

The POWERCELL® 760 load cell is designed for use in vehicle scales and other heavy-capacity weighing applications. It is a compression load cell with an integral rocker-pin suspension. The stainless steel enclosure is hermetically sealed for watertight protection.

POWERCELL® 760 Heavy-Capacity Load Cell

Mechanical and Metrological Data								Units
Counterforce design	Direct stress compression column – rocker pin							
Approval Certificates (Metrology)	NTEP 88-091A4; EC TC2149; NSC S252A							
Rated Capacity (R.C.)	22,500			45,000		90,000		kg
Class/Nmax (HB44)	III L-M/10,000							
Vmin (HB44)	3.1			5.0		7.0		lb
Class/Nmax (OIML)	C3	C4	C5	C6	C3	C4	C3	
Vmin (OIML)	5.0	2.0	2.0	1.25	5.0	4.0	14.4	kg
Temperature coefficient of span ^{1,2}	< ±6.7	< ±5.0	< ±4.0	< ±3.3	< ±6.7	< ±5.0	< ±6.7	ppm R.C./°C
Creep at R.C., 10s to 30 min. ²	< ±167	< ±125	< ±100	< ±83	< ±167	< ±125	< ±167	ppm R.C.
Zero Return (after 30 min. load) ²	< ±167	< ±125	< ±100	< ±83	< ±167	< ±125	< ±167	ppm R.C.
Sensitivity at R.C.	100,000 ±40							Counts
Temperature coefficient of zero	HB44: < ±0.7; OIML: < ±0.8							Vmin/5°C
Linearity error ¹	< ±100							ppm R.C.
Hysteresis ¹	< ±160							ppm R.C.
Combined error (lin. and hyst.) ¹	< ±200							ppm R.C.
Non-repeatability	< ±50							ppm R.C.
Counterforce material	Stainless steel 17-4 PH (magnetic), hardness							>R.C.-40
Enclosure	304SS x 0.89 mm wall, laser welded to counterforce							
Strain gages	Four encapsulated gages							
Loading type	Compression (PIN)							
Load cell receivers	Stainless steel (optional)							
Deflection at R.C., typical	0.76					1.02		mm
Net shipping weight, typical	2.5					6.7		kg
Stability after warm-up, pk to pk 60s	20 (typical)							ppm
Barometric effect	< 0.64							kg/kPa
Electrical Data								Units
Data update rate	15 per second							Hz
Connector	Six-pin integral, glass to metal							
Data transmission	Bi-directional, two-wire RS-485 using Intel BITBUS for multiple digital load cells							
Supply voltage PIN JX-D (min/max)	7.5/30							V
Zero balance	< ±1.5							% R.C.
Insulation resistance	> 2000 at 50VDC							MΩ
Approvals (hazardous area) ³	Factory Mutual Job ID #OV4A2.AX							
Environmental Conditions								Units
Safe overload	150							% R.C.
Ultimate overload	250							% R.C.
Temperature compensation range	-10...+40							°C
Operating temperature range	-40...+55							°C
Safe storage temperature	-40...+70							°C
Warm-up period, min.	15							Minutes
Continuous exposure to humidity	100							% RH
Fatigue life at R.C.	> 1,000,000							Cycles
Protection against water/dust	IP68/IP69K							

¹Values may exceed limits in certain cases. Combined error of span, linearity error, and hysteresis will not exceed 70% of the error limits for HB44 and 80% of the error limits according to OIML IR76-1.

²TC of span, creep, and creep return for 10,000 HB44 typically meet 3000d OIML performance.

³Contact the METTLER TOLEDO Applications Group for details and assistance.

Contact your local METTLER TOLEDO authorized distributor or sales office for more information.