



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

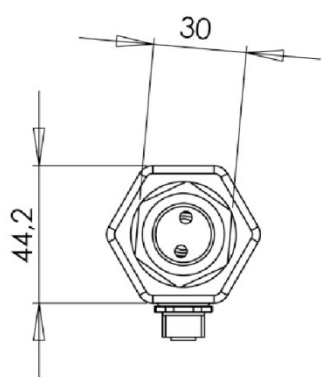


Socket specification	
Connector design	1x male socket, 1x female socket
Connector locking system	Screw-locking
Wire gauge	0,25 mm ²
Contacts	8 Pol
Rated voltage	60V
Rated current (40°C)	1A
Cable specification	
Cable design	Multipair overall screened cable PG9
Outlet diameter	9,9 mm
Voltage class	0,6/1kV
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	

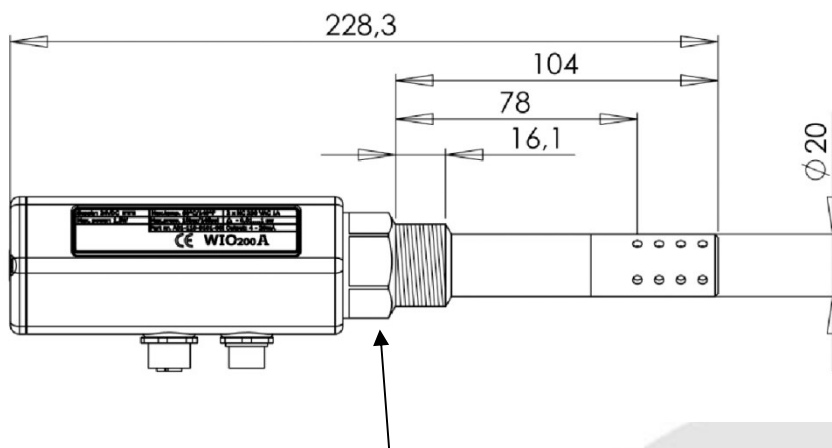


Enclosure	
Weight for WIO standard	640 grams
Weight for WIO Ball valve	690 grams
Connection (mechanical)	ISO 228-1 G 3/4 male and female thread.
Enclosure material	Stainless Steel
Protective type	IP66

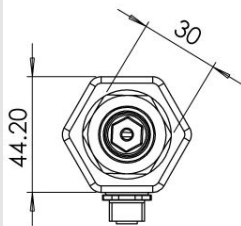
Dimensions for sensor in mm



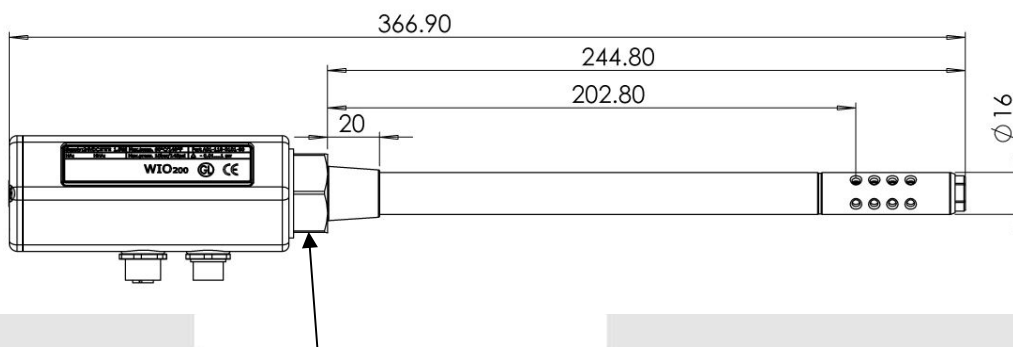
WIO Standard



Hexagon for 30mm Wrench max. Torque 35 Nm



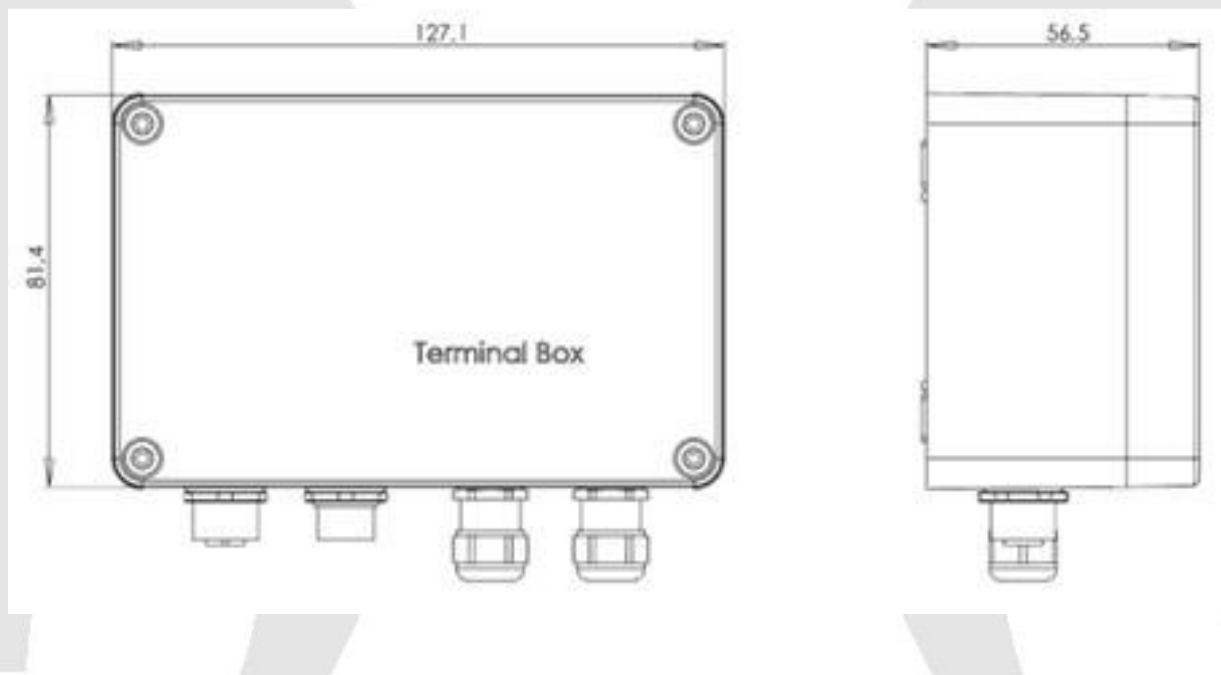
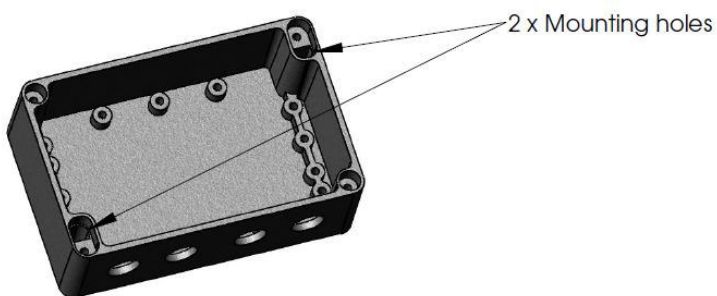
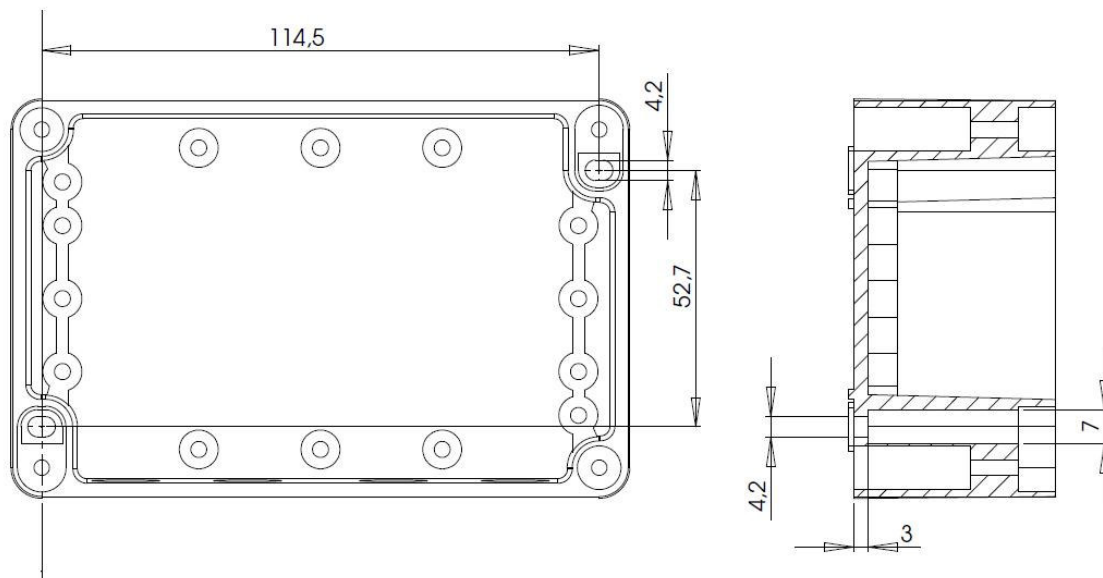
WIO Ball valve



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 (H₂O)	
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)