Quantometer QA / QAe*

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CN114.3_

Applications

Media: Methane, town gas, natural gas, air, inert gases Branches: Industry, trade, chemicals, food-stuffs, ...

Brief information

CN114.3 quantometers are highly reliable gas meters, which can be used throughout the entire field of flow metering and which fulfil all of the varying requirements of industrial metering. The QA and QAe* quantometers work on the principle of the rotating turbine wheel. The rotation of the turbine wheel is proportional to the volume of the flowing gas and this volume (Vb/m³) is registered by either a mechanical (QA) or an electronic (QAe) totalizer.
Self-lubricating bearings ensure that the quantometers operate completely without any maintenance.
On account of the proven metering principle and the quality of the materials in use, the quantometers meet the highest standards. By using the quantometers in production and heating processes, it is possible to control the flow of gas precisely and therefore optimise the use of energy.
The QA quantometers are fitted with a 7-digit mechanical totalizer which registers the volume Vb in cubic meters (m³).
The QAe quantometers are equipped with an electronic totalizer. Besides the normal registration of the total volume (Vb, m³), the QAe can also display the flow rate (Qb, m³/h), the volume of a key-day (m³ / Vb on the key-day) and the date of the key-day. This means that the user can easily calculate the gas consumption for any specific part of the building or for any cost centre at any chosen time.

Interfaces/Outputs:

- QA: E1 Reed switch
- QA/QAe: E 200 Namur output (in accordance with DIN EN 50227)
- QAe: Optical interface in accordance with EN 1434-3 (ZVEI- compatible)
- QAe: M-BUS interface in accordance with EN 1434-3 (Bus voltage approx. 40 V DC)
- QAe: L-BUS interface (Bus voltage approx. 3.6 V DC, open collector output)

Main features

- Compact gas meter
- Meter sizes QA/e 10 – QA/e 40
- Flow ranges 1.6 –65 m3/h
- Measuring range up to 1:20
- Nominal width DN 25 – DN 40
- Aluminium housing
- Temperature ranges QA: -10 °C to +60 °C, QAe: 0 °C to +50 °C
- Maintenance-free
- QA: protection class IP52 7-digit mechanical index
- QAe*: protection class IP44 7-digit LCD display showing:
- actual volume (basic state)
- key-day values / key-day date
- Metering accuracy in wide ranges independent of physical characteristics of the gas such as density, temperature and pressure
- DVGW approved

*QAe only on request

Applicazioni

Tipi di gas: Metano, gas di città, gas naturale, gas non corrosivi, gas inerti.

Descrizione

I quantometri CN114.3 sono strumenti di misura del gas molto sicuri per l'ampia gamma diportata e per le diverse esigenze delle Aziende.I quantometri QA e QAe* funzionano sul principio della turbina. La Rotazione della girante è proporzionale al volume di gas fluito e viene registrata (Vb/m³) mediante un numeratoremeccanico (QA) o elettronico (QAe).I cuscinetti autolubrificanti garantiscono un funzionamento perfetto del quantometro esenteda manutenzione.Il collaudato principio di misura unito all'elevata qualità dei materiali usati, assicurano larispondenza alle più alte esigenze industriali.Nei processi produttivi e riscaldamento, i quantometri consentono un preciso controllo e ottimizzazione dell'energia.I quantometri QA sono equipaggiati con un numeratore meccanico a 7 posizioni che registrala quantità di gas Vb in m³ . I quantometri QAe sono equipaggiati con numeratore elettronico.Oltre alla registrazione del volume totale (Vb/m³) il QAe permette la visualizzazione della portata instantanea (Qb/m³ /h) e del volume ad una data impostata.L'utilizzatore può quindi facilmente calcolare i costi di produzione.

Interfaccia/uscite:

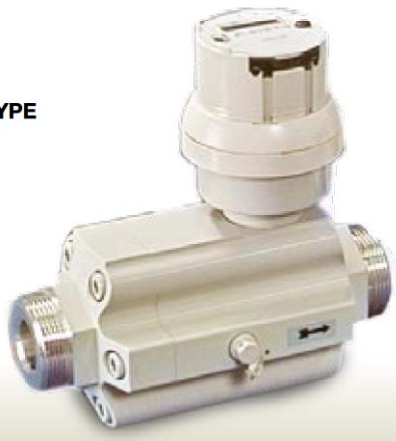
- QA: E1 contatto reed E1
- QA/QAe: uscita Namur E 200 (secondo DIN EN50227)
- QAe: interfaccia ottica (EN 1434 - compatibile ZVEI)
- QAe: Interfaccia M-Bus (EN 14349)
- QAe: Interfaccia L-BUS

Caratteristiche principali

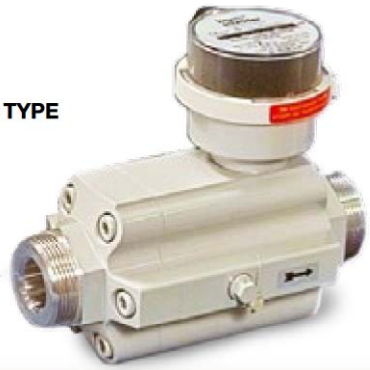
- Contatore di gas compatto
- Modelli QA/e 10 – QA/e 40
- Portate 1.6 –65 m³/h
- Rapporto di misura fino a 1:20
- Diametri nominali DN25 - DN40
- Esecuzione custodia: Alluminio
- Temperatura gas QA: -10 °C to +60 °C, QAe: 0 °C to +50 °C
- Non necessita di manutenzione
- Numeratore meccanico a 7 posizioni
- Classe di protezione QA: IP52
- QAe*: Indicatore LCD a 6 cifre per:
- volume di esercizio
- volume alla data impostata
- data impostata
- Entro un ampio campo di misura la precisione è indipendente dalle caratteristiche fisiche del gas quali la densità, pressione e temperatura
- Approvazione DVGW

* QAe Gestito solo su richiesta

***QAe TYPE**



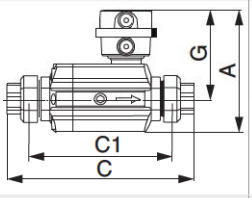
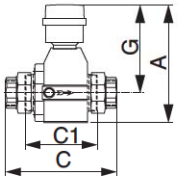
QA TYPE



Quantometer QA / QAe: Flow meters with mechanical (QA) or electronic index (QAe)

Quantometri di portata con numeratore meccanico (QA) o elettronico (QAe)

Technical data

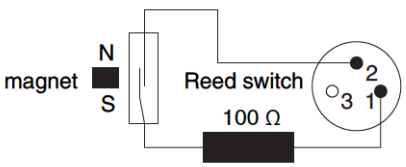
			QA/e 10 - QA/e 40 G I	QA/e 40 GF I
				
Medium/ maximum pressure	Combustible gases		4 bar	4 bar
	Air, inert gases		16 bar	16 bar
Metering technology	Measuring range	m³/h	QA/e 10 DN 25: 1.6 –16 QA/e 16 DN 25: 2 –25 QA/e 25 DN 25: 2.5 – 40 QA/e 40 DN 25: 3.3 – 65	QA/e 40 DN 40: 5 – 65
Type	CN114.31 - QA 10 GI CN114.32 - QA 16 GI CN114.33 - QA 25 GI CN114.34 - QA 40 GI CN114.385700 - QA 40 GFI			
	Max. error 0.1 Q_{max} – 0.2 Q_{max}		± 3 % (exception: QA/QAe 10 ±6 %)	
	Max. error 0.2 Q_{max} – Q_{max}		± 1.5 %	
Housing	Material		Aluminium	
	Diameter	DN mm	25	40
		DN "	1"	1½"
	Dimensions	A * mm	159	202
		C mm	240	190
		C1 mm	185	126.5
		G * mm	115	150
	Weight (net)	kg	2.1	2.5
	Weight (gross)**	kg	2.6	3.4
	Assembly		In pipes with screw connections according to DIN ISO 228 1" internal thread	In pipes with screw connections according to DIN ISO 228 1 ½" internal thread
Outputs puls values	LF-type E1 Reed switch		10 imp/m³	1 imp/m³
	MF type E200 inductive proximity switch		500 imp/m³	250 imp/m³

* QAe +25mm

** incl. bolts, nuts and packaging materials

Pulsers

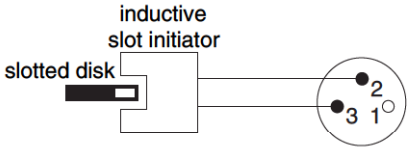
QA
LF pulser E1



E1 pin allotment
3 pin / DIN 41524

Voltage: U_{max} = 24 V
Current: I_{max} = 50 mA
Capacity: P_{max} = 0,25 W
Resistance: R_v = 100 Ω ± 20%

QA/QAe
MF pulser E200



E200 pin allotment
3 pin / DIN 41524

Characteristics of switch version according to DIN EN 50227 (Namur):

Standard voltage: U_n = 8 V DC
Internal resistance: R_i = 1 k Ω
Current consumption: active area free I ≥ 2,1 mA
active area covered I ≤ 1,2 mA