Vehicle Scale Load Cell

Advanced Accuracy Performance

In Vehicle Weighing Applications

POWERCELL® Technology

POWERCELL GDD load cells provide accurate weighing for heavy-capacity applications such as truck and rail scales. Digital signal processing provides advanced weighing performance compared to analog load cells.

Simple Connectivity

POWERCELL GDD load cells connect through a junction box in a simple network. Cables are securely attached to the load cells at the factory for easy installation in the field.

Improved Diagnostics

Unlike other load cell systems with junction boxes, POWERCELL GDD provides diagnostic capability that makes individual load cell outputs visible from the terminal. This simplifies problem identification and repair.

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® GDD™ Load Cell Kit

The load cell system uses proven POWERCELL technology that has demonstrated the ability to provide accurate vehicle weighing in demanding applications. The stainless steel construction is laser welded to provide IP68 and IP69K protection for survival in harsh environments.

Digital signal processing improves weighing accuracy and repeatability over traditional load cell technologies.

Diagnostic capabilities embedded in the load cell and scale terminal allow problems to be identified and repaired quickly. The POWERCELL GDD load cell is approved for global applications that require either OMIL C3 or NTEP 10000d IIIL-M approvals. The kits include the hardware required to complete a full truck scale installation.

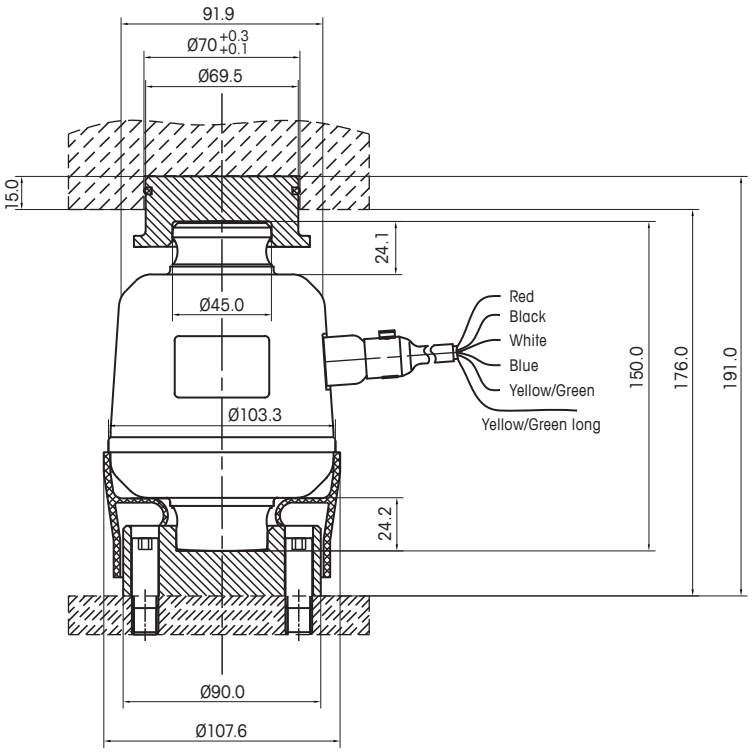
METTLER TOLEDO

POWERCELL GDD Load Cell Specifications

PARAMETER		UNITS	SPECIFICATION		
Trade Name			POWERCELL® GDD™		
Model Number			SLC720		
Cell Type			Column Compression - Digital Weight Processor (DWP)		
Rated Capacity (R.C.[1])		t	20	30	50
Sensitivity at R.C.		d @R.C.	200000	300000	500000
Communication			Controller Area Network (CAN) - Encrypted		
Communicaton Rate		kbit/sec	125		
Effective System Update Rate		Hz	15 with 12 cells		
Weighing Performance					
Warm-up Time from Cold Start		min	15.0		
Effect of Cable Length on System Accuracy		kg	0		
Temperature Effect on Minimum Dead Load Output		kg/°C	<± 0.8*Vmin(OIML)/5°C		
Temperature Range	Compensated	°C	-10 to +40		
	Operating	°C	-40 to +55		
	Safe Storage	°C	-40 to +80		
Humidity Effect - Continuous 100% RH		kg	0		
Barometric Pressure Effect on Zero Load Output		kg/kPa	<±1.2		
Metrology	Class		C3		
	Linearity[2]	ppm R.C.	< 100		
	Hysterisis[2]	ppm R.C.	< 160		
Temperature Effect on	Span[2]	ppm R.C./°C	<± 13.3		
	Combined Error[2]	ppm R.C.	<300		
Creep at R.C.	10s to 30m	ppm R.C.	<± 167		
Zero Return	After 30 min at R.C.	ppm R.C.	<± 167		
Non Repeatability		ppm R.C.	<± 100		
Zero Balance at 20°C		% R.C.	<± 0.1		
Diagnostics (system)					
Diagnostics (system)			Individual load cell outputs visible from the terminal.		
Metrological Approvals					
European / OIML Approvals[3]	Standard		OIML R60		
	European Test Certificate		TC8298		
	OIML Certificate of Conformity		R60/2000-NL1-12.53		
	Class		C3		
	nmax (OIML)		3000		
	Y[4]	kg/kg	6061	6383	8772
	Vmin (OIML)	kg	3.3	4.7	5.7
	PLC		0.8		
	Humidity Symbol		CH (Hermetic Seal)		
	Min. Dead Load	kg	50		
NTEP Approval3	Standard		NIST Handbook 44		
	Certificate Number		NTEP 13-010		
	Class		III L-M		
	nmax (HB44)		10000		
	Vmin (HB44)	kg	1.2	1.8	2.2
	Min. Dead Load	kg	50		
Electrical					
Load Cell Cable Length		m	13 (attached)		
Cable Length Home-Run		m	8 to 200 in selected pre-terminated lengths		
Cable Material	Cable Load Cell		Double shield 4 wires		
	Cable Home Run		Double shield 5 wires		
Supply Voltage Regulated in the cell	Typical	V DC	24		
	Minimum/Maximum	V DC	10 / 26.4		
Lightning Protection5	Max (tested)	A	15000		
Mechanical					
Material	Spring Element		Stainless (magnetic)		
	Enclosure		Electropolished 304 Stainless		
	Low Profile Receivers		Stainless (magnetic)		
	Anti-Rotation		Integral, 6-Point Hexagonal Mount		
	Cable entry fittings		Stainless, Laser Welded, Glass-to-Metal Seal		
Protection	Type		Hermetic (submersible)		
	IP Rating		IP68 & IP69k		
Load Limit	Safe	%R.C.	200		
	Ultimate	%R.C.	250		
Safe Dynamic Load		%R.C.	70		
Fatigue Life		cycles @R.C.	>1,000,000		
Direction of Loading			Compression (↓)		
Shipping Weight		kg	3.7	3.9	4.1

(1) RC = Rated, or full capacity as specified on the dataplate.
(2) The combined error of span, linearity error, and hysterisis will not exceed 80% of the error limits according to OIML R60.
(3) See certificate for complete information.
(4) Y = Emax / Vmin
(5) Testing by Lightning Technologies Inc. with Lightning Protection Kit.
Patents pending, POWERCELL is a trademark of METTLER TOLEDO

POWERCELL GDD Load Cell Dimensions



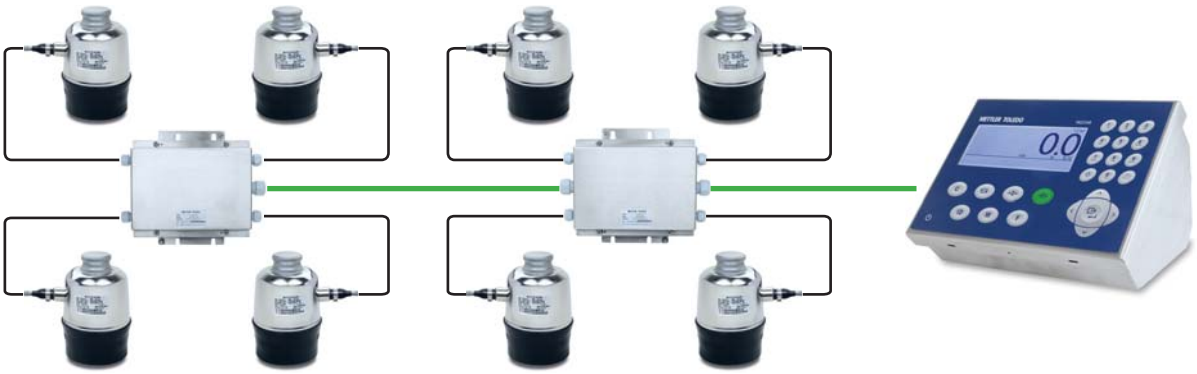
Cable Color Code	
Red	VIN
Black	GND
White	CANH
Blue	CANL
Yellow/Green	CGND
Yellow/Green long	SHIELD

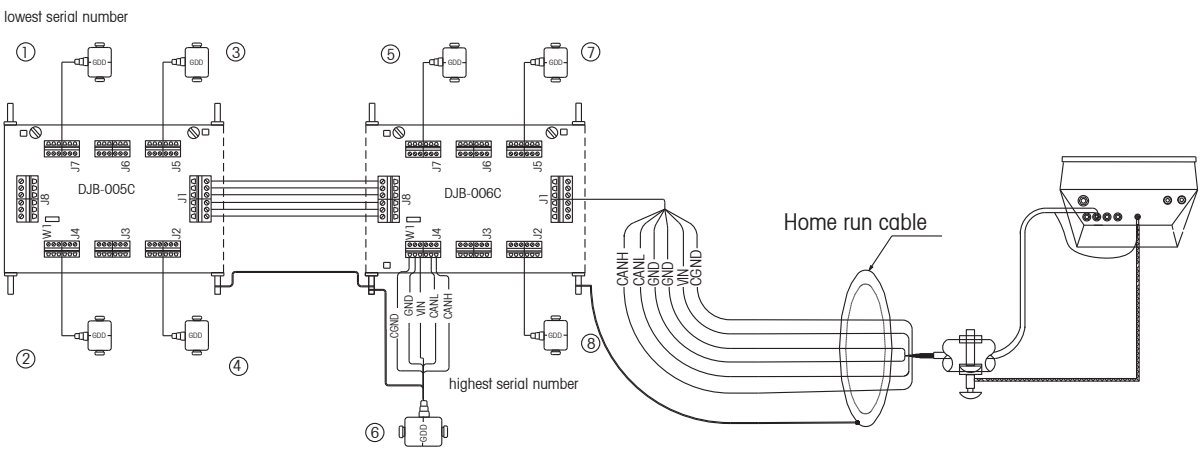
MG Kits with POWERCELL GDD load cells

Part Number	Model	Load Cell			Upper & Lower Receiver Set	Receiver Mounting Pins	Junction Box			Cable 8m	Receiver Grease	Leveling Shim Kit
		20t Capacity	30t Capacity	50t Capacity			with 5 holes	with 6 holes	with 7 holes	J-Box to J-Box		
30085197	MG2004	4			4	12	1				1	2
30085198	MG2006	6			6	18			1		1	3
30085199	MG2008	8			8	24	1	1		1	1	4
30085200	MG3004		4		4	12	1				1	2
30085201	MG3006		6		6	18			1		1	3
30085202	MG3008		8		8	24	1	1		1	1	4
30085203	MG5004			4	4	12	1				1	2
30085204	MG5006			6	6	18			1		1	3
30085205	MG5008			8	8	24	1	1		1	1	4

Note: Home run cable (based on the required length), Lightning Protection Kit, locating tool, and terminal are ordered seperately .

POWERCELL GDD Load Cell Wiring (8 Load Cell System)





MG Kits Accessories

Part Number	Description
72260837	Home Run Cable, 8m, Junction Box to Terminal
72260838	Home Run Cable, 9m, Junction Box to Terminal
72260839	Home Run Cable, 15m, Junction Box to Terminal
72260840	Home Run Cable, 20m, Junction Box to Terminal
72260841	Home Run Cable, 25m, Junction Box to Terminal
72260842	Home Run Cable, 30m, Junction Box to Terminal
72260843	Home Run Cable, 40m, Junction Box to Terminal
72260844	Home Run Cable, 50m, Junction Box to Terminal
72260845	Home Run Cable, 80m, Junction Box to Terminal
72260846	Home Run Cable, 100m, Junction Box to Terminal
72260847	Home Run Cable, 150m, Junction Box to Terminal
30059953	Home Run Cable, 180m, Junction Box to Terminal
30769111	Home Run Cable, 200m, Junction Box to Terminal
30085206	Leveling Shim Kit (1,2,3 & 4mm)
30038533	Locating Tool POWERCELL GDD
68004326	Receiver Grease
61043831	Lightning Protection Kit

MG Kits Spare Parts

Part Number	Description
72246551	POWERCELL GDD Load Cell, 20 ton, C3
72236271	POWERCELL GDD Load Cell, 30 ton, C3
72236274	POWERCELL GDD Load Cell, 50 ton, C3
30027472	Junction Box, DJB-005C
30027473	Junction Box, DJB-006C
30027474	Junction Box, DJB-007C
72242501	Lower Receiver, POWERCELL GDD
30038535	Upper Receiver, POWERCELL GDD
61043497	Receiver Mounting Pin, Hex
72247437	Rubber Skirt, POWERCELL GDD

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