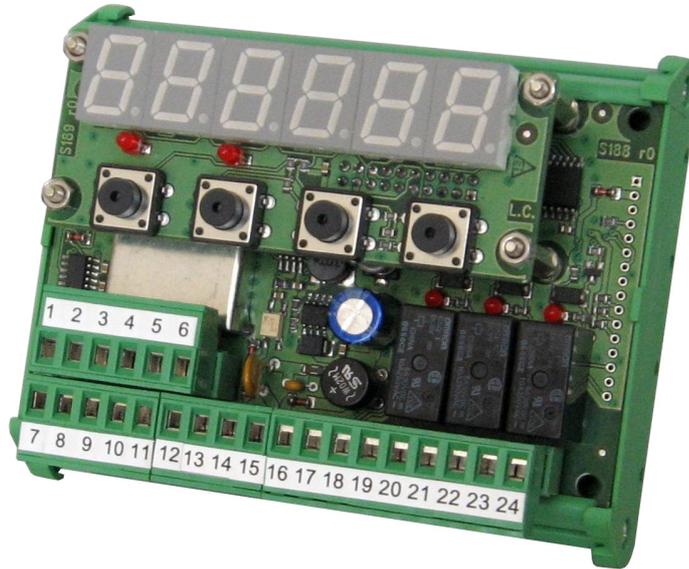


WK2



Digital Overload Electronic for Lifting Devices

- ★ *Overload detection controlled through pre-alarm and alarm set-points.*
- ★ *Dual safety overload detection by means of two instruments connected to the same weighing system.*
- ★ *Individual or 'sum-based' overload detection by means of up to four instruments connected to different weighing systems.*
- ★ *Signal alarm in case of load cell cable interruption.*
- ★ *Removable display board for an easy set-up and calibration.*



WK2

TECHNICAL FEATURES

Power supply	12 - 24 Vac / Vdc \pm 15 %
Power consumption	4 W
Isolation class	Class III
Operating temperature	-10 to +50 °C (0 - 85% RH, non-condensing)
Storage temperature	-20 to +60 °C
Display type	
	Numeric, 6 red LED digit, 7 segments (14 mm high)
Status LED's	5 LED's \varnothing 3 mm (3 LED's used for relay outputs status)
Keyboard	4 mechanical keys
Overall dimensions	
	115 x 93 x 65 mm (l x h x d)
Mounting	DIN rail (EN 60715)
Enclosure	Polyamide 6.6 UL 94V-0 self-extinguishing
Connections	Pull-out screw terminals, pitch 5.08 mm
Load cell input (max. 4) with the following features:	
Input signal sensitivity	0.02 μ V min.
Linearity	< 0.01% of F.S.
Thermal drift	< 0.001% of F.S. / °C
Internal A/D resolution	24 bit
Measurement range	-3.9 to +3.9 mV/V
Digital filter	0.1 Hz to 10 Hz, selectable
Decimal digits	0 to 3 decimal digits
Zero and F.S. calibration	Digital, via keyboard
Alarm outputs	
	2 relays (contact rate 24 Vdc/Vac - 0,5A - N.O. contact) 1 relay (contact rate 24 Vdc/Vac - 0,5A - N.O. and N.C. contact)
Logic inputs	1 opto-coupled (dry contact)
Serial ports	
	Rs232 or Rs485
Baud rate	Up to 115 kbps (default 9600 bps)
Max. cable length	15m (Rs232) ; 1000m (Rs485)
OPTIONAL Analog output	
	Voltage: 0 - 10 V / 0 - 5 V Current: 0 - 20 mA / 4 - 20 mA
Resolution	16 bit
Calibration	Digital, via keyboard
Impedance	Voltage: Min. 10K Ω Current: Max. 300 Ω
Linearity	0.03% of F.S.
Thermal drift	0.001% of F.S. / °C
Programme code memory	
	32 kB
Data memory	
	2 kB
Conformity to Standards	
	EN61000-6-2, EN61000-6-3 for EMC
	EN61010-1 for Electrical Safety



WK2

SOFTWARE MAIN FEATURES

WEIGHING

- ⇒ Programmable maximum capacity from 10 to 500.000.
- ⇒ Programmable display division value from 0.001 to 50.
- ⇒ Programmable digital filter from 0.1 to 5 Hz
- ⇒ Resolution from 500 to 100.000 counts.
- ⇒ Zero setting and auto-tare functions.
- ⇒ Automatic zero setting at power-on and zero tracking functions.

SERIAL PORTS

- ⇒ Rs232 or Rs485. Selectable baud rate up to 115Kbps (default 9600 bps)
- ⇒ Continuous transmission data protocol

INDIVIDUAL OVERLOAD LIMITER APPLICATION

MAIN FEATURES

- ⇒ Overload limiter with immediate alarm activation* in case the maximum weighing system capacity is exceeded, the load cell cable is interrupted, or the gross weight value is negative.
* All the relay outputs open simultaneously.
- ⇒ Up to 3 set-point levels can be used as pre-alarm and alarm signals, each set-point is linked to a relay output that opens when the level is exceeded, after a possible programmable time delay.
- ⇒ Fail safe function can be handled by set-point #3; negative or positive weight comparison.
- ⇒ By programming one of the set-points = 0 the relative relay output is permanently engaged so that it can be used as alarm signal in case of a power loss event.

ZERO SETTING AND TARE FUNCTIONS

- ⇒ Auto-tare command via remote input or keyboard.
- ⇒ Zero setting.

SERIAL COMMUNICATION PROTOCOL

- ⇒ Continuous transmission of the weight value to a PC or to a remote display (frequency 3Hz).

DUAL SAFETY OVERLOAD LIMITER APPLICATION

MAIN FEATURES

- ⇒ Dual safety overload detection by means of two instruments connected to the same weighing system.
- ⇒ Alarm activation in case the difference between the 2 weight values exceeds a programmable percentage, calculated on the higher weight value. Besides, the alarm can activate over a programmable set-point working as a minimum level.
- ⇒ Immediate alarm activation in case of: uneven weight distribution, instruments' communication failure, weight exceeding the maximum capacity, or load cell cable interruption. In all these cases all the relay outputs open and a message starts blinking on the display.
- ⇒ Up to 3 set-point levels can be used as pre-alarm and alarm signals, each set-point is linked to a relay output that opens when the level is exceeded, after a possible programmable time delay.
- ⇒ Fail safe function can be handled by set-point #3; negative or positive weight comparison.
- ⇒ By programming one of the set-points = 0 the relative relay output is permanently engaged so that it can be used as alarm signal in case of a power loss event.

ZERO SETTING AND TARE FUNCTIONS

- ⇒ Auto-tare command via remote input or keyboard.
- ⇒ Zero setting.

WK2

4 SYSTEMS OVERLOAD LIMITER APPLICATION

MAIN FEATURES

- ⇒ Individual or 'sum-based' overload detection by means of up to four instruments connected to different weighing systems. Individual and total weight values can be switched on any of the four instruments at any time.
- ⇒ Sum of the gross weight values controlled by a programmable set-point, linked to a relay output that opens when the level is exceeded, after a possible programmable time delay.
- ⇒ 2 set-point levels can be used as pre-alarm and alarm signals, each set-point is linked to a relay output that opens when the level is exceeded, after a possible programmable time delay. One of the set-points can work with negative weight values.
- ⇒ Immediate alarm activation in case of: instruments' communication failure, weight exceeding the maximum capacity, or load cell cable interruption. In all these cases all the relay outputs open and a message starts blinking on the display.
- ⇒ By programming one of the set-points = 0 the relative relay output is permanently engaged so that it can be used as alarm signal in case of a power loss event.

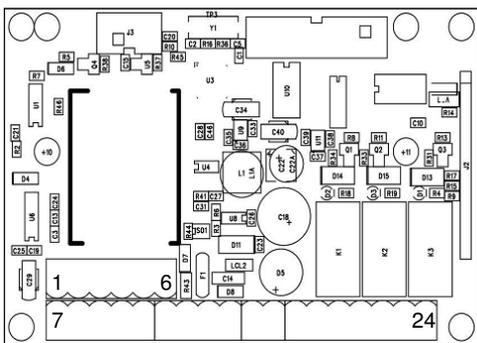
ZERO SETTING AND TARE FUNCTIONS

- ⇒ Auto-tare command via remote input or keyboard.
- ⇒ Zero setting.

SERIAL COMMUNICATION PROTOCOL

- ⇒ Although the Rs485 serial port is used for the communication among the instruments, a remote display for total weight visualization can be connected in parallel on the same port.

ELECTRICAL CONNECTIONS



Pin #	6 pin terminal block
1	Load cell Excitation -
2	Load cell Excitation +
3	Load cell Sense +
4	Load cell Sense -
5	Load cell Signal -
6	Load cell Signal +

Pin #	18 pin terminal block	
7	Serial RS232 TX	
8	Serial RS232 RX	
9	Serial GND	
10	Serial RS485 TX/RX +	
11	Serial RS485 TX/RX -	
12	Common	Dry contact
13	Logic input	
14	+ / ~	Power supply 12-24 Vac/dc ±15%
15	- / ~	
16	+ analog output V or mA (opto-coupled)	
17	GND analog output (opto-coupled)	
18	Common relay 1	
19	N.O. relay 1	
20	Common relay 2	
21	N.O. relay 2	
22	Common relay 3	
23	N.O. relay 3	
24	N.C. relay 3	

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