WATER FLOW MONITOR
U.S. PATENT NO. 7,491,320

THE CONCEPT

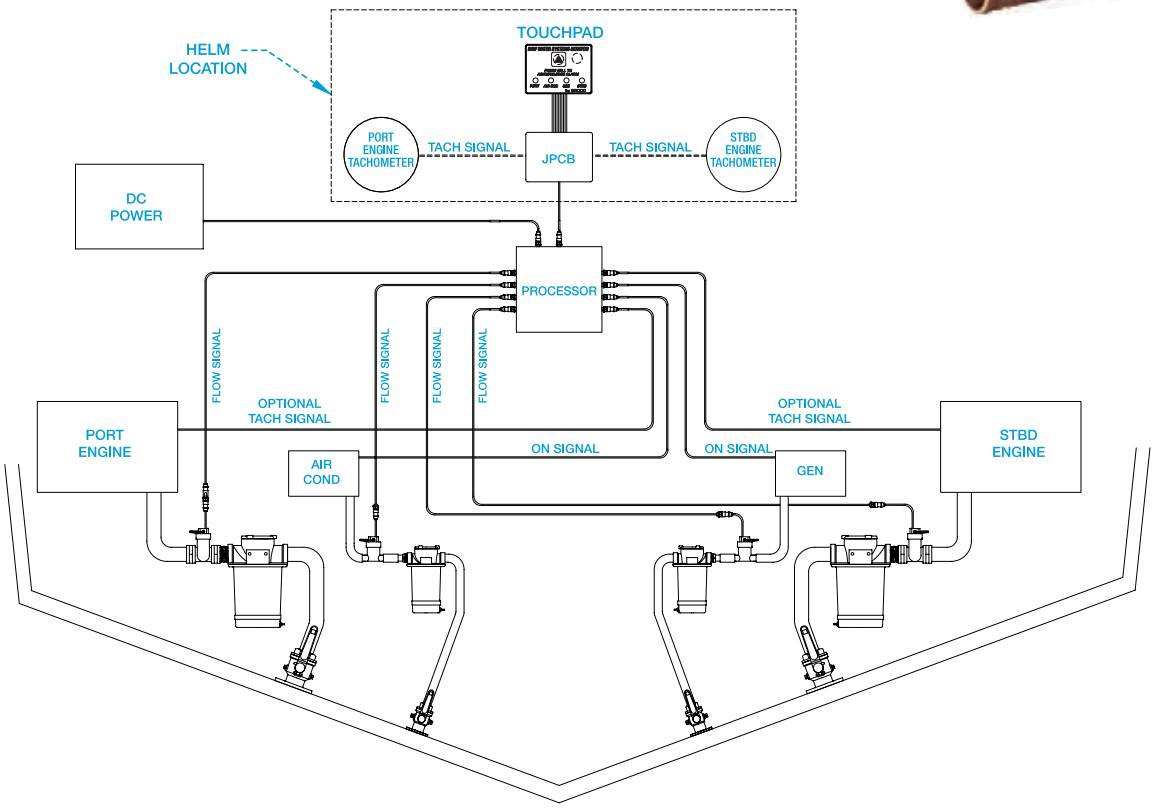
SSA is a patented system that alerts the vessel operator visually and audibly to the significant reduction of raw water flow to any connected device. You are alerted faster than traditional gauges or sensors (about 7 seconds) – fast enough to allow you to react and investigate – fast enough to prevent damage BEFORE it occurs.

Models are offered to monitor flow to engines, generators, air conditioners, R/O systems or combinations of these consumers, and the tournament fisherman model monitors flow to multiple live wells.

SSA-1GB-(PIPE SIZE)

SSA-1GW-(PIPE SIZE)

SENSOR ASSEMBLY



SSA-4 SAMPLE INSTALLATION

HOW IT WORKS

Sensors, hose sizes 5/8" to 6", installed in each raw water line send flow data to the processor, and each device sends an "on" signal when it is operating.
If flow to any of the devices falls below calibrated "normal" you are alerted audibly, and an LED identifies the device requiring maintenance or service.

In an emergency the sensor can be removed from the bronze housing to allow water to be pumped from a flooded bilge. All housings accept GROCO® SBVSA-1505 Service Adaptor for winterization or system flushing.

MODEL	MAX DEVICES CONNECTED	DEVICE DESCRIPTION	INDICATOR	NMEA2000
SSA-1GB	1	Propulsion Engine	2-5/8" Gauge, Black	N/A
SSA-1GW	1	Propulsion Engine	2-5/8" Gauge, White	N/A
SSA-3	3	1 engine, 1 generator, 1 air conditioner	Touchpad	Coming Soon
SSA-4	4	Up to 2 engines and up to 2 AC or DC pumps	Touchpad	Coming Soon
SSA-4B	4	Up to 4 AC or DC baitwell pumps	Touchpad	Coming Soon
SSA-7	7	Up to 3 Engines, up to 4 AC or DC pumps	Touchpad	Coming Soon

HOW TO DESIGN YOUR SYSTEM

Step-1: Select the Touchpad. Your selection identifies how many devices you will connect and what the devices are.

Touchpad #31
Engine, AC, Gen

Touchpad #41
Engine, Engine, AC, Gen

Touchpad #43
4 AC or 4 DC Pumps

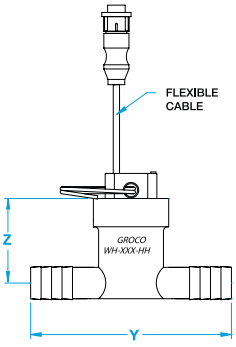
Touchpad #71
Engine, Engine, AC, AC, AC, Gen, Gen

Touchpad #72
Engine, Engine, AC, AC, Gen, Gen, R/O or Refrigeration

Touchpad #73
Engine, Engine, AC, AC, AC, Gen, R/O or Refrigeration

After Step-1: Sample System Part Number = SSA41- _ _ _ _ - _

Step-2: Select Sensor Plumbing Code from chart below to match existing plumbing (specify in alphabetic order).



SENSOR	HOSE ID	PLUMBING CODE	SENSOR	NPT	PLUMBING CODE	DIMENSIONS Y	DIMENSIONS Z
SSA-625-HH	5/8"	W	-	-	-	4.8	2.0
SSA-750-HH	3/4"	B	SSA-750-PP	3/4"	A	4.8	2.0
SSA-1000-HH	1"	D	SSA-1000-PP	1"	C	4.8	2.2
SSA-1250-HH	1-1/4"	F	SSA-1250-PP	1-1/4"	E	4.8	2.3
SSA-1500-HH	1-1/2"	H	SSA-1500-PP	1-1/2"	G	5.2	2.4
SSA-2000-HH	2"	K	SSA-2000-PP	2"	J	5.2	2.7
SSA-2500-HH	2-1/2"	M	SSA-2500-PP	2-1/2"	L	5.2	2.9
SSA-3000-HH	3"	P	SSA-3000-PP	3"	N	5.2	3.0
SSA-4000-HH	4"	R	SSA-4000-PP	4"	Q	5.2	3.6
SSA-5000-HH	5"	T	SSA-5000-PP	5"	S	-	-
SSA-6000-HH	6"	V	SSA-6000-PP	6"	U	-	-

SENSOR ASSEMBLY

After Step-2: Sample System Part Number = SSA41-B D K K-_

Step-3: Identify the source of engine(s) RPM signal.

Monitoring a propulsion engine requires an RPM signal. RPM data can be obtained from either of 3 sources, the source becomes the final number in the system part number.

Choose suffix -1 if you will obtain RPM from a helm-mounted analog tachometer.

Choose suffix -2 if you will obtain RPM from the signal generator on each engine.

Choose suffix -3 if you will obtain RPM from the engine J1939 connector or ECU.

After Step 3: Completed Sample System Part Number = SSA41-B D K K-1

Example Part Number: SSA41-B D K K-1

- Touchpad for 2 Engines, 1 AC and 1 Gen
- Sensor Assembly fits 3/4" ID hose
- Sensor Assembly fits 1" ID hose
- Sensor Assembly fits 2" ID hose
- Sensor Assembly fits 2" ID hose
- RPM signal obtained from helm mounted tach

More Examples: SSA31-B B L-2

- Touchpad for 1 Engine, 1 AC and 1 Gen
- Sensor Assembly fits 3/4" ID hose
- Sensor Assembly fits 3/4" ID hose
- Sensor Assembly fits 2-1/2" NPT
- RPM signal obtained from engine tach signal gen

SSA73-B B B D D K K-3

- Touchpad for 2 Engines, 3 AC, 1 Gen and 1 RO
- Sensor Assembly fits 3/4" ID hose
- Sensor Assembly fits 3/4" ID hose
- Sensor Assembly fits 3/4" ID hose
- Sensor Assembly fits 1" ID hose
- Sensor Assembly fits 1" ID hose
- Sensor Assembly fits 2" ID hose
- Sensor Assembly fits 2" ID hose
- RPM signal obtained from J1939 connection