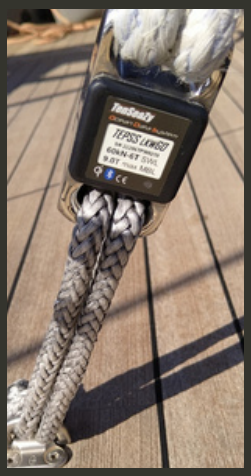
Ocean Data System
MARINE ELECTRONICS SOLUTIONS

TensEazy



Wireless Technology
TELEMETRY and LOAD MEASUREMENT

- Wireless transmission,
- Quick and easy to implement,
- Extended sensor range and options,
- Unlimited connectivity and data usage possibilities,
- High accuracy,
- Extended battery life,
- Highly configurable to your needs,
- Compact, lightweight.

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

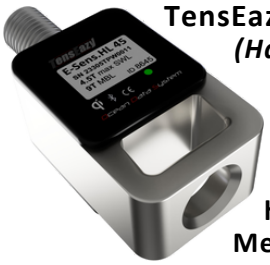
Eco-designed and made in Brittany/France
Durable - Repairable - Reconditionable - Recyclable

TensEazy sensors — Ultra-compact for all applications

A very large range of standard wireless loadcells

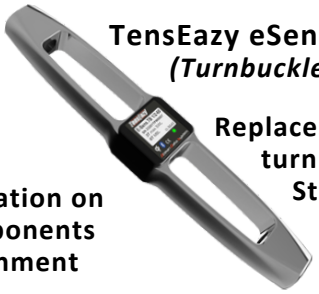
TensEazy eSense.SL
(Soft Link)

In-line integration
Running rigging
Soft attachments



TensEazy eSense.HL
(Hard Link)

In-line integration on hardware components
Mechanical attachment



TensEazy eSense.TB
(Turnbuckle)

Replaces existing turnbuckles
Standard threads

Specific sensors (design/adaptation on request)

TensEazy core module embedded in stressed mechanical parts. Optimisation of dimensions and verification of mechanical behaviour.






Mechanical specifications

TensEazy 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*
 **eSense.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
eSense.SL20	2	4		1 x Ø10 *ou* 2 x Ø9	67 x 39 x 21	93	Titanium	420
eSense.SL50	5	10		1 x Ø13 *ou* 2 x Ø12	82 x 41 x 27	198		840
eSense.SL100	10	20		1 x Ø16 *ou* 2xØ14	95 x 52 x 30	295		840
eSense.SL200	20	40		1 x Ø21 *ou* 2 x Ø19	108 x 66 x 36	613		840
 **eSense.HL18**	2	4	Thread and hole or Eye (textile)	M10X1.5 - Ø10.2	54 x 39 x 21	102	Titanium	420
eSense.HL45	4.5	9		M16X2 - Ø16.3	63 x 41 x 33	175		840
eSense.HL70	6.8	13.6		M20x2.5 - Ø20.5	74 x 50 x 44	245		840
eSense.HL100	9.1	18.2		M24x3 - Ø24.5	87 x 53 x 52	316		840
 **eSense.TB1/4"**	0.75	1.5	Threads (Other specs on request)	1/4" - UNF28	135 x 39 x 21	146	Aluminium	420
eSense.TB5/16"	1.4	2.8		5/16" - UNF24	163 x 39 x 21	224	Cupro Aluminium CuAl9Ni3Fe2 or Stainless steel APX4-1.4418	420
eSense.TB3/8"	1.8	3.6		3/8"-UNF24	187 x 39 x 21	281		420
eSense.TB1/2"	2.9	5.8		1/2" - UNF20	226 x 39 x 27	525		840
eSense.TB5/8"	4.5	9		5/8" - UNF18	268 x 41 x 27	842		840
eSense.TB3/4"	7.5	12.9		3/4" - UNF16	281 x 45 x 33	1168		840
eSense.TB7/8"	8.9	17.8		7/8" - UNF14	344 x 53 x 38	1325		840

Common features

LOAD DATA - ACCURACY

Accuracy over the measuring range	higher than **0.1%**
Maximum no-linearity on full scale (FS)	lower than **0.1%**
Resolution on full scale (FS)	**Adjustable from 14.25bits (0.015%) to 16.75bits (0.003%)**
Load data given in Kg force (default) or any other unit (on request)	
Specific calibration certificate provided for each sensor	

TRANSMISSION

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

POWER SUPPLY - CHARGING - BATTERY LIFE

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)		

TX Frequency	***1 battery***	***2 batteries***
1 per 10 seconds (0.1Hz)	**11600**	**23200**
1 per 5 seconds (0.2Hz)	**5800**	**11600**
1 per 2 seconds (0.5Hz)	**2320**	**4640**
1 per second (1Hz)	**1160**	**2320**
3 per second (3Hz)	**387**	**774**
5 per second (5Hz)	**233**	**466**
10 per second (10Hz)	**116**	**232**
Standby mode	**>2 ans**	**>4 ans**

Clip-on pad for switching off the sensor :
Zero power consumption.
Supplied with every sensor.

Optional TensEazy clip-on charger.

Held in position by elastic band.

5vdc power supply.
Micro USB connector.

ENVIRONMENT

Operating temperature	**-10 to +50°C**
Storage temperature	**-30 to +60°C**
Protection	**IP68**

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
- Supports many sensors
- Basic recording of displayed data (*.csv file)
- 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 the onboard 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 (webserver)
- 4 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 (Instrument data IN - Load Data OUT)
- Recording in *.CSV files(direct import into MS/Excel®)
- Multiple simultaneous recordings allowed
- Advanced settings of the log files (data selection, frequencies, triggers, etc...)
- Data file recovery with a USB stick or FTP (Ethernet connection)
- External power supply, from NMEA2000 bus, or optional rechargeable battery
- Dimensions (mm) : W138 x H120 x D37

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 enables a single wired load cell (mV/V signal) to be connected wirelessly to all TensEazy-compatible receivers. Similar components and operation to 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)
- IP68 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,
- the TensEasy Gateway,
- a Windows-Linux-macOS PC running a monitoring interface built with ODxI,
- any controller from the ODS product line,

UpSideUp Sail Control TensEazy

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

B&G nke ELECTRONICS GARMIN

MAD TEC SAILMON vakaros

Raymarine

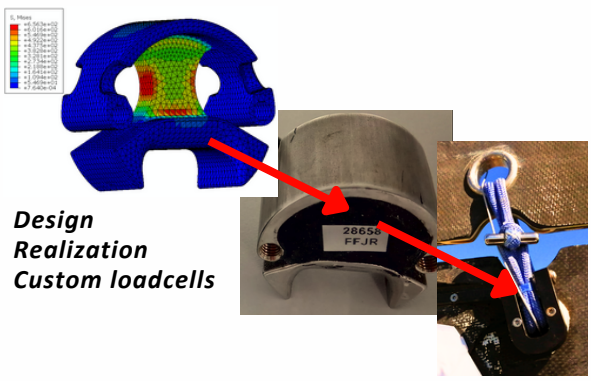
B&G Safety Warning System

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

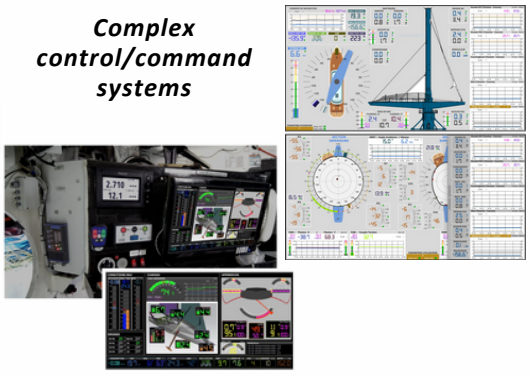
Ocean Data System offers the widest range of solutions for instrumentation, security, and control/command, allowing it to respond quickly and cost-effectively to any special project.
Our engineers design and produce your bespoke wired or wireless sensors, devices, controllers and user interfaces precisely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

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



Design
Realization
Custom loadcells

Complex control/command systems



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