

Data Acquisition System

Model 490

Focal Technologies Corporation, a Moog Inc. company, has over 30 years of expertise in supplying standard and custom marine products for harsh environment applications and is a leading manufacturer of high performance and high quality swivels. Contact Focal for any assistance in selecting the best solution for your requirements.

Description

The Model 490 is a miniature, ruggedized, health monitoring and data logging system. When installed as an option in any of the Model 400 series swivels, it provides real-time access to diagnostic information as well as data storage for offloading at a later time. The Model 490 logs readings from a variety of on-board sensors for parameters such as temperature, relative humidity, acceleration (3-axis), ambient light level, rotations and speed. Add-on sensors for capability expansion are also available.

Diagnostic readings may be accessed via a RS-422/485 serial link in real time by using Focal Graphical User Interface (GUI) software, based on the Microsoft® .NET Framework, or by using a customer's own software configured to read Focal's serial ASCII protocol or Modbus ASCII format.

All 400 series products are intended for use in Floating Production Systems (FPS). They are well suited for any application requiring a product that can withstand harsh marine conditions or require long life with minimal maintenance intervals. Designed and manufactured in our ISO 9001 facility under our project management system, products have a two year warranty and are provided with a complete document package.

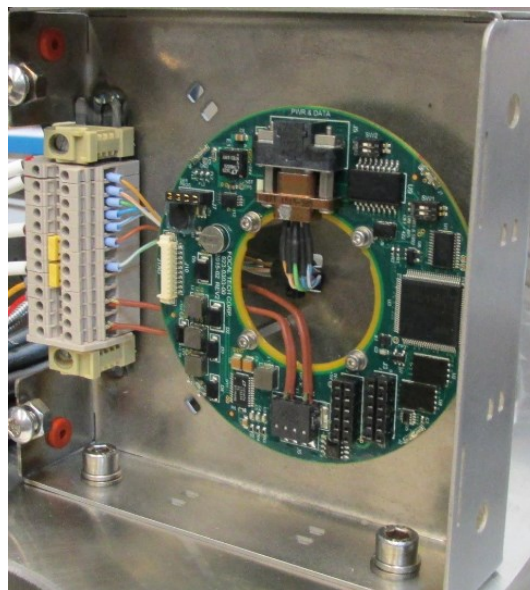
All products can be modified to meet specific requirements. Installation, commissioning and service is available. Contact the factory for details.

Features

- Real-time health monitoring of temperature, relative humidity, shock, and other parameters
- Programmable data logging intervals
- Hierarchical data logging with statistical summaries to optimize use of on-board memory
- Turns counting for monitoring swivel rotation and life
- Small size and ruggedized electronics
- Open diagnostic protocol for customer development
- On-board real-time clock (RTC) with battery backup
- Sensor bus port for future expansion

Options

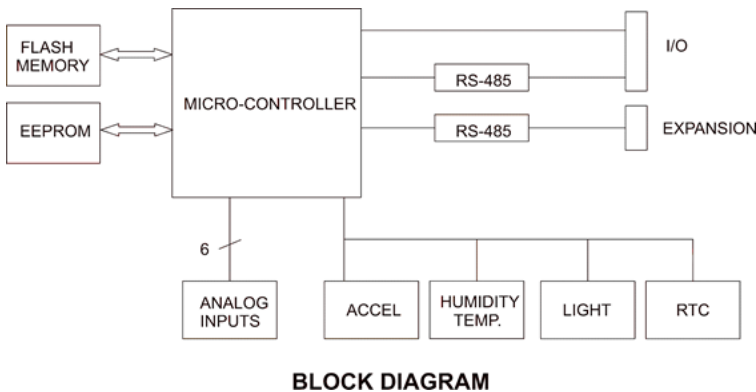
- Diagnostic GUI software available for Windows-based PC



Specifications

Data Logger	
Non-volatile Memory	64 MB Flash RAM
Logging Interval	1 - 120 minutes, time stamp
Data Retention	20 years (+40 °C)
Clock Battery	MS Li-ion, 5.5 mAh nominal
Electrical	
Supply Voltage	9 - 28 VDC
Supply Current	40 mA @ 12 VDC
Power Dissipation	0.8 W max
Overvoltage	36 VDC max
Reverse Polarity	30 VDC max
Sensors	
On-board Sensors	
Temperature	-20 °C to +70 °C
Relative Humidity	5 to 95% RH
Accelerometer (3-Axis)	± 200 g per axis
Ambient Light	300 to 1000 nm
Off-board Sensors	6 sensor inputs
Shaft Encoder	Various resolutions available
AC Current	Up to 1000 A
Partial Discharge	Not calibrated

Interface	
Terminals	Connection of power and data is typically made to terminals in an increased safety junction box
Classification	
Marine	Typically included with swivel classification
Environmental	
Temperature	-20 °C to +70 °C (operational) -20 °C to +70 °C (storage)
Ingress	n/a
Vibration	MIL-STD-167-1A 4 to 33 Hz, 3 axis
Shock	MIL-STD-810G 40 g, 10 ms, 3 axis
Options	
Software	Focal Graphical User Interface
Physical	
The Model 490 and its associated sensors are factory integrated into a swivel enclosure. Dimensions of the Model 490 are not typically required	



All specifications and information are subject to change without notice. Please contact Focal for the latest updates.

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