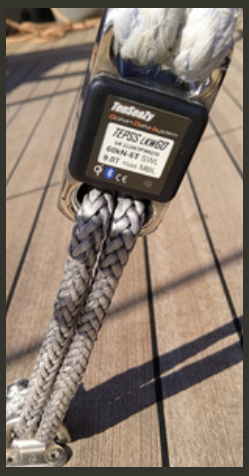
Ocean Data System
ELECTRONIC MARINE SOLUTIONS

TensEazy

Wireless Technology
TELEMETRY and LOAD MEASUREMENT



- Wireless transmission,
- Quick and easy to implement,
- Sensor range and options,
- Unlimited connectivity and data usage possibilities,
- High measurement accuracy,
- Large battery life,
- Highly configurable to your needs,
- Compact, lightweight, very low power consumption.

A relevant alternative to wired sensors

Improved sealing and reliability:
No weaknesses due to the cable.
No risk of moisture ingress.
Sufficient battery life for most applications.

BRETAGNE DÉVELOPPEMENT INNOVATION

Eco Designed

Une solution ODS DEVELOPMENTS

Eco-designed and produced in Brittany/France
Durable - Repairable - Reconditionable - Recyclable

TensEazy sensors

Ultra-compact for all purpose

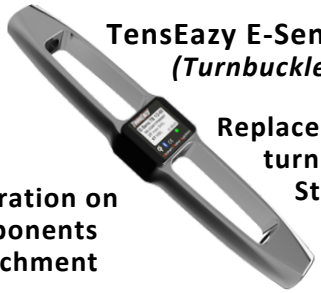
A very large range of standard wireless loadcells

TensEazy E-Sense.SL
(Soft Link)

On-line integration
Running rigging
Soft attachments

TensEazy E-Sense.HL
(Hard Link)

On-line integration on hardware components
Mechanichal attachment



TensEazy E-Sense.TB
(Turnbuckle)

Replace existing turnbucles
Standard threads

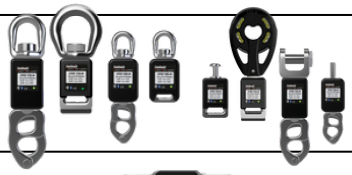
Custom made load sensors

Integration of the TensEazy module in stressed mechanical parts.
Optimization of dimensions and mechanical behavior.





Mechanical specifications

TensEasy standard loadcells		Recommanded max work load	Breaking load	Attachment interfaces		Dimensions Sensor only	Mass Sensor only	Body material	Max battery capacity
		Tons	*Tons*		*mm ou inches*	*L x l x H - mm*	*Grams*		*mAh*
	**E-Sense-SL06**	0.6	1.2	Soft line Strop Webbing LoopX® ...	1 x Ø8 *ou* 2 x Ø6	62 x 39 x 21	65	Aluminium	420
	E-Sense-SL20	2	4		1 x Ø10 *ou* 2 x Ø9	67 x 39 x 21	96	Titanium	420
	E-Sense-SL50	5	10		1 x Ø13 *ou* 2 x Ø12	82 x 41 x 27	198		840
	E-Sense-SL100	10	20		1 x Ø14 *ou* 2xØ12.5	91 x 50 x 29	306		840
	E-Sense-SL200	20	40		1 x Ø21 *ou* 2 x Ø19	108 x 66 x 36	613		840
	**E-Sense-HL20**	2	4	Thread and hole or Eye (textile)	M10X1.5 - Ø10.2	54 x 39 x 21	102	Titanium	420
	E-Sense-HL45	4.5	9		M16X2 - Ø16.3	63 x 41 x 33	175		840
	E-Sense-HL70	6.8	13.6		M20x2.5 - Ø20.5	74 x 50 x 44	245		840
	E-Sense-HL100	9.1	18.2		M24x3 - Ø24.5	87 x 53 x 52	316		840
	**E-Sense-TB1/4"**	0.75	1.5	Threads (Other specs on request)	1/4" - UNF28	135 x 39 x 21	146	Aluminium	420
	E-Sense-TB5/16"	1.4	2.8		5/16" - UNF24	163 x 39 x 21	224	Cupro Aluminium CuAl9Ni3Fe2 or Stainless steel 17.4PH	420
	E-Sense-TB3/8"	1.8	3.6		3/8"-UNF24	187 x 39 x 21	281		420
	E-Sense-TB1/2"	2.9	5.8		1/2" - UNF20	234 x 39 x 27	525		840
	E-Sense-TB5/8"	4.5	9		5/8" - UNF18	270 x 41 x 28	842		840
	E-Sense-TB3/4"	7.5	12.9		3/4" - UNF16	281 x 45 x 33	1168		840
	E-Sense-TB7/8"	8.9	17.8		7/8" - UNF14	344 x 53 x 38	1325		840

Common features

LOAD DATA - PRECISION

Accuracy over the measuring range	higher than 0.1%
Maximum no-linearity over the measuring range	lower than 0.1%
Resolution over the measuring range	Ajustable from **14.25bits (0.015%) to 16.75bits (0.003%)**
Load data delivered in Kg force (default) or any other unit (on request)	
Specific calibration certicifate provide for each sensor	

TRANSMISSION

Transmission frequency	**User setting : 7 available frequencies + standby mode** An LED indicates explicitly the selected transmission frequency

POWER SUPPLY - CHARGING - AUTONOMY

Power ON/OFF	Always ON by default	
Battery	**1 battery by default**	**2nd battery as option**
Charge battery	Wireless charging with compatible Qi station.	
Charging time	**2h**	**4h**
Battery life between 2 charges @ 14.25 bits (hours)		

Frequency TX	***1 battery***	***2 batteries***
1 per 10 seconds (0.1Hz)	**6437**	**12874**
1 per 5 seconds (0.2Hz)	**3257**	**6514**
1 per 2 seconds (0.5Hz)	**1350**	**2700**
1 per second (1Hz)	**716**	**1432**
3 per second (3Hz)	**298**	**596**
5 per second (5Hz)	**215**	**430**
10 per second (10Hz)	**114**	**227**
Standby mode	**>2 ans**	**>4 ans**

Clip-on pad for powering OFF the sensor :
Zero power consumption
Supplied with each sensor

Optionnal TensEazy clip-on charger

Held in position by elastic band

5vdc power supply
Mini USB connector

ENVIRONMENT

Operating temperature	**-10 to +50°C**
Storage temperature	**-30 to +60°C**
Protection	**IP67**

TensEazy App

The TenSeaZy® App interface creates uncluttered dashboards for hands-on measurement on Smartphones or Tablets

- Displays the current load, max and min values or other expressions from many math functions
- 2 configurable threshold values for coloured warning indicators
- Highly configurable dashboards :
  Numeric, gauge, bar graph, indicator, historical trend
- Support many sensors
- Basic recording of displayed data and *.csv export
- Access to advanced sensor settings
- Android and IPhone compatible

TensEazy Gateway

The TensEazy gateway allows the load data received to be fed into most navigation instruments and to the on-board display network.

- NMEA2000, NMEA0183, NKE compatible
- Multiple sensors supported
- Basic data logging for post-processing/replay (*.csv file)
- IP66 protection
- Easy set-up by Wifi (integrated web server)
- LEDs for status indication and TX/RX activity
- Dimensions (mm) : W100 x H100 x D28

TensEazy Logger

The TensEazy logger collects data from the TensEazy sensors as well as data from the nav instruments. This data is synchronised and recorded.

- NMEA0183 and NMEA2000 compatible
- Recording in CSV format (direct import into MS/Excel®)
- Multiple simultaneous recordings allowed
- Advanced settings of recording files (data selection, frequencies, triggers, etc...)
- Data file recovery with USB stick or FTP (Ethernet connection)
- External power supply, from NMEA2000 bus, or optional rechargeable battery
- Dimensions (mm) : W100 x H100 x D28

TensEazy Hub

The TensEazy Hub allows standard wired loadcells to be connected and the data to be transmitted wirelessly to all TensEazy compatible receivers. It can also be used to control actuators or other devices from relay outputs.

- Up to 6 analog inputs (0-10v or 0-5v)
- Up to 3 strain gauge inputs (mV/V)
- Up to 2 relay outputs
- Multiple TensEazy hubs can be used simultaneously
- External 12/24vdc power supply or rechargeable battery
- Dimensions (mm): W100 x H100 x D40

TensEazy module

The TensEazy module allows the connection of a wired loadcell (mV/V signal) and the transmission of the data by a wireless link to all TensEazy compatible receivers. Similar components and operation to the TensEazy wireless sensors.

- 1 input strain gauge conditioner (mV/V)
- Several TensEazy modules can be used simultaneously
- Internal power supply by 1 or 2 batteries with wireless charging (Qi charger)
- IP67 protection
- Dimensions (mm): W33 x H33 x D25

Unlimited connectivity

Direct wireless connection to ...

- an Android or iOS smartphone and tablet running the TensEazy app,
- a Windows-Linux-macOS PC running a monitoring interface built with ODxI,
- any controller from the ODS range,

UpSideUp Sail Control TensEazy

- the TensEasy Gateway.

Indirect connection to most marine electronic brands throught the TensEazy Gateway or the ODS controllers.

B&G nke ELECTRONICS GARMIN

MAD inTEC SAILMON Raymarine

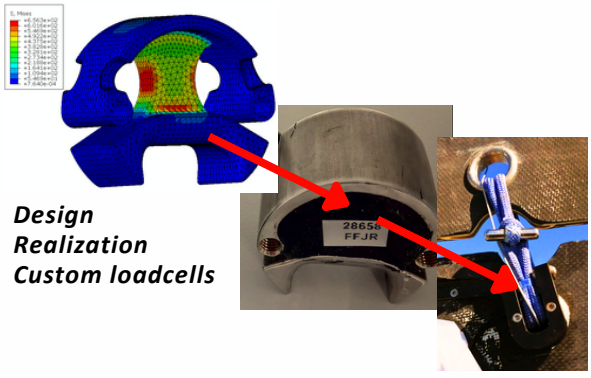
B&G Safety Warning System

TensEazy is obviously compatible with the B&G's alert function, which allows you to see briefly whether you are sailing safely (green), approaching the limit (orange) or exceeding it (red).

Special projects and custom developments

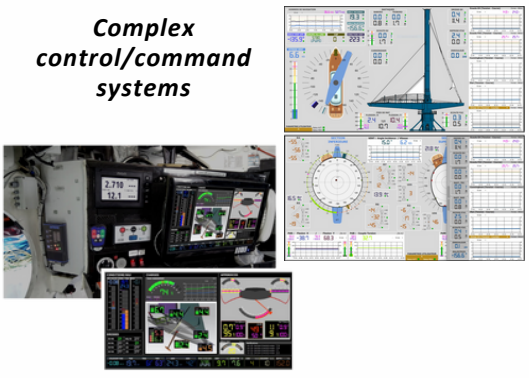
Ocean Data System offers the widest range of solutions for instrumentation, security, and control/command, allowing it to respond quickly and cost-effectively to any special project.
Our engineers design and produce your bespoke wired or wireless sensors, devices, controllers and user interfaces precisely tailored to your needs and requirement.

- ***Competitions***
- ***Yachting***
- ***Marine Industry***
- ***Industry***
- ***Others...***



Design
Realization
Custom loadcells

Complex control/command systems



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