

# DSC SMART COMPRESSION LOAD CELL



## DESCRIPTION:

The DSC, Digital Single Column, is a stainless steel compression load cell with a digital output.

This digital output enables the user to communicate with each DSC independently of the others in the system, thus offering advantages in system setup, system control, corner correction, fault finding and load cell replacement.

This product is suitable for use in road and rail weighbridges and process weighing applications.

The welded construction and built-in surge protection ensure that this product can be used successfully in harsh environments.

## FEATURES:

- Digital output via RS485 or RS422 interface.
- Self-aligning, stainless steel single column.
- Hermetically sealed, IP66 and IP68
- Certified to OIML R60, **4000d**
- Internal diagnostics
- Internal lightning protection
- Maximum transmission distance 1200m
- **Capacities: 30, 40 and 50t**

# DSC: SPECIFICATIONS

Capacity	$E_{max}$	t	30, 40, 50	
Accuracy Class According to OIML R60			C3	C4
Maximum Number of Verification Intervals	$n_{ic}$		3000	4000
Minimum Verification Interval ( $v_{min} = E_{max}/Y$ )	$v_{min}$		$E_{max}/6000$	$E_{max}/8000$
Minimum Verification Interval, <b>Type MR</b>	$v_{min}$		$E_{max}/15000$	$E_{max}/20000$
Accuracy Class According to Type Designation <sup>1</sup>		CC	C3	C4
Combined Error		%S	$\leq \pm 0.050$	$\leq \pm 0.023$
Hysteresis		%S	$\leq \pm 0.050$	$\leq \pm 0.017$
Minimum Dead Load Output Return	MDLOR	%S	$\leq \pm 0.050$	$\leq \pm 0.017$
Minimum Dead Load Output Return, <b>Type MI7.5</b>	MDLOR	%S <sub>nom</sub>	$\leq \pm 0.067$	$\leq \pm 0.0067$
Non-Repeatability	$E_R$	%S	$\leq \pm 0.070$	$\leq \pm 0.035$
Creep Error (30 Minutes)		%S	$\leq \pm 0.060$	$\leq \pm 0.025$
Creep Error (20-30 Minutes)		%S	$\leq \pm 0.0200$	$\leq \pm 0.0053$
Temperature Effect on Minimum Dead Load Output	$TC_o$	%S <sub>nom</sub> /5°C	$\leq \pm 0.0250$	$\leq \pm 0.0117$
Temperature Effect on Minimum Dead Load Output, <b>Type MR</b>	$TC_o$	%S <sub>nom</sub> /5°C	$\leq \pm 0.0250$	$\leq \pm 0.0047$
Temperature Effect on Sensitivity	$TC_s$	%S/5°C	$\leq \pm 0.0250$	$\leq \pm 0.0088$
Minimum Dead Load	$E_{min}$	%E <sub>max</sub>	0	
Safe Load Limit	$E_{lim}$	%E <sub>max</sub>	150	
Ultimate Load	$E_{ult}$	%E <sub>max</sub>	300	
Deflection at $E_{max}$		mm	0.50	
Excitation Voltage		V	12.5 ... 18.0	
Recommended Excitation Voltage		V	15	
Maximum Current Consumption		mA	80	
Start-up Current		mA	150	
Rated Output	$S_{nom}$	Counts	240.000 $\pm$ 200	
Zero Balance		Counts	$\leq \pm 200$	
Insulation Resistance	$R_{ins}$	MΩ	$\geq 5000$	
Compensated Temperature Range	$T_{cps}$	°C	-10 ... +40	
Operating Temperature Range	$T_{opr}$	°C	-40 ... +80	
Storage Temperature Range	$T_{strg}$	°C	-40 ... +90	
Element Material			Stainless steel 1.4542	
Sealing (DIN 40.050 / EN 60.529)			IP66 and IP68	
Signal Update Per Second			25	
Baud Rate		Bits/s	9600	
Transmission Type			Asynchronous serial transmission	
Start Bits			1	
Data Bits			7	
Stop Bits			1	
Parity			Odd	
Maximum Transmission Cable Length		M	1200	
Data Transmission Interface			RS422 (4 communication wires) / RS485 (2 communication wires)	

1 The specified accuracies apply for the compensated temperature range.

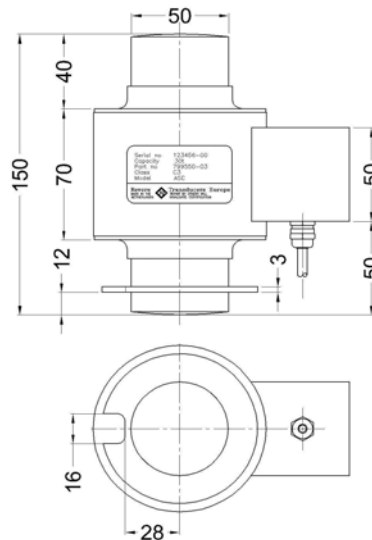
Correct mounting of the load cells is essential to ensure optimum performance. Shield is connected to the load cell body through a capacitor.  
Further information is available on request.

#### Cable specifications:

Cable length 15m.  
Excitation + Green  
Excitation - Black  
Rx + Yellow  
Rx - Blue  
Tx + Red  
Tx - White  
Shield Transparent

All dimension tolerances according to ISO 2768m, unless otherwise specified.

Also available:  
**Self Aligning Set ASC and DSC**  
See for more information:  
Assembly Guideline 02/3-110/01.



All specifications subject to change without notice.

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