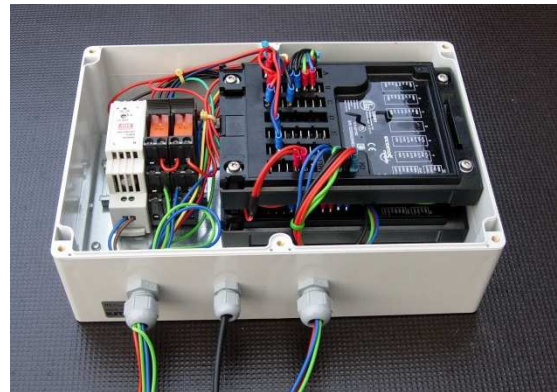


# GHC-2

**Crane Overload Protection SIL 2 (EN 61508) / PL D (EN 13849-1)**

## Suitable for:

- Bridge Cranes, Gantry Cranes
- Container Cranes, STS Cranes
- Portal Cranes
- Straddle Carriers, RTGs
- Forklifts
- General applications in harbor- and construction industries



GHC-2 is the most economic Safety system according to SIL 2 and PL D used as overload protection on cranes and other lifting equipment. It is also suitable for a number of other applications in rugged conditions, including construction and harbor equipment.

It is based on a fully double-channel (redundant) Category 3 design with a high diagnostic coverage of > 99%. The two controls are working as master and slave and have a high mean time between failures (MTTFd) of 125 years! The programming is done in World-Standard IEC 61131-3 language CoDESys®.

GHC-2 requires also redundant Sensors and fulfils its safety function by activating or shutting down crane functions via digital outputs and relays. It can

be linked directly to the crane controls and other systems by CANBUS or by optional analogue outputs with 4...20 mA output current.

In case of any discrepancy, that may occur in normal working session, it will de-activate its Diagnostic Relay. This will make sure that the crane is shut down completely and therefore set to a safe position.

GHC-2 comes as a plug-and-play solution and can be calibrated without any special tools simply on the screen in a very short time.

### Features:

- Analogue and digital display according to choice from 2,8" to 7"
- Tare function
- Load Totalization
- Datalogger with Date/Time and readout on USB Memorystick (only 7" console)
- Alarm function on screen
- Passcode protected Menu for
  - Calibration of sensors
  - Fine adjustment of analogue outputs (optional)
  - User defined Cutout limits setting
- 16 digital outputs or Relays to react on critical crane conditions
  - Overload cutout
  - Overload prewarning
  - Underload slackrope
  - Load unbalance
  - Single line overload
  - Total cutout by diagnostic Relay
- 4 redundant analogue inputs (4...20 mA) for sensors; Choice of sensors acc. to Cranetype
- 6 redundant digital inputs for general purpose or incremental counters
- 8 PWM outputs (part of the 16 digital outputs)
- Converters available to perform analogue outputs 4...20 mA out of the PWM signals
- 2 CANBUS interfaces
- "Emergency Programs" that allows to continue the crane's work in case of non-severe errors depending on diagnostic result

<b>Technical Data</b>	
Supply Voltage	110...230 Volts DC
Current Consumption <small>w/o loads on digital outputs</small>	0,1 A max <small>w/o Load on dig. outputs</small>
Output Current digital Outputs	1..4 A <small>with separate powersupply</small>
Resolution analogue inputs	12 bit
Temperature range <small>console/control</small>	-25°...+70°C / -40°...+85°C
Protection class	IP 65
L x H x W <small>of central unit</small>	265 x 185 x 90 mm