

HYDRUS 2.0

ULTRASONIC METER



APPLICATION

HYDRUS 2.0 is a static ultrasonic water meter designed for all applications of domestic cold water supply enabling accurate measuring with long-term stability under difficult conditions (no measurement of air and insensitive to sedimentation). Developed within the framework of the MID, it complies with the European regulations and holds sanitary conformity certificates (KTW/W270, ACS, WRAS and others). The integrated communication function supports meter data provision via mobile reading (walk-by/drive-by/passive drive-by) or fixed network (upgrade without on-site configuration). In combination with Diehl Metering's IZAR fixed network system, which stands out with excellent coverage, high data granularity and timeliness will be maintained. This is what makes it a high responsive infrastructure to take actions immediately.

The integrated LoRaWAN[®] communication enables private or public operated fixed network reading.

FEATURES

- DN 15 to 50
- MID approved with dynamic range up to R 800
- IP 68 suitable for outdoor installations
- Integrated radio communication based on Open Metering telegram (OMS Generation 3 (not available with radio meters with C1 mobile mode or LoRaWAN[®]/C2) or 4, Profile B)
- LoRaWAN[®] communication (Fixed Network) and OMS radio as a back-up mode
- Wired M-Bus/Pulse/Pulse, wireless M-Bus, wireless M-Bus in combination with wired L-Bus/Pulse interface
- Display with error and alarm codes including leakage detection
- Battery lifetime up to 16 years
- U0 / D0, no need for calming sections

GENERAL

| | | HYDRUS 2.0 | |
|---|--|-----------------------------------|----|
| Medium temperature range | °C | +0.1 ... +90 | |
| Ambient operating temperature | °C | -10 ... +55 | |
| Ambient storage temperature | °C | -10 ... +70 (>35 °C max. 4 weeks) | |
| Environmental class | | O (Outdoors) | |
| Mechanical environmental class | | M2 | |
| Electromagnetic environmental class | | E2 | |
| Nominal pressure | PN | bar | 16 |
| Power supply | Two 3.6 VDC lithium batteries | | |
| Battery lifetime T30 ¹ /T50 ¹ | Up to 16 years | | |
| Communication interfaces | Optical, OMS wireless M-Bus 434 or 868 MHz, M-Bus, L-Bus and Pulse, LoRaWAN [®] 868 MHz | | |
| Data storage | For errors, alarms and measuring values, data logging capabilities to record up to 1024 daily values +32 monthly values and two annual due dates | | |
| Protection class | IP 68 | | |

¹ Depends on the sending interval of the radio telegram, the telegram length and the ambient temperature at the installation

TECHNICAL DATA DISPLAY

| | | HYDRUS 2.0 |
|-------------------------------|--|------------|
| Display indication | LCD, 9-digit, additional symbols/display counter/unit | |
| Units displayed DN 15 - DN 50 | Volume (m ³ + 3 decimal places) and flow rate (m ³ /h + 3 decimal places) | |
| Values displayed | Display test - volume - battery lifetime - firmware version - software checksum - flow - current/continuous/historical error - alarm status - high resolution volume - due date - due date volume - reverse volume - display counter - low battery indication - leakage indication - metrological log access - radio signal ON/OFF - alarm indication - billing value indication - and more display loop options to choose from. | |

INTERFACES - OVERVIEW

| | | HYDRUS 2.0 |
|--------------------|--|------------|
| Optical | For switching the display loop and configuring / reading the meter via IZAR@MOBILE | |
| M-Bus | 2400 baud, cable length 1.5 m, power supply only via built-in battery - can be combined with two Pulse outputs | |
| L-Bus | In combination with radio, cable length 1.5 m (only one interface communicating at the same time) | |
| Pulse (Open drain) | Two Pulse outputs, or one Pulse and one L-Bus output, Pulse cable length 1.5 m | |

SECURITY

| | | HYDRUS 2.0 |
|----------------------|---|------------|
| Versions | OMS Generation 3 (not available with radio meters with C1 mobile mode or LoRaWAN [®] /C2) or OMS Generation 4, Profile B, selectable | |
| LoRaWAN [®] | Certified according to the standard 1.0.2 | |

VOLUME / PULSE OPEN DRAIN

| HYDRUS 2.0 | | |
|---|---------|--|
| Max. input voltage | V | 30 |
| Max. input current | mA | 27 |
| Max. voltage drop at active output | V/mA | 2/27 |
| Max. current through inactive output | µA/V | 5/30 |
| Max. reverse voltage without destroying outputs | V | 6 (in case current does not exceed 27 mA) |
| Pulse rates | l/pulse | Decadic 1 / 10 (depending on nominal diameter) |
| Pulse output 1 variants | | Total volume or forward volume |
| Pulse output 2 variants | | Flow direction or error, reverse volume |
| Pulse frequency | | Max. frequency 10 Hz |
| Pulse width | | 50 - 125 ms |

POSSIBLE COMMUNICATION INTERFACES

| HYDRUS 2.0 | |
|----------------------------|--------------|
| Wireless M-Bus/Pulse/L-Bus | 3 wire |
| Wireless M-Bus only | without wire |
| LoRaWAN® and OMS radio | without wire |
| M-Bus only | 2 wire |
| M-Bus/Pulse/Pulse | 5 wire |
| Pulse/Pulse | 3 wire |
| IZAR BE PULSE | 4 wire |

REACH

Information pursuant to Article 33 (1) of Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006:

This product series contains components with the following substances in a concentration of more than 0.1% weight by weight (w/w):

- Lead (only for the flange variants) - (CAS no.: 7439-92-1)
- Lead titanium zirconium oxide (CAS no.: 12626-81-2)

TECHNICAL DATA

| Nominal diameter | DN | mm | 15 | 15 | 15 | 15 | 15 ³ | 15 |
|---|-------------------|-------------------|------|------|------|-------|-----------------|-------|
| Permanent flow rate | Q ₃ | m ³ /h | 1.6 | 1.6 | 1.6 | 2.5 | 2.5 | 2.5 |
| Overall length | L | mm | 110 | 165 | 170 | 110 | 115 | 165 |
| Dynamic (Q ₃ /Q ₁) | R | | 400 | 400 | 400 | 800 | 800 | 800 |
| Overload flow rate | Q ₄ | m ³ /h | 2 | 2 | 2 | 3.125 | 3.125 | 3.125 |
| Transitional flow rate | Q ₂ | l/h | 6.4 | 6.4 | 6.4 | 5 | 5 | 5 |
| Minimum flow rate | Q ₁ | l/h | 4 | 4 | 4 | 3.13 | 3.13 | 3.13 |
| Starting flow rate | | l/h | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 | 1.4 |
| Pressure loss at Q ₃ | | bar | 0.19 | 0.19 | 0.19 | 0.46 | 0.46 | 0.46 |
| Pressure loss at Q ₄ | | bar | 0.3 | 0.3 | 0.3 | 0.72 | 0.72 | 0.72 |
| Maximum flow rate ² | Q _{high} | m ³ /h | 2.8 | 2.8 | 2.8 | 4.37 | 4.37 | 4.37 |
| Flow rate at ΔP = 1 bar | | | 3.67 | 3.67 | 3.67 | 3.69 | 3.69 | 3.69 |

| Nominal diameter | DN | mm | 15 | 20 | 20 | 20 | 20 | 20 |
|---|-------------------|-------------------|-------|-------|-------|-------|------|------|
| Permanent flow rate | Q ₃ | m ³ /h | 2.5 | 2.5 | 2.5 | 2.5 | 4 | 4 |
| Overall length | L | mm | 170 | 115 | 130 | 190 | 105 | 115 |
| Dynamic (Q ₃ /Q ₁) | R | | 800 | 400 | 800 | 800 | 400 | 630 |
| Overload flow rate | Q ₄ | m ³ /h | 3.125 | 3.125 | 3.125 | 3.125 | 5 | 5 |
| Transitional flow rate | Q ₂ | l/h | 5 | 10 | 5 | 5 | 16 | 10 |
| Minimum flow rate | Q ₁ | l/h | 3.13 | 6.25 | 3.13 | 3.13 | 10 | 6.3 |
| Starting flow rate | | l/h | 1.4 | 1.4 | 1.4 | 1.4 | 3.0 | 3.0 |
| Pressure loss at Q ₃ | | bar | 0.46 | 0.4 | 0.4 | 0.4 | 0.55 | 0.55 |
| Pressure loss at Q ₄ | | bar | 0.72 | 0.63 | 0.63 | 0.63 | 0.86 | 0.86 |
| Maximum flow rate ² | Q _{high} | m ³ /h | 4.37 | 4.37 | 4.37 | 4.37 | 7 | 7 |
| Flow rate at ΔP = 1 bar | | | 3.69 | 3.95 | 3.95 | 3.95 | 5.39 | 5.39 |

| Nominal diameter | DN | mm | 20 | 20 | 20 | 20 | 20 |
|---|-------------------|-------------------|------|------|------|------|------|
| Permanent flow rate | Q ₃ | m ³ /h | 4 | 4 | 4 | 4 | 4 |
| Overall length | L | mm | 130 | 165 | 175 | 190 | 220 |
| Dynamic (Q ₃ /Q ₁) | R | | 800 | 800 | 800 | 800 | 800 |
| Overload flow rate | Q ₄ | m ³ /h | 5 | 5 | 5 | 5 | 5 |
| Transitional flow rate | Q ₂ | l/h | 8 | 8 | 8 | 8 | 8 |
| Minimum flow rate | Q ₁ | l/h | 5 | 5 | 5 | 5 | 5 |
| Starting flow rate | | l/h | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Pressure loss at Q ₃ | | bar | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Pressure loss at Q ₄ | | bar | 0.63 | 0.63 | 0.63 | 0.63 | 0.63 |
| Maximum flow rate ² | Q _{high} | m ³ /h | 7 | 7 | 7 | 7 | 7 |
| Flow rate at ΔP = 1 bar | | | 5.39 | 5.39 | 5.39 | 5.39 | 5.39 |

² Outlet pressure minimum 3 bar, maximum 100 hours per year, closed pipeline network

³ Please see table DIMENSIONS

APPROVAL

DN 15 - 20

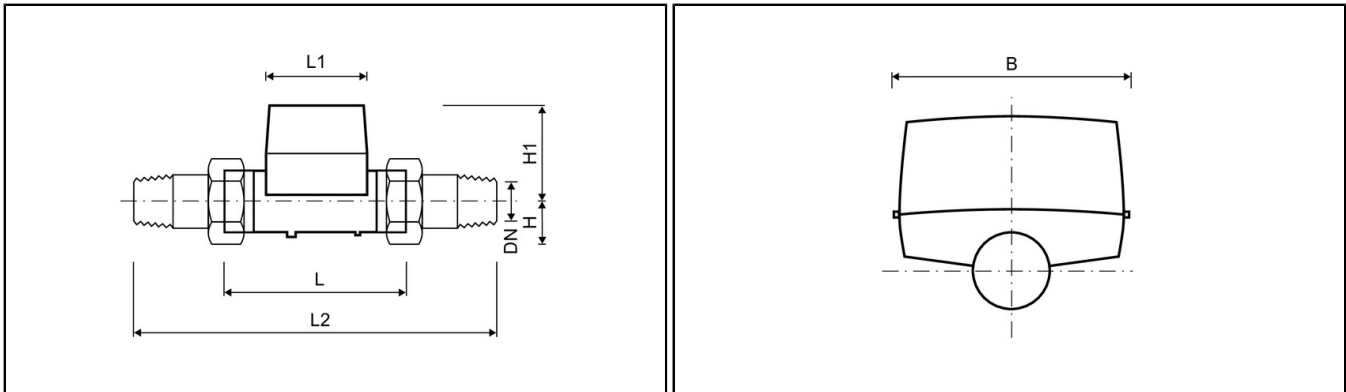
| | | |
|---|---|--|
| Approval | | MID DE-19-MI001-PTB012 |
| Dynamic range (Q ₃ /Q ₁) | R | Up to 800 |
| Standards | | EN 4064, EN 14154, OIML R49 |
| Sanitary conformity | | KTW/W270, ACS, WRAS, Belgacqua, KIWA Netherlands, OTH, PZH, SVGW |
| LoRaWAN® certification | | 1.0.2 |

DYNAMIC RANGE (R=Q3/Q1)

DN 15 - 20

| | | |
|--|---|--|
| Q ₃ 1.6 m ³ /h - T30 / T50 | R | 400 |
| Q ₃ 1.6 m ³ /h - T70 / T90 | R | 400H; 250V |
| Q ₃ 2.5 m ³ /h - T30 / T50 | R | 160; 800 (400 for L 115 mm) |
| Q ₃ 2.5 m ³ /h - T70 / T90 | R | 160; 400; 800H / 400 V (250 for L 115 mm) |
| Q ₃ 4 m ³ /h - T30 | R | 160; 400; 800 (630 for L 105 mm and 115 mm) |
| Q ₃ 4 m ³ /h - T50 / T70 / T90 | R | 160; 400; 800H / 400V (630H for L 105 mm and 115 mm) |

DIMENSIONS



| Nominal diameter | DN | mm | 15 | 15 | 15 | 15 | 15 ³ | 15 |
|-----------------------------------|----------------|-------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Permanent flow rate | Q ₃ | m ³ /h | 1.6 | 1.6 | 1.6 | 2.5 | 2.5 | 2.5 |
| Overall length | L | mm | 110 | 165 | 170 | 110 | 115 | 165 |
| Counter length | L1 | mm | 89 | 89 | 89 | 89 | 89 | 89 |
| Counter width | B | mm | 89 | 89 | 89 | 89 | 89 | 89 |
| Overall length with coupling | L2 | mm | 190 | 245 | 250 | 190 | 195 | 245 |
| Connection thread on meter | | Inch | G ³ / ₄ B | G ³ / ₄ B | G ³ / ₄ B | G ³ / ₄ B | G ³ / ₄ B | G ³ / ₄ B |
| Connection thread of coupling | | Inch | R ¹ / ₂ | R ¹ / ₂ | R ¹ / ₂ | R ¹ / ₂ | R ¹ / ₂ | R ¹ / ₂ |
| Height | H1 | mm | 71 | 71 | 71 | 71 | 71 | 71 |
| Weight without coupling (approx.) | | kg | 0.7 | 0.8 | 0.8 | 0.7 | 0.7 | 0.8 |
| Weight with coupling (approx.) | | kg | 1.1 | 1.2 | 1.2 | 1.1 | 1.1 | 1.2 |
| Height | H | mm | 18 | 18 | 18 | 18 | 18 | 18 |

| Nominal diameter | DN | mm | 15 | 20 | 20 | 20 | 20 | 20 |
|-----------------------------------|----------------|-------------------|---------------------------------|-------------------------------|-------------------------------|-------------------------------|--|--|
| Permanent flow rate | Q ₃ | m ³ /h | 2.5 | 2.5 | 2.5 | 2.5 | 4 | 4 |
| Overall length | L | mm | 170 | 115 | 130 | 190 | 105 | 115 |
| Counter length | L1 | mm | 89 | 89 | 89 | 89 | 89 | 89 |
| Counter width | B | mm | 89 | 89 | 89 | 89 | 89 | 89 |
| Overall length with coupling | L2 | mm | 250 | 215 | 230 | 290 | 205 | 215 |
| Connection thread on meter | | Inch | G ³ / ₄ B | G1B | G1B | G1B | G1B | G1B |
| Connection thread of coupling | | Inch | R ¹ / ₂ | R ³ / ₄ | R ³ / ₄ | R ³ / ₄ | R ³ / ₄ ⁴ | R ³ / ₄ ⁴ |
| Height | H1 | mm | 71 | 74 | 74 | 74 | 74 | 74 |
| Weight without coupling (approx.) | | kg | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.8 |
| Weight with coupling (approx.) | | kg | 1.2 | 1.2 | 1.2 | 1.3 | 1.2 | 1.2 |
| Height | H | mm | 18 | 21 | 21 | 21 | 21 | 21 |

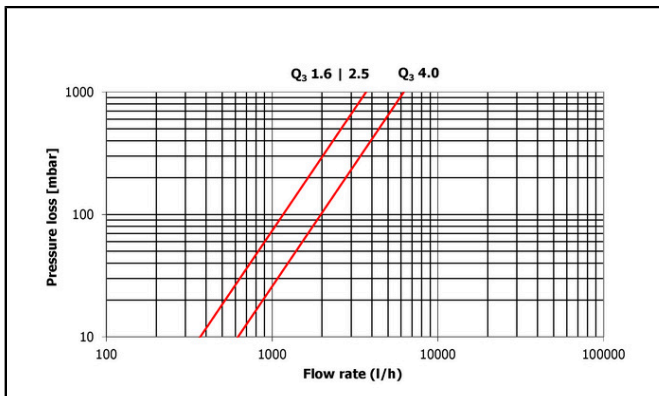
HYDRUS 2.0 - ULTRASONIC METER

| Nominal diameter | DN | mm | 20 | 20 | 20 | 20 | 20 |
|-----------------------------------|----------------|-------------------|-----|------|------|-----|-----|
| Permanent flow rate | Q ₃ | m ³ /h | 4 | 4 | 4 | 4 | 4 |
| Overall length | L | mm | 130 | 165 | 175 | 190 | 220 |
| Counter length | L1 | mm | 89 | 89 | 89 | 89 | 89 |
| Counter width | B | mm | 89 | 89 | 89 | 89 | 89 |
| Overall length with coupling | L2 | mm | 230 | 295 | 295 | 290 | 320 |
| Connection thread on meter | | Inch | G1B | G1¼B | G1¼B | G1B | G1B |
| Connection thread of coupling | | Inch | R¾ | R1 | R1 | R¾ | R¾ |
| Height | H1 | mm | 74 | 74 | 74 | 74 | 74 |
| Weight without coupling (approx.) | | kg | 0.8 | 1.0 | 1.0 | 0.9 | 1.2 |
| Weight with coupling (approx.) | | kg | 1.2 | 1.6 | 1.6 | 1.3 | 1.4 |
| Height | H | mm | 21 | 27 | 27 | 21 | 21 |

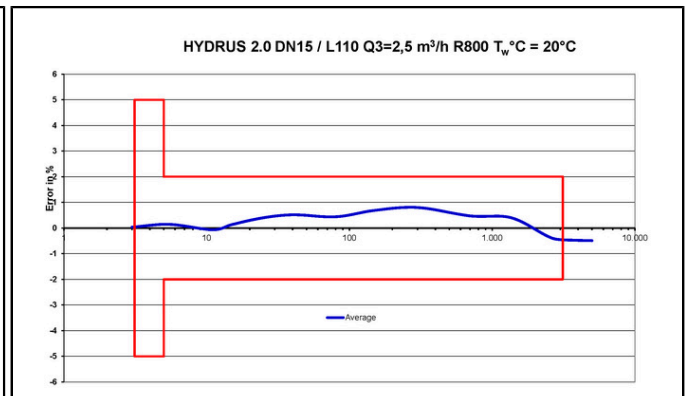
³ Further version with connection thread on meter inlet G7/8B and meter outlet G3/4B on request.

⁴ Wrench size should not be bigger than 38 mm

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph

TECHNICAL DATA

| Nominal diameter | DN | mm | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 32 |
|---|-------------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Permanent flow rate | Q ₃ | m ³ /h | 6.3 | 6.3 | 6.3 | 6.3 | 10 | 10 | 10 | 10 |
| Overall length | L | mm | 135 | 150 | 175 | 260 | 150 | 175 | 260 | 260 |
| Dynamic (Q ₃ /Q ₁) | R | | 400 | 400 | 400 | 400 | 800 | 800 | 800 | 800 |
| Overload flow rate | Q ₄ | m ³ /h | 7.87 | 7.87 | 7.87 | 7.87 | 12.5 | 12.5 | 12.5 | 12.5 |
| Transitional flow rate | Q ₂ | l/h | 25.2 | 25.2 | 25.2 | 25.2 | 20 | 20 | 20 | 20 |
| Minimum flow rate | Q ₁ | l/h | 15.8 | 15.8 | 15.8 | 15.8 | 12.5 | 12.5 | 12.5 | 12.5 |
| Starting flow rate | | l/h | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Pressure loss at Q ₃ | | bar | 0.22 | 0.22 | 0.22 | 0.22 | 0.54 | 0.54 | 0.54 | 0.33 |
| Pressure loss at Q ₄ | | bar | 0.34 | 0.34 | 0.34 | 0.34 | 0.84 | 0.84 | 0.84 | 0.53 |
| Maximum flow rate ² | Q _{high} | m ³ /h | 11.02 | 11.02 | 11.02 | 11.02 | 17.5 | 17.5 | 17.5 | 17.5 |
| Flow rate at ΔP = 1 bar | | | 13.43 | 13.43 | 13.43 | 13.43 | 13.43 | 13.43 | 13.43 | 10.95 |

| Nominal diameter | DN | mm | 40 | 40 | 40 | 40 | 50 | 50 | 50 | 50 |
|---|-------------------|-------------------|-------|-------|------|------|-------|-------|-------|-------|
| Permanent flow rate | Q ₃ | m ³ /h | 10 | 10 | 16 | 16 | 16 | 16 | 25 | 25 |
| Overall length | L | mm | 200 | 300 | 200 | 300 | 270 | 300 | 270 | 300 |
| Dynamic (Q ₃ /Q ₁) | R | | 400 | 400 | 800 | 800 | 250 | 250 | 400 | 400 |
| Overload flow rate | Q ₄ | m ³ /h | 12.5 | 12.5 | 20 | 20 | 20 | 20 | 31.25 | 31.25 |
| Transitional flow rate | Q ₂ | l/h | 40 | 40 | 32 | 32 | 102 | 102 | 100 | 100 |
| Minimum flow rate | Q ₁ | l/h | 25 | 25 | 20 | 20 | 64 | 64 | 62.5 | 62.5 |
| Starting flow rate | | l/h | 8.7 | 8.7 | 8.7 | 8.7 | 25 | 25 | 25 | 25 |
| Pressure loss at Q ₃ | | bar | 0.22 | 0.22 | 0.2 | 0.2 | 0.14 | 0.14 | 0.33 | 0.33 |
| Pressure loss at Q ₄ | | bar | 0.34 | 0.34 | 0.31 | 0.31 | 0.22 | 0.22 | 0.52 | 0.52 |
| Maximum flow rate ² | Q _{high} | m ³ /h | 17.5 | 17.5 | 28 | 28 | 32.13 | 32.13 | 32.13 | 32.13 |
| Flow rate at ΔP = 1 bar | | | 21.32 | 21.32 | 36.0 | 36.0 | 44.0 | 44.0 | 44.0 | 44.0 |

² Outlet pressure minimum 3 bar, maximum 100 hours per year, closed pipeline network

APPROVAL

DN 25 - 50

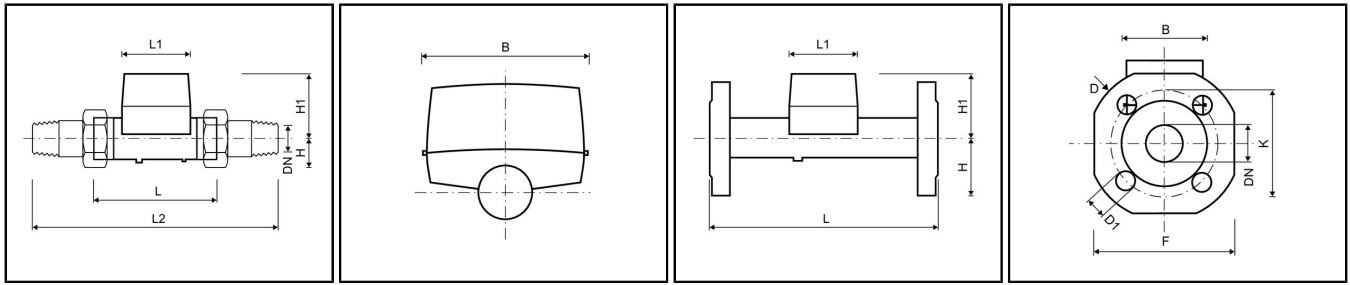
| | | |
|---|---|--|
| Approval | | MID DE-19-MI001-PTB012 |
| Dynamic range (Q ₃ /Q ₁) | R | Up to 800 |
| Standards | | EN 4064, EN 14154, OIML R49 |
| Sanitary conformity | | KTW/W270, ACS, WRAS, Belgacqua, KIWA Netherlands, OTH, PZH, SVGW |
| LoRaWAN® certification | | 1.0.2 |

DYNAMIC RANGE (R=Q3/Q1)

DN 25 - 50

| | | |
|--|---|------------------------|
| Q ₃ 6.3 m ³ /h - T30 | R | 160; 400 |
| Q ₃ 6.3 m ³ /h - T50 / T70 / T90 | R | 160; 400H / 250V |
| Q ₃ 10 m ³ /h - DN 25, DN 32 - T30 | R | 160; 400; 800 |
| Q ₃ 10 m ³ /h - DN 25, DN 32 - T50 / T70 / T90 | R | 160; 400; 800H / 400V |
| Q ₃ 16 m ³ /h - DN 40 - T30 | R | 160; 400; 800 |
| Q ₃ 16 m ³ /h - DN 40 - T50 / T70 / T90 | R | 160; 400; 800H / 400 V |
| Q ₃ 16 m ³ /h - DN 50 | R | 250 |
| Q ₃ 25 m ³ /h - DN 50 | R | 400 |

DIMENSIONS

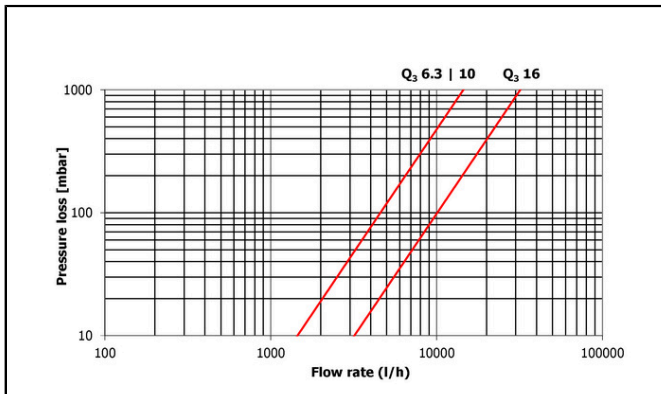


| Nominal diameter | DN | mm | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 32 |
|-----------------------------------|----------------|-------------------|------|------|------|------|------|------|------|------|
| Permanent flow rate | Q ₃ | m ³ /h | 6.3 | 6.3 | 6.3 | 6.3 | 10 | 10 | 10 | 10 |
| Overall length | L | mm | 135 | 150 | 175 | 260 | 150 | 175 | 260 | 260 |
| Counter length | L1 | mm | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| Counter width | B | mm | 89 | 89 | 89 | 89 | 89 | 89 | 89 | 89 |
| DIMENSIONS - THREAD | | | | | | | | | | |
| Overall length with coupling | L2 | mm | 255 | 270 | 295 | 380 | 270 | 295 | 380 | 380 |
| Connection thread on meter | | Inch | G1¼B | G1¼B | G1¼B | G1¼B | G1¼B | G1¼B | G1¼B | G1½B |
| Connection thread of coupling | | Inch | R1 | R1 | R1 | R1 | R1 | R1 | R1 | R1¼ |
| Height | H1 | mm | 78 | 78 | 78 | 78 | 78 | 78 | 78 | 78 |
| Weight without coupling (approx.) | | kg | 1.0 | 1.0 | 1.1 | 1.4 | 1.0 | 1.4 | 1.4 | 1.5 |
| Weight with coupling (approx.) | | kg | 1.6 | 1.6 | 1.7 | 2.0 | 1.6 | 2.0 | 2.0 | 2.1 |
| Height | H | mm | 27 | 27 | 27 | 27 | 27 | 27 | 27 | 30 |
| DIMENSIONS - FLANGE | | | | | | | | | | |
| Flange diameter | D | mm | - | - | - | 115 | - | - | 115 | 140 |
| Hole circle diameter | K | mm | - | - | - | 85 | - | - | 85 | 100 |
| Number of screwholes | | pcs | - | - | - | 4 | - | - | 4 | 4 |
| Screwhole diameter | D1 | mm | - | - | - | 14 | - | - | 14 | 18 |
| Height | H | mm | - | - | - | 50 | - | - | 50 | 62.5 |
| Height | H1 | mm | - | - | - | 84 | - | - | 84 | 84 |
| Width | F | mm | - | - | - | 100 | - | - | 100 | 125 |
| Weight with flanges (approx.) | | kg | - | - | - | 3.4 | - | - | 3.4 | 4.6 |

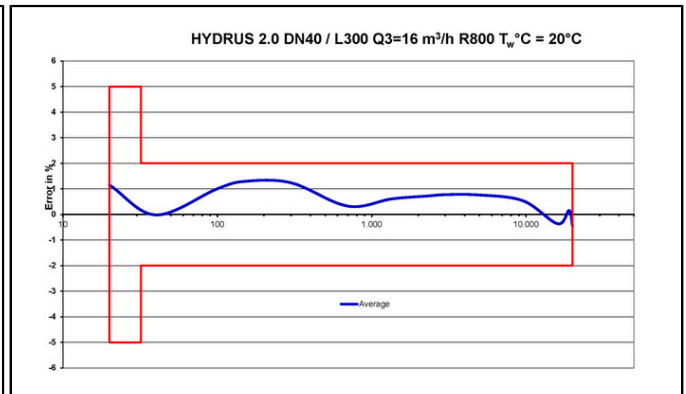
HYDRUS 2.0 - ULTRASONIC METER

| Nominal diameter | DN | mm | 40 | 40 | 40 | 40 | 50 | 50 | 50 | 50 |
|-----------------------------------|----------------|-------------------|-----|-----|-----|-----|------|------|------|------|
| Permanent flow rate | Q ₃ | m ³ /h | 10 | 10 | 16 | 16 | 16 | 16 | 25 | 25 |
| Overall length | L | mm | 200 | 300 | 200 | 300 | 270 | 300 | 270 | 300 |
| Counter length | L1 | mm | 96 | 96 | 96 | 96 | 92 | 92 | 92 | 92 |
| Counter width | B | mm | 89 | 89 | 89 | 89 | 94 | 94 | 94 | 94 |
| DIMENSIONS - THREAD | | | | | | | | | | |
| Overall length with coupling | L2 | mm | 340 | 440 | 340 | 440 | 390 | 420 | 390 | 420 |
| Connection thread on meter | | Inch | G2B | G2B | G2B | G2B | G2½B | G2½B | G2½B | G2½B |
| Connection thread of coupling | | Inch | R1½ | R1½ | R1½ | R1½ | R2 | R2 | R2 | R2 |
| Height | H1 | mm | 82 | 82 | 82 | 82 | 90 | 90 | 90 | 90 |
| Weight without coupling (approx.) | | kg | 1.8 | 2.6 | 1.8 | 2.6 | 3.9 | 4.05 | 3.9 | 4.05 |
| Weight with coupling (approx.) | | kg | 3.0 | 3.8 | 3.0 | 3.8 | 5.5 | 5.65 | 5.5 | 5.65 |
| Height | H | mm | 36 | 36 | 36 | 36 | 41 | 41 | 41 | 41 |
| DIMENSIONS - FLANGE | | | | | | | | | | |
| Flange diameter | D | mm | - | 148 | - | 148 | - | - | - | - |
| Hole circle diameter | K | mm | - | 110 | - | 110 | - | - | - | - |
| Number of screwholes | | pcs | - | 4 | - | 4 | - | - | - | - |
| Screwhole diameter | D1 | mm | - | 18 | - | 18 | - | - | - | - |
| Height | H | mm | - | 69 | - | 69 | - | - | - | - |
| Height | H1 | mm | - | 87 | - | 87 | - | - | - | - |
| Width | F | mm | - | 138 | - | 138 | - | - | - | - |
| Weight with flanges (approx.) | | kg | - | 6.3 | - | 6.3 | - | - | - | - |

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph

Economic Actor Information

Applicable regulation and legal obligations for products may change.

DIEHL METERING monitors applicable regulation to ensure their products comply at the date of placing on the market.

Each economic actor making products available on the market thereafter must independently keep informed about the current applicable regulation.

For questions, please contact: metering-germany-info@diehl.com

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**EMPOWER A
SUSTAINABLE
FUTURE**