



## TYPE: LD-STRAIN



# LD-STRAIN Load Cell/Strain Gauge Input Large Digit Display

## Description

The LD-STRAIN is a large digit display for use with strain gauge bridge based sensors, including load cells, load pins, load links and load shackles. Various options are available including 4 or 6 digit versions, different height digits allowing for viewing from up to 200 metres, DC or AC powering and different mounting options.

The digit heights that are available include 57mm (25m viewing distance), 102mm (50m viewing distance), 150mm (75m viewing distance), 200 (100m viewing distance), 300mm (140m viewing distance) and 400mm (200m viewing distance). Mounting options available include panel mounting, suspension mounting and wall mounting. Power supply options available include 95-265vac, 11-30vdc and 48vac. Output options are 4-20mA, 0-10V,  $\pm 10V$ , 2 relay alarms, 4 relay alarms, RS232 or RS485.

The main application for the LD-STRAIN is for simple crane weighing applications and hoist/winch monitoring. The various output options available allow for the re-transmission of the display signal or for process control.

Different input signals are available including serial input (see LD-SERIAL) and process input (see LD-PROCESS). LCM Systems engineers will be pleased to discuss your specific application requirements with you. They will be able to advise on the correct product selection, options required and advise on suitable sensors, where required.

## Features

- Direct connection to strain gauge based sensors
- Digit heights 57, 102, 150, 200, 300 or 400mm
- Viewing distances from 25, 50, 75, 100, 140 or 200 metres
- Suspension, panel or wall mounting options
- AC or DC powered versions
- Wide choice of analogue, relay or digital outputs
- IP65 sealed

## Typical Applications

- Crane weighing
- Winch monitoring
- Platform weighing
- Module weighing

## Specification

Power supply	95-265vac (optional 11-30vdc or 48vac)
Power rating	40 VA maximum
Load cell excitation voltage	5vdc (max 40mA) or 10vdc (120mA max)
Load cell bridge resistance	125ohms using 5vdc excitation, 83ohms using 10vdc excitation
Load cell sensitivity	$\pm 40mV/V$ maximum
Input resistance	>10Megohms
Accuracy	$< \pm 0.05\%$
Zero temperature coefficient	$< 30ppm/^{\circ}C$
Span temperature coefficient	$< 25ppm/^{\circ}C$
Filtering	7Hz roll off low pass filter
Display update rate	10 readings per second
Internal resolution	1 part in 400,000
Display range	4 digit version: -1999 to +1999 6 digit version: -199999 to +199999
Connections	All user/installation connections using detachable field screw terminals
Case material	Heavy duty uPVC
Storage temperature	-20 to +70 $^{\circ}C$
Operating temperature	0 to +50 $^{\circ}C$ (internal heater option to allow operation to -25 $^{\circ}C$ )
Environmental sealing	IP65

## Ordering Guide

Create a full part number like this:-

Model	Display Height	Digits	Analogue Output	Alarm Output	Serial Data Output	Colour (Red)	Voltage Supply	Mounting & Gland Position & Sealing
LD-STRAIN	2" (57mm) Digits -F2 4" (102mm) Digits -F4 6" (150mm) Digits -F6 8" (200mm) Digits -F8 12" (300mm) Digits -F12 16" (400mm) Digits -F16	4 Digits -4N 6 Digits -6N	No Output -0 4-20mA -ANI 0-10V -ANV $\pm 10V$ -ANB	No Alarms -0 2 Alarms -AL2 4 Alarms -AL4	No Data -0 RS232 -232 RS485 -485	Indoor Viewing -R Outdoor Viewing -RDLV	95-265VAC -AC 11-30VDC -DC 48VAC -48VAC	Panel, IP65 Front -1 Wall, Bottom, IP65 -2 Suspension, Top, IP65 -3

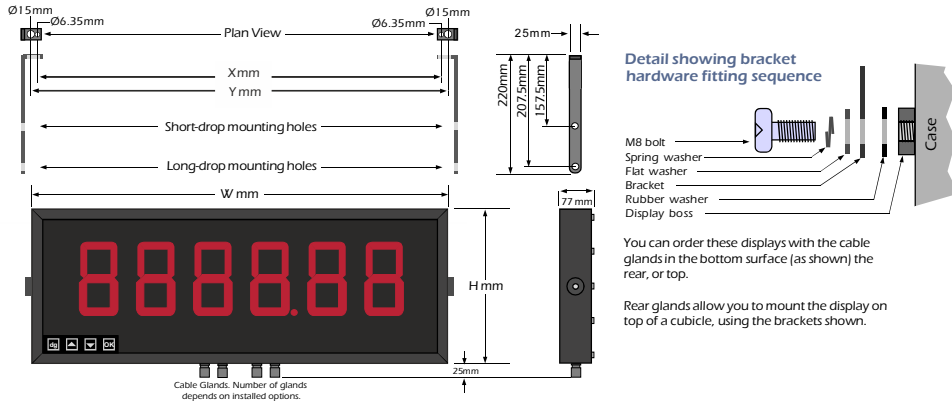


Example - LD-STRAIN display 102mm high, 4 display digits, RS485 output, 2 alarms, outdoor viewing, 110vac powered with suspension mount  
Order code = LD-STRAIN-F4-4N-0-AL2-0-RDLV-AC-3

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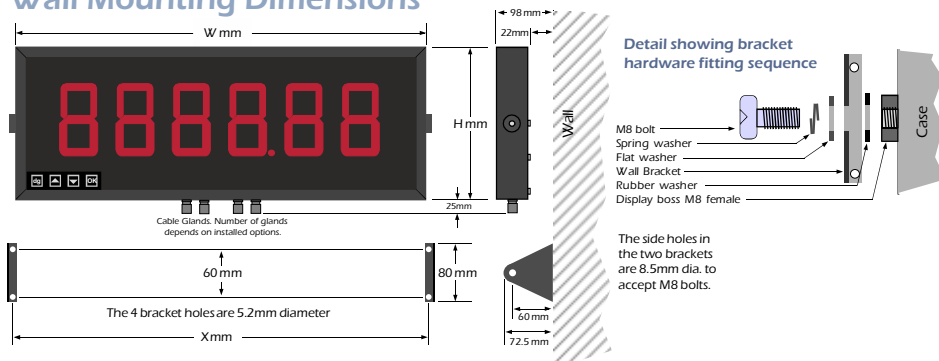


## Suspension Mounting Dimensions



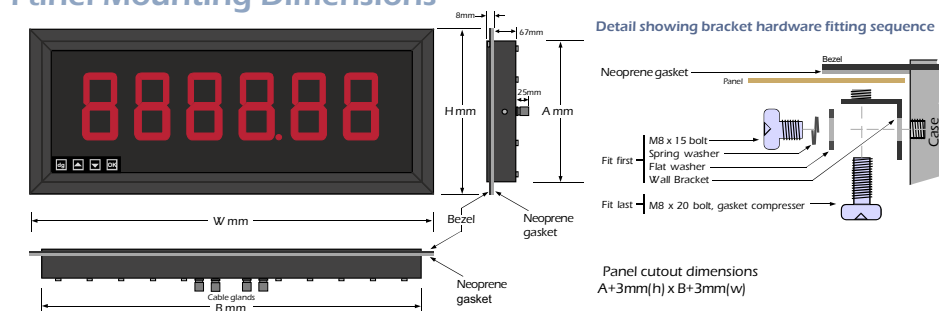
	57mm digits		102mm digits		150mm digits		200mm digits		300mm digits		400mm digits	
	4 digit	6 digit	4 digit	6 digit	4 digit	6 digit	4 digit	6 digit	4 digit	6 digit	4 digit	6 digit
X mm	219.5	316	374	556	520	760	690	1012	990	1480	1308	1960
H mm	154.5	154.5	195.5	195.5	246	246	290	290	408	408	515	515
W mm	279.5	376	434	616	580	820	750	1072	1050	1540	1368	2020
Y mm	249.5	346	404	586	550	790	720	1042	1020	1510	1338	1990

## Wall Mounting Dimensions



	57mm digits		102mm digits		150mm digits		200mm digits		300mm digits		400mm digits	
	4 digit	6 digit	4 digit	6 digit	4 digit	6 digit	4 digit	6 digit	4 digit	6 digit	4 digit	6 digit
X mm	266.5	363	421	603	567	807	737	1059	1037	1527	1355	2007
H mm	154.5	154.5	195.5	195.5	246	246	290	290	408	408	515	515
W mm	279.5	376	434	616	580	820	750	1072	1050	1540	1368	2020

## Panel Mounting Dimensions



	57mm digits		102mm digits		150mm digits		200mm digits		300mm digits		400mm digits	
	4 digit	6 digit	4 digit	6 digit	4 digit	6 digit	4 digit	6 digit	4 digit	6 digit	4 digit	6 digit
H mm	172.5	172.5	213.5	213.5	264	264	308	308	426	426	533	533
A mm	154.5	154.5	195.5	195.5	246	246	290	290	408	408	515	515
B mm	279.5	376	434	616	580	820	750	1072	1050	1540	1368	2020
W mm	297.5	394	452	634	598	838	768	1090	1068	1558	1386	2038

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Due to continual product development, LCM Systems Ltd reserves the right to alter product specifications without prior notice.

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APPROVED

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