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# Monad Electronics

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# Introduction



## Winner of National Award for year 2009-2010 in R&D

Monad Electronics is An ISO 9001:2015 certified company, which has over the last 18 years been involved in the business of Exporting, designing & manufacturing, Electronics Industrial products, Testing equipments , sensors and related indicating and controlling devices and allied products related to Data logging & Acquisition.

We are specialized in providing consultancy for itemized engineering Test ring and Projects. We are also interested in taking - up the project development, recommending and mfg. sensing and related components, service providing in installation & commissioning.

We are in this field from last 15 years and also Exporting our products to USA, Germany, Belgium, Turkey, Australia, UAE, Singapore, Spain, Brazil, New Zealand, Philippines, UK, Croatia and African countries. We have good track record of import substitute high end equipment development and supplying to leading industries and government institutes.

## SAFE LOAD INDICATOR

Multi purpose applications - Mobile cranes, Hydraulic and lattice, Container handlers.

Pressure or load cell force sensing options.

Continuous display of operating radius, rated capacity, boom length and boom angle

Audible and visual pre-warning of overload and overload cut-off.

Tare facility of lifted load readings.

Reeving selection of up to 50 parts of line, up to 5 parts on fly jib.

Power supply capable of inputs ranging from 9 to 24VDC with crane voltage out of range warnings.

Also AC committable. These units have proved to be reliable and easy to use.

Optional data logging facilities- easily downloadable to laptop

System's consist of a Very compact display cum computer unit , Our computer is most compact and easy serviceable compared to our completers. Single Board computer have advantage over two part system of Less wiring, low mounting space requirement .

# SAFE LOAD INDICATOR

Load Cell/Tensiometer



Cable guide



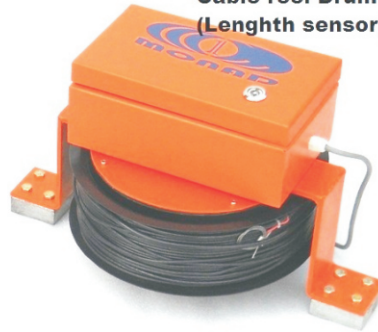
Load cell Cable  
(Shielded Rubber cable)

A2B



A2B Wieght

Cable reel Drum  
(Length sensor)



Computer/Display



Power Supply

## Digital Display Unit



## FEATURES

### **The display constantly updates the following information:**

- Load on the Hook
- Current Capacity or Percent of Current Capacity
- Choice of Operating Radius / Boom Angle / Boom Length / Boom Tip Height
- Current Crane Configuration
- Alert or Alarm Conditions
- System Status
- Any Special Conditions Specific to the Crane

### **Options include:**

- Dead End Tensiometer
- Running Line Tensiometer
- Load Sensing Pins
- Boom Length Sensor (for telescoping boom applications)
- Boom Angle Sensor
- List Angle Sensor for Barge or Ship Cranes
- Anti-Two-Block
- Hook Travel / Rope Deployment Monitor
- Shutdown Relays
- Horn / Klaxon
- Lift recorder with PC interface Wireless
- Custom Applications

## Cable Real Drum



## System Configurations:

- Safe-Load Indicating
- User Selectable Sea States
- Multiple Parts of Line (Falls)

## Front Panel Displays:

- Lift Capacity (SWL)
- Load on Hook
- Boom Angle or Boom Radius,  
dependant upon Crane Load Charts
- Percent Capacity
- Number of Falls
- Sea State Selected
- Approach to Overload and Overload

## Menu Configurations:

- Number of Falls
- Parts of Line
- Parts of Line
- Sea States
- Calibration
- Diagnostics
- Units selection

## System Outputs:

- Volt-Free Relay Contacts for:
  - Overload
  - Out of Angle
  - Last Wrap (requires drum monitor)
  - Anti-2Block (requires drum monitor)



## Load Cell



## PERFORMANCE SPECIFICATIONS:

Hook Load Resolution:	< 0.10 ton
Angle Accuracy:	< +/- 1.00o
Angle Resolution:	< +/- 1.00o
Radius Resolution:	< +/-5.0 ft Maximum Load
System Response Time:	0.25 Seconds
Alert Set Point	
Alarm Set Point	
Overload Relay	volt free
Load Display Units	Tonnes or Tons/Kg
Power Requirements	:220 Volts AC, 50 Hz, 25w or 12 Volts DC, 25w

## OPTIONAL FEATURES:

### Analog Outputs:

- Overload
- Out of Angle
- Last Wrap (requires drum monitor)
- Anti-2Block (requires drum monitor)

### Digital Outputs:

- Data Stored on RS232 Protocols

### Optional Features

- 3 outputs are available for:
  - Volt-Free Relay Contacts for: Load, Capacity and Angle
  - Overload
  - Out of Angle

### Data Logging/Recording:

- Storage: 4,000 lifts
- Date and Time Stamping
- Boom Angle (Min and Max)
- Load Radius (Min and Max)
- Load Radius (Min and Max)
- Sea State Selected
- Slew Position (optional)
- Operator ID (optional)
- Logged data downloadable in ASC 1 format

## OPTIONAL EQUIPMENTS:

Anti-2 Block Sensor  
Slew Ring Position Sensor  
Wire Rope Payout Sensor (drum monitor)  
Telemetry Data Communications (Duplex)  
Data Transmission from Operator's  
Data Transmission from Operator's.  
Display To Remote PC/Display  
Ton-Mile Totalizer  
Hand-Held Remote Display via Telemetry  
Remote PC Display and Lift Recording  
Boom Tip Hardware: Zone 1 Hazardous  
Area, Div. 1 or 2  
Cab Components: Zone 1, Div. 2



**Angle Sensor**



**Pressure Sensor**

## A2B Switch

