IMPROVE SERVICE LIFE
INCREASE PRODUCTIVITY
REDUCE DOWNTIME
ENSURE BETTER MAINTENANCE

PULSE MONITOR
ELECTRONIC HOIST DATA INTERFACE

COLUMBUS MCKINNON CORPORATION
PULSE MONITOR ELECTRONIC HOIST DATA INTERFACE

The proper use and maintenance of your Columbus McKinnon powered hoists can help ensure a long service life, as well as operator safety. Pulse Monitor is an electronic monitoring system that records key performance data for your hoist during normal operation. The captured data can be read with the Pulse computer interface kit* to assist you in troubleshooting and determining preventative maintenance solutions. A more accurate diagnosis can help reduce maintenance costs and minimize downtime.

Standard on our popular Yale™ Global King and Shaw-Box™ World Series wire rope hoists, Pulse technology is also available in kits for adaptation to other Columbus McKinnon hoists.

What information does the Pulse Monitor record?
The Pulse Monitor electronically captures key information with a time and date stamp every time the hoist’s motor is powered on, including:

- **MOTOR STARTS**
  A motor start is recognized by energization of either the slow or fast motor winding for 300ms or more.

- **CUMULATIVE RUN TIME**
  Every time the motor is energized, the Pulse Monitor records how long it runs and adds to the cumulative total run time.

- **PLUG EVENT (EXCESSIVE PLUGGING)**
  A plug event is recorded when the directional contactor (node 0A or 1A) is energized four times within any two second period of operation.

- **MOTOR TRIP EVENT**
  A motor trip event will be recorded when the monitor card terminal K1 measures 115 volts** and terminal K2 is at 0 volts.

- **OVERCAPACITY EVENT**
  An overcapacity trip will be recorded when the monitor card terminals K1 and K2 measure 115 volts** and terminal 0A is at 0 volts. The overcapacity event is recorded based on absence of a voltage at the normally closed contact from the overload limit switch relay. It is not measuring load on the motor, but rather the state of the overload limit switch.

- **VOLTAGE MEASUREMENT**
  For every motor event, the voltage will be measured.
Total Cost of Ownership

The long-term expense of maintenance, service fees and replacement parts can add up over the full service life of a hoist. All of these after-sale costs contribute to the total cost of ownership – which is an important factor to consider when making a purchasing decision.

The Pulse Monitor can help provide an even lower total cost of ownership for your CMCO hoist, by allowing for:

**BETTER MAINTENANCE TIMING**
Consistently monitors motor starts, hoist run time and cumulative run time for preventative maintenance planning.

**REDUCED DOWNTIME DUE TO IMPROPER HOIST USE**
Monitors excessive hoist use, excessive plugging, motor trip events and overcapacity events.

**VERIFICATION OF CLEAN LINE VOLTAGE**
Measures voltages for every motor event to ensure hoist is running on adequate line voltage.

**LONGER HOIST LIFE**
Allows operator to schedule maintenance at regular intervals and monitor hoist abuse.

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Pulse Monitor Kit Offering

The Pulse Monitor is available in four different kit varieties to accommodate individual needs.

**NEW! PULSE MONITOR INTERFACE KIT WITH USB ADAPTOR**

CATALOG NO. PINTERFACEUSB

Use with Yale Global King & Shaw-Box World Series hoists equipped with a Pulse Monitor Card. Kit includes:

1. Pulse Monitor Computer Interface (9V battery not included)
2. Serial Extension Cable (6 ft.)
3. Pulse Monitor Software Disk
4. StarTech.com USB Adaptor Software Disk
5. Serial Port to USB Adaptor Cable (3 ft.)

Note: Kit also includes a DB9 to DB25 pin adapter for 25-pin RS232 serial communication, which will not be needed in most cases.

**PULSE MONITOR INTERFACE KIT**

CATALOG NO. PINTERFACEKIT

Use with Yale Global King & Shaw-Box World Series hoists equipped with a Pulse Monitor Card. Kit includes:

1. Pulse Monitor Computer Interface (9V battery not included)
2. Serial Extension Cable (6 ft.)
3. Pulse Monitor Software Disk

**PULSE MONITOR INDIVIDUAL CARD KITS**

CATALOG NO. PCARDKIT1 (USE WITH 115V CONTROL)
CATALOG NO. PCARDKIT2 (USE WITH 24V CONTROL)

Use kits to install Pulse Monitor Card on CMCO hoists that do not include card as standard equipment. To read data on the card, a computer interface kit, sold separately, is also required. Kit includes:

1. Pulse Monitor Card
2. Card Mounting Bracket
3. Pulse Monitor Software Disk
4. Pan Head Phillips Screw Self Tap #6-32 X 5/8" (includes 2 extra)
5. Pan Head Phillips Screw Self Tap #10-24 X 1/4" (includes 1 extra)
6. Terminal Wire Insulated Female Quick Connector Panduit Part no. DNR14-188F1B-C (tab size 0.187 X 0.020) (includes 3 extra)
7. 16# Insulated Wire (15 ft.)

**PULSE MONITOR COMPLETE CARD & INTERFACE KITS**

CATALOG NO. PCOMPLETENET1 (Use with 115V control)
CATALOG NO. PCOMPLETENET2 (Use with 24V control)

Use to install Pulse Monitor Card on CMCO hoists that do not include the Pulse Monitor Card as standard equipment. Kit also includes computer interface kits required to read card data. (Requires 3" X 5-1/4" X 2-1/2" envelope in control enclosure.) Kit includes:

1. Pulse Monitor Card
2. Card Mounting Bracket
3. Pulse Monitor Computer Interface (9V battery not included)
4. Serial Extension Cable (6 ft.)
5. Pulse Monitor Software Disk
6. StarTech.com USB Adaptor Software Disk
7. Serial Port to USB Adaptor Cable (3 ft.)
8. Pan Head Phillips Screw Self Tap #6-32 X 5/8" (includes 2 extra)
9. Pan Head Phillips Screw Self Tap #10-24 X 1/4" (includes 1 extra)
10. Terminal Wire Insulated Female Quick Connector Panduit Part no. DNR14-188F1B-C (tab size 0.187 X 0.020) (includes 3 extra)
11. 16# Insulated Wire (15 ft.)

Note: Kit also includes a DB9 to DB25 pin adapter for 25-pin RS232 serial communication, which will not be needed in most cases.

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* Computer interface kit (sold separately) is required to read Pulse Monitor Card data.
** While the Pulse Monitor itself is capable of +/-5% voltage measurement accuracy, two additional factors may further decrease accuracy. Motor voltage is calculated using the control voltage powering the Pulse Monitor. This calculation is based on the ideal ratio of the control transformer (primary voltage to secondary voltage). Any variation in the control transformer ratio will consistently skew the motor voltage data. Additionally, this voltage measurement is made at the point where the Pulse Monitor is connected. If this point is significantly removed from the motor being monitored, a noticeable voltage drop may exist. The user is cautioned to consider both these contributing factors while interpreting the stored voltage data.
Columbus McKinnon is one of the most respected and well-known names in the material handling industry. We combine two different yet complimentary areas of expertise – rigging products and hoists – to develop complete floor-to-ceiling lifting systems for even the most unique material handling applications.

Columbus McKinnon designs and manufactures a large portfolio of durable and reliable products for a variety of industries. Our portfolio includes powered and manual hoists, rigging products, below-the-hook attachments, cranes, enclosed track systems and specially engineered products.

Not only is Columbus McKinnon a leader in material handling products, we are also a global leader in providing expertise and training on the proper use and inspection of rigging and overhead lifting equipment. With a range of comprehensive programs and seminars conducted at venues throughout North America, including our hands-on training centers and private companies, our courses include:

- Hoist Maintenance
- Crane & Hoist Inspection
- Crane Operator Training
- Safe Hoisting
- Load Securement
- Rigging
- Rigging Gear Inspection

One of our newest programs, **CMCO University**, is a three-day course designed to give attendees an intimate knowledge of our products, the information they’ll need to select the right product for the application, and the tools to win in the marketplace.

Classes are available at our state-of-the-art, hands-on training centers, including the **Niagara Training Center** and the **Hoist & Rigging Training Center of Excellence in the Center for Occupational Health and Automobile Manufacturing (COHAM) lab at The Ohio State University**.

Rely on Columbus McKinnon for the products and expertise you need to keep your workforce productive and safe.