



## Engine instruments



Technical specification: IP67 **watertight** instruments; anti-fog convex clear lens; technopolymer frame; AISI316 stainless steel diamond front bezel, black or glossy; red and yellow backlit dial; rear pre-calibrated connection with bayonet plug; 12/24V power supply. Engine control instruments need to be fitted with VDO sensors.



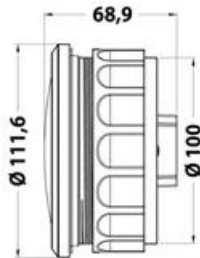
### LCD multifunction instrument

**27.328.01** Compatible with NMEA2000 / J1939 / analog protocols. To be used with any outboard / inboard engine except Mercury with SMARTCRAFT protocol.

Functions:

- speedometer via GPS signal ((Knots, km/h, MPH);
- counter w/full scale freely selectable from 3000 to 8000 RPM;
- hourmeter;
- fuel level + alarm 10%. Freely selectable 0-190 / 240-33 ohm;
- oil pressure + alarm at 0.7 bar (preferred scale bar/psi freely selectable);
- water temperature + alarm 95° (Celsius / Fahrenheit scale) freely selectable.

Backlit (clearly legible even when exposed to sunlight), adjustable lighting. Red and yellow backlit dial. Power supply 9/32 V. Resolution: 432x432 pixel. Supplied with: 1m 5-pole NMEA cable with standard end connector, 1m 6-pole-analog cable.



### Universal electronic revolution counter with hour counter

Connection to the alternator "w" terminal. Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Scale	V	mm		
					Ø	hole Ø	P
27.325.01	27.326.01	27.327.01	0-3000 RPM	12/24	96	85	55
27.325.02	27.326.02	27.327.02	0-4000 RPM	12/24	96	85	55
27.325.03	27.326.03	27.327.03	0-6000 RPM	12/24	96	85	55
27.325.04	27.326.04	27.327.04	0-8000 RPM	12/24	96	85	55



### GPS speedometer/mile counter without transducer

No transducer is necessary, it is equipped with 32-channel GPS antenna.

- **Type 1:** Speedometer/compass: 0-45 knot speed analogic indication and compass course digital indication (degree by degree).
- **Type 2:** Speedometer/totalizer/compass: speed digital indication 0-999 knots, Km/h or MPH, distance covered up to 99999 miles and compass course (degree by degree).


Black dial, black bezel	Black dial, glossy bezel	Glossy dial, glossy bezel	Version	V	mm		
					Ø	Ø hole	P
27.780.02	27.780.03	27.780.01	Type 1	12	96	85	55
27.781.02	27.781.03	27.781.01	Type 2	12/24	96	85	55



**Speedometer with (water pressure ) Pitot tube**

Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Scale	V	mm		
					Ø	hole Ø	P
27.325.08	27.326.08	27.327.08	0-35 MPH	12/24	96	85	55
27.325.09	27.326.09	27.327.09	0-55 MPH	12/24	96	85	55
27.325.10	27.326.10	27.327.10	0-65 MPH	12/24	96	85	55

 **27.325.00** Anti-seedweed nozzle kit for speedometer 27.315.00 + 6-m high-pressure PVC tube 27.316.00



**Fuel level gauge**

Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Signal	V	mm		
					Ø	hole Ø	P
27.320.01	27.321.01	27.322.01	240-33 Ω	12/24	57	51	45
27.320.00	27.321.00	27.322.00	0-190 Ω	12/24	57	51	45
27.320.02*	27.321.02*	27.322.02*	240-33/0-190 Ω possibility to	12/24	57	51	45

\* Backlit only in red.



**Water level gauge**

Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Signal	V	mm		
					Ø	hole Ø	P
27.320.03	27.321.03	27.322.03	240-33 Ω	12/24	57	51	45
27.320.29	27.321.29	27.322.29	10-180 Ω	12/24	57	51	45
27.320.04*	27.321.04*	27.322.04*	240-33/0-190 Ω possibility to select	12/24	57	51	45

\* Backlit only in red.



**Water temperature gauge**

Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Scale	V	mm		
					Ø	hole Ø	P
27.320.08	27.321.08	27.322.08	40-120°C	12/24	57	51	45



**Oil temperature indicator**

Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Scale	V	mm		
					Ø	hole Ø	P
27.320.09	27.321.09	27.322.09	50-150°C	12/24	57	51	45



**Voltmeter**

Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Scale	V	mm		
					Ø	hole Ø	P
27.320.14	27.321.14	27.322.14	8/16 V	12	57	51	45
27.320.15	27.321.15	27.322.15	18/32 V	24	57	51	45



**Oil pressure indicator**

Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Scale	V	mm		
					Ø	hole Ø	P
27.320.10	27.321.10	27.322.10	0-5 bar	12/24	57	51	45
27.320.11	27.321.11	27.322.11	0-10 bar	12/24	57	51	45





**Rudder angle indicator**

Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Signal	V	mm		
					Ø	hole Ø	P
27.320.17	27.321.17	27.322.17	0-190 Ω	12/24	57	51	45



**TRIM indicator**

Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Signal	V	mm		
					Ø	hole Ø	P
27.320.20	27.321.20	27.322.20	0-190 Ω	12/24	57	51	45



**Quartz clock**

Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Scale	V	mm		
					Ø	hole Ø	P
27.320.27	27.321.27	27.322.27	12 hours	12/24	57	51	45



**Ammeter**

With 8/32 V SHUNT, suitable for most of the ammeters on the market. Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Scale	V	mm		
					Ø	hole Ø	P
27.320.23	27.321.23	27.322.23	± 50 A	12/24	57	51	45
-	27.321.24	27.322.24	± 80 A	12/24	57	51	45



**Blackwater gauge**

Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Signal	V	mm		
					Ø	hole Ø	P
27.320.05	27.321.05	27.322.05	10-180 Ω	12/24	57	51	45



**Digital voltmeter**

Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Scale	V	mm		
					Ø	hole Ø	P
27.320.40	27.321.40	27.322.40	8/32 volt	12/24	57	51	45



**Digital ammeter**

With 8/32-volt SHUNT. Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Scale	V	mm		
					Ø	hole Ø	P
27.320.44	27.321.44	27.322.44	± 80 A	12/24	57	51	45



**Digital hour counter**

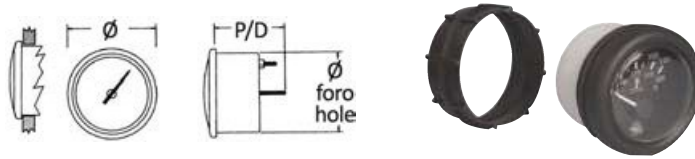
Red and yellow backlit dial.

Black dial, black bezel	Black dial, glossy bezel	White dial, glossy bezel	Scale	V	mm		
					Ø	hole Ø	P
27.320.36	27.321.36	27.322.36	0-99999 hours	12/24	57	51	45

# GUARDIAN line, high-quality instruments



Technical features: - Sturdy nylon and fiberglass body; Screw-ring mounting or unique recess fit system; Mobile interchangeable bayonet bezel, black, white or chromed (available upon request), allowing back bulkhead mounting with glass flush with dashboard; Scratch-proof glass; Red back lighting for black dial instruments, and natural light for white dial instruments; 100% watertight; Standard size compatible with most instruments available on the market.



## GUARDIAN RPM counter

White dial White bezel	Black dial Black bezel	OPTIONAL chromed bezel	Type	V	←→  mm		
					Ø	Ø hole	P
27.520.01	27.420.01	27.455.01	Diesel 0-4000 RPM*	12	96	85	60
27.520.02	27.420.02	27.455.01	Diesel 0-4000 RPM*	24	96	85	60
27.520.05	27.420.05	27.455.01	Diesel 0-4000 RPM, w/ hourmeter*	12	96	85	60
27.520.06	27.420.06	27.455.01	Diesel 0-4000 RPM, w/ hourmeter*	24	96	85	60
27.521.01	27.421.01	27.455.01	2/4 stroke 0-7000 RPM	12	96	85	60
27.521.05	27.421.05	27.455.01	2/4 stroke 0-7000 RPM, w/ hourmeter	12	96	85	60

\* Connection to terminal W of the alternator



▲ 27.520.01



▲ 27.521.05 + 27.455.01



▲ 27.421.01



▲ 27.521.05



▲ 27.420.05



▲ 27.421.01 + 27.455.01

## GUARDIAN speedometers

White dial, white bezel	Black dial, black bezel	OPTIONAL chromed bezel	Type	V	←→  mm			Sensor*
					Ø	Ø hole	P	
27.522.01	27.422.01	27.455.01	0-30 knots	12	96	85	60	27.452.00
-	-	27.455.01	0-30 knots	24	96	85	60	27.452.00
27.523.01	-	27.455.01	0-30 knots with log	12	96	85	60	27.452.00
27.524.01	27.424.01	27.455.01	0-50 knots	12	96	85	60	27.452.00
27.525.01	27.425.01	27.455.01	0-50 knots with log	12	96	85	60	27.452.00
-	-	27.455.01	0-50 knots with log	24	96	85	60	27.452.00

\* All speedometers to be equipped with their sensor.



▲ 27.522.01



▲ 27.424.01



▲ 27.425.01



▲ 27.524.01 + 27.455.01



▲ 27.452.00 - Guardian electronic sensor for speedometers/mile counters



▲ 27.425.01 + 27.455.01

## GUARDIAN fuel level gauge 10-180 ohm

White dial White bezel	Black dial Black bezel	OPTIONAL chromed bezel	V	←→  mm		
				Ø	Ø hole	P
27.527.01	27.427.01	27.455.02	12	59	52	45
27.527.02	27.427.02	27.455.02	24	59	52	45



▲ 27.427.01



▲ 27.527.01

## GUARDIAN water level gauge 10-180 ohm

White dial White bezel	Black dial Black bezel	OPTIONAL chromed bezel	V	←→  mm		
				Ø	Ø hole	P
27.528.01	27.428.01	27.455.02	12	59	52	45
27.528.02	27.428.02	27.455.02	24	59	52	45



▲ 27.428.01



▲ 27.428.01 + 27.455.02



▲ 27.528.01



▲ 27.531.01

▲ 27.432.01

**GUARDIAN temperature gauges**

White dial, white bezel	Black dial, black bezel	OPTIONAL chromed bezel	Type	V	←→  mm		
					Ø	Ø hole	P
27.531.01	27.431.01	27.455.02	H2O 40°-120°	12	59	52	45
27.531.02	27.431.02	27.455.02	H2O 40°-120°	24	59	52	45
27.532.01	27.432.01	27.455.02	Oil 40°-150°	12	59	52	45
27.532.02	27.432.02	27.455.02	Oil 40°-150°	24	59	52	45

Use VDO oil pressure sensors



▲ 27.429.01

▲ 27.529.02 + 27.455.02

▲ 27.529.02

**GUARDIAN oil pressure gauge**

White dial, white ring	Black dial, black ring	OPTIONAL chromed bezel	Type	V	←→  mm		
					Ø	Ø hole	P
27.529.01	27.429.01	27.455.02	0-5 bar	12	59	52	45
27.530.01	27.430.01	27.455.02	0-5 bar	24	59	52	45
27.529.02	27.429.02	27.455.02	0-10 bar	12	59	52	45
27.530.02	27.430.02	27.455.02	0-10 bar	24	59	52	45

Use VDO oil pressure sensors



▲ 27.433.02

▲ 27.533.01

▲ 27.433.01

**GUARDIAN voltmeter**

White dial White bezel	Black dial Black bezel	OPTIONAL chromed bezel	V CC	←→  mm		
				Ø	Ø hole	P
27.533.01	27.433.01	27.455.02	10/16	59	52	45
27.533.02	27.433.02	27.455.02	20/32	59	52	45



▲ 27.434.01

▲ 27.534.01

**GUARDIAN hourmeters**

White dial White bezel	Black dial Black bezel	OPTIONAL chromed bezel	V	←→  mm		
				Ø	Ø hole	P
27.534.01	27.434.01	27.455.02	12	59	52	45
27.534.02	27.434.02	27.455.02	24	59	52	45



▲ 27.438.01

▲ 27.538.01 + 27.455.02

▲ 27.538.01

**Waste GUARDIAN 10-180 ohm waste water gauge**

White dial White bezel	Black dial Black bezel	OPTIONAL chromed bezel	V	←→  mm		
				Ø	Ø hole	P
27.538.01	27.438.01	27.455.02	12	59	52	45
27.538.02	27.438.02	27.455.02	24	59	52	45



▲ 27.439.01

▲ 27.539.01

**GUARDIAN Power Trim**

To be coupled with genuine sensors of Mercury engines.

White dial White bezel	Black dial Black bezel	OPTIONAL chromed bezel	V	←→  mm		
				Ø	Ø hole	P
27.539.01	27.439.01	27.455.02	12	59	52	45



**GUARDIAN loose bezel**

White	Chromed	Black	Ø mm
27.457.02	27.455.02	27.456.02	59
27.457.01	27.455.01	27.456.01	96

# VDO instruments, ViewLine series



## VDO ViewLine revolution counter

IP67 watertight case; double anti-fog pane; LED back-lit LED dial and needle; panel or flush mounting of the instruments; interface with NMEA signal; second frequency available as an option. All instruments are equipped with finishing ring having the same color as their dial. RPM counter and sumlog equipped with ring 27.499.01 or 27.599.01. 52-mm Ø instruments equipped with ring 27.499.03 or 27.599.03.

**AA - The revolution counters have to be equipped with:** cable 27.599.11 (RPM counter function, only); additional cable 27.599.12 for other functions: hour counter, clock, voltmeter; push-button 27.599.13 necessary for basic and advanced programming of the RPM counter.

**EE - The synchronizers have to be fitted with cables** 27.599.11 + 27.599.12.

**BB - The sumlogs have to be equipped with:**cable 27.599.11 (speedometer function, only); additional cable 27.599.12 for other functions: partial/total mile sumlog, depth sounder, water temperature, clock, voltmeter + push-button 27.599.13; multifunction transducer 27.581.50.

**CC - The 52-mm Ø control instruments have to be equipped with:** cable 27.599.11

**DD - The rudder angle metres have to be equipped with:** sensors 27.176.00 / 27.176.10 + cable 27.599.11.



Product	Product Ø mm	Dial		V
		white	black	
Revolution counter with partial and total hour counter + clock + voltmeter	-	-	-	-
Scale 3000 RPM Input: W, IND, DDEC, HALL, 1	85	27.480.00	27.580.00	12/24
Scale 4000 RPM Input: W, IND, DDEC, HALL, 1	85	27.480.01	27.580.01	12/24
Scale 5000 RPM Input: W, IND, HALL, 1	85	27.480.02	27.580.02	12/24
Scale 6000 RPM Input: W, IND, HALL, 1	85	27.480.03	27.580.03	12/24
Scale 7000 RPM Input: 1	85	-	27.580.04	12/24
± 500 RPM synchronizer	85	27.480.10	27.580.10	12/24
Triducer with extractable label to match the sumlog, fitted with thru hull (speed + depth + water temperature)	52	27.581.50	27.581.50	-
10/180 Ω fuel level indicator	52	27.482.01	27.582.01	12/24
240/33 Ω fuel level indicator	52	27.482.21	27.582.21	12/24
10/180 Ω H <sub>2</sub> O level indicator	52	27.484.01	27.584.01	12/24
20 mA waste water level indicator (float 27.678.01/02)	52	27.485.01	27.585.01	12/24
8/16 V voltmeter	52	27.486.01	27.586.01	12
18/32 V voltmeter	52	27.487.01	27.587.01	24
40/120°C + 105/250°F H <sub>2</sub> O thermometer	52	27.488.01	27.588.01	12/24
50/150°C + 120/300°F oil thermometer	52	27.489.01	27.589.01	12/24
-60A + 60A ammeter	52	27.490.01	27.590.01	12/24
5 bar/80psi engine oil pressure	52	27.491.01	27.591.01	12/24
10 bar/150 psi engine oil pressure	52	27.492.01	27.592.01	12/24
25 bar/350 psi engine oil pressure	52	27.493.01	27.593.01	12/24
Rudder angle indicator** (3/180 Ω)	52	27.495.01	27.595.01	12/24
TRIM indicator (167-10 Ω input)	52	27.496.01	27.596.01	12/24
Hour counter	52	27.494.01	27.594.01	12/24
0-2 bar turbo pressure gauge	52	27.497.01	27.597.01	12/24

LEGENDA: W = signal W alternator; IND= VDO inductive sensor; DDEC = Electronic adjuster; HALL = HALL VDO effect sensor; 1= Terminal 1 reel.

- 27.599.11 TYCO/HIRSCHMANN-type 8-pole connector with cable
- 27.599.12 TYCO/HIRSCHMANN 14-pole connector with cable
- 27.599.13 Programming key

\*\* 27.176.00; 27.176.10 Rudder sensors 27.495.01; 27.595.01;

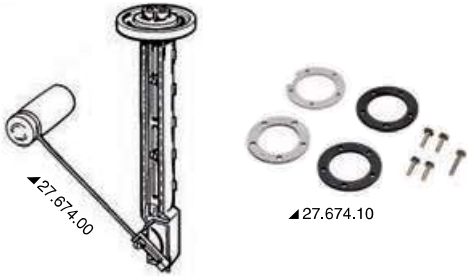


## VDO finishing rings for ViewLine instruments

White	Chromed	Black	Finishing	Ø mm
27.499.01	27.699.01	27.599.01	Ray round	85
27.499.03	27.699.03	27.599.03	Ray round	52



# Accessories for VDO series Oceand and View Line



### VDO - Fuel tank float

Code	Description	Resistance Ω	V
27.674.00	150- to 605-mm adjustable lever float fitted with fastening counterflange 27.674.10	3-180	12/24
27.674.10	Kit including 2 x metal ring nuts + 2 x fastening seals (screws included)	-	

### Float for water tank



Float for capacitive water tank. It can be cut on demand. It matches instruments 27.574.02 OCEAN series.

Code	For depth mm
27.677.00	80-600
27.677.01	600-1200
27.677.02	1200-1500

### VDO sensor for grey or black water tanks



Sensor for grey or black water tanks, with electrolytic separator and 2 adjustable warning thresholds. They match 27.485.01, 27.585.01, 27.474.18 (VIEW LINE + OCEAN).

Code	Adjustable range mm
27.678.01	200/600
27.678.02	600/1200



### VDO Rudder angle sensor

Code	Station	V
27.176.00	single	12/24
27.176.10	double	12/24



### VDO Resistors to feed at 24V

Code	Suitable for
27.599.15	all Ø mm 52 instruments



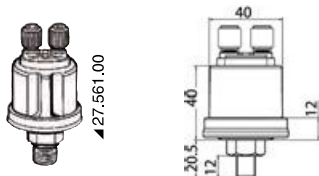
### Water/oil temperature sensor

To be paired to indicators Osculati, Guardian, VDO, etc.

Code	Version	Range	Thread	Poles		With alarm	Code	Version	Range	Thread	Poles		With alarm
				grounded	insulated						grounded	insulated	
27.792.00	Water	70° - 120°	M 14 x 1.5	x		x	27.819.02	Water	70° - 120°	1/2 - 14NPT			x
27.810.00	Water	70° - 120°	M 14 x 1.5	x			27.819.03	Oil	50° - 150°	1/2 - 14NPT			x
27.811.00	Oil	50° - 150°	M 14 x 1.5	x			27.826.00*	Olio	70° - 120°	M 14 x 1.5		x	
27.812.00**	Oil	70° - 120°	1/4 x 18NPT		x	x	27.826.01	Olio	50° - 150°	M 14 x 1.5		x	
27.812.01	Water	70° - 120°	1/4 x 18NPT	x			27.877.03	Water	70° - 120°	M 18 x 1.5		x	
27.812.02	Water	70° - 120°	1/4 x 18NPT			x	27.827.00	Water	40° - 120°	M 18 x 1.5	x		
27.812.03	Oil	50° - 150°	1/4 x 18NPT			x	27.827.01	Olio	50° - 150°	M 18 x 1.5	x		
27.813.00	Oil	50° - 150°	M 14 x 1.5	x		x	27.827.02	Water	40° - 120°	M 18 x 1.5	x		x
27.818.00	Water	70° - 120°	M 14 x 1.5		x		27.827.03	Olio	50° - 150°	M 18 x 1.5			x
27.818.01	Oil	70° - 120°	M 14 x 1.5		x		27.450.00	Water	70° - 120°	1/8" - 27NPT	x		
27.819.00	Water	70° - 120°	1/2 - 14NPT		x		27.450.01	Olio	70° - 120°	1/8" - 27NPT	x		
27.819.01	Oil	70° - 120°	1/2 - 14NPT	x			27.450.02	Oil	50° - 150°	1/8" - 27NPT	x		

\* Genuine VDO - Bosch type.

\*\* Genuine VDO.



### Oil pressure bulbs

Signal output 10 - 184 Ω. To be paired with indicators Osculati, Guardian, VDO, etc. Rated voltage: 6 V to 24 V.

Code	Bar	Thread	Grounded		With alarm	Preset for double station	Code	Bar	Thread	Grounded		With alarm	Preset for double station
			Poles	Poles						Poles	Poles		
27.500.00	5	1/8-27 NPT	x										
27.561.01	5	1/8-27 NPT		x						x			x
27.565.01	5	1/8-27 NPT	x		x				x				
27.561.00*	5	M 10x1		x					x				
27.565.03	5	M 10x1	x		x				x		x		
27.502.00	10	1/8-27 NPT	x							x			
27.557.00*	10	1/8-27 NPT								x			x
27.563.00	10	1/8-27 NPT								x			
27.565.00	10	1/8-27 NPT	x						x				
27.503.00	10	M 10x1							x				
27.507.00	10	M 10x1	x						x		x		
27.562.00	10	M 10x1								x			

\* Genuine VDO

**VDO spare propeller**

Code	Description
27.270.05	Spare propeller for 50 knots (2192)(2192)



**Accessories for instruments**

**Instrument sensors**

27.330.01 0-190 Ω rudder angle sensor. It matches 27.320.17 / 27.321.17 / 27.322.17 and VDO instruments.



**Universal pilot pipe**



27.315.00 Suitable for any water pressure speedometer; can be used up to 80 MPH, made of **white nylon**.

**Special high pressure hose, designed for water pressure speedometers**



Made of **PVC, universal**.

Code	Reel
27.316.00	25 m

**NMEA 2000 connector**

**IP68** Cables and connectors to create an onboard NMEA 2000 network. Sturdy IP68 connectors for use in marine environment.

Code	Description	Length m	Color
27.362.02	Male/female cable	1	Grey
27.362.04	Male/female cable	3	Grey
27.362.06	Male/female cable	6	Grey
27.363.02	TEE (2 female/ 1 male)	-	Grey
27.364.01	Male terminal connector	-	Black
27.364.02	Female terminal connector	-	Black
27.363.15	Power cord to power the system via a TEE terminal	5	Yellow



**Level indicator + sensors**

**Fuel level indicator**



Waterproof, fitted with floater and FUEL symbol. 240-33 Ω frequency. For 12V installations.

Code	Ø mm	Tank depth mm
27.160.00	52	130/660

**Universal Gauge**



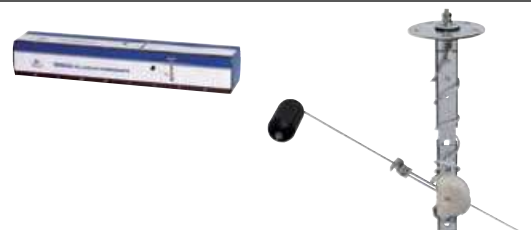
TANK letter symbol (suitable for any type of liquid).

Resistance		Ø mm
10-180 Ω	240-33 Ω	
27.159.00	27.170.00	52

**Universal floater for fuel level gauge**

5-hole international flange, 70-mm Ø.

Resistance 240-33 ohms (Teleflex, Faria USA, Vetus, S. Giorgio Sein, Beede, Medallon)	Resistance 10-180 ohms (VDO, Yazaki, Faria Europa, Uflex, Guardian)	Tank depth mm
27.160.01	27.160.02	130/660



**Universal lever float for fuel level**

Metal parts made of **stainless steel**. Scratch-proof, made of **ceramic** with **platinum** contact (4 million movements guaranteed). Adjustable for tanks with height of 150-600. Mobile rod delay patented system, neutralizes the pitch/roll effect.

Code	Resistance Ω
27.160.05	240-33
27.160.06	10-180





**OSCULATI**



**Vertical 5-hole level sensor with S5 flange**

**WATER+FUEL**

Ideal for either fuel or water . Any length available for a minimum order of 10 pieces. 12/24 V compatible. 316 stainless steel.

Code	Resistance	Length cm	Code	Resistance	Length cm
27.160.15	240/33 Ω*	15	27.160.48	240/33 Ω*	48
27.161.15	0/190 Ω*	15	27.160.50	240/33 Ω*	50
27.160.17	240/33 Ω*	17	27.161.50	0/190 Ω**	50
27.161.17	0/190 Ω**	17	27.160.53	240/33 Ω*	53
27.160.20	240/33 Ω*	20	27.160.55	240/33 Ω*	55
27.161.20	0/190 Ω**	20	27.161.55	0/190 Ω**	55
27.160.22	240/33 Ω*	22	27.160.58	240/33 Ω*	58
27.161.22	0/190 Ω**	22	27.161.59	0/190 Ω**	59
27.160.25	240/33 Ω*	25	27.160.60	240/33 Ω*	60
27.161.25	0/190 Ω**	25	27.161.60	0/190 Ω**	60
27.160.28	240/33 Ω*	28	27.160.63	240/33 Ω*	63
27.161.28	0/190 Ω**	28	27.160.65	240/33 Ω*	65
27.160.30	240/33 Ω*	30	27.161.65	0/190 Ω**	65
27.161.30	0/190 Ω**	30	27.160.70	240/33 Ω*	70
27.160.32	240/33 Ω*	32	27.161.70	0/190 Ω**	70
27.161.32	0/190 Ω**	32	27.160.80	240/33 Ω*	80
27.160.35	240/33 Ω*	35	27.161.80	0/190 Ω**	80
27.161.35	0/190 Ω**	35	27.160.90	240/33 Ω*	90
27.160.36	240/33 Ω*	36	27.161.90	0/190 Ω**	90
27.160.38	240/33 Ω*	38	27.160.10	240/33 Ω*	100
27.160.40	240/33 Ω*	40	27.161.10	0/190 Ω**	100
27.161.40	0/190 Ω**	40	27.160.11	240/33 Ω*	110
27.160.45	240/33 Ω*	45	27.161.11	0/190 Ω**	110
27.161.45	0/190 Ω**	45	27.160.12	240/33 Ω*	120
27.160.47	240/33 Ω*	47	27.161.12	0/190 Ω**	120

\* For instruments: Teleflex, Aqua Meter, Vetus, S. Giorgio Sein (Veglia), Beede, Medallion, Datcom, 27.160.00, models Taiwan - Wena, Osculati.

\*\* For instruments: Yazaki, mod. 3 wires, Faria Europa, VDO, Uflex, Guardian.

**OSCULATI**

**Level sensor with NMEA 2000 outlet signal**

SAE 5-bore international flange. 12/24V compatible. IP65 watertight. **Stainless steel** body. Level sensors are programmed to indicate **the use** of the tank (ex. black/grey/freshwater - fuel) and, if communicated when ordering the items, the **volume** that will be expressed in litres instead of in percentage. In case more than one tank for the same liquid is present onboard, the order shall also indicate the **numbering of the tanks** (ex. 1 - 2 - 3).



		Version			Length mm
Fuel	Water	Grey water	Black water		
27.165.15	27.166.15	27.167.15	27.168.15	150	
27.165.17	27.166.17	27.167.17	27.168.17	170	
27.165.20	27.166.20	27.167.20	27.168.20	200	
27.165.22	27.166.22	27.167.22	27.168.22	225	
27.165.25	27.166.25	27.167.25	27.168.25	250	
27.165.28	27.166.28	27.167.28	27.168.28	275	
27.165.30	27.166.30	27.167.30	27.168.30	300	
27.165.35	27.166.35	27.167.35	27.168.35	350	
27.165.40	27.166.40	27.167.40	27.168.40	400	
27.165.45	27.166.45	27.167.45	27.168.45	450	
27.165.50	27.166.50	27.167.50	27.168.50	500	
27.165.55	27.166.55	27.167.55	27.168.55	550	
27.165.60	27.166.60	27.167.60	27.168.60	600	
27.165.65	27.166.65	27.167.65	27.168.65	650	
27.165.70	27.166.70	27.167.70	27.168.70	700	
27.165.80	27.166.80	27.167.80	27.168.80	800	
27.165.90	27.166.90	27.167.90	27.168.90	900	
27.165.99	27.166.99	27.167.99	27.168.99	1000	

**New**

**NMEA 2000 level sensor programmer**

This programmer configures NMEA 2000 lever sensors type 27.165.xx and similar ones, changing their use.

The programmer can:

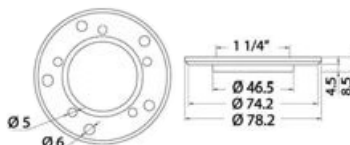
- 1) Set the sensor for: fuel, clear water, grey water, waste water.
- 2) Give the number to the tanks (1, 2, 3, etc.)
- 3) Set the tank capacity in litres or as volume.

The programmer retrofits the boat's NMEA2000 network – using a Micro-C NMEA2000 cable and connecting it to a free slot in the NMEA2000 network – and can be configured without acting on the lever sensor.

Code	DC Input V	A	V	Cable	Cable length cm	For level sensors
27.165.00	5	1-3	9-16	USB A	80	27.165.xx

**Mounting flange for level sensors from S5 to S3**

Code	Description
52.746.10	Useful to install S3 thread sensors on tanks ready to fit 5-bore flange (S5).



**Vertical level sensor with S3 threaded flange**

**WATER+FUEL** Ideal for either fuel or water. Any length available for a minimum order of 10 pieces. 12/24 V compatible. AISI316 stainless steel.

Code	Resistance	Length cm	Code	Resistance	Length cm
27.170.17	240/33 Ω*	17	27.170.30	240/33 Ω*	30
27.170.20	240/33 Ω*	20	27.171.30	0/190 Ω**	30
27.171.20	0/190 Ω**	20	27.170.35	240/33 Ω*	35
27.170.22	240/33 Ω*	22	27.171.35	0/190 Ω**	35
27.170.25	240/33 Ω*	25	27.170.40	240/33 Ω*	40
27.171.25	0/190 Ω**	25	27.171.40	0/190 Ω**	40
27.170.28	240/33 Ω*	28	27.170.45	240/33 Ω*	45
27.171.28	0/190 Ω**	28	27.170.50	240/33 Ω*	50

\* For instruments: Teleflex, Aqua Meter, Vetus, S. Giorgio Sein (Veglia), Beede, Medallion, Datcom, 27.160.00, Taiwan-Wena and Osculati models.

\*\* For instruments: Yazaki, mod. 3 wires, Faria Europa, VDO, Uflex, Guardian.

**OSCOLATI**



**GOBIUS level indicators**

**GOBIUS PRO level sensor - Bluetooth**

**BLUETOOTH**

**UP TO 9 SENSOR**

Sensor to be mounted on the outside of any tank whose vibrations indicate the inside level.

- It can be mounted on tanks of any materials.
- It works with any kind of liquid.
- Easy to install without drilling the tank (no leaks or bad smell).
- 1 to 9 sensors can be mounted on a single tank (each indicating a single step).

1 sensor only is recommended to show 3/4 waste water or water/fuel reserve. Gobius Pro can be programmed via Bluetooth and can be connected to a warning light, relay or buzzer. It can be read **also via Bluetooth** (App available for download on your smartphone or other devices). App languages: English, Italian, French, German, Norwegian, Swedish.

Code	Description	V	No. of sensors
27.182.01	GOBIUS PRO 1	12/24	1

**Gobius®**  
Level Indicators



**GOBIUS C external level sensor**

**MICRO RADAR TECHNOLOGY**

Sensor to be mounted on the outside of the tank. The micro radar technology detects the fluid level without coming into contact with the liquid inside the tank.

- It connects to the Bluetooth or BUS networks.
- Plug and Play installation.
- No need to disassemble the tank. It measures the liquid level from above, no risk of leaks.
- It works with any kind of liquid.

The Gobius C sensor has to be mounted on the upper side of the tank and its max measuring depth of the tank is 2 metres.

It can be connected to control systems and analog devices such as KUS, VDO, WEMA, Faria (10-190 Ohm, 240-33 Ohm, 4-20 mA and 0-5 V). Moreover, it is fitted with 2 single on/off outputs to detect when the tank is empty/full.

Installation of the sensor via Bluetooth from your cellphone app for both versions Gobius C (27.183.01) and Gobius C/NMEA 2000 (27.183.02). During the configuration of Gobius C, the user can configure the shape of the tank for a better measuring of the liquids, even in tanks having an irregular shape. For Gobius C/NMEA 2000 (27.183.02), after installation connect the 1-m cable to the NMEA 2000 network and wait for the Gobius C sensor to be detected by the NMEA 2000 system of the boat. The App for iOS and Android systems is available in English, French, German, Italian, Spanish and Swedish.

Type of tank	Installation
Non-drilled plastic tank	Apply sensor Gobius C
Already drilled plastic tank	Plug the hole and apply sensor Gobius C or apply the adapter to sensor Gobius C (27.138.10+27.183.01)
Metal tank	Drill and apply the adapter to sensor Gobius C (27.138.10+27.183.01)

Code	Description	V	Adapter OPTIONAL
27.183.01	GOBIUS C 2.0	12/24	27.183.10
27.183.02	<b>New</b> GOBIUS C / NMEA 2000 3.0	12/24	27.183.10

**Gobius®**  
Level Indicators



**Gobius C adapter for metal tanks**

**27.183.10** Specific adapter for the installation of the Gobius C sensor on a metal tank or any other tank having a pre-existing bore. For tanks with an S3 flange, use this adapter to install the Gobius C sensor. For S5 flanges, pair the Gobius C adapter to flange **52.746.10**. Screw the adapter on the pre-existing 1,25" Wema & KUS brackets (SAE 5) and then mount the sensor on the adapter using the 3M tape included. The package includes: adapter, 3M tape, sealing o-rings.

**Gobius®**  
Level Indicators

