



CO-OPS Engineering Bulletin 23-001

Engineering Change: CO-OPS SDI-12 Address Assignments Update

Systems Affected: All CO-OPS measurement systems with instrumentation that utilize SDI-12 protocol

Originating Team: Measurement Systems Manager

Approval Date: 28 October 2022

Background: SDI-12 (Serial Digital Interface at 1200 baud) is an asynchronous serial communications protocol that allows multiple devices with unique addresses to share the same data channel. Many of the instruments utilized by CO-OPS use SDI-12 protocol to communicate. The approval of new instrumentation for operational use required an update to CO-OPS SDI-12 address assignments to prevent the possibility of any conflicts in deployed systems.

Action Required: CIL/SIL shall set any new or returned instrumentation to the following addresses during configuration:

Instrument	Application	SDI-12 Address
Aquatrak 4110 Controller	Tides/Acoustic Water Level	0
WaterLOG H-334/H-3342N Shaft Angle Encoder	Great Lakes Water Level	0
Reserved - Future Reallocation of the Aquatrak 4110 Controller*	Tides/Acoustic Water Level	1
Aquatrak 4110 Controller	Tsunami (1-minute values)	2
KPSI 500T Pressure Transducer	Great Lakes Water Level	3
WaterLOG H-3401-00-01 Tipping Bucket	Rainfall	3
Reserved - Future Reallocation of the WaterLOG H-334/H-3342N Shaft Angle Encoder*	Great Lakes Water Level	4
Sutron Accubar Barometer	Barometric Pressure	5
YSI 6-Series Multiparameter Sonde	Water Quality	7
Conductivity Sensors (Greenspan)	Water Quality	8
WaterLOG H-3551 Series "Smart Gas" System Sutron Compact Constant Flow (CF) Bubbler*	1 st Bubbler Purge System – Primary DCP	A
WaterLOG H-3551 Series "Smart Gas" System Sutron Compact Constant Flow (CF) Bubbler*	2 nd Bubbler Purge System – Primary DCP	B
WaterLOG H-3551 Series "Smart Gas" System Sutron Compact Constant Flow (CF) Bubbler*	1 st Bubbler Purge System – Backup DCP	D
WaterLOG H-3551 Series "Smart Gas" System Sutron Compact Constant Flow (CF) Bubbler*	2 nd Bubbler Purge System – Backup DCP	E
Gill MaxiMet GMX500*	All in one MET Sensor	M
Reserved - OSTEP/Instrument Labs	Testing & Analysis	X
WaterLOG H-3611/H-3611i/203360 Radar Sensor*	Microwave Water Level	Y
WaterLOG H-3612/NILE 517-M12 Radar Sensor*	Bridge Clearance Air Gap	S

** New Designation. The addresses reserved for future reallocation will likely be implemented during the roll out of the next generation of data collection platforms.*

Estimated Time To Complete: 10 Minutes per instrument

References:

CO-OPS Engineering Bulletin 11-003 (I23) CO-OPS SDI-12 Addresses Update