. An optional Micro-USB power plug is also available.

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.

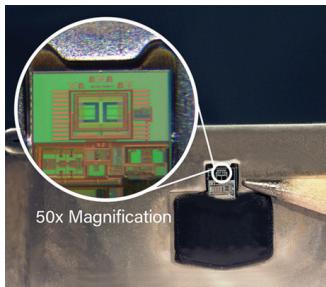
The use of MEMS techniques allows both electronic circuits and mechanical devices to be manufactured on a silicon chip, similar to the process used for integrated circuits.



Typical low accuracy sight glass rotameter replaced by RedyCompact.

Making the Ultimate Thermal OEM Mass Flow Controller

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.



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 using real gas 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

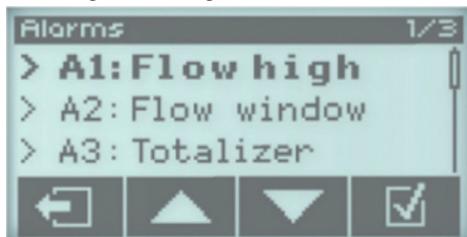
Lifetime No-Drift Sensor Warranty. If drift occurs, instrument will be repaired or replaced free of charge.

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.

No-Drift Warranty

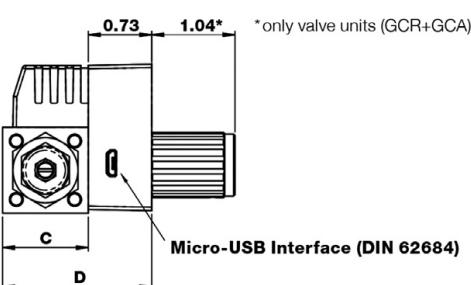
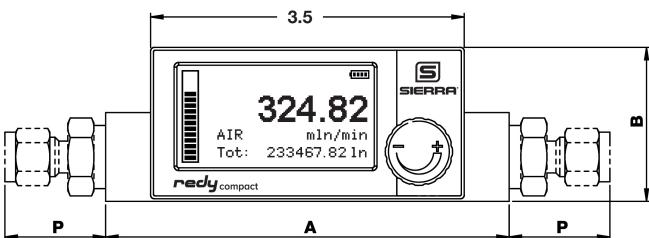
Lifetime No-drift Sensor Warranty. If drift occurs, instrument will be repaired or replaced free of charge.

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)



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

Media (real gas calibration)

Air, O₂⁽²⁾, N₂⁽²⁾, He, Ar, CO₂, H₂, CH₄, C₃H₈ (other gases and gas mixtures on request)

⁽²⁾O₂ & N₂ are calibrated with Air

Accuracy (air & equivalents)

Eco: \pm 2.0% of full scale; ranges > 200 SLPM \pm 3.0% of full scale

Special: \pm 1.0% of full scale up to 50 SLPM

Turndown Ratio

Eco: 1: 50 Special: 1: 100

Response Time

Max. 300 msec (depending on filter settings)

Flow Update by Sensor

40 msec (battery mode 500 msec)

Display Update

240 msec (battery mode 500 msec)

Repeatability

\pm 0.5% of full scale

Longterm Stability

< 1% of measured value / year

Power Supply Meter GCM & Regulator GCR

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)

Operation Pressure

3 - 160 psia (0.2 - 11 bara)

Temperature (environment/gas)

32 - 122°F (0 - 50°C)

Materials

Anodized aluminum, optional stainless steel electropolished

Seals

FKM, optional EPDM (FDA)

Pressure Sensitivity

<0.014% / psi (<0.2% / bar) of reading (typical N2)

Temperature Sensitivity

<0.012% FS measuring range type per 1°F (<0.025% per 1°C)

Warm-up Time

< 1 sec. for full accuracy

INTEGRATION

Display

Touch & swipe display (128x64 px) with automatic position adjustment (position sensor)

Backlighted only with external power supply (Micro-USB or 24 Vdc)

Process Connection

G1/4" (BSPP* female) up to 64 SLPM, G1/2" (BSPP* female) up to 480 SLPM

*British Standard Pipe Parallel

Inlet Section

None required

Mounting Orientation

Any position (consult manufacturer above 73 psi / 5 bar or vertical mounting)

Connection Cable

For external power supply: 6.5 ft with fly leads

SAFETY

Test Pressure

240 psia (16 bara)

Leak Rate

< 1 x 10-6 mbar l/s He

Environmental Protection

IP50 (conforms to NEMA 1)

EMC

EN 61326-1

OPTIONS



Panel Mounting Kit



Vacuum Fittings



Various Inlet and Outlet Fittings

RedyCompact Series

| Instrument Type | RedyCompact 2 Series (Gas) | G | C |
|---|---|-----|---|
| Function | | M | |
| Meter | | R | |
| Regulator – With manual valve | | S | |
| Switch – With alarm | | A | |
| All-In – With manual valve & alarm | | A X | |
| Full Scale of Measuring Range (Air) Defined By Manufacturer | Divider A, up to 640 SCCM, 1/4" Body | B X | |
| | Divider B, up to 6,400 SCCM, 1/4" Body | C X | |
| | Divider C, up to 64 SLPM, 1/4" Body | D X | |
| | Divider D, up to 480 SLPM, 1/2" Body | E | |
| Instruments Version | Special (±1.0% of FS, 1: 100 / up to 50 SLPM) | S | |
| | Customer-specific / OEM | K | |
| Materials (body, seals) | Aluminium, FKM | A | |
| | Aluminium, EPDM | B | |
| | Stainless steel, FKM | S | |
| | Stainless steel, EPDM | T | |
| | Customer-specific / OEM | K | |
| Supply (Micro-USB always available) | Battery supply | B | |
| | External supply 24 Vdc, 6.5 ft | F | |
| | Customer-specific / OEM | K | |
| Material valve (regulator, all-in) | Nickel-plated brass | A | |
| | Stainless steel | S | |
| | Customer-specific / OEM | K | |
| | No valve | N | |
| Manual valve Defined by Manufacturer | NS 1.0 | 1 0 | |
| | NS 1.5 | 1 5 | |
| | NS 2.0 | 2 0 | |
| | NS 2.5 | 2 5 | |
| | NS 3.0 | 3 0 | |
| | NS 3.5 | 3 5 | |
| | NS 4.0 | 4 0 | |
| | NS 6.0 | 6 5 | |
| | Valve not defined | 8 8 | |
| | Valve mounted | 9 5 | |
| | Customer-specific / OEM | 9 9 | |
| | No valve | 0 0 | |
| Type Code | G C - - | | |



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