

## **Double-Link Beam Load Cell**

### **FEATURES**

- Capacities: 50k to 100k lbs.
- Nickel-plated element
- Certified to OIML R60 3000d and NTEP class IIIL 10000 divisions
- Sealing: IP67 (DIN 40.050)
- · Low profile, self-checking, and self-centering
- · Optimized design specially for weigh-bridge use
- Optional
  - Conduit adapter
  - FM approved for use in potentially explosive atmospheres

#### **APPLICATIONS**

- Truck scales
- · Railroad track scales
- "Legal-for-Trade" tank, bin and hopper weighing

#### **DESCRIPTION**

The 5223 is a hermetically sealed, end loaded, center supported double-ended shear beam.

This product is suitable for a wide range of truck and rail scales. It is designed to use parallel link





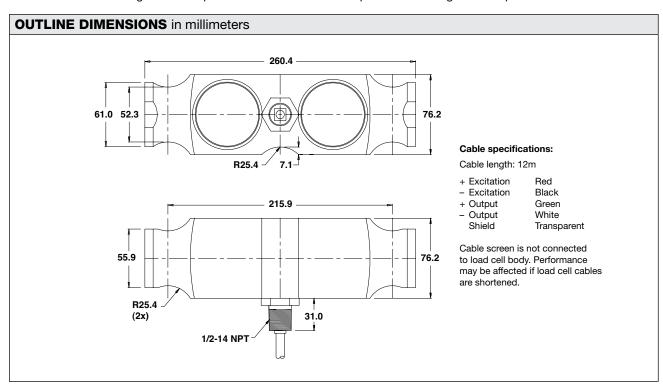




loading, considered by many weighing experts to be advantageous when compared to other loading techniques.

Fully welded stainless steel seals ensure high environmental integrity and provided that additional cable sealing is used, occasional submersion can occur without damage.

These products meet the stringent Weights and Measures requirements throughout Europe.



Revere



Celtron • Revere • Sensortronics • Tedea-Huntleigh

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### Double-Link Beam Load Cell

PARAMETER         VALUE         UNIT           Standard capacities (Emax)         50k, 65k, 100k         lbs.           Accuracy class according to OIML R-60 / NTEP         NTEP IIIL         Non-Approved         C3           Max. no. of verification intervals (nic)         10000         3000         Fmax/10000           Min. verification interval (Vmin)         1         Emax/10000         mV/V           Rated output (eS)         3         mV/V           Rated output tolerance         0.0030         ± mV/V           Zero balance         1.0         ±% FSO           Combined error         0.0200         0.0300         0.0200         ±% FSO           Non-repeatability         0.0100         0.0100         ±% FSO           Non-repeatability         0.0100         0.0100         ±% applied load           Creep error (30 minutes)         0.0027         0.0300         0.0245         ±% applied load           Creep error (20 minutes)         0.0027         0.00410         0.0070         ±% applied load/s*°C("F)           Temperature effect on sensitivity         (0.0010)         0.0070         0.0045         ±% applied load/s*°C("F)           Maximum safe over load         300         0.0040         0.0045         ±	SPECIFICATIONS					
Accuracy class according to OIML R-60 / NTEP         NTEP IIIL         Non-Approved         C3           Max. no. of verfication intervals (n <sub>IC</sub> )         10000         3000           Min. verification interval (V <sub>min</sub> )         mV/V           Rated output (=S)         3         mV/V           Rated output tolerance         0.0003         ±mV/V           Zero balance         1.0         ±% FSO           Combined error         0.0200         0.0300         0.0200         ±% FSO           Non-repeatability         0.0100         0.0100         0.0100         ±% FSO           Minimum dead load output return         0.0250         0.0300         0.0167         ±% applied load           Creep error (30 minutes)         0.0027         0.0045         ±% applied load         ±% applied load           Creep error (20 minutes)         0.0027         0.0045         ±% applied load         ±% applied load           Temp. effect on min. dead load output         (0.0008)         0.0140         0.0070         ±% applied load/5°C(/°F)           Temperature effect on sensitivity         (0.0010)         0.0070         0.0045         ±% applied load/5°C(/°F)           Maximum safe over load         150         % Emax           Ultimate over load         150	PARAMETER	VALUE			UNIT	
R-60 / NTEP         N1EP IIIL         N0n-Approved         C3           Max. no. of vertication intervals (N <sub>IIc</sub> )         10000         3000           Min. verification interval (V <sub>min</sub> )         E <sub>max</sub> /10000           Rated output (-S)         3         mV/V           Rated output tolerance         0.003         ±mV/V           Zero balance         1.0         ±% FSO           Combined error         0.0200         0.0300         0.0200         ±% FSO           Non-repeatability         0.0100         0.0100         0.0100         ±% FSO           Non-repeatability         0.0100         0.0300         0.0167         ±% applied load           Creep error (30 minutes)         0.0300         0.0245         ±% applied load           Creep error (20 minutes)         0.0027         0.0045         ±% applied load           Temp. effect on min. dead load output         (0.0008)         0.0140         0.0070         ±% FSO/5°C (/°F)           Temperature effect on sensitivity         (0.0010)         0.0070         0.0045         ±% applied load/5°C(/°F)           Maximum safe over load         150         % E <sub>max</sub> Maximum safe side load         100         % E <sub>max</sub> Deflection at E <sub>max</sub> 0.5 / 0.6 / 0.9 <th>Standard capacities (E<sub>max</sub>)</th> <th colspan="3">50k, 65k, 100k</th> <th>lbs.</th>	Standard capacities (E <sub>max</sub> )	50k, 65k, 100k			lbs.	
Min. verification interval (Vmin)   Emax/10000     Rated output (=S)   3   mV/V     Rated output tolerance   0.003   ±mV/V     Zero balance   1.0   ±% FSO     Combined error   0.0200   0.0300   0.0200   ±% FSO     Non-repeatability   0.0100   0.0100   0.0100   ±% FSO     Minimum dead load output return   0.0250   0.0300   0.0167   ±% applied load     Creep error (30 minutes)   0.0027   0.0045   ±% applied load     Creep error (20 minutes)   0.0027   0.0045   ±% applied load     Temp. effect on min. dead load output   (0.0008)   0.0140   0.0070   ±% FSO/5°C ("F)     Temperature effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temperature effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   (0.0010)   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   0.00070   0.0045   ±% applied load     Temp. effect on sensitivity   0.00070   0.0045   ±% applied load     Temp. effect on sensitivity   0.0010   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   0.0010   0.0070   0.0045   ±% applied load     Temp. effect on sensitivity   0.0010   0.0070   0.0045   ±% a		NTEP IIIL	Non-Approved	СЗ		
Rated output (=S)   3	Max. no. of verfication intervals (n <sub>lc</sub> )	10000		3000		
Rated output tolerance         0.003         ±mV/V           Zero balance         1.0         ±% FSO           Combined error         0.0200         0.0300         0.0200         ±% FSO           Non-repeatability         0.0100         0.0100         0.0100         ±% FSO           Minimum dead load output return         0.0250         0.0300         0.0167         ±% applied load           Creep error (30 minutes)         0.0027         0.0300         0.0245         ±% applied load           Creep error (20 minutes)         0.0027         0.0045         ±% applied load           Temp. effect on min. dead load output         (0.0008)         0.0140         0.0070         ±% FSO/5°C (/°F)           Temperature effect on sensitivity         (0.0010)         0.0070         0.0045         ±% applied load           Maximum effect on sensitivity         (0.0010)         0.0070         0.0045         ±% applied load/5°C(/°F)           Maximum safe over load         150         % Emax           Ultimate over load         300         % Emax           Maximum safe side load         100         % Emax           Deflection at Emax         0.5/0.6/0.9         mm           Excitation voltage         5 to 18         V	Min. verification interval (V <sub>min</sub> )			E <sub>max</sub> /10000		
The combination	Rated output (=S)	3			mV/V	
Combined error         0.0200         0.0300         0.0200         ±% FSO           Non-repeatability         0.0100         0.0100         0.0100         ±% FSO           Minimum dead load output return         0.0250         0.0300         0.0167         ±% applied load           Creep error (30 minutes)         0.0027         0.0045         ±% applied load         ±% applied load           Temp. effect on min. dead load output         (0.0008)         0.0140         0.0070         ±% FSO/5°C (°F)           Temperature effect on sensitivity         (0.0010)         0.0070         0.0045         ±% applied load           Maximum dead load         0         0.0070         ±% applied load         *% FSO/5°C (°F)           Minimum dead load         0         0.0045         ±% applied load         *% FSO/5°C (°F)           Minimum dead load         0         0.0045         ±% applied load         *% FSO/5°C (°F)         *% Emax         ** </th <th>Rated output tolerance</th> <th colspan="3">0.003</th> <th>±mV/V</th>	Rated output tolerance	0.003			±mV/V	
Non-repeatability         0.0100         0.0100         0.0100         ±% FSO           Minimum dead load output return         0.0250         0.0300         0.0167         ±% applied load           Creep error (30 minutes)         0.0027         0.0045         ±% applied load           Creep error (20 minutes)         0.0027         0.0045         ±% applied load           Temp. effect on min. dead load output         (0.0008)         0.0140         0.0070         ±% FSO/5°C (°F)           Temperature effect on sensitivity         (0.0010)         0.0070         0.0045         ±% applied load           Maximum dead load         0         0.0070         ±% applied load         *C(°F)           Minimum dead load         0         0.0070         ±% applied load         *C(°F)           Maximum safe over load         150         % Emax         *Emax           Ultimate over load         300         % Emax         *Emax           Maximum safe side load         100         % Emax         *Emax           Deflection at Emax         0.5/0.6/0.9         mm         **           Excitation voltage         5 to 18         V           Maximum excitation voltage         20         V           Output resistance         700±7	Zero balance	1.0			±% FSO	
Minimum dead load output return         0.0250         0.0300         0.0167         ±% applied load           Creep error (30 minutes)         0.0300         0.0245         ±% applied load           Creep error (20 minutes)         0.0027         0.0045         ±% applied load           Temp. effect on min. dead load output         (0.0008)         0.0140         0.0070         ±% applied load/5°C (°F)           Temperature effect on sensitivity         (0.0010)         0.0070         0.0045         ±% applied load/5°C (°F)           Minimum dead load         0         % Emax           Maximum safe over load         150         % Emax           Ultimate over load         300         % Emax           Maximum safe side load         100         % Emax           Deflection at Emax         0.5 / 0.6 / 0.9         mm           Excitation voltage         5 to 18         V           Maximum excitation voltage         20         V           Input resistance         700±7         Ω           Output resistance         ≥5000         MΩ           Compensated temperature range         −10 to +40         °C           Operating temperature range         −40 to +80         °C           Storage temperature range         −40 to +90 <th>Combined error</th> <th>0.0200</th> <th>0.0300</th> <th>0.0200</th> <th>±% FSO</th>	Combined error	0.0200	0.0300	0.0200	±% FSO	
Creep error (30 minutes)         0.0300         0.0245         ±% applied load           Creep error (20 minutes)         0.0027         0.0045         ±% applied load           Temp. effect on min. dead load output         (0.0008)         0.0140         0.0070         ±% applied load/5°C(/°F)           Temperature effect on sensitivity         (0.0010)         0.0070         0.0045         ±% applied load/5°C(/°F)           Minimum dead load         0         % Emax           Maximum safe over load         150         % Emax           Ultimate over load         300         % Emax           Maximum safe side load         100         % Emax           Deflection at Emax         0.5 / 0.6 / 0.9         mm           Excitation voltage         5 to 18         V           Maximum excitation voltage         20         V           Input resistance         700±7         Ω           Output resistance         700±7         Ω           Insulation resistance         ≥5000         MΩ           Compensated temperature range         −10 to +40         °C           Operating temperature range         −40 to +80         °C           Storage temperature range         −40 to +90         °C           Element material (D	Non-repeatability	0.0100	0.0100	0.0100	±% FSO	
Creep error (20 minutes)         0.0027         0.0045         ±% applied load           Temp. effect on min. dead load output         (0.0008)         0.0140         0.0070         ±% FSO/5°C (/°F)           Temperature effect on sensitivity         (0.0010)         0.0070         0.0045         ±% applied load/5°C(/°F)           Minimum dead load         0         % Emax           Maximum safe over load         150         % Emax           Ultimate over load         300         % Emax           Maximum safe side load         100         % Emax           Deflection at Emax         0.5 / 0.6 / 0.9         mm           Excitation voltage         5 to 18         V           Maximum excitation voltage         20         V           Input resistance         700±7         Ω           Output resistance         700±7         Ω           Insulation resistance         ≥5000         MΩ           Compensated temperature range         -10 to +40         °C           Operating temperature range         -40 to +80         °C           Storage temperature range         -40 to +90         °C           Element material (DIN)         Nickel-plated alloy steel	Minimum dead load output return	0.0250	0.0300	0.0167	±% applied load	
Temp. effect on min. dead load output         (0.0008)         0.0140         0.0070         ±% FSO/5°C (/°F)           Temperature effect on sensitivity         (0.0010)         0.0070         0.0045         ±% applied load/5°C(/°F)           Minimum dead load         0         % E <sub>max</sub> Maximum safe over load         150         % E <sub>max</sub> Ultimate over load         300         % E <sub>max</sub> Maximum safe side load         100         % E <sub>max</sub> Deflection at E <sub>max</sub> 0.5 / 0.6 / 0.9         mm           Excitation voltage         5 to 18         V           Maximum excitation voltage         20         V           Input resistance         700±7         Ω           Output resistance         ≥5000         MΩ           Compensated temperature range         -10 to +40         °C           Operating temperature range         -40 to +80         °C           Storage temperature range         -40 to +90         °C           Element material (DIN)         Nickel-plated alloy steel	Creep error (30 minutes)		0.0300	0.0245	±% applied load	
Temperature effect on sensitivity	Creep error (20 minutes)	0.0027	0.0045		±% applied load	
Minimum dead load         0         % Emax           Maximum safe over load         150         % Emax           Ultimate over load         300         % Emax           Maximum safe side load         100         % Emax           Deflection at Emax         0.5 / 0.6 / 0.9         mm           Excitation voltage         5 to 18         V           Maximum excitation voltage         20         V           Input resistance         700±7         Ω           Output resistance         700±7         Ω           Insulation resistance         ≥5000         MΩ           Compensated temperature range         −10 to +40         °C           Operating temperature range         −40 to +80         °C           Storage temperature range         −40 to +90         °C           Element material (DIN)         Nickel-plated alloy steel	Temp. effect on min. dead load output	(0.0008)	0.0140	0.0070	±% FSO/5°C (/°F)	
Maximum safe over load         150         % Emax           Ultimate over load         300         % Emax           Maximum safe side load         100         % Emax           Deflection at Emax         0.5 / 0.6 / 0.9         mm           Excitation voltage         5 to 18         V           Maximum excitation voltage         20         V           Input resistance         700±7         Ω           Output resistance         700±7         Ω           Insulation resistance         ≥5000         MΩ           Compensated temperature range         −10 to +40         °C           Operating temperature range         −40 to +80         °C           Storage temperature range         −40 to +90         °C           Element material (DIN)         Nickel-plated alloy steel	Temperature effect on sensitivity	(0.0010)	0.0070	0.0045	±% applied load/5°C(/°F)	
Ultimate over load         300         % Emax           Maximum safe side load         100         % Emax           Deflection at Emax         0.5 / 0.6 / 0.9         mm           Excitation voltage         5 to 18         V           Maximum excitation voltage         20         V           Input resistance         700±7         Ω           Output resistance         700±7         Ω           Insulation resistance         ≥5000         MΩ           Compensated temperature range         −10 to +40         °C           Operating temperature range         −40 to +80         °C           Storage temperature range         −40 to +90         °C           Element material (DIN)         Nickel-plated alloy steel	Minimum dead load	0			% E <sub>max</sub>	
Maximum safe side load         100         % E <sub>max</sub> Deflection at E <sub>max</sub> 0.5 / 0.6 / 0.9         mm           Excitation voltage         5 to 18         V           Maximum excitation voltage         20         V           Input resistance         700±7         Ω           Output resistance         700±7         Ω           Insulation resistance         ≥5000         MΩ           Compensated temperature range         −10 to +40         °C           Operating temperature range         −40 to +80         °C           Storage temperature range         −40 to +90         °C           Element material (DIN)         Nickel-plated alloy steel	Maximum safe over load	150			% E <sub>max</sub>	
Deflection at E <sub>max</sub> 0.5 / 0.6 / 0.9         mm           Excitation voltage         5 to 18         V           Maximum excitation voltage         20         V           Input resistance         700±7         Ω           Output resistance         700±7         Ω           Insulation resistance         ≥5000         MΩ           Compensated temperature range         −10 to +40         °C           Operating temperature range         −40 to +80         °C           Storage temperature range         −40 to +90         °C           Element material (DIN)         Nickel-plated alloy steel	Ultimate over load	300			% E <sub>max</sub>	
Excitation voltage         5 to 18         V           Maximum excitation voltage         20         V           Input resistance         700±7         Ω           Output resistance         700±7         Ω           Insulation resistance         ≥5000         MΩ           Compensated temperature range         -10 to +40         °C           Operating temperature range         -40 to +80         °C           Storage temperature range         -40 to +90         °C           Element material (DIN)         Nickel-plated alloy steel	Maximum safe side load	100			% E <sub>max</sub>	
Maximum excitation voltage         20         V           Input resistance         700±7         Ω           Output resistance         700±7         Ω           Insulation resistance         ≥5000         MΩ           Compensated temperature range         −10 to +40         °C           Operating temperature range         −40 to +80         °C           Storage temperature range         −40 to +90         °C           Element material (DIN)         Nickel-plated alloy steel	Deflection at E <sub>max</sub>	0.5 / 0.6 / 0.9			mm	
Input resistance $700\pm7$ Ω         Output resistance $700\pm7$ Ω         Insulation resistance       ≥5000       MΩ         Compensated temperature range       −10 to +40       °C         Operating temperature range       −40 to +80       °C         Storage temperature range       −40 to +90       °C         Element material (DIN)       Nickel-plated alloy steel	Excitation voltage	5 to 18			V	
Output resistance         700±7         Ω           Insulation resistance         ≥5000         MΩ           Compensated temperature range         −10 to +40         °C           Operating temperature range         −40 to +80         °C           Storage temperature range         −40 to +90         °C           Element material (DIN)         Nickel-plated alloy steel	Maximum excitation voltage	20			V	
Insulation resistance         ≥5000         MΩ           Compensated temperature range         -10 to +40         °C           Operating temperature range         -40 to +80         °C           Storage temperature range         -40 to +90         °C           Element material (DIN)         Nickel-plated alloy steel	Input resistance	700±7			Ω	
Compensated temperature range         -10 to +40         °C           Operating temperature range         -40 to +80         °C           Storage temperature range         -40 to +90         °C           Element material (DIN)         Nickel-plated alloy steel	Output resistance	700±7			Ω	
Operating temperature range         -40 to +80         °C           Storage temperature range         -40 to +90         °C           Element material (DIN)         Nickel-plated alloy steel	Insulation resistance	≥5000			ΜΩ	
Storage temperature range -40 to +90 °C  Element material (DIN) Nickel-plated alloy steel	Compensated temperature range	-10 to +40			°C	
Element material (DIN)  Nickel-plated alloy steel	Operating temperature range	-40 to +80			°C	
	Storage temperature range	-40 to +90			°C	
<b>Sealing (DIN 40.050 / EN60.529)</b> IP67	Element material (DIN)	Nickel-plated alloy steel				
	Sealing (DIN 40.050 / EN60.529)	IP67				

FSO-Full Scale Output

All specifications subject to change without notice.

## 广州锐拓自动化科技有限公司

## 传感器事业部内部使用资料



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