Vehicle Scales

Unequalled Reliability

Keeps Your Scale Working

Vehicle Weighing

POWERCELL PDX load cells provide reliable weighing for heavy-capacity applications such as truck and rail scales. They are designed to perform in the toughest industrial environments and in the most forbidding climates, from the tropics to the polar regions.

No Junction Boxes

POWERCELL PDX load cells connect to one another in a simple network that eliminates the need for high-maintenance junction boxes. Load cells, cables, and connectors are watertight, sealing the entire network against failures caused by floods and normal scale cleaning.

Advanced Diagnostics

Unlike other load cells, POWERCELL PDX load cells have a predictive diagnostics system that constantly monitors the performance of each load cell and automatically corrects for changes in temperature and other environmental factors. It instantly alerts the scale operator to any potential problems in the scale system.

Rocker Column

An integral rocker-column suspension automatically aligns the load cell for accurate weighing. A debris shield keeps the lower end of the rocker column free of debris and stones that can affect weighing accuracy.

POWERCELL® PDX® Load Cell

The load cell uses proven POWERCELL technology that has demonstrated the ability to meet the real-world demands of vehicle weighing. It builds on past generations of POWERCELL load cells by adding the industry's most advanced diagnostic capabilities. To provide the ultimate in reliability, the predictive diagnostics system continually monitors each load cell and its environment. It provides peace of mind by verifying that each load cell in a system is performing properly. The POWERCELL PDX load cell system is designed for proactive service, alerting you to potential problems before they occur. It helps avoid problems and, if problems do occur, enables service technicians to make the right repairs the first time and make them quickly.

METTLER TOLEDO

POWERCELL® PDX® Load Cell Specifications

Parameter		Unit of Measure	Specification				
Trade Name			POWERCELL PDX				
Model Number			SLC820				
Load Cell Type			Column Compression, Digital Weight Processor (DWP)				
Rated Capacity (R.C.)[1]		t (klb, nominal)	30 (66)			50 (110)	
Sensitivity at R.C.		d @ R.C.	300,000			500,000	
Communication			Controller Area Network (CAN), Encrypted				
Communication Rate		kbit/sec	125				
Effective System Update Rate (14 cells)		Hz	40				
Effective System Update Rate (24 cells)		Hz	15				
Weighing Performance							
Cable Length, Cell to Cell (typical)		m (ft)	5, 12 (16, 39)				
Cable Length, Home Run (maximum)		m (ft)	100, 200, 300 (328, 656, 984)				
Warm-up Time from Cold Start		minutes	15				
Effect of Cable Length on System Accuracy		kg	0				
Temperature Effect on Minimum Dead Load Output		Vmin/°C (.../°F)	0.8/5°C (0.8/9°F)				
Temperature Range	Compensated[2]	°C (°F)	-10 to +40 (+14 to +104)				
	Operating	°C (°F)	-30 to +55 (-22 to +131)				
	Safe Storage	°C (°F)	-40 to +80 (-40 to +176)				
Humidity Effect, Continuous		100% RH	0				
Barometric Pressure Effect on Zero Load Output		Vmin/kPa	< 1				
Metrology	Linearity[3]	ppm R.C.	< 100				
	Hysteresis	ppm R.C.	< 160				
	Combined Error[3]	ppm R.C.	< 300				
Temperature Effect on		Class	C3	C4	C6	C3	C4
	Span[3, 4]	ppm R.C./°C	<± 13.3	<± 10.0	<± 6.6	<± 13.3	<± 10.0
Creep at R.C.[4]	10s to 30m	ppm R.C.	<± 167	<± 125	<± 83	<± 167	<± 125
Zero Return[4]	30 min at R.C.	ppm R.C.	<± 167	<± 125	<± 83	<± 167	<± 125
Nonrepeatability		ppm R.C.	<± 50				
Zero Balance		%R.C.	< 0.1				
Predictive Diagnostics (System)							
Breach Detection			Loss of Hermetic Seal				
Maximum Overload			Maximum Overload				
Load Cell Temperature			Minimum, Maximum, Actual				
Asset Management			Serial Number				
Load Cell Voltage			Minimum, Maximum, Actual				
Communication Signal Level			High, Low				
Tilt Angle			Current Position, Maximum Recorded				
Metrological Approvals							
European/OIML Approval[5]	Number		TC7579; T2206; R60/2000-NL1-09:08				
	Class		C3	C4	C6	C3	C4
	nmax		3000	4000	6000	3000	4000
	Y		6383	12,500	20,000	8772	12,500
	Vmin	kg	4.7	2.4	1.5	5.7	4.0
	pLC		0.8 (Terminal = 1)				
	Humidity Symbol		CH (Hermetic Seal)				
	Min. Dead Load	kg	50				
NTEP Approval[5]	Number		NTEP 08-090				
	Class		III L M				
	nmax		10,000				
	Vmin	kg (lb)	1.8 (4.0)			2.2 (4.9)	
	Min. Dead Load	kg (lb)	50 (110)				

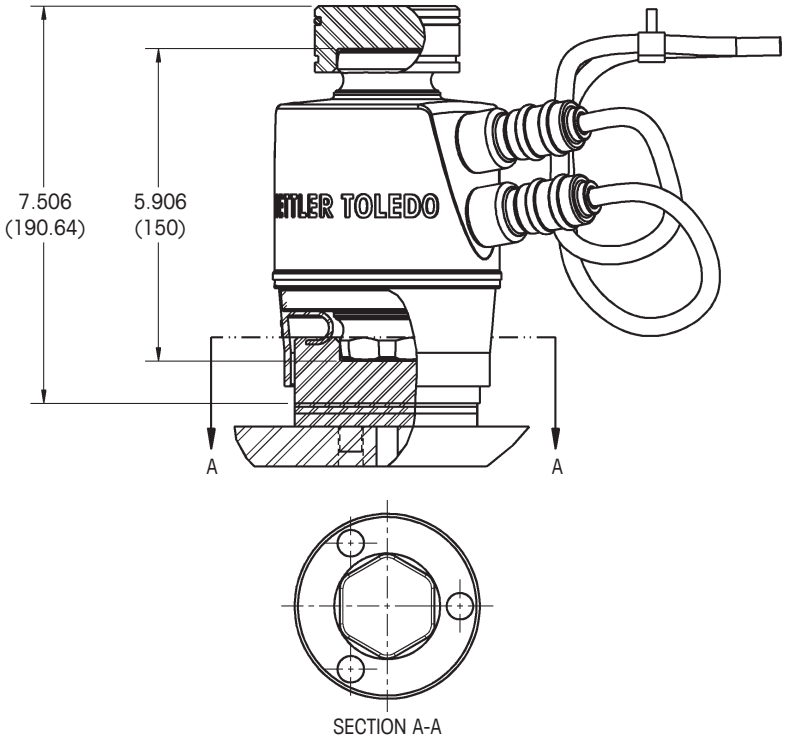
[1] R.C. = Rated or full capacity as specified on the data plate.
[2] Certified according to approval agency or notified body (third party).
[3] The combined error of span, linearity error, and hysteresis will not exceed 80% of the error limits for OIML R60.
[4] TC of span, creep, and creep return for HB44 typically meet OIML C3 performance.
[5] See certificate for complete information.

POWERCELL® PDX® Load Cell Specifications

Parameter		Unit of Measure	Specification	
Hazardous Area				
ATEX	Number		KEMA 09 ATEX 0063	
	Rating		II 3 G Ex nA II T6	
	Rating		II 3 D Ex tD A22 IP6X T 85°C	
			Umax = 26.4V, Imax = 2A	
			Pmax = 0.5W / Load Cell	
	Ta		-40°C < Ta < +55°C	
IECEx	Number		IECEx KEM 09.0028	
	Rating		Ex nA II T6	
	Rating		Ex tD A22 IP6X T 85°C	
			Umax = 26.4V, Imax = 2A	
			Pmax = 0.5W / Load Cell	
	Ta		-40°C < Ta < +55°C	
Electrical				
Supply Voltage Regulated in the Load Cell	Typical	V DC	12 or 24 (external supply)	
	Minimum/Maximum	V DC	12/24	
Lightning Protection[6]	Max. Tested (IEEE4-95)	A	> 80,000	
Insulation Resistance @ 50VDC		MΩ	≥ 2000	
Breakdown Voltage		V AC	≥ 500	
Mechanical				
Material	Spring Element		17-4 PH Stainless Steel (magnetic)	
	Enclosure		Electropolished 304 Stainless Steel	
	Low-Profile Receivers		17-4 PH Forged and Machined Stainless Steel, Hardened	
	Anti-Rotation		6-Point Hexagonal	
	Cable Entry Fittings		Stainless Steel, Laser Welded	
	Cable, Load Cell		Braided Stainless Steel, Oil Resistant, 9mm, 5 Conductors, Internal/External Shielded with Drain Wires	
	Cable, Home Run		Braided Stainless Steel, Oil Resistant, 14mm, 4 Conductors, Internal/External Shielded with Drain Wires	
	Connectors		Quick-Connect, Stainless Steel, Glass-to-Metal	
Protection	Type		Hermetic (submersible)	
	IP Rating		IP68 (1m - 7 days submersion), IP69K test reports on file	
	NEMA Rating		NEMA 6P (submersible)	
Load Limit	Safe	%R.C.	200	
	Ultimate	%R.C.	300	
Safe Dynamic Load		%R.C.	70	
Direction of Loading			Compression	
Deflection @ R.C., typical		mm (in)	0.51 (0.020)	0.71 (0.028)
Horizontal Restoring Force		%A.L./mm[7]	1.82	
Shipping Weight, nominal		kg (lb)	3.0 (6.6)	3.2 (7.0)

[6] Tested by Elektro Swiss AG (40,000A) and Lightning Technologies, Inc. (80,000A).
[7] Percent of the vertical applied load (A.L.) per mm of displacement.

POWERCELL® PDX® Load Cell Dimensions inch (mm)



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For more information