

Quartz type Water Level Gauge (Optical Fiber Transmission type)

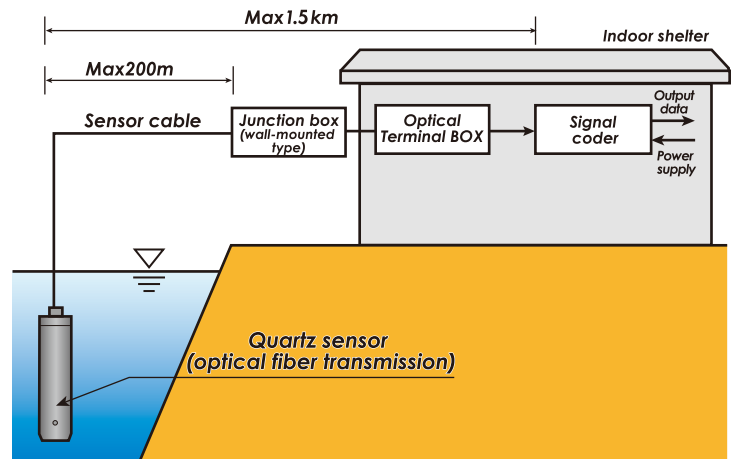
- High Accurate Water Level Measurement by Using Quartz Sensor
(Selectable from $\pm 0.05\%$ / $\pm 0.02\%$ / $\pm 0.01\%$ F.S.)
- High Durability by Using an Optical Fiber Cable for Data Transmission and Power Supply
- Electrical Power for the Sensor Operation is Generated by "Very Small Optical/Electrical Converter" (Like a Very Small Solar Panel.) which is Mounted inside of the Quartz Sensor.
- Wide Measurement Range (selectable from 10/20/30/50/70m)
- Suitable for Mountainous Stations where are Frequently Damaged by Lightning Surge.
- Long Transmission Distance (sensor to coder is up to 1.5km)



Summary

OPQS series is a Quartz type water level gauge which uses optical fiber cable as signal transmission and power feeding for lightning protection. It can realize both very high accurate and stable water level measurement even when lightning occurs.

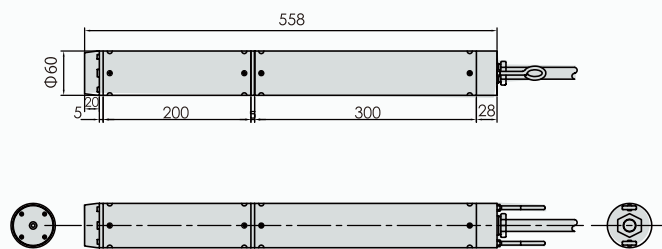
System block diagram



Outline drawing

Quartz sensor (optical fiber transmission)

Optical power feeding type

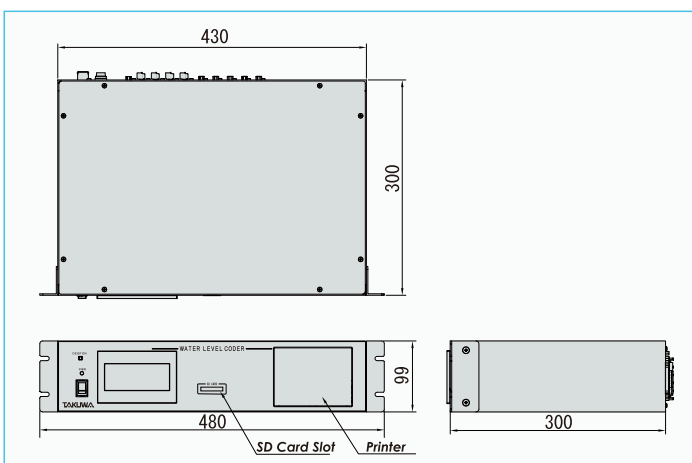


Specifications

Quartz sensor (optical fiber transmission)

Optical Power Feeding Type	
Type	OPQS -10 WPS (For measuring range 10m) OPQS -20 WPS (For measuring range 20m) OPQS -30 WPS (For measuring range 30m) OPQS -50 WPS (For measuring range 50m) OPQS -70 WPS (For measuring range 70m)
Accuracy	± 0.05% F.S *Option (High Accuracy Type): ± 0.02% F.S or ± 0.01% F.S
Temperature Coefficient	± 0.0007% F.S/°C
Thermal Sensitivity Coefficient	± 0.0049%/°C
Allowable Overload	120% F.S
Power Supply	Optical Power Feeding Unit: DC9V
Optical Fiber	SM Type Optical Fiber (10/125µm) 2 core
Center Wavelength	For Signal: 1.31 µm For Power Feeding: 1.48 µm
Environment Condition	-10°C - +50°C
Material	SUS316
Dimensions	Φ60 X 558mm
Weight	Approx 4.0kg (Sensor only)
Cable	Dedicated Cable Maximum Cable Length 200m (Distance between the sensor and the Junction Box)

Signal coder



Signal coder

Type	WLC3-OP1-□□□□□□ (Depend to number of Input, number of output signal)
No of input	2 channel (Maximum)
Input type	Optical signal (Frequency signal 28 - 44KHZ from the Sensor)
Display	LCD (with touch panel) 128 X 64 dot
Operation	Operation by touch panel
Processing Function	(a) Average operation Non Continuously (1 sec) Weighted Average: 5, 10, 15 sec (1 sec each) Moving Average: 1, 5, 10 min (2 sec each) (b) Level addition and subtraction: -999.999m - +999.999m
Output	Serial Communication Signal (RS-232C or RS-422) 1 channel
Power Supply	Choose from ①AC100V 50/60Hz ②DC12V ③DC24V
Dimensions	480W X 99H X 300D (mm) (not including projection)
Output (Option)	1) Analog output : 2 channel at 1 input. Choose from 4-20mA or 0-5V or 0-10mV 2) BCD output : 2 channel (Maximum) at 1 input BCD output 5 digits with odd parity 3) Comparative output : 8 point at 1 input (A,B,C,D≤H or A,B,C,D≥H) Non-voltage A contact (Photo MOS relay output) 4) Printer: recording : Nothing, 1, 2, 5, 10, 15, 20, 30 (min), 1, 2, 3, 6 (hour) Capacity of recording: Approx 6 months (Recording paper: Φ50, Recording time: 1 hour) 5) Card recording : Recording media: SD Card (Maximum 2GB) Recording time: Nothing, 1, 2, 5, 10, 15, 20, 30 (min), 1, 2, 3, 6 (hour) Recording capacity: 1 year and above (at 1min recording) *Maximum number of output (option) : 8 channel (Analog 2CH and BCD 2CH at sensor 1 input) Comparison contact, Printer and card recording

※Information in this document is subject to change without notice