# METER RR 032 — Flow transmitter

## GENERAL CHARACTERISTICS

The primary sensor is constituted by a rotor with paddles which enters in rotation at the passage of fluid. The speed of rotation is proportional to the flow. The measurement is detected by means of sensors depending on the type of mechanical construction and materials of the body of the transmitter.

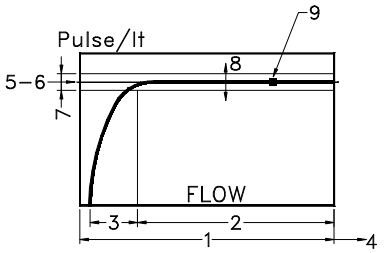
- Flow meter for pipes from DN32 to DN100.
- Hermetic separation between flow chamber and sensor.
- Design in plastic and metal.
- IP67 protection.

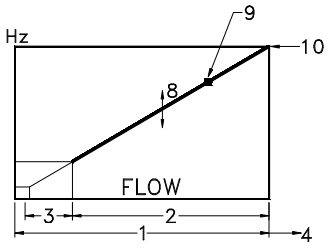
## TECHNICAL DATA Tab.1

| DN Pipe | Q max l/min | Measure range l/min (1) | (2) | (3) | Pulses / liter (6) | Hz (10) |
|---|---|---|---|---|---|---|
| 32 | 220 | 15 - 200 | 30 - 200 | 15 - 30 | 90 | 300 |
| 40 | 360 | 15 - 300 | 60 - 300 | 15 - 60 | 48 | 240 |
| 50 | 480 | 25 - 400 | 80 - 400 | 25 - 80 | 34 | 227 |
| 65 | 600 | 40 - 500 | 100 - 500 | 40 - 100 | 24 | 200 |
| 80 | 840 | 50 - 700 | 100 - 700 | 50 - 100 | 17,5 | 204 |
| 100 | 1200 | 85 - 1000 | 100 - 1000 | 85 - 100 | 10,5 | 175 |

| | | | |
|---|---|---|---|
| Swivel connection | 1.1/4" UNI 228/1 - Female | **RM** | Mounting fittings as per Tab.3 |

| | | | | |
|---|---|---|---|---|
| **1** | Total measuring range | | See measuring range table | |
| **2** | Linear measuring range | | | |
| **3** | Non linear measuring range | | | |
| **4** | Flow in excess of the value of F.S. | | increased usury | $\Delta p > 0,5$ bar |
| **5** | Pulses / liter | | Measurements with $H_2O$ a 20°C | |
| **6** | Pulses / liter mean value | | | |
| **7** | Accuracy | ± 3% | Ref. to pulses / liter of measured value | |
| **8** | Pulses / liter variation | ± 10% | Ref. to the value at point 5 | |
| **9** | Repeatability | ± 1% | Ref. to F.S. frequency | |
| **10** | Max. frequency | | Value at F.S. | Value at F.S. |




| | | RRI - 032 | | RRH - 032 | |
|---|---|---|---|---|---|
| **Detection sensor** | | Inductive | | HALL | |
| **Power supply Current** | | 5 – 30 Vdc | PNP | 5 – 30 Vdc | PNP |
| | | | NPN | | NPN |
| | | 5 – 30 Vdc | Namur | 5 – 30 Vdc | Namur |
| **Max. load** | | 10 mA | | 30 mA | |
| **Short circuit protection** | | 200 mA | | 100 mA | |
| **Reverse polarity protection** | | No | | Yes | |
| **Detection sensor** | | No | | Yes | |
| **Output** | **P** | PNP | | PNP | |
| | **N** | NPN | | NPN | |
| | **A** | Namur | | ------ | |
| **Connection** | **S** | M12x1 | 4 poles | M12x1 | 4 poles |
| **Max. pressure** | | 10 Bar | | 100 Bar | |
| **Medium temperature** | | -20 / +60 °C | | -20 / +100 °C | |
| **Ambient temperature** | | -20 / +60 °C | | -20 / +60 °C | |
| **Degree of protection** | | **IP67** | | **IP67** | |

## MATERIALS Tab.2

| | RRI - 032 | | RRH - 032 | |
|---|---|---|---|---|
| Body | PVC | **H** | S.S. 1.4305 | **K** |
| Rotor | PVDF | **-** | PVDF | **-** |
| Rotor inserts | N.10 S.S. | **10K** | N.5 magnets | **05M** |
| Supports - axes | Iglidur - Ceramic | **-** | Iglidur - Ceramic | **-** |
| Gaskets | Viton | **V** | Viton | **V** |

## INSTALLATION FITTING Tab.3

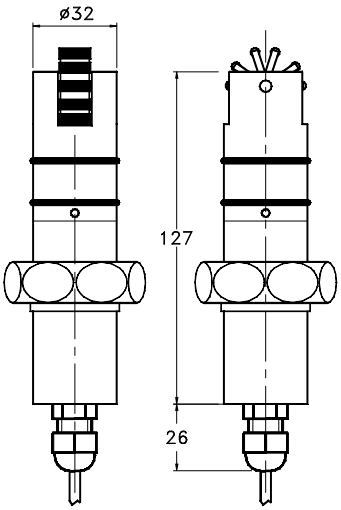
| | RR 32 | |
|---|---|---|
| Process side connection | 1.1/2" | **40** |
| Material | PVC | **P** |
| | Stainless steel 1.4571 | **K** |
| Thread | UNI 228/1 - Male | **V** |
| Accessory on request | | |

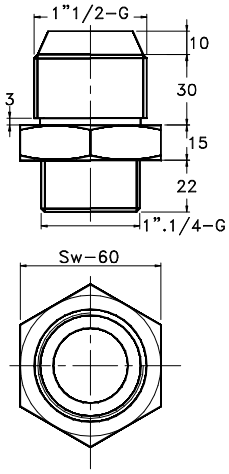
We reserve the right to change the data without notice

BE#114/2-03/2008

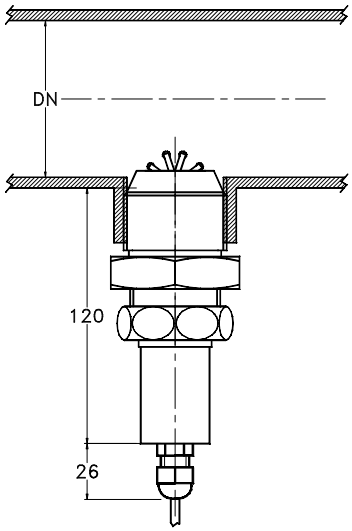
## DIMENSIONS

Measures in mm.



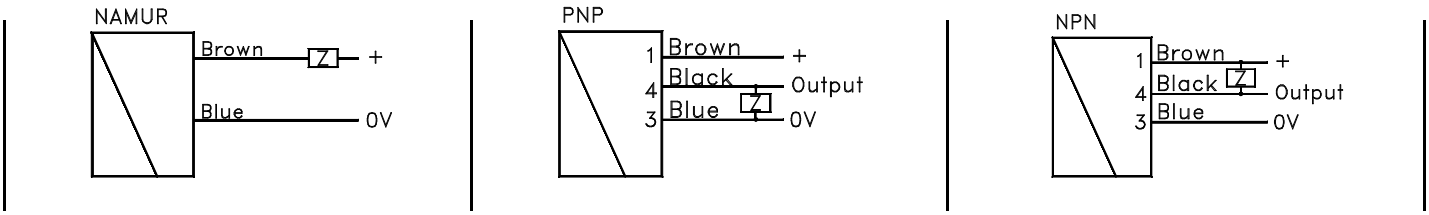




RR32 nut on request




## WIRING

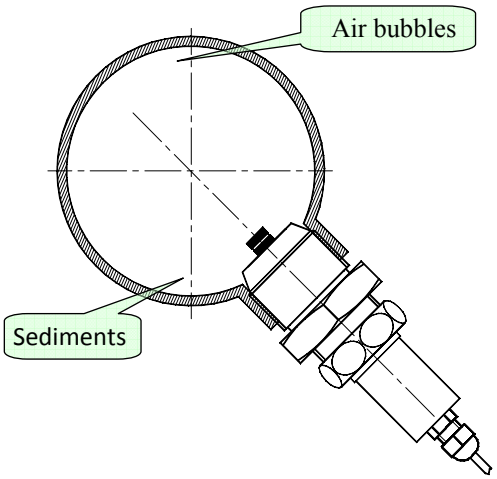
Tab.4




| NAMUR = A | PNP = P | NPN = N |
|---|---|---|

## INSTALLATION

The flow transmitters RR32 are easily mounted in line by means of the swivel connection and relative mounting nut. Before installing the transmitter the hydraulic circuit must be purged to avoid that contaminants can interfere with the proper functioning of the rotor. It is important that the rotor always work in conditions of clean fluid. The presence of air bubbles in the fluid can be a source of error in the measurement. Valves and / or other auxiliary components of the circuit must be installed downstream of the transmitter taking into account, in this case, of a start-up time of about 0,5 sec and a response delay of approximately 3 sec.
Electronic interface units are available to display the flow rate and the alarm signaling.




## NOMENCLATURE

| RRI | 032 | RM | H | 000 | V | 10K | P | S | | |
|---|---|---|---|---|---|---|---|---|---|---|
| • | | | | | | | | | - | Name – Type of sensor |
| | • | | | | | | | | Tab.1 | Suitable for pipes from DN32 a DN100 |
| | | • | | | | | | | Tab.1 | Swivel connection 1.1/4" |
| | | | • | | | | | | Tab.2 | Body material |
| | | | | • | | | | | Tab.1 | Measuring range in function of DN pipe |
| | | | | | • | | | | Tab.2 | Gasket material |
| | | | | | | • | | | Tab.2 | N. and type of the rotor inserts (if present) |
| | | | | | | | • | | Tab.1-4 | Output signal type and wiring |
| | | | | | | | | • | Tab.1 | Electrical connection |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| RR | 32 | 40 | P | V | Mounting nut 1.1/2" | PVC | Accessory on request | Tab.3 |
| RR | 32 | 40 | K | V | Mounting nut 1.1/2" | S.S. 1.14571 | Accessory on request | |

| | | | | | | |
|---|---|---|---|---|---|---|
| K | PU | 02 | S | G | Connection cable 2m length with M12x1 plug | Accessory on request |