

MONECA™ SMART
Smart card hydrant standpost





1 - General information

MONECA™ SMART is the latest generation of networked hydrant standposts. Designed exclusively for professionals, it is the completely secure solution for drawing large volumes of water.

This new generation system incorporates communication functions which allow remote monitoring of the metering display unit, and of usage and badge refilling.

MONECA™ SMART offers a secure alternative to unauthorised draws from your fire hydrants. It not only enables you to protect your fire-protection portfolio, it also helps to reduce non revenue water volumes.

- **MONECA™ SMART** can be ordered either:
 - without a communication modem,
 - with the SIGFOX™ wireless communication modem,
 - with the GPRS/3G quad band (850/900/1800/1900 MHz) communication modem. Supplied without SIM card.

MONECA™ SMART can be installed on any public or privately owned site.

2 - Technical characteristics

- Minimum working pressure : 1 bar,
- MAWP (maximum allowable working pressure): 10 bar,
- Inlet: flange DN 80 ISO PN 10,
- Outlet: symmetrical coupling DN 65,
Option: symmetrical coupling DN 40 or 80.
Please consult us regarding other possible options ([refer to § 7](#)).
- Temperature range for use: -10°C to +65°C,
- Max. output flow rate: 40 m³/h, subject to a margin of +0 to +20%,
- Min. output flow rate: 400l/h, (shuts down automatically below this value),
- Option: flow limiter, 20 or 30 m³/h,
- Fluid: drinking water, clean water.

2-1 Functions:

- Pollution prevention in public water networks,
- Monitoring of draw outflow,
- Prevention of the risk of water hammer,
- Access control via contactless badge,
- Electronic payments system, either on a pre- or post-payment basis,
- Metering of the draw volumes
- Connection height 1 m (or up to 1.8 m with a different version),

2-2 Design:

- Mantle made of synthetic material, grey polyurethane paint,
- Non-return valve,
- Flow limiter,
- Integrated foot filter,
- Hydraulic piston valve,
- MID-approved pulse output meter (for invoicing),
- Backlit screen displaying the available balance on the badge, as well as the instructions and anomalies,
- RFID badge reader,
- Bluetooth™ communication port,
- Autonomous operation using pack of lithium batteries.

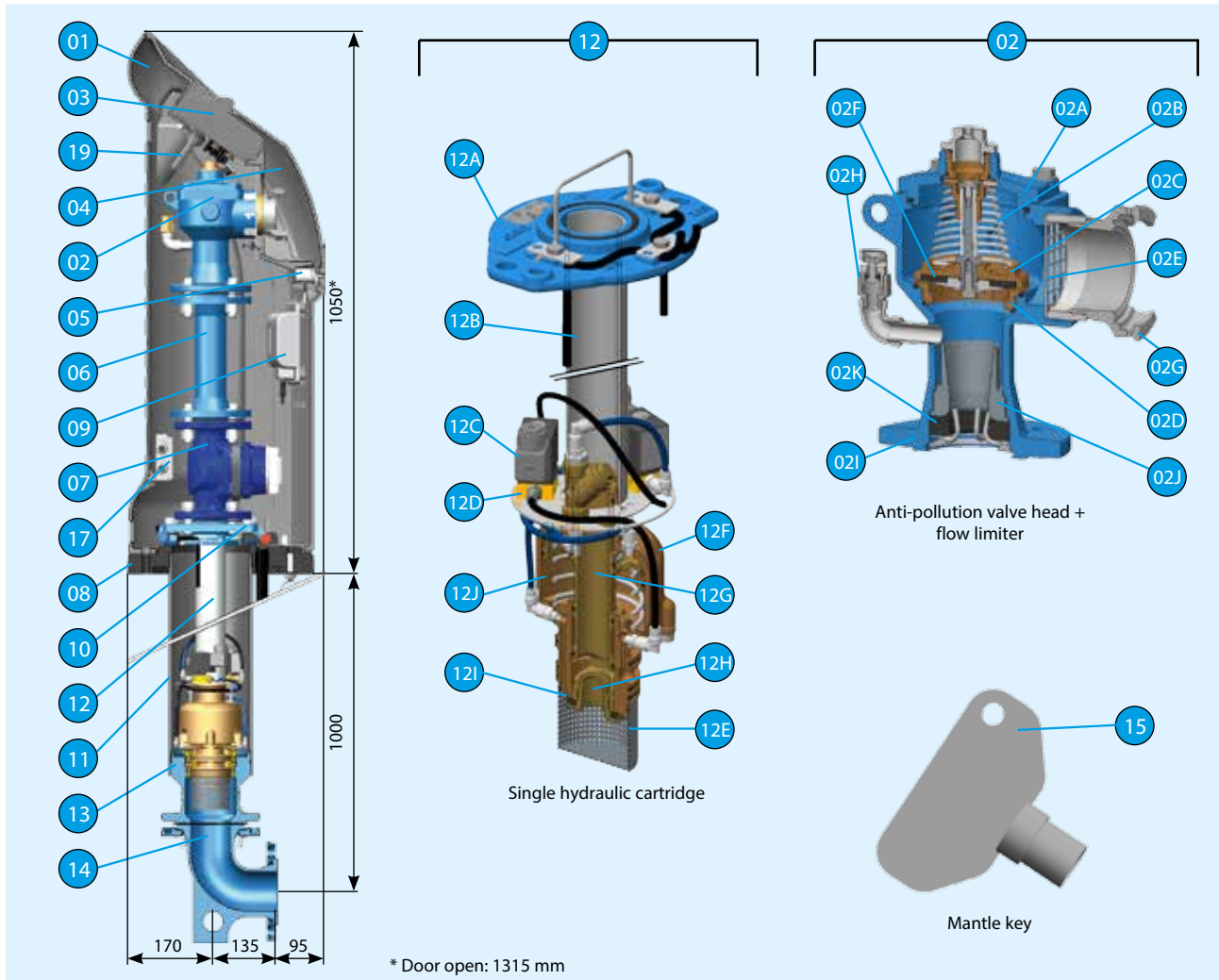
2-3 Conformity:

- CE marking,
- NFP 98350 standard (Persons of Reduced Mobility),
- ACS (water sanitary approval) no. 16 ACC LY 207.

2-4 Maintenance:

- Easy to maintain: quick access to the various components by simply opening the front cover.

2-5 Dimensions and parts list



Part no.	Designation	N.B.	Materials	Standards
01	Mantle in 2 parts + locks	1	PDCPD	
02	Anti-pollution flow limiter valve head	1	-	
2A	Cover	1	Cast iron GS/EN-GJS-450-10	NF EN 1563
2B	Spring	1	Stainless steel AISI 302/X10Cr Ni18-8	NF EN 10088
2C	Valve mounting	1	Bronze/CuSn5Zn5Pb2	NF EN 1982
2D	Seat	1	Bronze/CuSn5Zn5Pb2	NF EN 1982
2E	Inlet screen, 9 mm mesh	1	Stainless steel 316/X5CrNiMo 17-12-2	NF EN 10088
2F	Valve stem	1	EPDM	NF EN 681
2G	Symmetrical inlet DN 65	1	Aluminium	NF EN 1706
2H	Air intake valve	1	-	
2I	Body of valve head	1	Cast iron GS/EN-GJS-450-10	NF EN 1563
2J	Flow nozzle	1	POM	
2K	Flow limiter diaphragm, 40 m³/h	1	EPDM	
03	Electronic module	1	-	
04	Door	1	PDCPD	
05	Electromagnetic lock	1	-	
06	Sleeve	1	Cast iron GS/EN-GJS	NF EN 1563
07	Meter DN 50 + Pulse emitter	1	-	
08	Sealing baseplate	1	Cast iron GL/EN-GJL-250	NF EN 1561
09	Main battery	1	-	
10	Hinged plate	1	Cast iron GL/EN-GJL-250	NF EN 1561
11	Column	1	Cast iron GS/EN-GJS	NF EN 1563
12	Hydraulic cartridge	1	-	
12A	Flange + handle	1	Cast iron GS/EN-GJS-450-10	NF EN 1563
12B	Column	1	Stainless steel A2/X5CrNi 18-10	NF EN 10088
12C	Bistable solenoid valve	2	-	
12D	Sieve filter G3/8, mesh size 0.3 mm	1	Bronze / stainless steel 316/X5CrNiMo 17-12-2	NF EN 1982+NF EN 10088
12E	Upstream strainer, mesh size 2 mm	1	Stainless steel 316/X5CrNiMo 17-12-2	NF EN 10088
12F	Valve body	1	Bronze/CuSn5Zn5Pb2	NF EN 1982
12G	Piston	1	Bronze/CuSn5Zn5Pb2	NF EN 1982
12H	Valve stem mounting	1	Bronze/CuSn5Zn5Pb2	NF EN 1982
12I	Valve stem	1	EPDM	
12J	Spring	1	Stainless steel X10 CrNi 18-8	NF EN 10088
13	Valve box	1	Cast iron GL/EN-GJL-250	NF EN 1561
14	Inlet elbow DN 80 ISO PN10/16	1	Cast iron GS/EN-GJS-450-10	NF EN 1563
15	Mantle key	1	-	
16	Push button (not shown)	2	-	
17	Junction box (optional)	1	-	
18	Modem, GPRS/3G or Sigfox (optional - Not shown)	1	-	
19	USB flash drive (option)	1	-	



2-6 2 types of RFID BADGE:

- **User badge** for the final user, enables him to draw water:
 - the capacity of the badge is limited to a maximum of 9,999 m³.
 - the badge can be refilled.
 - it is valid for 5 years as from the date when it is ordered.
- **Maintenance badge** for the operator, it allows him to:
 - access the standpost settings.
 - specify the zone code. See explanation in paragraph 4 (electronic payments system).
 - authorise the uploading of the draw history (via cable or Bluetooth™ link).

Characteristics of the badges

- Frequency 13.56 MHz.
- Standards ISO14443A.
- Chip MIFARE® Classic 1K.
- Materials PVC.



3 - Operation

The reading of the badge is contactless (RFID technology) and it enables water to be supplied once the shutter is closed.

Video

Follow this link for further information about how it operates:
<https://youtu.be/EWCcg5T4nng>



Access control

- The reading of the badge's authorisation code unlocks the main door. Once it is open, it provides access to the display device, the control buttons, and the water connection fitting.



The display device shows

- Either the remaining volume available on the badge in m³,
- Or an information message showing that an authorisation has expired, or an incident message etc...

Drawing water with the MONECA™ SMART

Standard mode:

- Press the button +:
 - **briefly** to increase the flow to a rate of roughly 10 m³/h,
 - **hold the button down** to increase the flow rate until the valve is fully opened (displayed on the bar chart).
- Press the button again -: the flow reduces and then stops.
- When you take the draw card out, the MONECA™ SMART shuts down.

Automated preset drawing volume (PV):

- Insert the badge in the reader
- The global available volume (GV) at the badge is displayed alternatively with the PV if GV>PV, then press the button + to start drawing. MONECA SMART will close automatically when drawn volume reaches PV.
- If PV>GV, then only GV is blinking on the display. Press button + to start drawing of remaining GV.

4 - Electronic payment system:



Operator code

The operator code is made up of 5 digits and 2 letters. It belongs to the customer, and it is assigned to it when the first order is placed. This code is contained in the memory of the standpost and of the badge. It must be included in the details of any new order.

For example: 12345 AA

The 5 digits form the "operator code", and the 2 letters are called the "zone code". The zone code can be customised by the customer, and it enables:

- the use of certain standposts to be limited by matching the badge's two letters with those of the standpost,
- different pricing zones to be assigned.

	STANDPOST CODES	USER BADGES			MAINTENANCE BADGE
		12345 AA	12345 AB	12345 FG	12345
	12345 AA	Drawing possible	Drawing possible	Drawing possible	Reading possible
	12345 AB	Drawing possible	Drawing possible	Drawing not possible	Reading possible
	12345 FG	Drawing possible	Drawing not possible	Drawing possible	Reading possible
	Refilling terminal for MONETICARD badges PC or WEB	Data exchange possible	Data exchange possible	Data exchange possible	Data exchange not possible

5 - The modems

MONECA™ SMART offers 2 methods of long-distance communication: firstly via a Sigfox™ wireless modem, or alternatively via a GSM (GPRS, 3G) modem.

MONECA™ SMART SIGFOX™

The SIGFOX™ wireless modem enables the information about each draw to be sent to the secure website in real time after the draw www.smart-inside.com.

MONECA™ SMART GSM

MONECA™ SMART is fitted with a GSM modem which stores the daily draw information and synchronises it on a daily basis with www.smart-inside.com.

Important note: the MONECA™ SMART in both the SIGFOX™ and GSM communicating versions involve the use of the secure website www.smart-inside.com and of [MONETICARD WEB](http://www.moneticard.com). The operator of the MONECA™ SMART hydrant standpost portfolio can therefore manage his portfolio via the website in relation to the following aspects: refilling of the badges, managing the list of blocked badges, managing users, and pricing policy by type of water or geographic zone...

6 - Accessories

Junction box

- In the case of a standpost connected to a network which is pressurised by a pump, the standpost has a switching output that can switch the pump on. This switching output changes state upon presentation of a valid badge with a credit balance.
- This box enables the standpost and the pump control to be electrically linked.



USB back-up kit

- Enables a continuous local mirror backup to be made of the MONECA™ SMART memory.



7 - Optional hydraulic outlets



Hydraulic connector according to STORZ B75 DIN 14318



Hydraulic connector according to UNE 23400 DN 70



Hydraulic connector according to D63 SMS1158



Hydraulic connector according to Instantaneous BS336



RFID badge reader



SIGFOX™ or GSM modem

8 - MONETICARD software: management of the badges, standposts and subscribers

8-1 Electronic payment system WITHOUT communication modem

The MONETICARD PC software is a complete solution for the management of:

- the subscribers,
- the badges (refilling),
- the draw volumes,
- the standposts and their maintenance.

This solution is designed to be installed on a PC that uses Windows 7® or a more recent version. A RFID badge reader connected to a USB port enables data to be read from and written to the badges.

This software enables:

- the invoicing of your customers (pre- or post-payment basis) to be managed.
- draw history data to be retrieved via cable link between a PC running the Monéticard PC software and the standpost.

8-2 Electronic payment system WITH communication modem

The MONETICARD WEB software allows the management of:

- the subscribers,
- the badges (refilling),
- and also the monitoring of the draw volumes (print-out of the usage report)
- monitoring of the standposts and their maintenance

This software solution is hosted on our internet platform and can be accessed exclusively by using a browser (e.g. Chrome). A RFID badge reader which is connected locally to a USB port enables data to be read from and written to the badges.

With the SIGFOX™ modem option, this allows:

- the automatic uploading of draw data,
- the fortnightly uploading of the metering display unit data,
- the sending of alarms in real time.

With the GSM modem option, it allows:

- the automatic uploading of draw data,
- the daily uploading of the metering display unit data and of alarms,
- the refilling of badges on the standpost itself,
- remote administration of the list of blocked badges,
- the updating of the standpost's internal software.

MONECA™ SMART is fitted with a Bluetooth™ communication port. The operator can use the Smart-Inside mobile app on his Android smartphone to configure the main operating settings and to run the main operation monitoring functions. This link also enables the standpost historical data to be collected (draws, alarms, error codes, ...) from the standpost memory and to be sent to Monéticard Web.

8-3 - Main functionalities of MONÉTCARD WEB

	MONECA™ SMART	MONECA™ SMART SIGFOX™	MONECA™ SMART GSM
Refilling of the badges	In the office	In the office	In the office or at the standpost
Uploading of the standpost historical data	Bluetooth™	Web	Web
Uploading of the metering display unit data	Bluetooth™	Web (2 x/month)	Web (daily)
- Updating of the list of blocked badges	Bluetooth™	Bluetooth™	Web
Configuration of the standpost settings	Bluetooth™	Bluetooth™	Bluetooth™/Web
Uploading of alarms	Bluetooth™	Web (real-time)	Web (once a day)
Online monitoring of draw volumes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Management of subscribers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Usage report (pdf format)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automatic exporting of data (PDF, CSV, XML)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MONECA™ service history sheet at www.smart-inside.com	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Bluetooth™: allows you to communicate with the standpost if you are nearby (short range)

Web: allows you to communicate with the standpost if you are further away (long range)

9 - Web platform: www.Smart-Inside.com



www.smart-inside.com is the web platform which brings together all our software solutions. They can be accessed via a secure connection using a web browser.

One of the special features provided by the web platform is the geolocation of all the portfolio assets independently of the software that you use.

This gives you an instant overview of all your available equipment.



10 - MONECA™ app



MONECA™ is the app which lets you customise the MONECA™ SMARTstandpost.

It uses a contactless connection via a Bluetooth™ communication port. This application enables usage data to be collected (draw histories, metering display unit data, alarms, etc...) and to be synchronised with www.smart-inside.com.

It also enables the list of blocked badges to be updated.

This app works exclusively with Android.



The number one choice for water flow control



TALIS remains the best choice for water flow management solutions. Our company provides the most appropriate solution for water and energy management as well as for industrial or municipal applications. With a comprehensive range of over 20,000 products, we provide global solutions for each phase of the water cycle: pumping, distribution, connections, ... Our experience, innovative technologies and all-encompassing, in-depth expertise form the basis for the development of lasting solutions and the best possible management of the vital resource which is water.



BAYARD

ZI - 4 avenue Lionel Terray
CS 70047

69881 Meyzieu cedex France

TEL. + 33 (0)4 37 44 24 24

FAX + 33 (0)4 37 44 24 25

WEBSITE : www.bayard.fr

Characteristics and performance data are subject to change without notice as a result of technical developments. Images and photos are non-binding.

