



# Gallus & RF1 Pay

Gas Smart Payment Meter - NFC and STS with eTC

A member of the Eclipse family, Gallus & RF1 Pay are the latest Smart Card Smart Payment meter in Itron's Revenue Collection Systems. The Gallus & RF1 Pay with an internal valve are considered an ideal entry point into the automatic meter reading world.

## KEY BENEFITS

- » NFC (Card and Smartphone) capabilities
- » STS with 12 buttons keypad
- » Self-billing meter
- » Pre or Post-Payment billing mode
- » 2-way communication
- » Electronic Temperature Compensation (optional)
- » Internal valve
- » Field swappable battery
- » Multiple fraud detection

## THE SYSTEM

The Gallus & RF1 Pay meter feature the Gallus & RF1 meters, which has been installed in more than 30 million locations worldwide. It has been enhanced with a secure NFC/STS token.

The microprocessor-based Smart Card provides low-cost, reliable and secure two-way communication between the point of sale (ATM, PC, self-service POS, customer portal on smartphone, GSM-1way) and the installed meter.

The revenue collection module offers innovative and customer appealing functions, such as no-disconnect periods, self-decommissioning, emergency credit and data logging capability. It also provides leak and fraud detection, overflow control and broad tariff flexibility.

The Gallus & RF1 Pay are part of the Eclipse Enterprise Edition multi-resource revenue collection system. This system provides efficient revenue collection, and enhanced data capture and reporting, for both electricity and gas utilities.

## ELECTRONIC TEMPERATURE COMPENSATION (OPTIONAL)

The temperature converted volume shown on the electronic index allows to bill the consumer more accurately.

## STANDARDS & COMPLIANCE

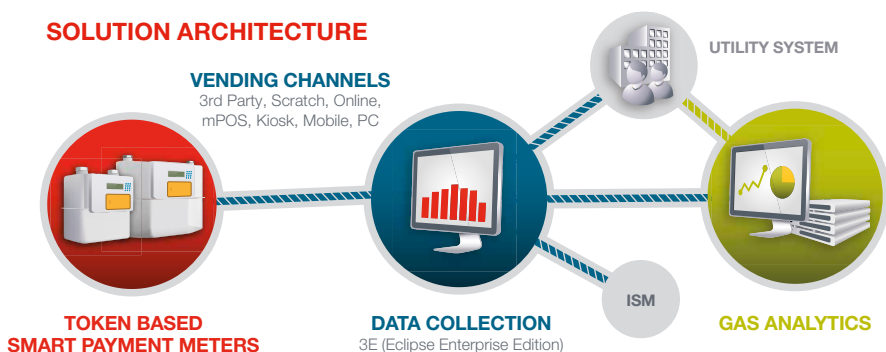
The meter is compliant with the following directives, standards and norms:

- » MID approved
- » EN 1359 and OIML standards
- » ISO 9001 certified
- » ATEX approved
- » IEC 62055-41:2014 (STS)

## AVAILABLE TOOLS

- » MTT, metrology test tool to connect to test benches (NAMUR norm)
- » RCT, recalibration tool (non MID) through RMA port
- » FET, field engineering tool, on smartphone for meter maintenance

## SOLUTION ARCHITECTURE



## DATA LOGGING & CONFIGURATION

### » Data Logging:

- Readings including the last 12 monthly data (1st of each month at midnight);
- Readings including the last 8 weekly data (each Monday at midnight);
- Readings including the last 30 daily data (each day at midnight);
- Remaining battery capacity at loading time;
- Last 10 alarm/error logbook entries with timestamps;
- Last 10 opening and closure with timestamps;
- Last 10 credit loadings with timestamps.

» **No Disconnect:** The meter can be configured to avoid disconnection during specified periods. This can include defined times of day, certain days, weekends, or specific periods of the year.

### » Self Decommissioning:

An automatic “close down” action allows the utility or consumer to decommission the account directly. No on-site visit from the utility is required.

## BILLING METHODS

Itron's Smart Payment solution allows **automated data collection** at the time the consumer is topping up its energy credit. In accordance with the local regulations, the meter can be set to different billing modes:

### » Regular Prepayment:

By loading the Smart Card upfront, the consumer pays for gas provision before consuming.

### » Pay-As-You-Go:

In this typical post-payment mode, the end customer is charged for the consumed gas after a certain period based on volume or time.

## SAFETY AND SECURITY


» Metrological and functional parts of the meter protected with separate seals.

» **Leak detection:** A leak test is conducted every time the gas valve opens to ensure other gas appliances have not been left on. The valve automatically closes if the installation is not tight.

### » Alarms (valve closes automatically):

- Open cover alarm
- Overflow alarm
- Backflow alarm
- Battery low (threshold configurable)

## Technical Specifications

Parameter	Value
Gas type	Natural gas, air, propane, butane, nitrogen and all non-corrosive gases
Cyclic volume	1.2 dm <sup>3</sup> (Gallus) and 2 dm <sup>3</sup> (RF1)
Measuring range	G1.6 Qmin 0.016 m <sup>3</sup> /h Qmax 2.5 m <sup>3</sup> /h G2.5 Qmin 0.025 m <sup>3</sup> /h Qmax 4 m <sup>3</sup> /h G4 Qmin 0.04 m <sup>3</sup> /h Qmax 6 m <sup>3</sup> /h G6 Qmin 0.06 m <sup>3</sup> /h Qmax 10 m <sup>3</sup> /h
Accuracy	Class 1.5
Standards / Directives	Directive 2014/32/EU (MID), Directive 2014/34/EU (ATEX), Directive 2011/65/EU RoHS; Conformity with EN1359:1998-A1:2006 IEC 62055-41:2014 (STS)
Maximum operating pressure	0.5 bar (0.1 bar for HTL version) Valve operation up to 0.2 bar
Temperature range	Operating -25°C to +55°C Storage -30°C to +70°C
Pressure drop	Under 2 mbar
ATEX approval	Zone 2:  II 3 G Ex ic IIA T3 Gc X.
Humidity	Max 93% RH at 40°C
Ingress protection	IP54 minimum protection level (according EN60529)
Casing	Sheet steel with grey white painting (RAL 9002)
NFC tag norm	2K cards ISO-14443
Battery	Lithium battery with 10 years average life time*
Display	Dot matrix

\* Battery life time may vary depending on usage

## RELATED PRODUCTS

Two-way multi-resource prepayment system: Eclipse Enterprise Edition (3E)



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Gallus Pay DN25 with Card



Gallus Pay DN25 with Smartphone

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