



## TYPE: TLL



# TLL Stainless Steel Load Link

## Description

The LCM series of load monitoring links have been designed for lifting and weighing in rugged or harsh environments, being manufactured entirely from stainless steel.

The TLL series are simple to install and are matched to standard shackle sizes. The links are normally supplied with a MIL specification plug and socket, and the whole package is environmentally sealed to IP66.

The TLL series can be supplied as shown in this data sheet, or can be modified to meet a particular application requirement. We are always pleased to discuss any special requirements that can be accommodated.

The TLL series can be supplied on its own or combined with our extensive range of instrumentation to provide a complete load monitoring system.

## Specification

Rated load (tonne)	5, 10, 20, 25, 30, 40, 50, 100	
Proof load	150% of rated load	
Ultimate breaking load	>300 % of rated load	
Output	1.3 mV/V at rated load ( $\pm 10\%$ )	
Accuracy	$\leq \pm 0.25\%$ of rated load	
Non-repeatability	$\leq \pm 0.04\%$ of rated load	
Excitation voltage	10vdc recommended, 15vdc maximum	
Bridge resistance	350 $\Omega$	
Insulation resistance	>500M $\Omega$ @ 500vdc	
Operating temperature range	-20 to +70°C (-20 to +55°C for Ex d)	
Compensated temperature range	-10 to +50°C	
Zero temperature coefficient	$\leq \pm 0.01\%$ of rated load/°C	
Span temperature coefficient	$\leq \pm 0.01\%$ of rated load/°C	
Environmental protection level	IP66 (IP67 optional)	
ATEX certification details	Ex i	II 2G Ex ib IIC T4 Gb / II 2D Ex ib IIIC T135°C Db
	Ex d	II 2G Ex d IIC T6 Gb / II 2D Ex tb IIIC T85°C Db
Connection type	5 metres PUR 4-core cable	
Wiring connections	+ve supply: Red (A)	-ve supply: Blue (B)
	+ve signal: Green (C)	-ve signal: Yellow (D)

## Available Options

- Special ranges and sizes available
- Hazardous Area certified - Explosion Proof (Ex d) and Intrinsically Safe (Ex i)
- Can be supplied complete with shackles
- Can be supplied with integral signal conditioning
- Optional complete carry kit, including indicator
- Special electrical connections
- TEDS option when used with TR150 handheld display (Not available with Hazardous Area versions)
- Wireless version available. See WLL data sheet

## Features

- Ranges: 5 to 100 tonne
- Stainless steel construction (17-4PH)
- Environmentally sealed to IP66 (IP67 can also be offered)
- Special sizes and ranges available
- Higher range versions available
- Amplified output version available
- Ideally suited to be supplied calibrated with TR150 load cell indicator

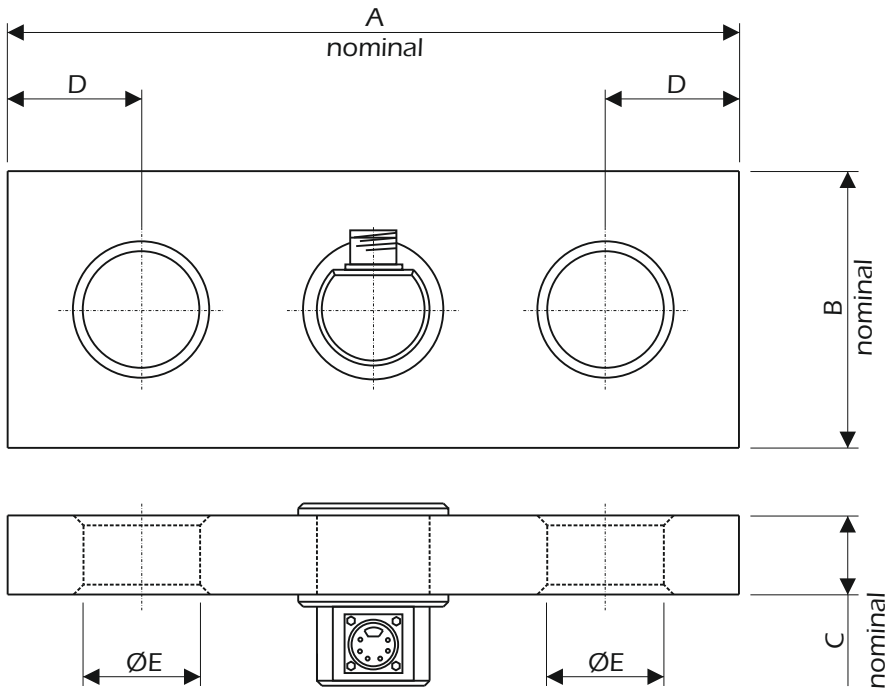
## Typical Applications

- Cable tension monitoring
- Under-hook hoist and crane weighing
- Towing/mooring tension
- Crane safe load monitoring



# TLL Stainless Steel Load Link

## Dimensions



All dimensions are in mm

Rating (tonnes)	A	B	C	D	ØE	Weight (kg)	Resolution (tonnes)
5	230	75	25	37.5	27	2.5	0.005
10	260	75	25	40	38	3	0.01
20	330	100	40	60	53	7.5	0.02
25	330	100	40	60	53	7.5	0.02
30	370	125	40	67.5	59	12	0.05
40	420	140	50	79	72	15	0.05
50	430	140	50	77.5	72	18	0.05
100	480	166	69	101	84	37	0.1

Note 1: Part numbers for ATEX versions will be suffixed with either -ATEX-D (explosion proof) or -ATEX-I (intrinsically safe) e.g. TLL-25-ATEX-D.

Note 2: Dimensions may change for hazardous area versions.



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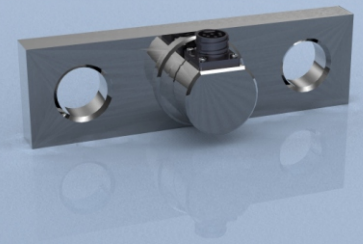
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Due to continual product development, LCM Systems Ltd reserves the right to alter product specifications without prior notice.

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