DSB7 CAN beam load cell (15t & 25t)

product description

The DSB7 CAN is a high-accuracy double-ended shear beam load cell designed for industrial vehicles and agricultural machinery that require precise payload control in demanding environments. The embedded CAN output functionality, supporting CANopen and J1939 protocols, enables seamless digital integration into modern weighing and control systems.

An embedded CAN board module transforms the DSB7 (15t & 25t) into a fully digital load cell, eliminating the need for external signal converters. It features a three-axis inclinometer for tilt compensation and is approved to Regulation 10, ISO 13766:2018, and ISO 14982:1998. Setup is straightforward and can be performed with a terminal emulation program or the Flintec FDC application, available from flintec.com.

applications

Under body vehicle weighing systems such as RCVs, tipper trucks and agricultural machinery including muck spreaders, trailers and feed mixers.

accessories + options

Compatible range of hardware | Optional CAN termination resistor

Optional through end-hole, weld block and spacer

Default: Free leads | Optional: M12, 5-pin male Code-A connector

key features

Corrosion resistant stainless steel

Hermetically sealed to IP68

Low profile

Designed for onboard vehicle weighing

Capacities of 15t (33klb) and 25t (55klb) available

Embedded CAN output (user-selectable CANopen or J1939)

Software-configurable parameters for flexible integration

Reg 10 approved, meets ISO 13766:2018 & 14982:1998 standards

Three-axis inclinometer data for tilt compensation

Works with Flintec FDC application for analysis & configuration

load cell specifications

Maximum capacity (E_{max})	t	15	25
Accuracy class	-	GP	
Temperature effect on minimum dead load output (TC_0)	%*RO/10°C	± 0.0400	
Temperature effect on sensitivity (TC_{RO})	%*RO/10°C	± 0.0200	
Combined error	%*RO	± 0.25	± 0.5
Creep error (30 minutes) / DR	%*RO	± 0.0600	
Zero balance	%*RO	± 1.5 (or better)	
Safe load limit (E_{lim})	%*E_{max}	200	
Ultimate load	%*E_{max}	300	
Safe side load	%*E_{max}	100	
Compensated temperature range	°C	–10...+40	
Load cell material	-	stainless steel 17-4 PH	
Sealing	-	complete hermetic sealing	
Protection according EN 60 529	-	IP68 (up to 2m water depth)	
Packet weight	kg	4.5 (15t), 15 (25t)	

The limits for Non-Linearity, Hysteresis, and TC_{RO} are typical values.

embedded CAN board specifications

Board model	-	CED-10
Power supply	VDC	+9 to +32
Supply Reversal Protection	-	Yes
Overvoltage Protection	VDC	≥38
CAN Termination Resistor	-	Optional
ADC Type	-	Single Channel 24- bit Delta Sigma
Digital Filters	-	Selectable FIR, IIR and Averaging
Calibration	-	Electronic calibration in mv/v (ecal) or Test Weights
Weight / Measurement Functions	-	Zero, Gross, Filter etc
CAN output cable	-	Free leads or an M12, 5 pin, Male, Code A connector
Inclinometer	-	Three-axis

Protocols Supported	-	CANopen & J1939
Baud Rate - CANopen	bit/s	10k, 20 k 50k, 125k, 250k, **500k**, 800k , 1M
Update rates – CANopen	-	4.7Hz to 4.8kHz
Baud Rate - J1939	bit/s	250k
Update rates – J1939	-	4.7Hz to 4.8kHz
Tilt Resolution	bit	12
Weighing Range	-	Single Interval
Minimum Input Sensitivity	µV/count	0.02
Resolution (External)	-	Resolution (External)
Regulations/ Standards	-	REG10, ISO 13766:2018, ISO14982: 1988
Protection According to EN60529	-	IP68

wiring

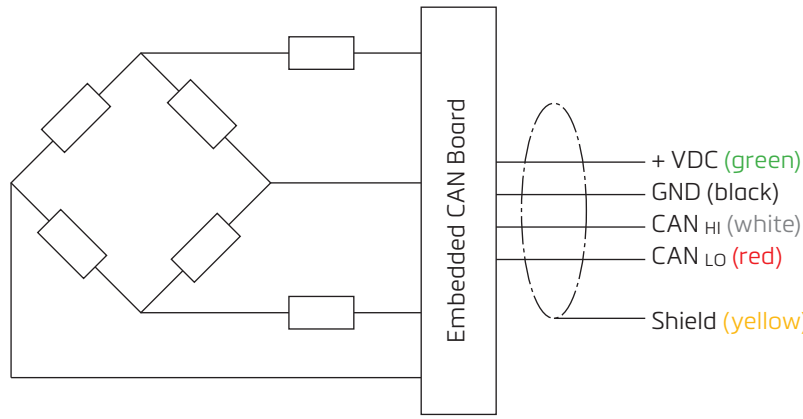
The load cell is provided with a shielded, 4 conductor cable (AWG 24).

Cable jacket: polyurethane

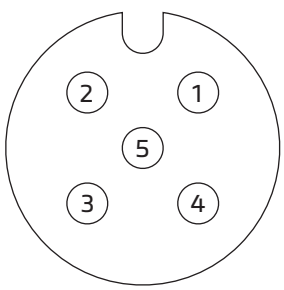
Cable length: 5m
(longer or shorter on request)

Cable diameter: 5mm

The shield is floating (On request the shield can be connected to the load cell body)



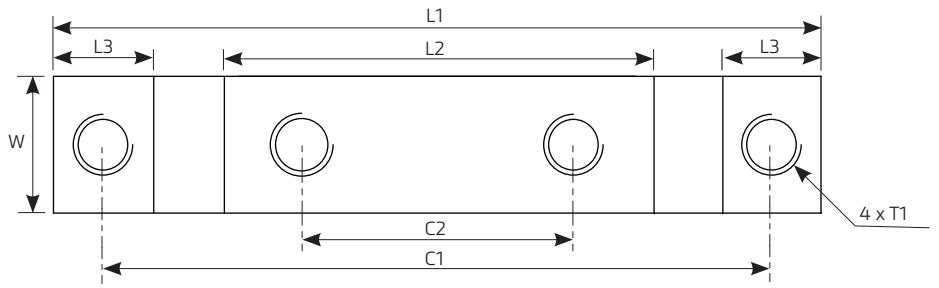
M12 5-PIN Male Code A



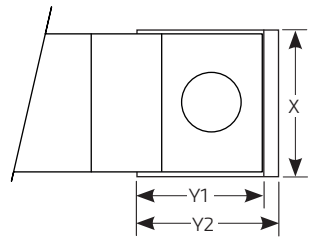
Pin	Function	Colour
1*	Shield**	Yellow
2	+ VDC	Green
3	GND	Black
4	CAN HI	White
5	CAN LO	Red

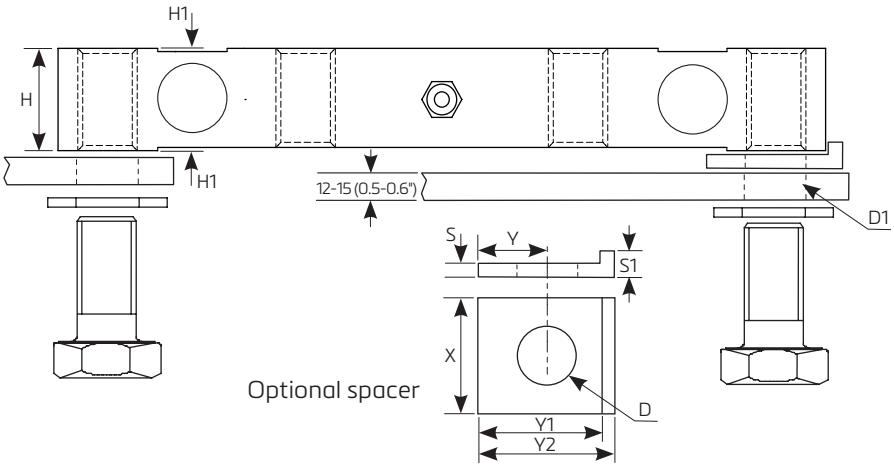
* Pin 1 shield connection is optional.
** Shield connected at sensor is optional.

15t Dimensions (mm)

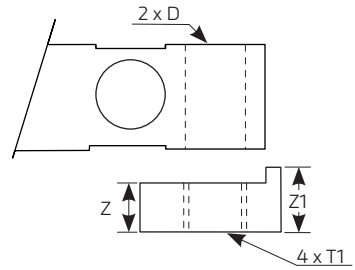


Optional through end-hole
DSB7 15t MT

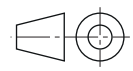




Optional spacer

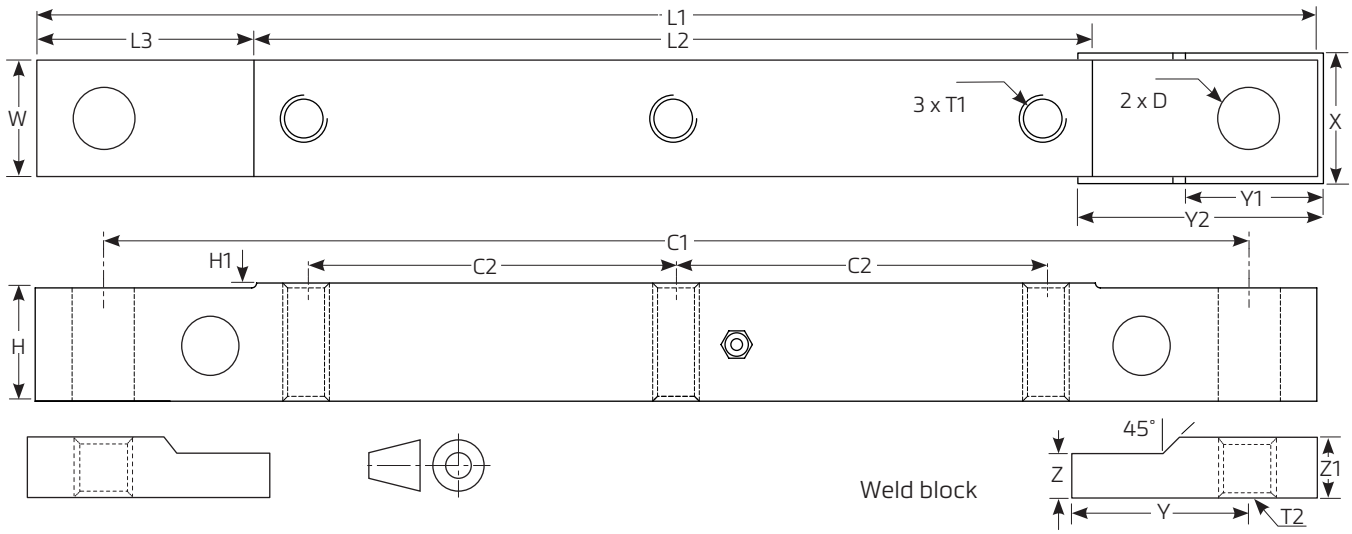


Optional weld block



Type	L1	L2	L3	C1	C2	H	H1	W	T1	D	D1	X	Y	Y1	Y2	S	S1	Z	Z1
15t	310	174	40	270	110	40	2.5	54	M24x2.0	-	25-26	56	28	48	54	8	14	-	-
15t MT	310	174	40	270	110	40	2.5	54	-	25	25-26	56	28	48	54	-	-	25	32

25t Dimensions (mm)



Weld block

Type	L1	L2	L3	C1	C2	H	H1	W	T1	T2	D	X	Y	Y1	Y2	Z	Z1
25 t	660	432	114	590.5	190.5	58	3.0	58	M24x2.0	M30x2.0	32	62	87	60.25	12 5	25	32

Specifications and dimensions are subject to change without notice