

HIRSCHMANN *mentor*

Load Moment Indicator for telescopic cranes

NEW



HIRSCHMANN *mentor*: the electronic Load Moment Indicator (LMI) for telescopic cranes - a turnkey solution for any situation where the client requires the highest levels of safety, coupled with an impressive cost-benefit ratio.

Central Data Source: the console serves as a central information system which gives the machine operator all the data he needs with functional simplicity, at a glance. The central unit is already integrated within the console, thus saving greatly in terms of space and wiring.

Viewing: the contrast of the LCD display is automatically adjusted by means of BestVIEW technology. Ambient temperatures and brightness are taken into account.

The Processor: The 32 Bit arrangement impresses with its rapid processing capacity and safe cut-off.

The Bus system: In the HIRSCHMANN *mentor* the CAN-protocol is integrated with CANopen. The unit can function both as a CANopen master or CANopen slave.

The HIRSCHMANN *mentor* takes over the control function and communicates by means of simple CAN nodes. It is possible to set up a decentralised network for mobile units. The operator can achieve simple solutions easily and inexpensively. The latest, maintenance-free sensors are connected by means of CANbus.

- Quick and effortless system calibration through **Phoenix**
- Minimal installation and maintenance costs thanks to CANbus technology
- Control function based on IEC61131 possible
- Modern Flash memory allows faster data upload and download
- BestVIEW adaptive display controls for optimal readability

Technical Data

Supply voltage	10 - 30 V DC
Digital inputs	4 (0...30V, with counter option)
Digital outputs	4 x PWM (50-400 Hz, 2 A, I-controlled)
In-/Outputs (configurable)	4 x Digital input / Digital output PWM (50-400 Hz, 1 A)
Housing	on-dash, sheet metal
System connector	M23x1, 19-pin male socket
Protection class	IP 65
Dimensions	181 x 141 x 70,5mm (WxBxD)
Display	LCD ,4 x 20 characters, 123 x 42,5mm
Operating temp. range	-20 °C to +70 °C
Storage temp. range	-30 °C to +80 °C
Keyboard (illuminated)	9 buttons/5 indicators
CAN bus	CANopen 2.0B
Connector	M12x1, 5-pin female socket
Cut-off relay	2 (8 A max. current)
Service interface	RS232, DB9, male socket
Processor	Motorola MPC 561, 40 MHz, 32bit, FPU
SRAM	1 MB
Flash-EPROM	16 MB
Warning signal	buzzer (built-in)

Software

Along with its function as the heart of an LMI, the HIRSCHMANN **mentor** is extendable and programmable (controls) on demand.

For special applications the **Configuration Manager** using Windows is available. For more complicated programming **1131Pro direct** can be used. Extensions and supplementary functions can be offered without any problems.



All the characteristics of the new calibration software, **Phoenix**, can be integrated into the LMI.

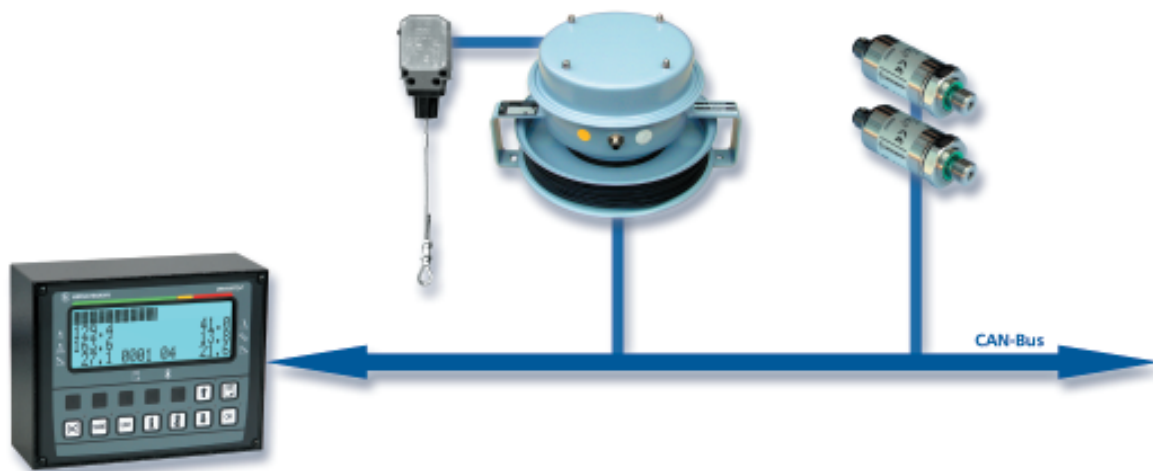
Service Interface

By means of a serial interface using the program **iTOOLS** the following information can be displayed:

- Status of limit switch
- Analogue values
- Internal computational values
- Events with date and time
- Unit version number

Optional Extras (on request)

- Event recorder, battery buffered RAM
- 900 MHz radio module (can be integrated)
- Limitation of operational area
- Key status display (LED, 3 colour)



Electronic Control Systems

Head Office and OEM Division

PAT GmbH

Hertzstr. 32-34 • 76275 Ettlingen • Germany
 Phone: +49 (0)7243 709-0 • Fax: +49 (0)7243 709-222
 eMail: pat.ettlingen@pat-group.net

Retrofit Division

PAT GmbH

Alte Bottroper Str. 39 • 45356 Essen • Germany
 Phone: +49 (0)201 40861-0 • Fax: +49 (0)201 40861-49
 eMail: info.essen@pat-group.net

www.pat-group.com