

RC3D (legacy) compression load cell



product description

The RC3D is the digital version of the successful RC3 rocker column load cell. It features an integrated micro-processing system that improves accuracy and load cell handling. The digital output enables the user to independently communicate with each load cell. The device is built from stainless steel and is hermetically sealed, providing a high level of environmental protection.

There is a new generation of RC3D available which features daisy-chain configuration - See the Flintec website for more details.

applications

Weighbridges, hoppers, tanks and silos.

options

Integrated surge protectors

accessories

Range of hardware and electronics

Variety of cable and connector options

key features

Capacities of 30, 40 and 50t

Stainless steel construction

OIML approval to C3 and C4
(Y=15,000)

Environmental Protection IP68
with complete hermetic sealing

Self-restoring design

Digital load cell with built-in microcontroller and A/D conversion

Easy communication (RS485) and fast system setup

Improved handling of corner adjustment, system calibration, fault finding and load cell replacement



RoHS
compliant



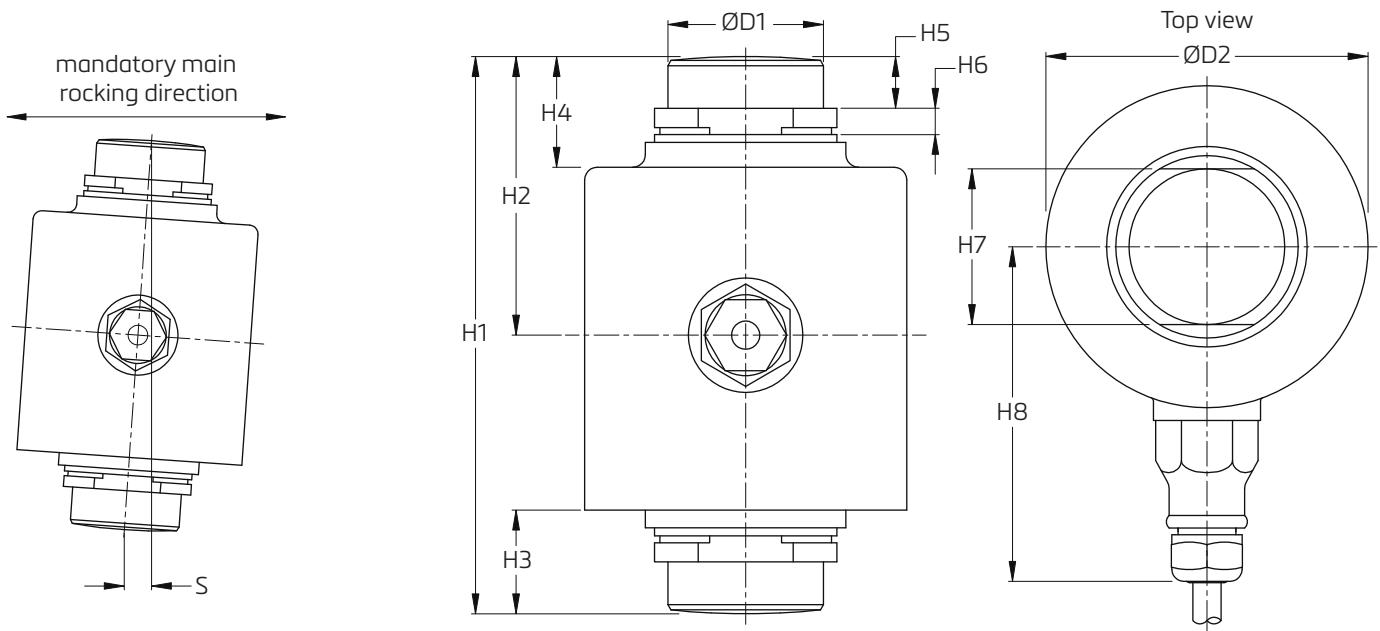
specifications

Maximum capacity (E_{max})	t	30/40/50			
Accuracy class according to OIML R60	-	(GP)	C1	C3	C4
Maximum number of verification intervals (n_{LC})	-	n.a.	1,000	3,000	4,000
Minimum load cell verification interval (v_{min})	-	n.a.	$E_{max} / 5,000$	$E_{max} / 15,000$	
Temperature effect on minimum dead load output (TC_0)	%*RO/10°C	± 0.0400	± 0.0280	± 0.0093	
Temperature effect on sensitivity (TC_{RO})	%*RO/10°C	± 0.0200	± 0.0160	± 0.0100	± 0.0080
Combined error	%*RO	± 0.0500	± 0.0300	± 0.0200	± 0.0180
Non-linearity	%*RO	± 0.0400	± 0.0300	± 0.0166	± 0.0125
Hysteresis	%*RO	± 0.0400	± 0.0300	± 0.0166	± 0.0125
Creep error (30 minutes) / DR	%*RO	± 0.0600	± 0.0490	± 0.0166	± 0.0125
Rated Output (RO)	counts	$200,000 \pm 200 (\pm 0.1\%*RO)$			
Zero balance	counts	$\pm 2,000 (\pm 1\%*RO)$			
Internal resolution	counts	550,000			
Excitation voltage	V	9...12			
Current consumption	mA	40			
Converter type	-	Sigma-Delta ratiometric			
Conversion rate	-	5 Hz (3 to 80 Hertz, factory configuration only)			
Digital filter	-	FIR automatically adjusted to conversion rate plus Rolling Average (1, 2, 4, 8, 16, 32 samples) post filtering			
Asynchrone interface	-	RS485A half duplex, multidrop with network address, 2,400...38,400baud Baudrate, data bits, parity and data output are programmable			
Number of bus addresses	-	32			
Safe load limit (E_{lim})	%* E_{max}	200			
Ultimate load	%* E_{max}	300			
Compensated temperature range	°C	-10...+40			
Operating temperature range	°C	-40...+60			
Load cell material	-	stainless steel 17-4 PH (1.4548)			
Sealing	-	complete hermetic sealing; cable entry sealed by glass to metal header			
Protection according EN 60 529	-	IP68 (up to 2m water depth) / IP69K			

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

The sum of Non-linearity, Hysteresis and TC_{RO} meets the requirements according to OIML R60 with $p_{LC}=0.7$.

product dimensions (mm)



Notes

* S_{max} = maximum lateral displacement of load introduction. Recommended gap 3...5 mm.

**RF = restoring force at S_{max} and E_{max} .

Capacity (t)	H1	H2	H3	H4	H5	H6	H7	H8	D1	D2	S_{max}^*	RF**
30 & 40	150	75	31	33	13	11.7	39	84	39	81	12	27 kN
50	178	89	32	34	17	8.5	44	94	44	99	9	51 kN

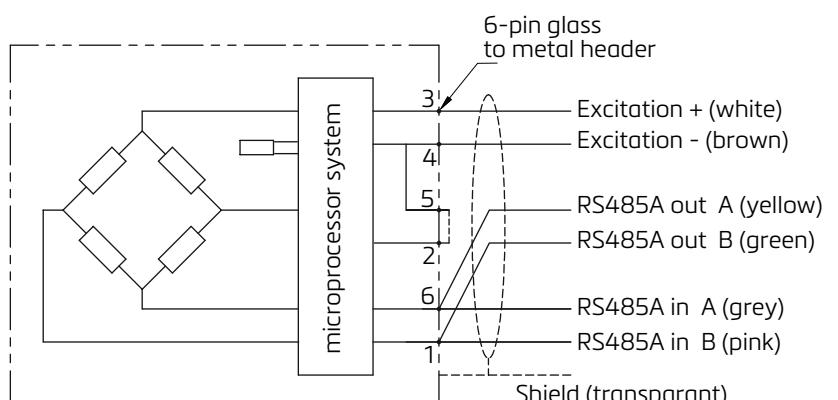
wiring

The load cell is provided with a 3x twisted pair cable (AWG 24) and shield according DIN 47100

Cable length: 18m

Cable diameter: 7.4mm

The shield is connected to the load cell body



Specifications and dimensions are subject to change without notice.