

# B24-LC for load cells



Large format meter with 4 digits and 60 mm digit height, and reading up to 25 meters, for load cell signals at industrial applications. Versatile and configurable instrument, provides excitation voltage, 'tare' and 'auto-tare' functions, configurable acquisition speed and noise rejection to 50 and 60 Hz. Front keypad for easy access to the configuration menu and connection for remote keypad. Two universal power supply options for AC and DC. Optional relay outputs, transistor, SSR control, analog retransmission and communications for Modbus RTU and RS-485 ASCII protocols. Sturdy metallic housing with full IP65 protection, for panel, wall or hanging mount.

## Technical specifications

<b>Reading</b>	
Digits	4
Reading	9999 / -1999
Decimal point	configurable
Led color	red or green
Digit height	60 mm
Type of digit	7 segment
Angle of vision	120°
<b>Load cells</b>	
Type of cells	1 mV/V, 2 mV/V, 3 mV/V and others
Excitation voltage	5 Vdc or 10 Vdc, configurable (max. 140 mA)
Vexc. protection	against shortcircuit
Maximum voltage at terminals	30 Vdc
Number of cells*	1 to 8 load cells (powered 5 Vdc) 1 to 4 load cells (powered 10 Vdc)
* (values calculated for standard 350 Ohms load cells. For cells with different impedance, the number is limited by the 140 mA available current)	
<b>Measure</b>	
Signal ranges (FS)	5 mV, 10 mV, 15 mV, 20 mV, 30 mV, 100 mV (internal)
Accuracy at 25 °	0.05 % FS
Thermal stability	100 ppm/°
Input impedance	20 MOhms
Acquisitions/second*	15, 50 or 60 acquisition/second (configurable)
* (and refresh for alarms, analog outputs and bus)	
Signal terminals	plug-in screw terminals (pitch 3.81 mm) cable gland output PG9 (max. 8 mm diameter) max. 0.50 mm <sup>2</sup>
Wire section	
<b>Outputs and configuration</b>	
Output and control options	relays, analog output, serial communications, ...
Configuration	3 button front keypad (connection for remote keypad)
<b>Power</b>	
Power 'H'	85 to 265 Vac and 120 to 370 Vdc (isolated 2500 Vac)
Power 'L'	11 to 36 Vdc (isolated 1500 Vdc)
Consumption	<3.0 W (meter only) <5.0 W (meter with options)
Power terminals	plug-in screw terminals (pitch 5.08 mm) cable gland output PG9 (max. 8 mm diameter) max. 2.5 mm <sup>2</sup> (max. AWG14)
Wire section	
<b>Mechanical</b>	
Housing	metallic (textured black painted iron)
Front filter	methacrylate
IP protection	full IP65 housing
Weight	<2200 grams
Mounting	panel, wall, hanging
Front size (panel cut-out)	340 x 135 mm (322 x 117 mm)
Depth	80 mm (including terminals)
Operating temp. (storage)	0 to 50 °C (-20 to 70 °C)
Packing box	paperboard, 38 x 15 x 10 cm



Front view

## Order reference

Format	Model	Power	Color	Option 1	Option 2	Option 3	Custom
B24	LC	H	R				
		-H (85-265 Vac and 120-370Vdc) -L (11-36 Vdc)	-R (red led) -G (green led)	-R1 (1 relay output) -AO (analog output) -RTU (Modbus RTU) -S4 (RS-485) -S2 (RS-232) -T1 (1 transistor output) -SSR (1 SSR control output) -0 (empty)			

\* Option 3 available with formats B26 and B46



Rear view

## Additional documentation

Bxx-LC user's manual	<a href="http://www.fema.es/docs/4625_Bxx-LC_manual_en.pdf">www.fema.es/docs/4625_Bxx-LC_manual_en.pdf</a>
Series B options	<a href="http://www.fema.es/docs/4326_SERIES-B_OPTIONS_manual_en.pdf">www.fema.es/docs/4326_SERIES-B_OPTIONS_manual_en.pdf</a>
Series B web page	<a href="http://www.fema.es/Series_B">www.fema.es/Series_B</a>

## Output and control options

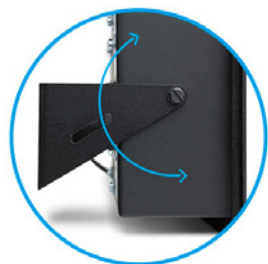
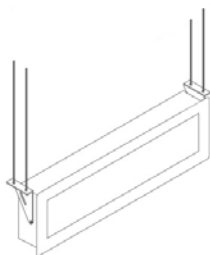
Format	Model	Power	Color	Option 1	Option 2	Option 3	Custom
B24	LC	H	R				

	Function	Installable options	Isolation
R1	1 relay output	2	yes
T1	1 transistor output	2	yes
SSR	1 control for SSR relay	2	yes
AO	1 analog output	2	yes
RTU	1 Modbus RTU port	2	yes
S4	1 RS-485 port	2	yes
S2	1 RS-232 port	2	yes
Option 3 available with formats B26 and B46			

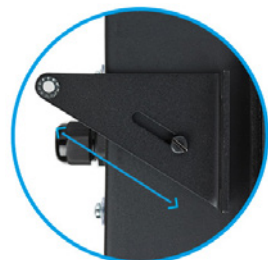
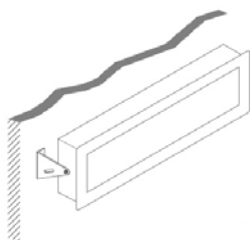
## Mounting options



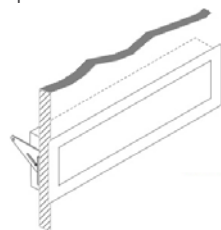
hanging



wall



panel

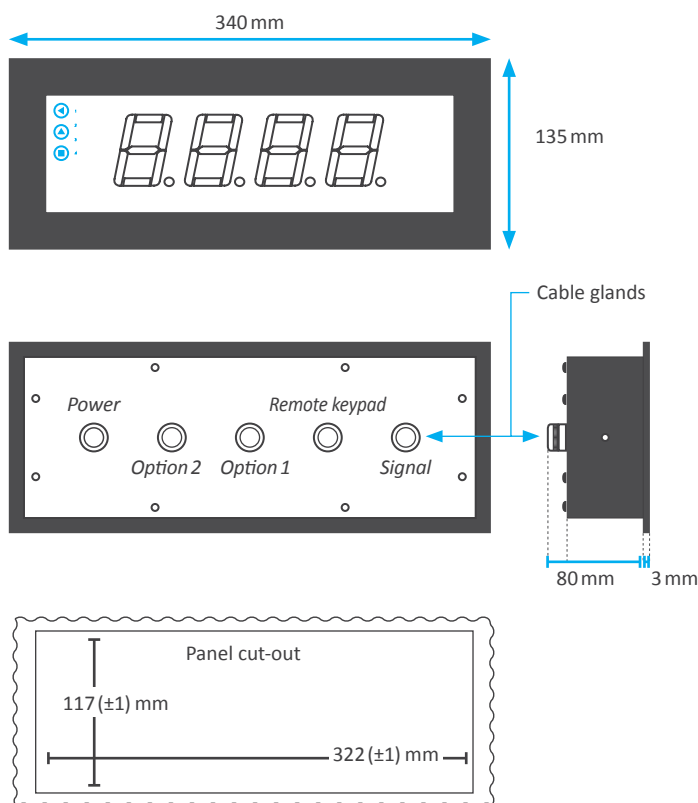


side fixations (included)

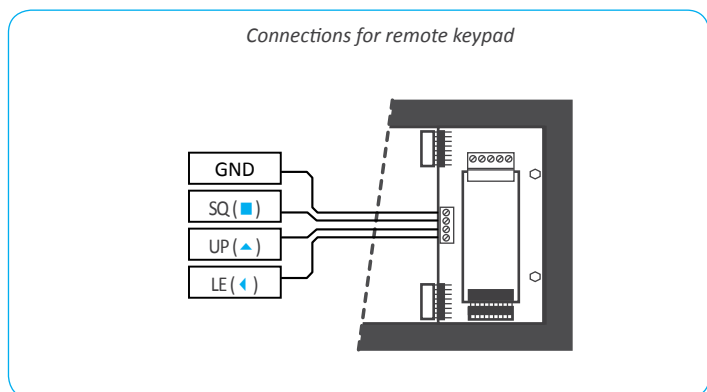
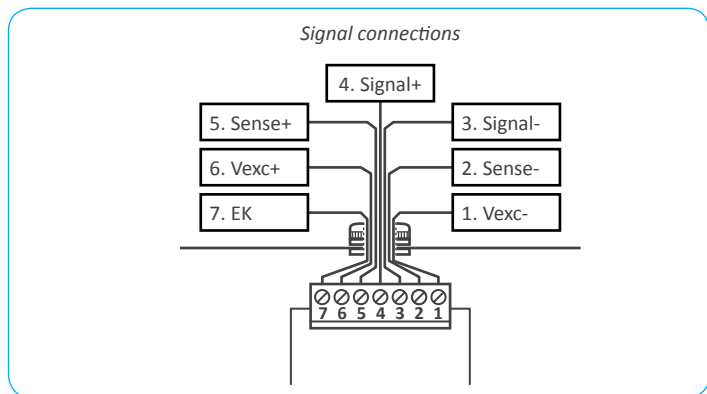
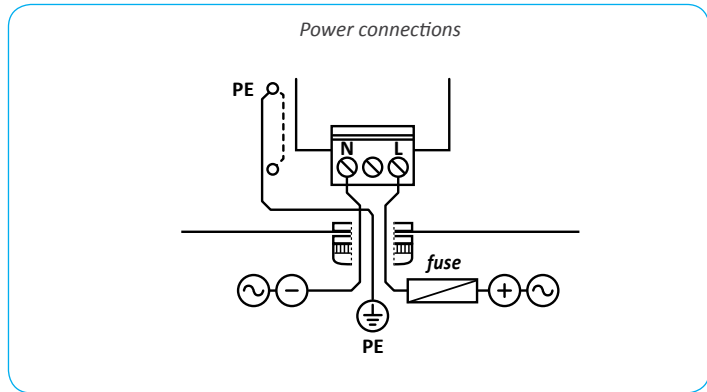
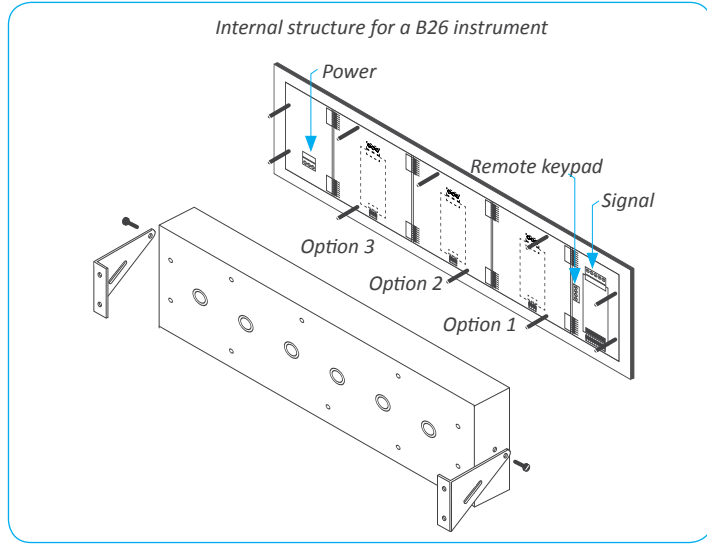
## Functions included

- 'Fast access' menu . . . . . fast access to parameters from front key 'UP' (■) (alarm setpoint, ...)
- 'Tare' function . . . . . configurable from different access points
- 'Auto-tare' function . . . . . automatic tare
- Scale factor . . . . . scale the reading values and offset
- 'Stock of units' . . . . . count number of items based on weight
- Modes . . . . . modes with noise rejection to 50 and 60 Hz
- Alarms . . . . . with one or two setpoints, independent activation and deactivation delays, hysteresis, optional manual deactivation of the relay
- Stability alarms . . . . . activation triggered by stability of the signal
- Display filters . . . . . recursive filter, 'steps', fixed digits, ...
- Rear control . . . . . activate functions from rear terminal
- Front key 'LE' (◀) . . . . . activate functions from front key
- 'On power-up' function . . . . . activate functions at power-up
- Memory . . . . . maximum and minimum
- Password . . . . . blocks access to configuration menu.
- Troubleshooting functions . . . . . values for input signal, excitation voltage and excitation current provided to the cell
- Brightness . . . . . 5 levels of brightness intensity.

## Dimensions

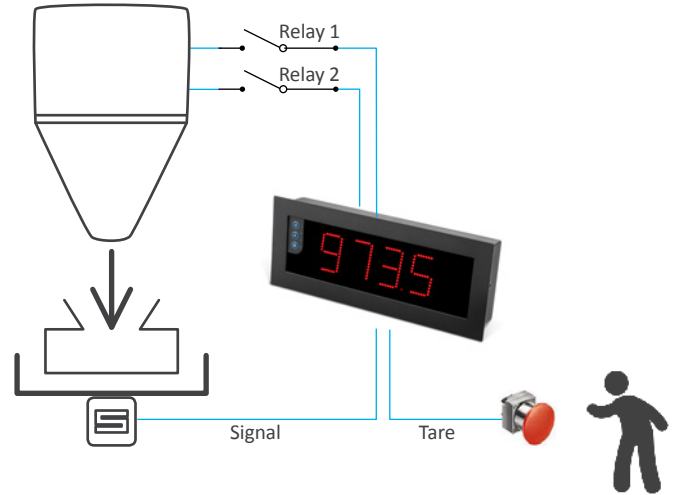


## Connections

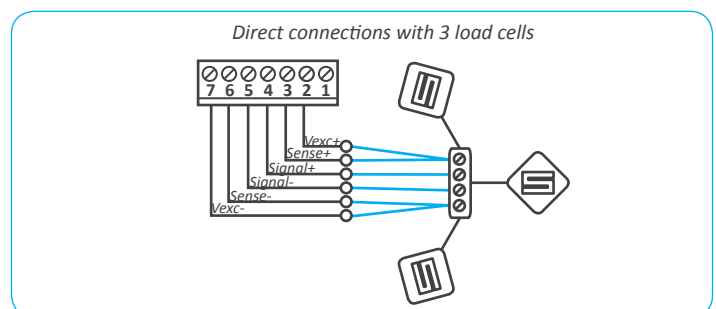
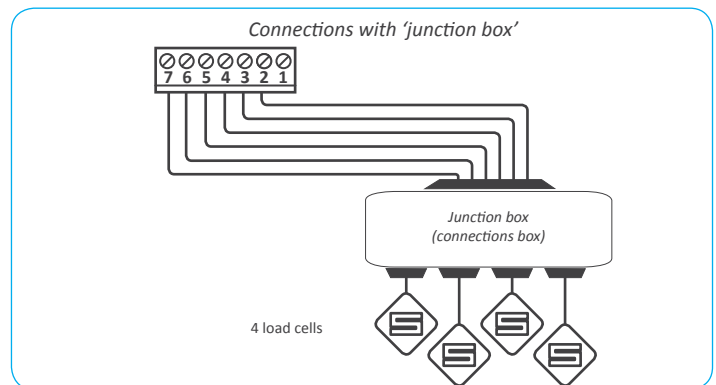
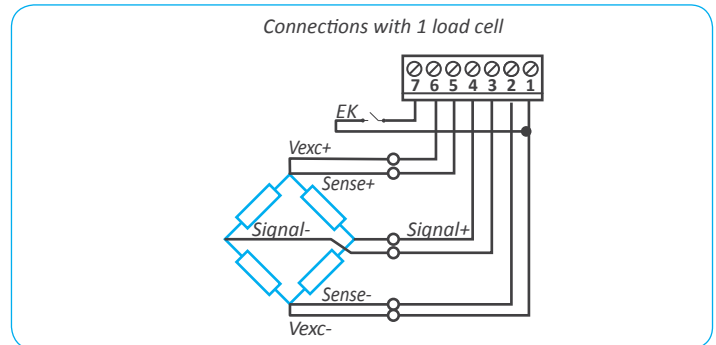


## Example of application with control

Bucket filling with material from a silo. Measure and reading of the weight at the bucket, with automatic control for slow filling with relay 1 and final closing of the silo opening with relay 2.




## Examples for other connections



## Other options

**Red color**



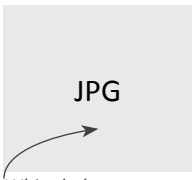
Red leds

**Green color**



Green leds

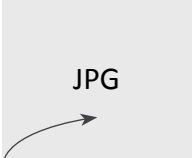
**White color**



JPG

White leds

**Cable output**




JPG

Preinstalled cable, 2 meters

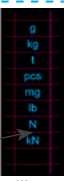
## Accessories

**RKB**



Remote keypad

**Units-8**



Labelling units  
(g, kg, t, pcs, mg, lb, N, kN)

## Other meters for load cells

### Series B

4 and 6 digits

digit height . . . . . 60 and 100 mm  
 color . . . . . red, green  
 reading . . . . . 25 and 50 meters  
 formats . . . . . B24, B26, B44, B46



### Series M

4, 5 and 6 digits

digit height . . . . . 14 mm  
 color . . . . . red, green  
 reading . . . . . 5 meters  
 size . . . . . 96 x 48 mm

DIGITAL PANEL METER  
**SERIES M**  
 Full Signal Ranges Available



### Series K

Further view

digit height . . . . . 20 mm  
 color . . . . . red  
 reading . . . . . 8 meters  
 size . . . . . 96 x 48 mm

DIGITAL PANEL METERS  
**SERIES K**  
 20 mm Digit Size



### Series S

Compact size

digit height . . . . . 14 mm  
 color . . . . . red, green  
 reading . . . . . 5 meters  
 size . . . . . 72 x 36 mm

DIGITAL PANEL METERS  
**SERIES S**  
 Compact Size 72x36 mm



## Other signals



45  
YEARS

Q  
ISO 9001  
Certified Quality

CE  
EN-61010-1  
Security

CE  
EN-61326-1  
Electromagnetic C.

5  
YEARS  
Extended Warranty