

WIROP Electronics

Smart Load Monitoring
&
Control



Load Link (Wireless and Cable)

Load Shackle (Wireless and Cable)

Handset reader

USB Reader and software packages

Electronics and Control



THE REAL TIME LOAD MONITORING



Since 1992, Wirop Industrial Co., Ltd. has been providing the load testing equipment worldwide. Wirop is a specialist in test beds across many different rigging and lifting gears. All these products have been part of many different fields including oil and gas, marine, and construction.

Ever since its establishment in 1979 with continuous integration, Wirop is now merging new technology to the loadcell products and commercialising the latest generation of load monitoring systems. Networking the load with our modern day computerized products. We are proud to offer the new load monitoring system to global market. All of the load monitoring products are designed, developed and manufactured by our motivated and mixed discipline engineering team.

With locations in the USA, German China, and Australia, plus a global network, we aim to deliver any catalogue product to any location in the world within days.

Your safety is our priority

Why choose us?

- ▶ Fast Delivery
- ▶ In-house specialist
- ▶ Tailored monitoring system
- ▶ Instant service and support
- ▶ Accuracy

Accreditations and Affiliations



MEMBERSHIP NO.478

Associate Member

WIRELESS-LOADLINK



The wireless load link transmits the load value to computer or handset device via radio channel.

Aerospace grade aluminum alloy tension link provides **high corrosion resistance** capability and high level of robust design for rugged environment.

The wireless communication distance ranges from 150m to 250m or even longer using IEEE 802.15.4 networking definition in license free band.

Wirop engineering team has the **leading power saving technology** in the load monitoring industry. The continuous reading battery life reaches 280 hours at data rate 3.3Hz. The talented engineering team has developed the **high grade noise filter technology coupled with ultra low voltage operating system** without losing high accuracy.

▶ Cable Loadlink

Loadlink is also available in cable type. It is a non-indicating version of the load link. The cable handset or other form of instrumentation is required to read the load value. The standard cable loadlink is equipped with 5 m of cable.

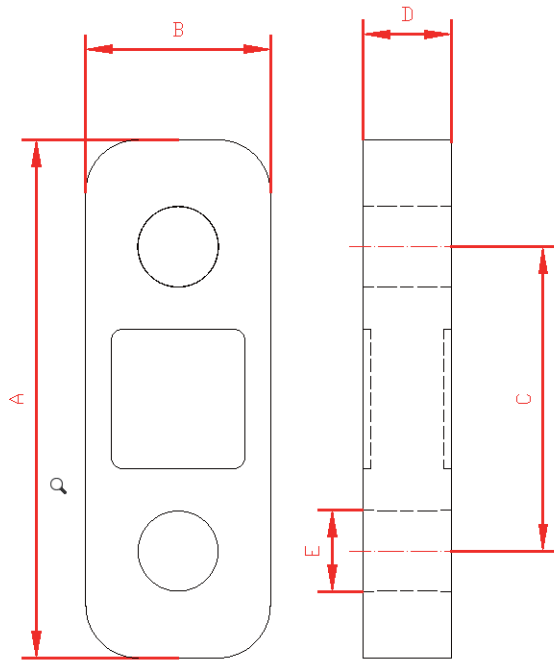


Product Specifications



Professional structural analysis

	Wireless LoadLink	Cable Loadlink
Material :	Aerospace grade aluminum	
Battery :	AA battery X 4	
Operating hours :	240-950 Hours	
Safety factor :	5 times safety factor	
Data rate :	1-10 Hz, Standard 3Hz	
System Range :	500 ~ 700 m	
Frequency :	2.4 GHz	
Operating temp :	-10 °C ~ 60 °C	
Storage temp :	-10 °C ~ 70 °C	
Sensitivity :	1.5mV / V or above	
Input resistance :	430 ± 30Ω	
Zero balance :	± 2%	
Max Excitation :	12V	
Temp effect on zero :	0.03 % / 10 °C	
Temp effect on output:	0.05 % / 10 °C	
Safety overload :	150 %	



Application

- ▶ Testing
- ▶ Overhead Weighing
- ▶ Vessel weighing
- ▶ Certification

Capacity(T)	2	5	12	25	35	55	85	100	150	200	300
Accuracy (FS)	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Weight (kg)	1.7	2.9	4.7	8.3	9.7	14.7	23.4	42.0	55.7	87.0	147.7
A (mm)	202	275	303	365	410	465	550	615	690	710	860
B (mm)	104	104	115	132	134	166	223	213	242	300	312
C (mm)	149	196	204	234	248	273	296	335	370	350	430
D (mm)	48	48	48	63	69	79	79	122	124	155	189
E (mm)	17	27	38	53	60	72	85	99	112	132	153

- ▶ Cable loadlink needs a cable handset .
- ▶ Wirop reserves the right to change the specification .
- ▶ Capacity more than 300T loadlink is available upon request .
- ▶ Wirop Load links satisfy the requirement of ASME B30.26

Wireless Load-shackle

The Wireless Load-Shackle is made of industry leading Crosby or Green Pin shackle bow coupled with high strength stainless steel load cell pin. It transmits the data via license free 2.4GHz channel providing safe, high integrity, and error free data transferring. The load data can be read from computer with a USB receiver or handset device.

Wirop engineering team has the **leading power saving technology** in the load monitoring industry. The continuous reading battery life reaches 280 hours at data rate 3.3Hz. Talented engineering team has developed the **high grade noise filter technology coupled with ultra low voltage operating system** without its losing high accuracy.

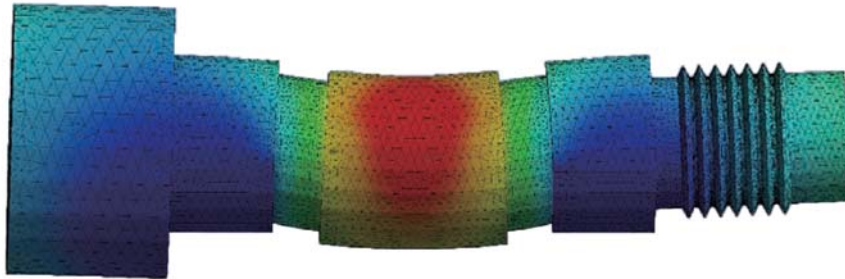


Cable load shackle

Cable load shackle requires an external cable reader to indicate the load value. Stocks available from in capacities 12T to 200T. With precised engineering and specially designed electronics, the cable and wireless reader provides unprecedented stability.

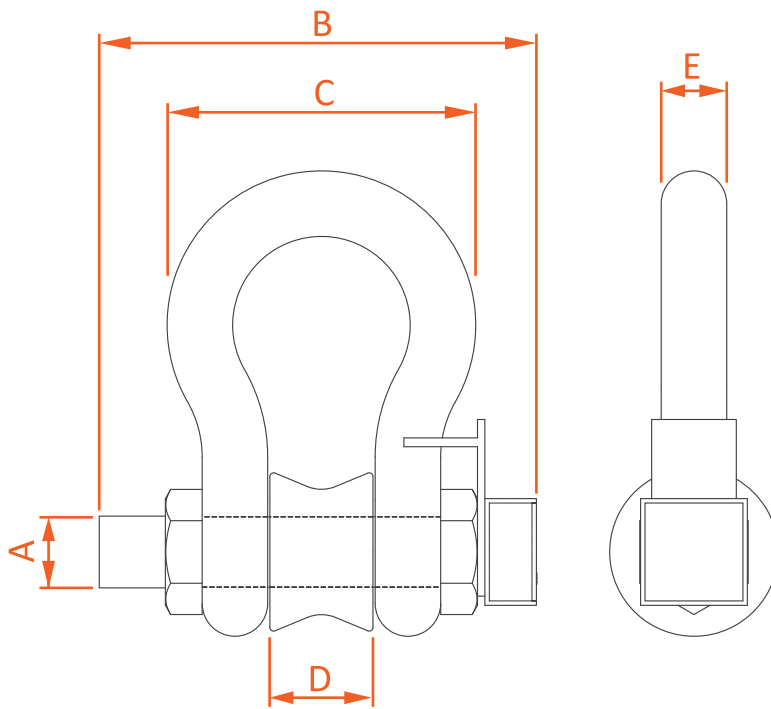


Product Specifications



Professional structural analysis

	Wireless Loadshackle	Cable Loadshackle
Material :	Stainless Steel (or High strength Steel)	
Battery :	AA batteries X 4	
Operating hours :	280 ~ 950 hours	
Safety factor :	5 times safety factor	
Data rate :	1-10 Hz, Standard 3Hz	
System Range :	150 ~ 250 m	
Frequency :	2.4 GHz	
Operating temp :	-10 °C ~ 60 °C	
Storage temp :	-20 °C ~ 70 °C	
Sensitivity :	2.0 mV / V or above	
Input resistance :	430 ± 30Ω	
Zero balance :	± 3 %	
Max Excitation :	12V	
Temp effect on zero :	0.03 % / 10 °C	
Temp effect on output:	0.05 % / 10 °C	
Safety overload :	150 %	



Application

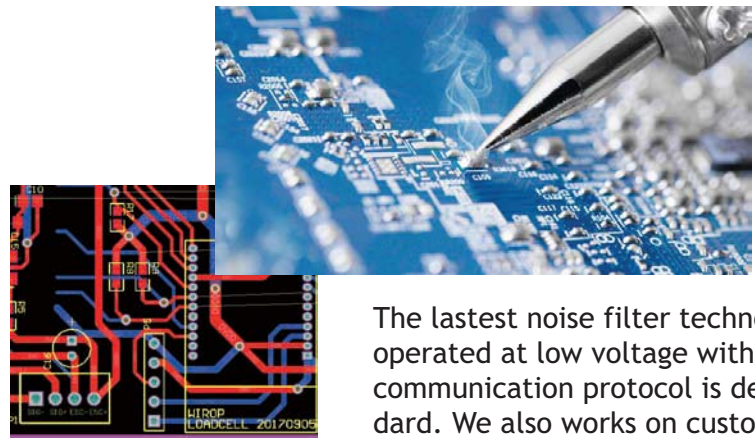
- ▶ Overhead weigh measurement
- ▶ Heavy lift measurement
- ▶ Cable tension monitor

	WPL-008S	WPL-012S	WPL-025S	WPL-055S	WPL-085S	WPL-100S	WPL-200S
Capacity (T)	8	12	25	55	85	100	200
Accuracy (FS)	1%	1%	1%	1%	1%	1%	1%
Weight (kg)	3.17	8	17.9	25.3	70.96	85.1	253.6
A (mm)	28	35	50	70	83	95	140
B (mm)	221	230	295	380	439	489	587
C (mm)	119	146	225	327	365	416	530
D (mm)	429	52	73	105	127	150	180
E (mm)	25.4	31.8	44.5	66.5	76	89	120

- ▶ Cable loadshackle needs a cable handset .
- ▶ Wirop reserves the right to change specifications .
- ▶ Capacity more than 200T load shackle is available upon request
- ▶ Wirop Load shackles satisfy the requirement of ASME B30.26

Electronics and Handset

▶ Electronics Design



Wirop recruits large mixed talents. From the mechanical, material analysis, software development and electronics hardware are all done and developed by the talented engineering team. We have developed ultra-efficient loadcell reading device in the industry.

The latest noise filter technology allows the loadcell reading to be operated at low voltage without losing its accuracy. The wireless communication protocol is developed based on IEEE 802.15.4 standard. We also works on customised projects. Please contact us for your special needs.

▶ Handset



The handset reader is our robust digital handheld display with a wide range of feature and suitable to receive load data from Wi-Load products. We have the **wireless handsets** and also the **cable handsets** available. The handset display is equipped with high resolution OLED backlight display.

▶ Product Specifications

Battery :	AA Battery x 4
Battery life :	30~40 Hours (continuous reading)
Working Temp. :	-10 °C ~ 50 °C
Ranges :	150 ~ 250 m (600-700m version is also available)
Display units :	Kg, Ton, Lb, Kn

▶ Product features

- ▶ Pre-set Zero
- ▶ Peak recording
- ▶ Overload warning and buzzing
- ▶ Rename loadcells on display
- ▶ Summing and average multiple load values.
- ▶ Reading up to four wireless Wi-Load loadcell simutanously (Optional)

USB Reader



Wirop also provides USB reader to the clients. USB reader collects the wireless load data to computers. The associated software packages are developed to suit your needs. Currently, we provides Data Logging Software (DLS), Certificate generator, and Centre of gravity.

The Wirop software development team offer many different software packages. Datalogging software, Certificate generator, centre of gravity and other customised software packages.

The DLS software package is a user friend, vibrant, and versatile wireless load cell monitoring package. The data logging software is designed to be used on Windows PC platform Win7, Win8, and Win10.

The Certificate generator records the load in a selected time frame and generate the test report instantly.

The centre of gravity software package receives the load values from multiple loadcells estimate the centre of gravity of a platform in a second.

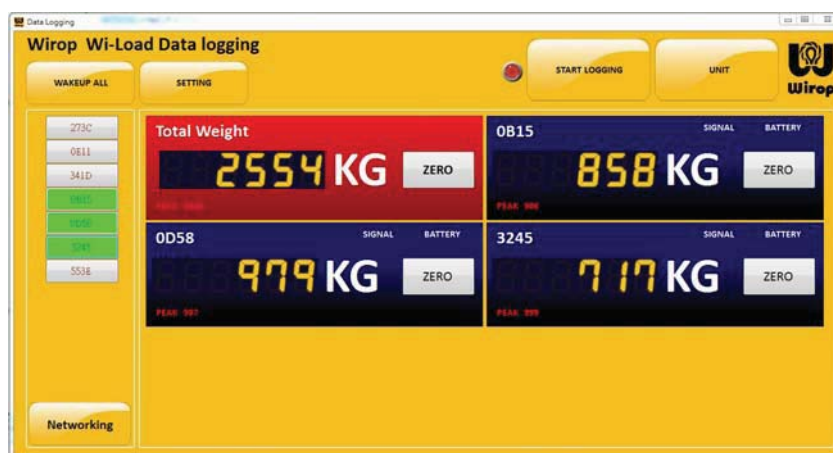
All the software packages are user friendly. With little training required, you are capable of handling the software packages.

Data logging Software (DLS)

The DLS allows reading instant load value from multiple load cells. It is capable of monitoring up to 96 load cells via live data. The logging data are saved in excel format, or CSV data file which can be opened for analysis.

With a simple click, it is able to plot the load data.

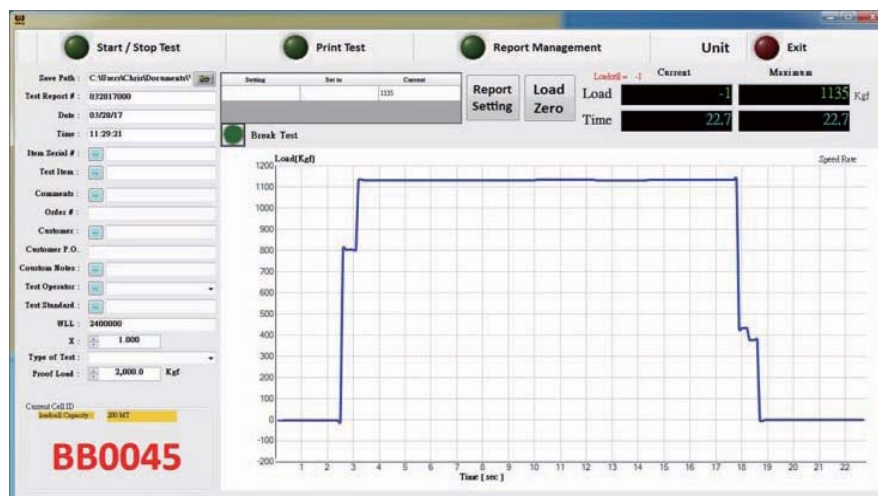
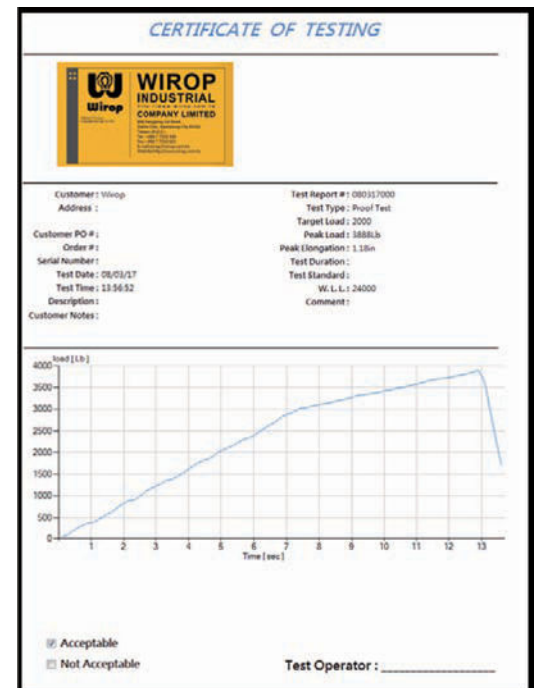
- ▶ Overload warning and multi loadcell monitoring
- ▶ Instant information VS time.
- ▶ Excel data output



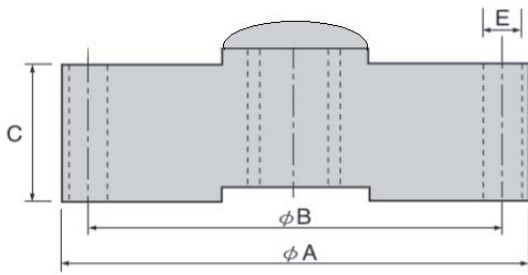
Certificate Generator

USB reader coupled with Certificate generator software package reads and records the load of a single loadcell against time. It plots the graph showing load VS time. The interface is similar to Wirop Testbed operating software. It helps the user to generate the test certificate instantly. It is very handy for real-time and mobile on-site testing.

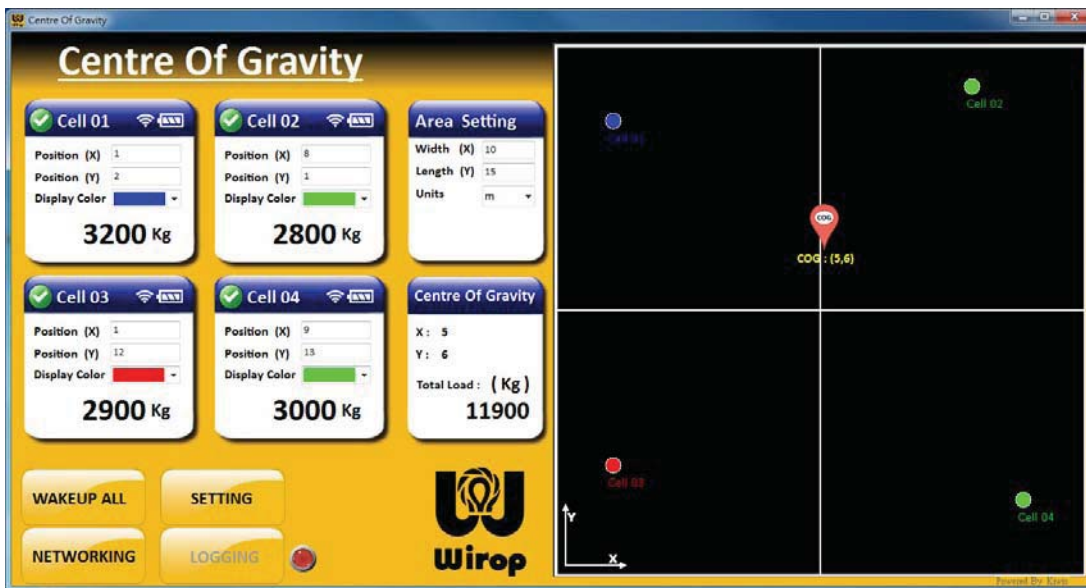
- ▶ Pairing your device
- ▶ User interface
- ▶ Test report generated



Centre of Gravity Compression Loadcell



Wirop provides compression loadcells, Capacity ranges from 2.5T to 100T. The compression loadcell coupled with the Centre of Gravity software package. The centre of gravity can be easily found. The loadcell is made of high grade stainless steel making the loadcells are particularly suitable for rugged environments.



Customized Projects and Instrumentation

Wirop loves challenges. Our engineering team has members with talents from mechanical, software programming, electrical and electronics background. We can help you with various designs to suit for your special need. We can connect you from analog world to digital world and vice versa. From sensing to control, we connects your measurement equipment to your system.

Large LED display



Wirop also provides Large LED displays. Typically suitable for manufacturing industry. The size of LED display is customerized. It communicates with wireless or cable loadcells. It can also displays the sum of multiple loadcells.

Calibration Service and Calibration Equipment

Prior to joining the loadcell industry, Wirop has been manufacturing calibration stand for years. We are now providing **calibration stand from capacity 10T-2000T.**

If you do not have a calibration stand, you are always welcome to send your loadcell back to Wirop. We will calibrate it for you.

Wirop has many different global locations for providing calibration service. Wirop calibration lab is certified to **ISO/IEC 17025:2005 standard.** This internationally recognised accreditation ensure our service meets the quality management. The equipment in the laboratory are confirmed to be the quality and accuracy under this standard.

A/D controller



Wirop engineering team has taken an innovative approach by developing a multi-channel A/D and D/A converters with relay controls. The A/D channel is able to read loadcell signal, voltage signal. The D/A channel is able to output the -10V~+10V. There are relays on the controller to act as switch signals. It communicates with the computer via a com port, USB or RS232, RS485 interface.

	No. of Channel	Functions
A/D Channel	4	Reading either loadcell signals, 0-5 volts, 0-10 volts.
D/A Channel	4	Outputing -10~+10 volts
Relay control	6	4 relay outputs, 2 relay input signal
Communication	1	RS232, RS485, or USB
Power Supply	110V~220V	





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