



WIO200A

Water in oil sensor

Datasheet 111688-900 Rev. 1.05

Dato: 2012-12-19



Technical Sensor Data



WIO Standard



WIO Ball Valve

| Output | |
|--|-------------------------------|
| Analogue output | 4 – 20 mA (galvanic isolated) |
| Max. Load (analogue output) | < 500Ω |
| Measurement Range (4 – 20 mA) | 0,01 – 1,00 a _w |
| Accuracy (0,05-0,95 a _w) | ± 0,03 a _w |
| Accuracy (outside 0,05-0,95 a _w) | ± 0,05 a _w |
| Resolution | < 0,004 a _w |
| Input | |
| Supply nominal voltage | 24V DC ± 10% |
| Max. residual voltage ripple | 10% |
| Maximum Load current | 58 mA + output load current |
| Max. Power input | < 2,4 VA |
| Relays | |
| Contact arrangement | 2 x Normally Closed (NC) |
| Rated voltage | 60V |
| Rated current (40°C) | 1A |
| Max. DC Load breaking capacity | |
| Relay 1 | „High Alarm“ |
| Relay 2 | „High High Alarm“ |
| Default High Alarm | 0,50 a _w |
| Default High High Alarm | 0,90 a _w |

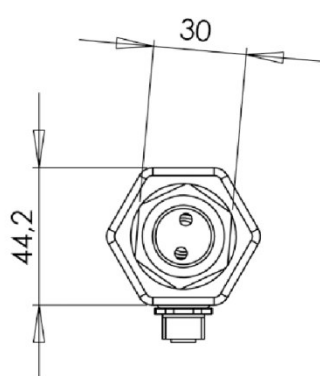


| Socket specification | |
|---|---|
| Connector design | 1x male socket, 1x female socket |
| Connector locking system | Screw-locking |
| Wire gauge | 0,25 mm ² |
| Contacts | 8 Pol |
| Rated voltage | 60V |
| Rated current (40°C) | 1A |
| Cable specification | |
| Cable design | Multipair overall screened cable PG9 |
| Outlet diameter | 9,9 mm |
| Voltage class | 0,6/1kV |
| Wires | 4x2 twisted pair |
| Wire gauge | 0,75 mm ² |
| Media for measurement | |
| Lubrication oil | Grade SAE 30/TBN 5-10 |
| Max. Oil temperature | 90°C |
| Max. Oil pressure | 15 Bar |
| Response times | |
| Delay before valid data from start-up | < 30 s |
| Delay before valid data from installation (first use) | 10 minutes |
| Device Failure Indication | |
| Analogue output | < 2 mA |
| Manual test | |
| Press sensor button for 5 seconds | High Alarm turns on for 5 seconds |
| Press sensor button for 10 seconds | High High Alarm turns also on for 5 seconds |
| Press sensor button for 15 seconds | Both Alarms turns off |
| Press sensor button for 20 seconds | Normal operating and test button ignored |
| Miscellaneous | |
| Ambient Temperature, running / storage | 0 - 90°C / -30 - +95°C |
| Relative humidity for running and storage | 10% up to 95%, no condensation |
| Re calibration | Recommended with max 3 years interval |
| Warranty | 2 years |
| Approvals | |
| Germanischer Lloyd | |

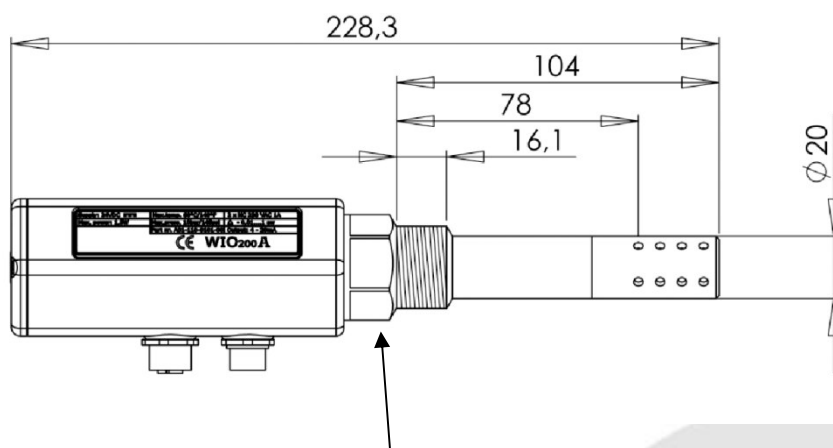


| Enclosure | |
|---------------------------|---|
| Weight for WIO standard | 640 grams |
| Weight for WIO Ball valve | 690 grams |
| Connection (mechanical) | ISO 228-1 G 3/4 male and female thread. |
| Enclosure material | Stainless Steel |
| Protective type | IP66 |

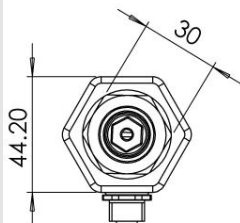
Dimensions for sensor in mm



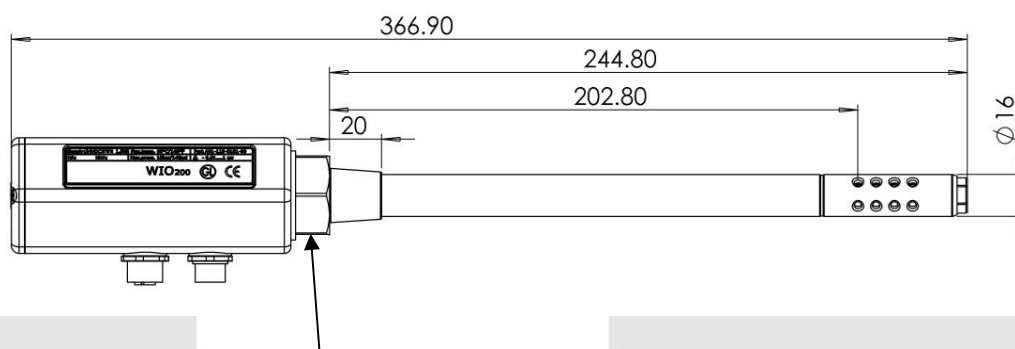
WIO Standard



Hexagon for 30mm Wrench max. Torque 35 Nm



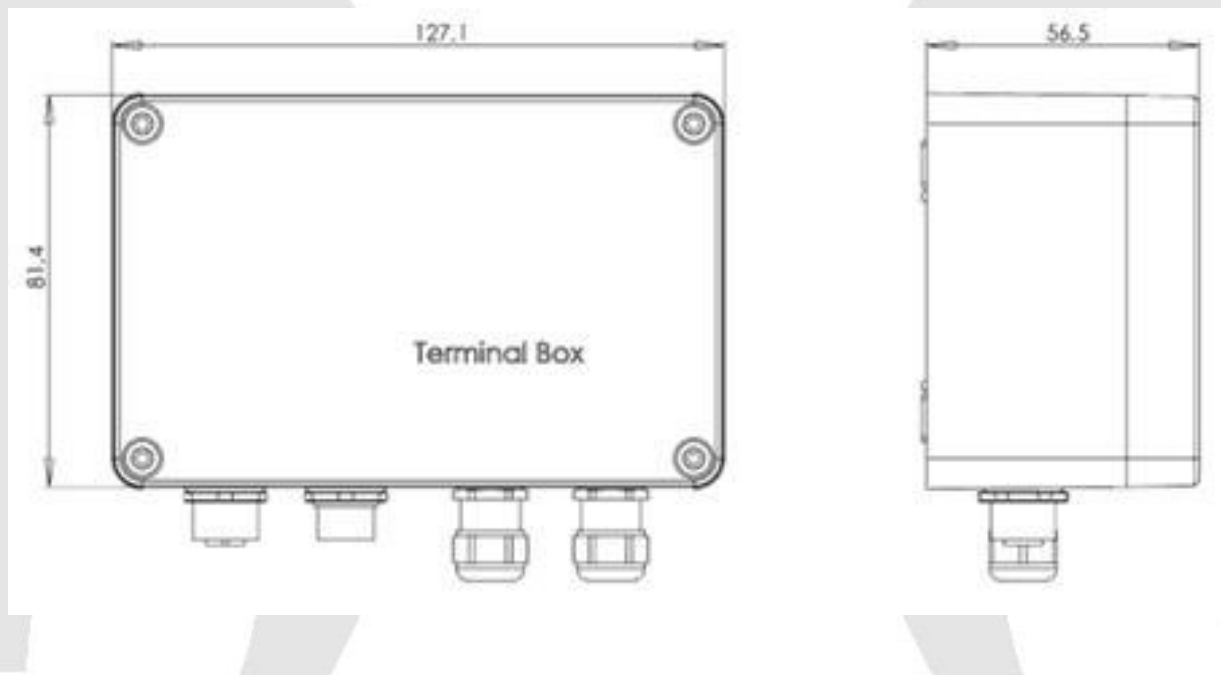
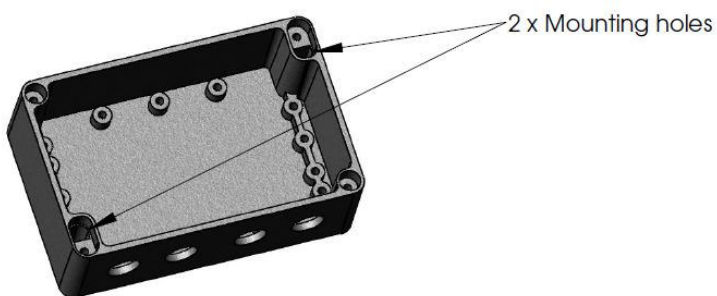
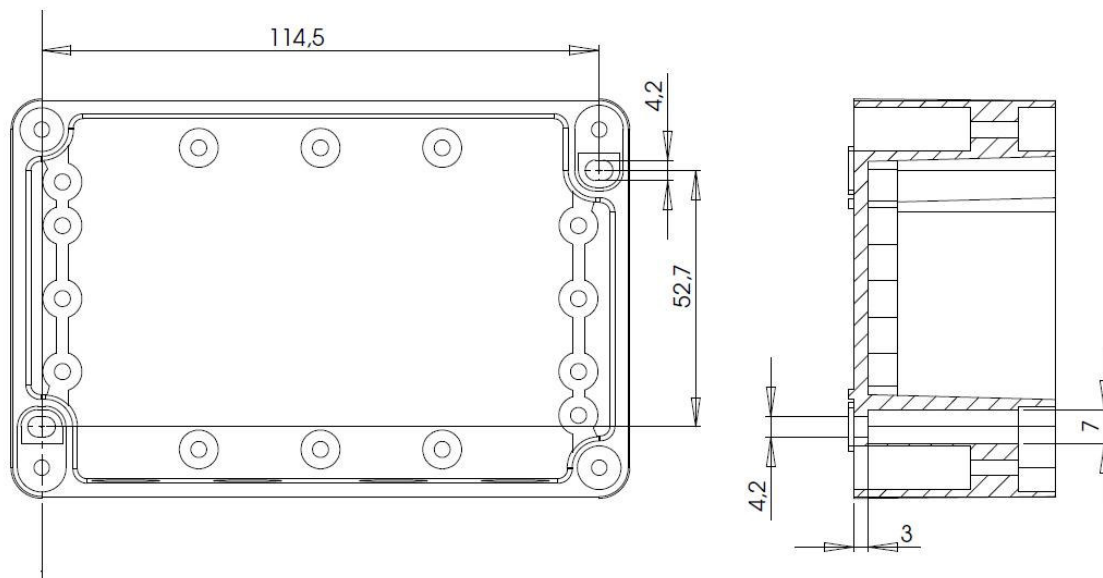
WIO Ball valve



Hexagon for 30mm Wrench max. Torque 35 Nm



Dimensions for terminal box in mm





Technical Data Terminal Box



| Output | |
|-----------------------------------|---|
| Analogue output | See the specifications for sensor's analogue output |
| Input | |
| Supply nominal voltage | 24V DC \pm 10% |
| Max. residual voltage ripple | 10% |
| Maximum Load current | 20 mA + output load current |
| Max. Power input | < 0,6 VA |
| Relays | |
| Contact arrangement | 2 x Normally Closed (NC) |
| Rated voltage | 250 VAC |
| Max. switching voltage | 400VAC |
| Rated current | 2A |
| Breaking capacity max. | 1250VA |
| Enclosure | |
| Weight | 510 grams |
| Connection to sensor (mechanical) | 2 x PG9 connectors (male + female) or gland PG * |
| Connection (mechanical) | 2 x gland PG ** |
| Enclosure material | Aluminum |
| Protective type | IP66 |
| Warranty | 2 years |

* user defined gland size (PG9, PG11 or PG13,5)

** user defined gland size (PG9, PG11, PG13,5 or PG16)



Technical Data Terminal Display Box



| Output | |
|--|---|
| Analogue output | See the specifications for sensor's analogue output |
| Input | |
| Supply nominal voltage | 24V DC \pm 10% |
| Max. residual voltage ripple | 10% |
| Maximum Load current | 45 mA + output load current |
| Max. Power input | < 1,3 VA |
| Relays | |
| Contact arrangement | 2 x Normally Closed (NC) |
| Rated voltage | 250 VAC |
| Max. switching voltage | 400VAC |
| Rated current | 2A |
| Breaking capacity max. | 1250VA |
| Display version - a_w (water activity from 0,03 to 1,00) | |
| Accuracy (0,05-0,95 a_w) | \pm 0,03 a_w |
| Resolution | <0,004 a_w |
| Display version - PPM (H ₂ O) | |
| Accuracy (0,05-0,95 a_w) | 30% |
| Resolution | 1 PPM |
| Enclosure | |
| Weight | 570 grams |
| Connection to sensor (mechanical) | 2 x PG9 connectors (male + female) or gland PG * |
| Connection (mechanical) | 2 x gland PG ** |
| Enclosure material | Aluminum |
| Protective type | IP66 |
| Warranty | 2 years |

* user defined gland size (PG9, PG11 or PG13,5)

** user defined gland size (PG9, PG11, PG13,5 or PG16)



Technical Data Terminal Box Alarm



| Output | |
|-----------------------------------|---|
| Analogue output | See the specifications for sensor's analogue output |
| Input | |
| Supply nominal voltage | 24V DC \pm 10% |
| Max. residual voltage ripple | 10% |
| Maximum Load current | 33 mA + output load current |
| Max. Power input | < 1,0 VA |
| Relays | |
| Contact arrangement | 2 x Normally Closed (NC) |
| Rated voltage | 250 VAC |
| Max. switching voltage | 400VAC |
| Rated current | 2A |
| Breaking capacity max. | 1250VA |
| Buzzer | |
| Oscillation frequency | 3000 \pm 500 Hz |
| Sound pressure level | 85db by open housing |
| Tone | pulsed |
| Button with LED | |
| Blink frequency | 2 Hz |
| Color | RED |
| Enclosure | |
| Weight | 530 grams |
| Connection to sensor (mechanical) | 2 x PG9 connectors (male + female) or gland PG * |
| Connection (mechanical) | 2 x gland PG ** |
| Enclosure material | Aluminum |
| Protective type | IP66 |
| Warranty | 2 years |

* user defined gland size (PG9, PG11 or PG13,5)

** user defined gland size (PG9, PG11, PG13,5 or PG16)



Technical Data Terminal Box Alarm Buzzer



| Output | |
|--|---|
| Analogue output | See the specifications for sensor's analogue output |
| Input | |
| Supply nominal voltage | 24V DC \pm 10% |
| Max. residual voltage ripple | 10% |
| Maximum Load current | 58 mA + output load current |
| Max. Power input | < 1,7 VA |
| Relays | |
| Contact arrangement | 2 x Normally Closed (NC) |
| Rated voltage | 250 VAC |
| Max. switching voltage | 400VAC |
| Rated current | 2A |
| Breaking capacity max. | 1250VA |
| Display version - a_w (water activity from 0,03 to 1,00) | |
| Accuracy (0,05-0,95 a_w) | \pm 0,03 a_w |
| Resolution | <0,004 a_w |
| Display version - PPM (H₂O) | |
| Accuracy (0,05-0,95 a_w) | 30% |
| Resolution | 1 PPM |
| Buzzer | |
| Oscillation frequency | 3000 \pm 500 Hz |
| Sound pressure level | 85db by open housing |
| Tone | pulsed |
| Button with LED | |
| Blink frequency | 2 Hz |
| Color | RED |



Enclosure

| | |
|-----------------------------------|--|
| Weight | 650 grams |
| Connection to sensor (mechanical) | 2 x PG9 connectors (male + female) or gland PG * |
| Connection (mechanical) | 2 x gland PG ** |
| Enclosure material | Aluminum |
| Protective type | IP66 |
| Warranty | 2 years |

* user defined gland size (PG9, PG11 or PG13,5)

** user defined gland size (PG9, PG11, PG13,5 or PG16)