RedyCompact

Gas Mass Flow Meters, Switches and Regulators

A1 A2 A3
324.82
AIR mln/min
Tot: 233467.82 ln
redy compact

redy compact
CO2
sccm
A1
A2
A3
371.57
SIERRA®

Lifetime
NO-DRIFT
Sensor
Warrenty

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 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.
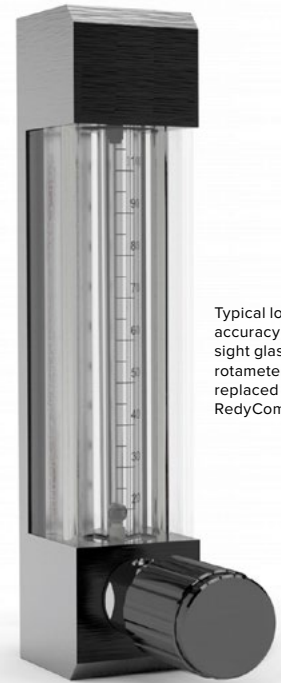
Typical low accuracy sight glass rotameter replaced by RedyCompact.

	Touch Display¹	Auto display alignment (position sensor)	Choose between multiple home screens	Totalizer	Multigas (up to 3)	Manual valve	Alarm functions	Power supply		
								Micro-USB power supply (DIN62684)	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; backlighted only with external power supply (Micro-USB or 24 Vdc)

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.
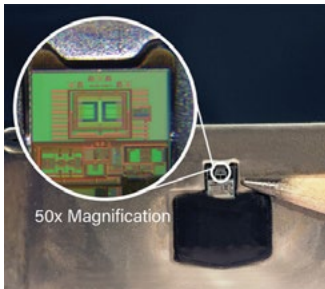
Gas Mass Flow Sensor
Accurate and Reliable MEMS Technology
Our Lifetime No-Drift Sensor Warranty is backed by high-precision MEMS technology utilizing an advanced CMOS sensor for stable gas mass flow rate measurement.

50x Magnification

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 Opertated
Off the Gtrid
Operate for months on a single double AA battery.

Lifetime **NO-DRIFT** Sensor Warrenty

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.
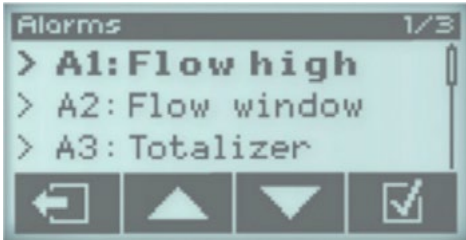
No-Drift Warranty

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)
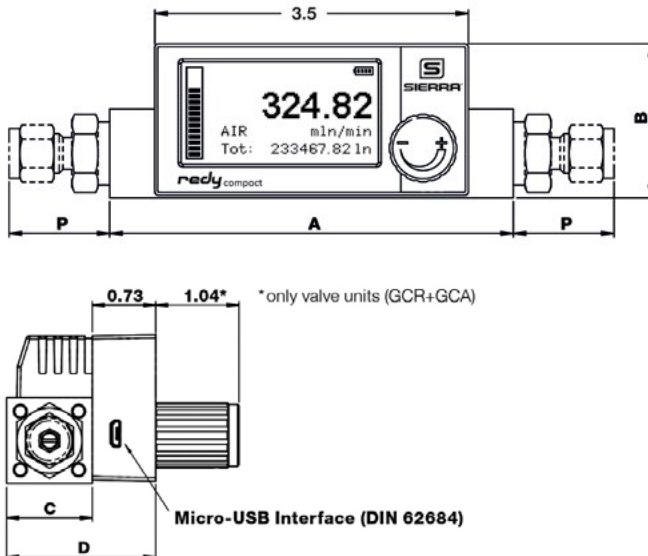
Type/Body	Length (inch)				Length of fitting
	A	B	C	D	P
GCM ¼" GCR ¼" GCS ¼" GCA ¼"	4.49	1.73	0.98	1.73	We offer a range of different inlet/outlet fittings.
GCM ½" GCS ½"	6.3	2.13	1.38	2.13	
GCR ½" GCA ½"	8.15	2.13	1.38	2.13	

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 ½" versions
For 1/2" size with Manual Valve
Valve is Flange Mounted

MEASURING RANGES

(full scale freely selectable)	Type	Measuring Range (Air)	
	GCX / ¼"	from 0 ... 27 SCCM	to 0 ... 64 SLPM
	GCX / ½"	from 0 ... 65 SLPM	to 0 ... 480 SLPM

PERFORMANCE DATA

Media (real gas calibration)	Air, O_2[(2)], N_2[(2)], He, Ar, CO_2, H_2, CH_4, C_3H_8 (other gases and gas mixtures on request)	
	[2]O_2 & N_2 are calibrated with Air	
Accuracy (air & equivalents)	Eco: ±	2.0% of full scale; ranges > 200 SLPM ± 3.0% of full scale
	Special:	± 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	± 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)	
TemperatureSensitivity	<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	G¼" (BSPP* female) up to 64 SLPM, G½" (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	Meter		M
	Regulator – With manual valve		R
	Switch – With alarm		S
	All-In – With manual valve & alarm		A
Full Scale of Measuring Range (Air) Defined By Manufacturer	Divider A, up to 640 SCCM, ¼" Body		A X
	Divider B, up to 6,400 SCCM, ¼" Body		B X
	Divider C, up to 64 SLPM, ¼" Body		C X
	Divider D, up to 480 SLPM, ½" Body		D X
Instruments Version	Eco (±2.0% of FS / > 200 SLPM ±3.0% of FS, 1 : 50)		E
	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 -	-

SIERRA®