TAKUWA

OPQS2 Series

Quartz Type Water Level Gauge

(Optical Fiber Transmission Type)

- Lightening protection measure (with a wireless cable)
- High accuracy measurement with a quartz oscillator
- Optical power supply (sensor power generated with the light)
- Wide measuring range

https://www.takuwa.co.jp/en/

The water pressure, varied as the water level changes, is measured with a quartz oscillator, whose oscillating frequency is converted to optical signals (SM) at the E/O converter inside the sensor for transmission.
The power source of the sensor receives the laser light, emitted from the light source built in the water level gauge coder, at the optical electric power supply to generate the electric power.
Free from lightning surge as a wireless cable (optical fiber) is used for data transmission between the sensor and the signal converter.
High accuracy measurement, without a conversion error caused by the secular change commonly seen in diaphragm
A wide measurement range, from 10m to 70m, applicable not only to rivers but also to dams.

Specifications

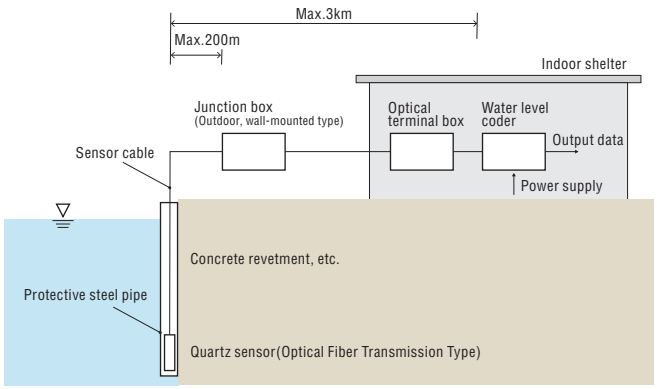
Optical quartz sensor(Optical fiber transmission type)

Model	OPQS2-10(measuring range 0 to 10m) OPQS2-20(measuring range 0 to 20m) OPQS2-30(measuring range 0 to 30m) OPQS2-50(measuring range 0 to 50m) OPQS2-70(measuring range 0 to 70m)
Accuracy	±0.05%FS ±0.02%FS ±0.01%FS(OPQS2-70 not allowed)
Temperature coefficient at 0 point	±0.0007% FS/°C
Temperature sensitivity coefficient	±0.0049% FS/°C
Overload resistance	120%FS
Power supply	Optical power feeding uni t : DC9V
Optical fiber	SM Type Optical Fiber(10/125μm) 2-core cable
Operating condition (temperature, humidity)	-10°C to +60°C (No freezing)
Material	SUS316L or Titanium(for sea)
Dimensions	280 x φ60 mm
Weight	Approx.3kg
Cable	Dedicated cable(Sensor to Junction box) Max.200m

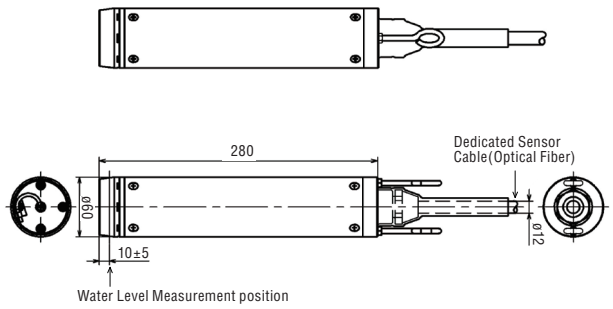
Water level coder

Model	WLC3-OP1—|A|B|C|D|E|F| A) Analog output 0: No, 1: 4 to 20mA, 2: 0 to 5V, 3: 0 to 10mV B) BCD output 0: No, 1: Yes 1 for each, 2= Yes 2 for each C) Comparison output 0: No, 1: Yes D) SD card slot 0: No, 1: Yes E) Power supply D1: DC12V, A1: AC100V F) Serial output Blank: RS232C, R4: RS422
Display・Operation	LCD touch panel
Processing functions Average calculation	None averaging Moving average 20 sec, 1 min, 5 min, 10 min(every 1 sec) or (every 2 sec) Weighted average 5 sec, 10 sec, 15 sec (every 1 sec) Level Setting -999.999m to +999.999m
Input type	Quartz type sensor(Optical fiber transmission type) Optical signal(Frequency signal 28 to 44 kHz)
Number of input	1 channel
Power supply	Select from DC12V or AC100V 50/60Hz
Dimensions	480W x 99H x 300D mm (excluding protruding parts)
Weight	8kg or less
Output	1)Analog output 2 channels at 1 input, select from 4 to 20mA, 0 to 5V or 0 to 10mV 2)BCD output 2 channels(Max.) at 1 input, BCD output 5 digits with odd parity 3)Comparative output 8 points at 1 input (A,B,C,D≦H or A,B,C,D≧H), Non-voltage A contact (Photo MOS relay output) 4)Card recording Recording media : SD card(Max.2GB) Recording interval : No, 1, 2, 5, 10, 15, 20, 30(min), 1, 2, 3, 6(hour) Recording capacity : 1 year or more(at 1 min recording)

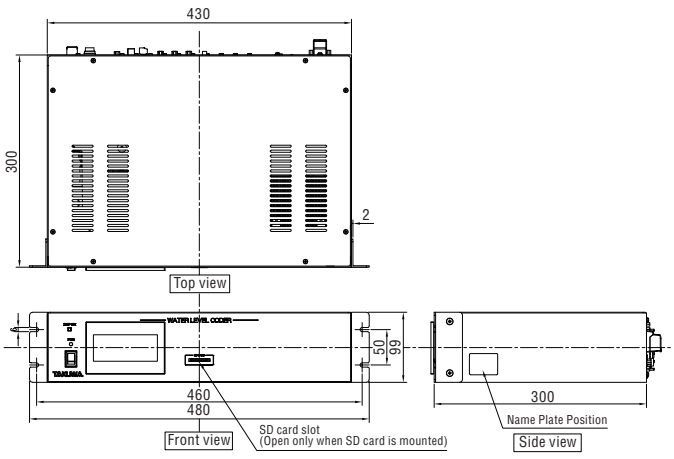
Configuration diagram



Optical quartz sensor(Optical fiber transmission type)



Water level coder



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