



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

Ultra-compact for all applications

A very large range of standard wireless loadcells



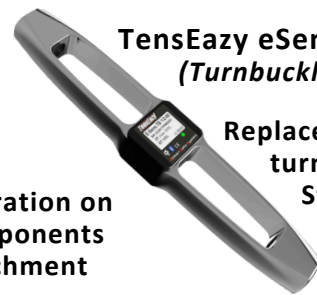
TensEasy eSense.SL
(Soft Link)

In-line integration
Running rigging
Soft attachments



TensEazy eSense.HL
(Hard Link)

In-line integration on hardware components
Mechanical attachment



TensEasy eSense.TB
(Turnbuckle)




**Replaces existing
turnbuckles
Standard threads**

Specific sensors (design/adaptation on request)



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



Mechanical specifications

TenseEasy standard loadcells		Recommended 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	68 x 39 x 21	93	Titanium	420
	eSense.SL50	5	10		1 x Ø13 ou 2 x Ø12	82 x 43 x 28	198		840
	eSense.SL100	10	20		1 x Ø16 ou 2xØ14	93 x 50 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			POWER SUPPLY - CHARGING - BATTERY LIFE				
Accuracy over the measuring range		Less than 0.1%	Power ON/OFF	Always ON by default		<div>Clip-on pad for switching off the sensor : Zero power consumption. Supplied with every sensor.</div> 	
Maximum no-linearity on full scale (FS)		Less than 0.3%	Battery	1 battery by default	2nd battery as option		
Resolution	Adjustable from 14.25bits (0.015%) to 16.75bits (0.003%)		Charge battery	Wireless charging with compatible Qi station.			
Load data given in Kg force (default) or any other unit (on request)			Charging time	2h	4h	<div>Optional TensEasy clip-on charger</div> 	
Specific calibration certificate provided for each sensor			Battery life between 2 charges @ 14.25 bits (hours)				
TRANSMISSION			TX Frequency	1 battery	2 batteries	Optional TensEasy clip-on charger with integrated power bank	
Transmit frequency	<div>User setting : 7 available frequencies + standby mode</div> <div>An LED clearly indicates the selected transmit frequency</div>		1 per 10 seconds (0.1Hz)	12000	24000	Held in position by elastic band.	
			1 per 5 seconds (0.2Hz)	6000	12000	5vdc power supply	
			1 per 2 seconds (0.5Hz)	2400	4800	MicroUSB / USB-C connectors	
			1 per second (1Hz)	1200	2400	Status LEDs	
			3 per second (3Hz)	396	792	ENVIRONMENT	
			5 per second (5Hz)	240	480		
			10 per second (10Hz)	120	240		
			Standby mode	>2 ans	>4 ans		
			Operating temperature		-10 to +50°C		
			Storage temperature		-30 to +60°C		
			Protection		IP68		

TensEasy App

The TensEasy® 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



TensEasy Gateway

The TensEasy® 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



TensEasy Logger

The TensEasy® logger collects data from the TensEasy 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



TensEasy Hub

The TensEasy Hub allows standard wired loadcells to be connected and the data to be transmitted wirelessly to all TensEasy 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 gage inputs (mV/V)
- Up to 2 relay outputs
- Multiple TensEasy hubs can be used simultaneously
- External 12/24vdc power supply or rechargeable battery
- Dimensions (mm): W100 x H100 x D40



TensEasy module

The TensEasy module enables a single wired load cell (mV/V signal) to be connected wirelessly to all TensEasy-compatible receivers. Similar components and operation to TensEasy wireless sensors.

- 1 input strain gauge conditioner (mV/V)
- Several TensEasy modules can be used simultaneously
- Internal power supply by 1 or 2 batteries with wireless charging (Qi charger)
- IP68 protection
- Dimensions (mm) excluding cable gland and base: P38 x H31 x W34



Unlimited connectivity

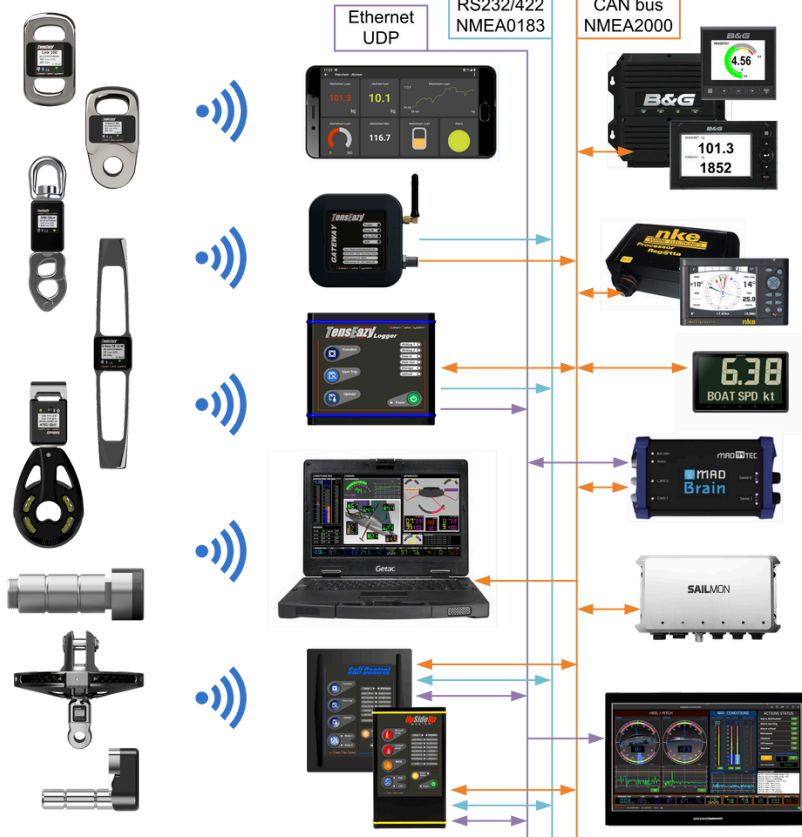
Direct wireless connection to ...

- an Android or iOS smartphone and tablet running the TensEasy 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** **TensEasy**

Indirect connection to most marine electronic brands through the TensEasy Gateway or the ODS controllers.

B&G **nke** **ELECTRONICS** **GARMIN**
MAD **TEC** **SAILMON** **vakaros**
Raymarine



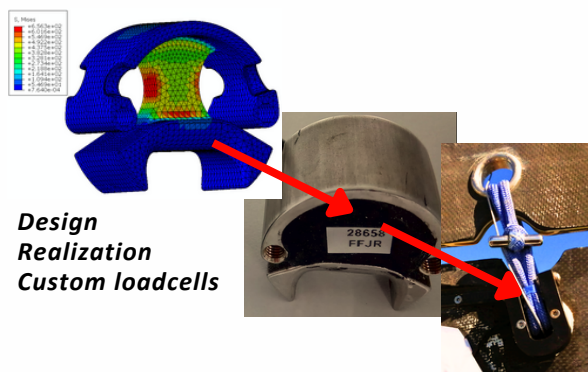
B&G Safety Warning System

TensEasy 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).

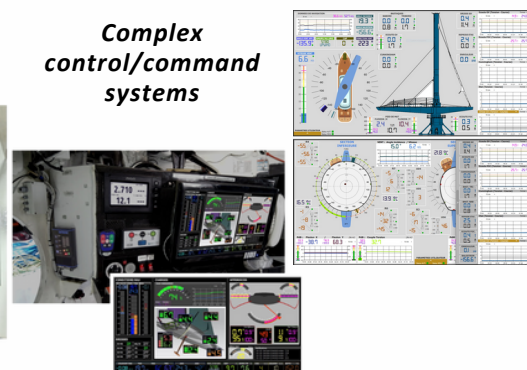
Special projects and custom developments

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.



Complex control/command systems



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

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