

# LCD3 - LCD3PL

DIGITAL LOAD LIMITER/TRANSMITTER FOR LIFTING SYSTEMS

LAUMAS®



		CODE
1 instrument	load limiters in single weighing systems	LCD3
2 instruments	load limiters in multi-weighing systems	LCD3A+B
3 instruments	load limiters in multi-weighing systems	LCD3A+B+C
4 instruments	load limiters in multi-weighing systems	LCD3A+B+C+D
1 instrument	load limiters with dual load cell input for safety systems	LCD3PL

## DESCRIPTION

- Digital load limiter/transmitter for lifting systems.
- Mounting on Omega/DIN rail for back panel or junction box.
- Dimensions: 140x93x65 mm (terminal blocks included).
- Set-up and calibration via keyboard and LCD display (two-line by 16-digit, 5 mm height).
- Connecting multiple units with load limiting and summing function.
- Alarm signal following load cell connection failure.
- LED indicators showing the status of the relay outputs.
- 4-key keyboard.

## LCD3 SPECIFICATIONS

- Load limitation detected by the intervention of alarm and pre-alarm thresholds.
- Load limitation (single and sum) for systems with up to 4 weighing points, by connecting multiple units.
- Connecting multiple units with load limiting and summing function.

## INPUTS/OUTPUTS AND COMMUNICATION

- RS485/RS232 serial ports for communication via ASCII continuous one way transmission.
- 2 digital inputs: status reading via serial communication protocols.
- LCD3:
  - 3 exchange relay outputs.
  - 1 load cell dedicated input.
  - Integrated RF interface for connecting multiple units (option on request).
- LCD3PL:
  - 4 relay outputs: one NO + two exchange relay outputs + one safety exchange relay output with guided contacts.
  - 2 independent load cell inputs.

## LCD3PL SPECIFICATIONS

- Dual channel input system for double bridge load cells, in accordance with category 2 as per EN 13849-1:2008, PL d (corresponding to SIL 2, EN62061 standard).
- Load limitation via safety relay with guided contacts, monitored in real time.
- Independent general alarm relay.
- 2 relays for general threshold intervention (e.g. pre-alarm/discharge system).

Rev. 0.0

### MAIN FUNCTIONS

- Connections to:
  - PC/PLC via RS485/RS232;
  - remote display via RS485/RS232;
  - up to 8 load cells in parallel by junction box;
  - other units for summing function via RS485 or RF (option on request).
- Continuous load cell connection integrity check.
- Digital filter to reduce the effects of weight oscillation.
- Theoretical calibration (via keyboard) and real calibration (with sample weights).
- Tare weight zero setting.
- Automatic zero setting at power-on.
- Gross weight zero tracking.

### CERTIFICATIONS



Equivalent of the CE marking for the United Kingdom



Category 2 as per EN 13849-1:2008, PL d (corresponding to SIL 2 level, EN 62061 standard) (LCD3PL)

### TECHNICAL FEATURES

Power supply and consumption	24 ÷ 48 VDC/VAC; 6 VA
Number of load cells • Load cells supply	up to 8 (350 Ω) • 4 VDC
Linearity	<0.01% full scale
Thermal drift	<0.002% full scale/°C
A/D Converter	24 bit
Measure range	±3.9 mV
Conversion per second	3/s
Decimals • Display increments	0 ÷ 4 • x1 x2 x5 x10 x20 x50
Digital filter	0.25 ÷ 3 Hz
Relay outputs	LCD3: n. 3 exchange relay outputs - 30 VDC/250 VAC; 2 A LCD3PL: n. 4, 1 NO + 2 exchange relay outputs + 1 safety exchange relay output with guided contacts - 18 ÷ 50 VDC/VAC; 2 A
Optoisolated digital inputs	n. 2
Serial ports	RS485, RS232
Baud rate	1200, 2400, 9600, 19200, 38400, 57600, 115200 (bit/s)
Humidity (condensate free)	85%
Storage temperature	-20 °C +60 °C
Working temperature	-10 °C +50 °C

### OPTIONS ON REQUEST

	DESCRIPTION	CODE
	IP67 polycarbonate box; dimensions: 170x140x95 mm (four fixing holes Ø4 mm; centre distance: 152x122 mm). - transparent cover - transparent cover; 4+2 M16x1.5 cable glands - plugs - transparent cover; 4+2 PVC end-fittings for sheath	CASTL CASTLPG9 CASTLGUA
	Only for LCD3 Integrated RF (radio) interface for connecting multiple units RF frequency 868 MHz (7 channels) Average range of coverage 50 metres	OPZLCD3RF