



RF1 sV ZB

Smart Gas Meter

Secure and reliable metrology for the smarter generation

Itron's smart gas meter has been built upon the proven design and success of previous products and continues to provide reliable and accurate metrology alongside increased functionality and flexibility.

KEY BENEFITS

RF1 sV ZB

The RF1 sV ZB is the latest advanced gas meter to be produced for the UK market. As part of a smart metering solution, its key benefits include:

- » Future-proof modular concept
- » Standardised digital communication interface
- » Field swappable battery
- » Remote firmware upgrade via hub
- » Remote valve operation
- » Easy operation and maintenance through advanced 2 push-button human-machine interface.

Security

The RF1 sV ZB is a fully secure product with the latest encryption and tamper alarms built in. Separate seals for metrology and functionality assist in preventing fraud. Alarms include:

- » Open cover alarm
- » Metrological tampering alarm
- » Battery low (threshold configurable)
- » Backflow alarm

ENGINEERING DIFFERENCE

Communications

Linking to a communications hub or electricity meter over ZigBee® Smart Energy HAN gives the RF1 sV ZB WAN capability for back-haul communications. As an end device, the meter transmits its information every 30 minutes to the HAN coordinator where it is stored for use by other HAN devices. The communications element in the RF1 sV ZB is modular and field replaceable allowing for a communications upgrade without removing the meter. The 15 year battery life ensures communications can last the lifetime of the meter.

Remote upgrades

The dual firmware design separates metrology from high level functionality and allows for firmware upgrades to be carried out over the air via the ZigBee® SE HAN. Configurable options include:

- » Tariff adjustment and pricing
- » Events and alarms
- » Data logging
- » Messaging
- » Billing settings

ENHANCED FUNCTIONALITY

Data logging

- » Daily log of data
- » Dynamic multi-tariff calculation
- » 256 records of end of billing logging, triggered by an end of billing event
- » Event log
- » Parameter change log
- » Default parameter and values backup every 15 minutes
- » Half hourly data stored locally
- » 13 months or 20,000 records of interval data

Functional safety and alarms

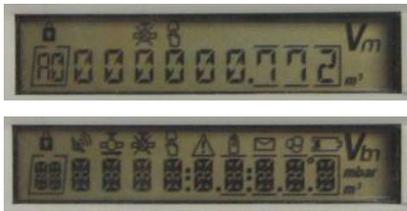
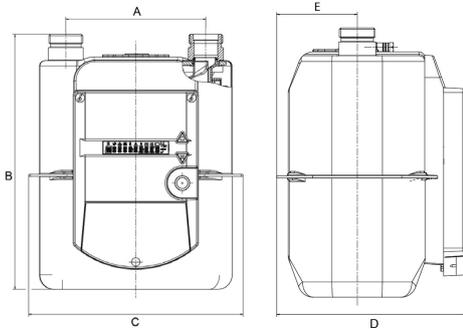
The RF1 sV ZB includes the latest technology which gives great importance to functional safety. The meter is ATEX approved and senses both accidental and deliberate misuse.

- » Valve open / closed state, including configurable behaviour in case of alarm
- » Magnetic tamper alarm
- » Unexpected flow alarm
- » Human interaction to restart flow after valve disconnect

Display

The low power LCD can show consumption using 9 digits to 3 decimal places. Messages can be displayed using the full segment digits allowing scrolling text. Various icons inform the user of the meter status including:

- » Alarm indicator
- » Battery life
- » Connectivity
- » Valve open / closed



LCD. The above images show an example display screen as well as a test display showing all segments.

Dimensions

A	152 mm
B	279 mm
C	233 mm
D	194 mm
E	83 mm

Technical Specifications

Meter size	G4
Measuring Range	G4 Qmin 0.04m ³ /h Qmax 6 m ³ /h
Maximum operating pressure	0.5 bar (0.1 bar for high temperature version) Valve operation up to 0.15 bar
Gas type	Natural gas, air, propane, butane, nitrogen and all non-corrosive gases
Gas temperature	-25°C to +55°C
Operating temperature (amb)	-25°C to +55°C
Storage temperature	-25°C to +70°C (> 55°C for up to 8 hours)
ATEX approval	Ex II 3G Ex ia ic IIA T3 Gc (Zone 2)
Relative humidity	Humidity is 93% condensing -25°C to +40°C, 90% condensing +40°C to +55°C
Colour	Light grey RAL 7035 (RF1 G4) Optional: unpainted
Tariffs	3 TOU rates
Display	LCD with 9 digits
Service Interface	IR service interface (EN62056-21)
Battery	2 lithium batteries with an average lifetime of 15 years under reference conditions
Directives	2004/22/EC (MID), 1999/5/EC (RTTE), 2004/108/EC (EMC) Conformity with EN1359:1998-A1:2006 OIML R137-1:2006 and OIML R137-2:2006 ATEX directive 94/9/EC - equipment and protective systems intended for use in potentially explosive atmospheres
IP Protection	IP54 minimum protection level (according EN60529)



Our company is the world's leading provider of smart metering, data collection and utility software systems, with over 8,000 utilities worldwide relying on our technology to optimise the delivery and use of energy and water.

To realise your smarter energy and water future, start here: www.itron.com

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