
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 been involved for over 20 year in the business of designing, manufacturing and export of Electronic Industrial products, Testing equipments , sensors and related indicating and controlling devices and allied products related to Data logging & Acquisition.

Monad is specialized in providing high end and high accuracy customized Force Transducers, Multi-Axial Force Transducers and Torque Sensors. Monad is an expert in providing import substitutes of high end Load Cells, Safe Load Indicators, etc

We are supplying to leading industries and government institutions and are also exporting our products to USA, Germany, Belgium, Turkey, Australia, U.A.E., Singapore, Spain, Brazil, New Zealand, Philippines, UK, Croatia and to the African countries.

LOAD MOVEMENT INDICATOR

Monad designed LMI systems specially for Excavator's. This system is Pressure Sensor based and displays operating radius, operating height, rated capacity and angle Continuously.

Audible and visual pre-warning of overload and overload cut-off available with Tare facility of lifted load readings.

System's Power supply is capable of inputs ranging from 10 to 30VDC with excavators 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 compact display unit with inbuilt mother board. This mother board takes the field wiring. On next page is a view of the display shown .

This view show just how compact the crane systems are, even though they are powerful and feature packed. The mother board unit, shown on next page, takes all the signals from the transducers mounted on the Excavators. This unit also provides all the voltages needed for the transducers and display unit.

LOAD MOVEMENT INDICATOR



Display Computer

LOAD MOVEMENT INDICATOR

FEATURES

The display constantly updates the following information:

- Load on the excavator
- Current Capacity and Percent of Current Capacity
- Operating Radius / Boom Angle / Boom Length / Boom Tip Height
- Alert or Alarm Conditions
- System Status
- Any Special Conditions Specific to the Excavator

Options include:

- Dead End Tensiometer
- Running Line Tensiometer
- Load Sensing Pressure Sensor
- Angle Sensor
- Shutdown Relays
- Horn / Klaxon
- Lift recorder with PC interface Wireless
- Custom Applications

LOAD MOVEMENT INDICATOR

System Configurations:

- # Safe-Load Indicating
- # User Selectable Sea States

Front Panel Displays:

- # Lift Capacity (SWL)
- # Load on Hook
- # Boom Angle or Boom Radius,
- # Load Charts
- # Percent Capacity
- # Graph Display Of Approach to Overload and Overload

Menu Configurations:

- # Calibration
- # Diagnostics
- # Units selection

System Outputs:

- # Volt-Free Relay Contacts for:
 - * Overload
 - * Out of Angle

LOAD MOVEMENT INDICATOR

OPTIONAL FEATURES:

Analog Outputs:

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

Optional Features

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

Data Logging/Recording:

- # Storage: Up To 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

Digital Outputs:

- # Data Stored on RS232 Protocols

LOAD MOVEMENT INDICATOR

Pressure Sensor



Angle Sensor

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Supply Voltage	12-30VDC
Electrical Protection	Solid state Re-Set Fuse + Voltage Regulator attenuation current spike suppression
Display Unit	Two Line alpha Numeric LCD display with backlit
Environmental Protection	IP65/67
Operating Temperature Range	0°C To 60°C
Pressure Sensor	Range:- 0-500 Bar Excitation:- 0-10VDC Output :- 2mV/V Burst Pressure :- 2000 Bar. 1/4`` BSP Connection Accuracy :- $\leq 0.25\%$ Temperature Compensation:- $\leq 0.01\%$ Material :- Alloy Steel/Space grade Steel
Angle Inclinator Sensors	

LOAD MOVEMENT INDICATOR

Angle Inclinometer Sensors

Solid State Dual Axis Accelerometer

Optimized Sensing Range:- 270°

Accuracy:- $\pm 0.2\%$

Resolution:- Infinite

Housing Material:- Alluminum

Shock Resistance:- Up to 500g 1ms