

Next Generation
red-y compact:

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**AA Battery Powered
Touch Technology
Micro-USB Port**



red-y compact series product information

Battery Powered Digital Mass Flow Meters for Gases

Independent digital convenience: Thermal Mass Flow Meters for Gases

The **red-y compact series** mass flow meters are characterized by powerful technology, intelligent functions and innovative design. The 2015 generation instrument offers a new level of ease of use: compact design with battery power and backlit touch display for great flexibility.

Touch Technology



The touch display offers intuitive navigation. The many variables that make the unit flexible are easily accessible

Independent Operation



The flow meters are powered with a standard AA battery. Optional 24 Vdc and Micro-USB power supply available

USB Enabled



The instruments can be powered with any common Micro-USB power supply (DIN62684). Device updates can be performed using the USB interface



High Accuracy & Dynamics



The devices offer high accuracy & a wide dynamic range:

Accuracy up to $\pm 1\%$ of full scale

Turndown ratio up to 1 : 100

(depending on application/measuring range)

Totalizer



In addition to the actual flow, the total consumption is displayed. Ideal for gas consumption measurements

1 Device - Multiple Gases



One measuring device can be used for up to 3 different gases or gas mixtures

Password Protection



To avoid unauthorised change of settings, the menu of the new red-y compact can be locked with a password

3-Year Warranty*



High-quality components ensure long and trouble-free operation

*does not apply to calibration, battery, options and accessories

Instrument versions (red-y compact series)

Version	Touch Display	Choose between multiple home screens	Totalizer	Multigas (up to 3)	Manual valve	Alarm functions	Power supply		
							Micro-USB power supply	Battery power	24 Vdc supply
Available Q2/2015									
compact meter GCM	●	●	●	○			●	●	○
compact regulator GCR	●	●	●	○	●		●	●	○
Available end of 2015									
compact switch GCS	●	●	●	○		●	●		●
compact all-in GCA	●	●	●	○	●	●	●		●

● Standard

○ Option



The new red-y compact 2015 release – Even more stunning features:

» **Wide Choice of Flow Units:**

Choose between a large number of **standardized** and **normalized flow units** of the **Imperial, US customary** and **SI** measuring systems (with user adjustable reference conditions).

The units are selectable from the integrated menu both for the actual flow and the totalized flow

» **Extended Alarm Functions*:**

The new red-y compact provides 3 configurable alarms. The following triggers are available:

Min. alarm, max. alarm, windows alarm, overflow alarm and **totalizer alarm**

The alarms can be configured with different parameters:

Normally open, normally closed, hysteresis and **auto/manual reset**

» **Device Information & Notifications**

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

» **Upgrade Device Features**

New device features will be available and can be updated through the built-in USB interface. Stay informed on latest releases at twitter.com/vogtlinmassflow or www.voegtlin.com

*available end of 2015



VA-Meters vs. Massflow Meters

Many applications require a higher accuracy together with pressure and temperature compensation which cannot be realized with conventional variable area flow meters.

VA-meters are extremely sensitive to pressure and temperature changes. 1 bar change in pressure can generate an error of 50% in your measurement. Our mass flow meters generate repeatability!

Autonomy, precision and comfort for your application

Through the application of **high-precision MEMS technology** (CMOS sensors), the thermal flow meters and controllers from Vögtlin Instruments AG set new standards in terms of response characteristics and measuring accuracy, and are characterized by maximum convenience:

- » **The devices are very compact, can be installed in any position, and are immediately ready for operation**
- » **The built-in touch display with an intuitive navigation offers various settings**
- » **The devices measure real mass flow, independent of changes in pressure and temperature. This provides high accuracy and repeatability to the measuring results**
- » **In addition to the actual value, the total consumption is displayed. This creates transparency in supply systems**
- » **The autonomous operation with a standard AA battery makes the compact a high-precision alternative to variable area flow meters**
- » **High quality: All flow meters are produced and calibrated at our headquarters in Aesch, Switzerland**

Our specialists will be happy to advise: +41 61 756 63 00 or www.voegtlin.com

Technical data (red-y compact series)

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 $\frac{1}{2}$ " versions

The valve is flange mounted

Measuring ranges

(full scale freely selectable)	Type	Measuring range (air)	Process connection
	GCX-A	from 0 ... 50 mln/min to 0 ... 600 mln/min	G $\frac{1}{4}$ "
	GCX-B	from 0 ... 600 mln/min to 0 ... 6000 mln/min	G $\frac{1}{4}$ "
	GCX-C	from 0 ... 6 ln/min to 0 ... 60 ln/min	G $\frac{1}{4}$ "
	GCX-D	from 0 ... 60 ln/min to 0 ... 450 ln/min	G $\frac{1}{2}$ "

Performance data

Media (real gas calibration)	Air, O $_2^*$, N $_2^*$, He, Ar, CO $_2$, H $_2$, CH $_4$, C $_3$ H $_8$ (other gases and gas mixtures on request) *O $_2$ & N $_2$ are calibrated with air
Accuracy (air & equivalents)	Eco: \pm 2.0% of full scale; ranges > 200 ln/min \pm 3.0% of full scale Special: \pm 1.0% of full scale up to 50 ln/min
Turndown ratio	Eco: 1 : 50 Special: 1 : 100
Response time	from 500 ms (depending on the application)
Repeatability	\pm 0.5% of full scale
Longterm stability	< 1% of measured value / year
Power supply Meter & Regulator	Standard AA battery (lifetime in months depending on operation) or Micro-USB power supply (DIN 62684) Option: External power +12...30 Vdc (power consumption max. 100mA)
Power supply Switch & All-in	External power +12...30 Vdc (power consumption max. 200mA) or Micro-USB power supply (DIN 62684)
Operation pressure	0.2 – 11 bar a
Temperature (environment/gas)	0 – 50°C
Materials	Anodized aluminium, optional stainless steel electropolished
Seals	FKM, optional EPDM (FDA)
Pressure sensitivity	< 0.2% / bar of reading (typical N $_2$)
Temperature sensitivity	< 0.025% FS measuring range type / °C
Warm-up time	< 1 sec. for full accuracy

Integration

Display	Touch display 128x64 px Backlighted only with external power supply (Micro-USB or 24 Vdc)
Process connection	G $\frac{1}{4}$ " (BSPP* female) up to 60 ln/min, G $\frac{1}{2}$ " (BSPP* female) up to 450 ln/min *British Standard Pipe Parallel
Inlet section	None required
Mounting orientation	Any position (consult manufacturer above 5 bar or vertical mounting)
Connection cable	For external power supply: 2 m and 5 m with loose ends

Safety

Test pressure	16 bar a
Leak rate	< 1 x 10 $^{-6}$ mbar l/s He
Environmental protection	IP-50
EMC	EN 61326-1

Options



Panel Mounting Kit



Vacuum Fittings



Various Inlet and Outlet Fittings

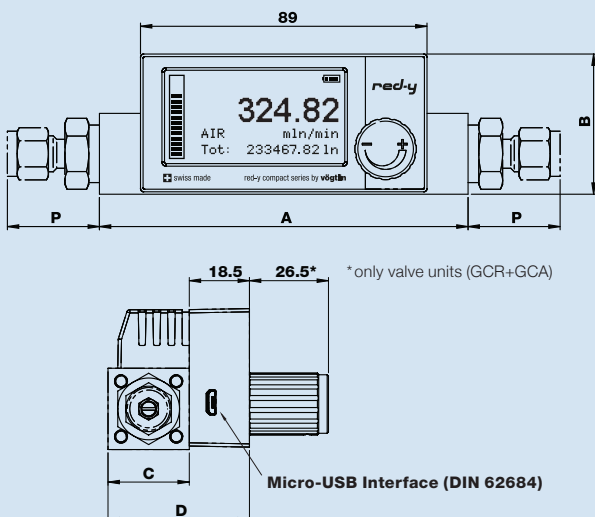
Type code «red-y compact series»

Instrument type	red-y compact 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	Customer-specific (Divider A, up to 600 mln/min)																			A X
	Customer-specific (Divider B, up to 6000 mln/min)																			B X
	Customer-specific (Divider C, up to 60 lln/min)																			C X
	Customer-specific (Divider D, up to 450 lln/min)																			D X
Instrument version	Eco ($\pm 2.0\%$ of FS / > 200 lln/min $\pm 3.0\%$ of FS, 1 : 50)																			E
	Special ($\pm 1.0\%$ of FS, 1 : 100)																			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																			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

*available end of 2015

Dimensions «red-y compact series»



Type / Body	Length (mm)				Length of fitting
	A	B	C	D	P
GCM G$\frac{1}{4}$" GCR G$\frac{1}{4}$" GCS G$\frac{1}{4}$" GCA G$\frac{1}{4}$"	114	44	25	44	We offer a range of different inlet/outlet fittings. See document 329-2092_en_fittings.pdf for types and dimensions
GCM G$\frac{1}{2}$" GCS G$\frac{1}{2}$"	160	54	35	54	
GCR G$\frac{1}{2}$" GCA G$\frac{1}{2}$"	207	54	35	54	

Find more detailed drawings in the *red-y compact series* manual available on www.voegtlin.com/downloads

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