B46-LC for load cells

Large format meter with 6 digits and 100 mm digit height, for reading up to 50 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.

Front view

Technical specifications

Reading

Digits	6
Reading	999999 / -199999
Decimal point	configurable
Led color	red or green
Digit height	100 mm
Type of digit	7 segment
Angle of vision	120º

Load cells

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)

Measure

Signal ranges (FS)	5 mV, 10 mV, 15 mV, 20 mV, 30 mV, 100 mV (internal)
Accuracy at 25 º	0.05 % FS
Thermal stability	100 ppm / º
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)
Wire section	max. 0.50 mm²

**Outputs and configuration**

Output and control options	relays, analog output, serial communications, ...
Configuration	3 button front keypad (connection for remote keypad)

Power

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)
	output through cable gland
Wire section	max. 2.5 mm² (max. AWG14)

Mechanical

Housing	metallic (textured black painted iron)
Front filter	methacrylate
IP protection	full IP65 housing
Weight	<4500 grams
Mounting	panel, wall, hanging
Front size (panel cut-out)	740 x 166 mm (722 x 148 mm)
Deep	80 mm (including terminals)
Operating temp. (storage)	0 to 50 ºC (-20 to 70 ºC)
Packing box	paperboard, 78 x 18 x 10 cm
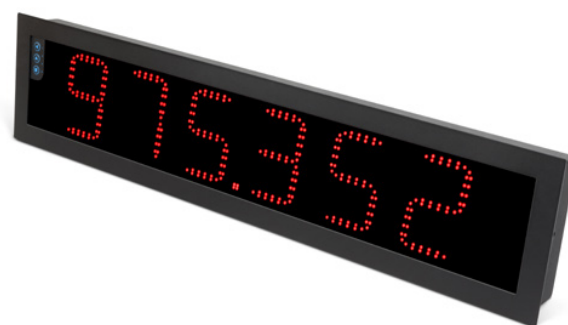
Order reference

Format	Model	Power	Color	Option 1	Option 2	Option 3	Custom
B46	- LC	- H	- R	-	-	-	-

-H (85-265 Vac and 120-370 Vdc)	-R (red led)	-R1 (1 relay output)	
-L (11-36 Vdc)	-G (green led)	-AO (analog output)	
		-RTU (Modbus RTU)	
		-S4 (RS-485)	
		-S2 (RS-232)	
		-T1 (1 transistor output)	
		-SSR (1 SSR control output)	
		-0 (empty)	

Rear view

Output and control options

Format	Model	Power	Color	Option 1	Option 2	Option 3	Custom
B46	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

Mounting options

hanging

wall

panel

side fixations (included)
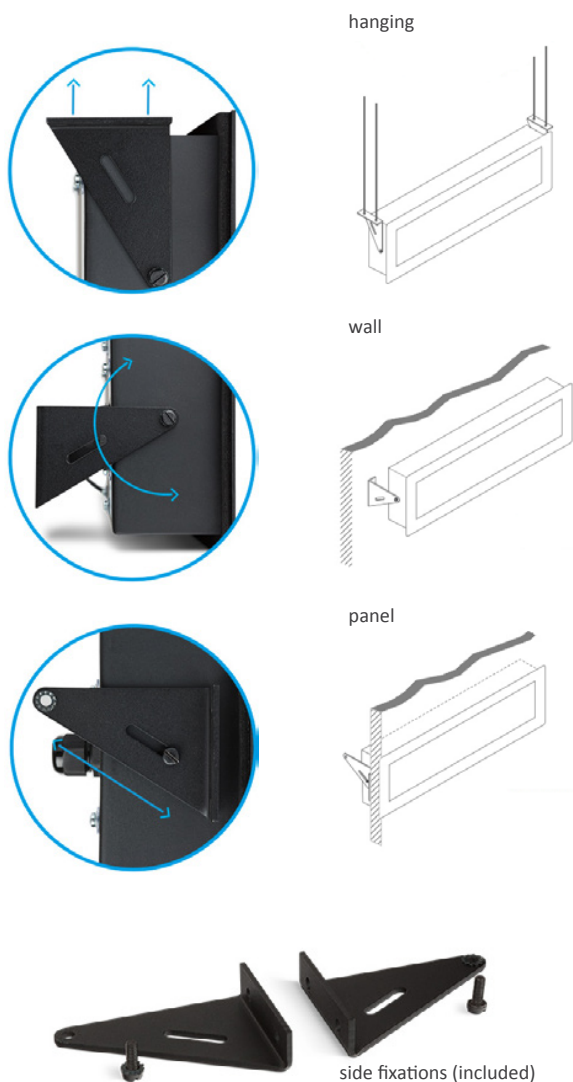
Functions included

'**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

740 mm

166 mm

Cable glands

Power

Option 3   Option 2   Option 1   Remote keypad   Signal

80 mm   3 mm

Panel cut-out

148 (±1) mm

722 (±1) mm

Connections

Internal structure for a B26 instrument

Power

Remote keypad

Signal

Option 3
Option 2
Option 1

Power connections

PE

N L

fuse

PE

Signal connections

4. Signal+

5. Sense+   3. Signal-

6. Vexc+   2. Sense-

7. EK   1. Vexc-

7 6 5 4 3 2 1
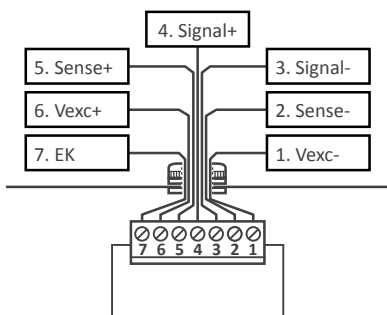
Connections for remote keypad
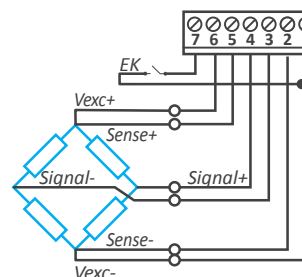
GND

SQ (■)

UP (▲)

LE (◄)
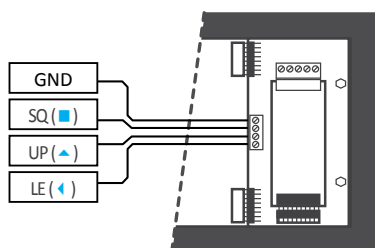
Example of application with control

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. The measure is transmitted to a central data for storage and future analysis, via Modbus RTU.
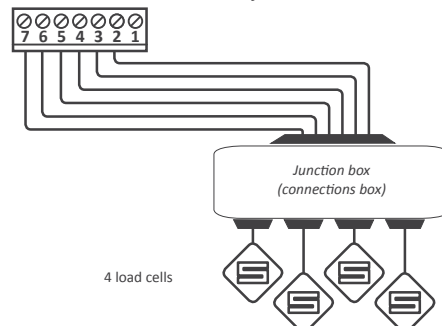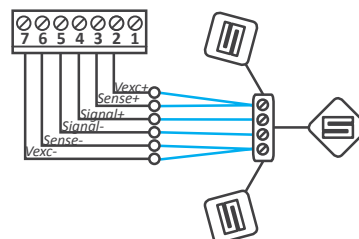
Relay 1
Relay 2

Modbus RTU
(isolated)

Signal   Tare
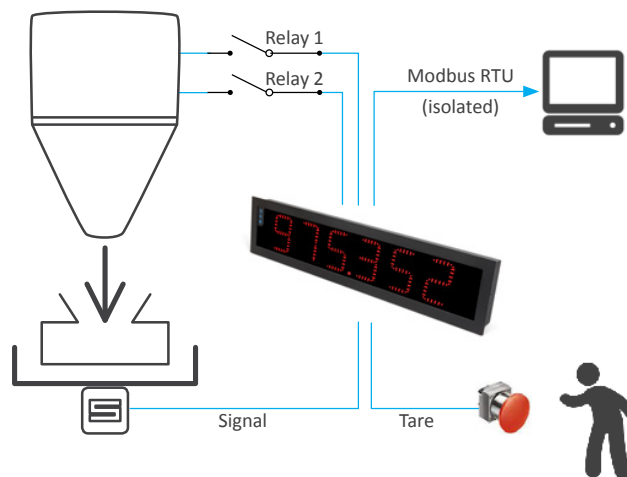
Examples for other connections

Connections with 1 load cell

7 6 5 4 3 2 1

EK

Vexc+
Sense+
Signal-   Signal+
Sense-
Vexc-

Connections with 'junction box'

7 6 5 4 3 2 1

Junction box
(connections box)

4 load cells

Direct connections with 3 load cells

7 6 5 4 3 2 1

Vexc+
Sense+
Signal+
Signal-
Sense-
Vexc-

45 YEARS 1969-2014

Q ISO 9001 Certified Quality

CE EN-61010-1 Security

CE EN-61326-1 Electromagnetic C.

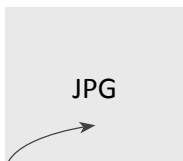**5** YEARS Extended Warranty
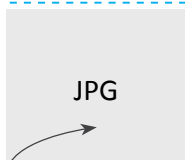
Other options

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

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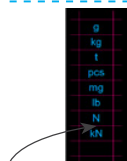
Labelling units (g, kg, t, pcs, mg, lb, N, kN)

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

999.999

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

999.9

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

999.9

Other signals

Process
°C °F
Vac/Aac
Vdc/Adc
Hz
Modbus
Custom
BCD
Kg
RS-485
RS-232

45 YEARS 1969-2014
Q ISO 9001 Certified Quality
CE EN-61010-1 Security
CE EN-61326-1 Electromagnetic C.
5 YEARS Extended Warranty