

Hazardous-Area Solution Division 1 and Zone 1/21



Load Cells

Three models of approved POWERCELL® load cells enable you to use the hazardous-area solution for vehicle scales, floor scales, and tank scales. The load cells feature digital compensation to maintain high weighing accuracy and advanced diagnostics to provide reliable performance.



Barrier

The Model CBR-a-X barrier is installed in a safe area, such as a control room or scale house. It uses zener diodes and semiconductors to limit the energy delivered into the hazardous area, providing redundant protection against ignition of potentially explosive atmospheres.



Converter Box

The Model CCB-a-X converter box is an intrinsic-safety device for installation in a hazardous area. It transmits the power and signal from the barrier to as many as four CANbus load cells. The converter box is hermetically sealed for IP68 protection against water and dust.



Scale Terminal

We offer a variety of CANbus-compatible terminals for hazardous-area applications. Select the terminal that provides the processing and transaction capabilities you need. Capabilities range from basic weighing to advanced filling/dosing and connectivity to automation equipment.

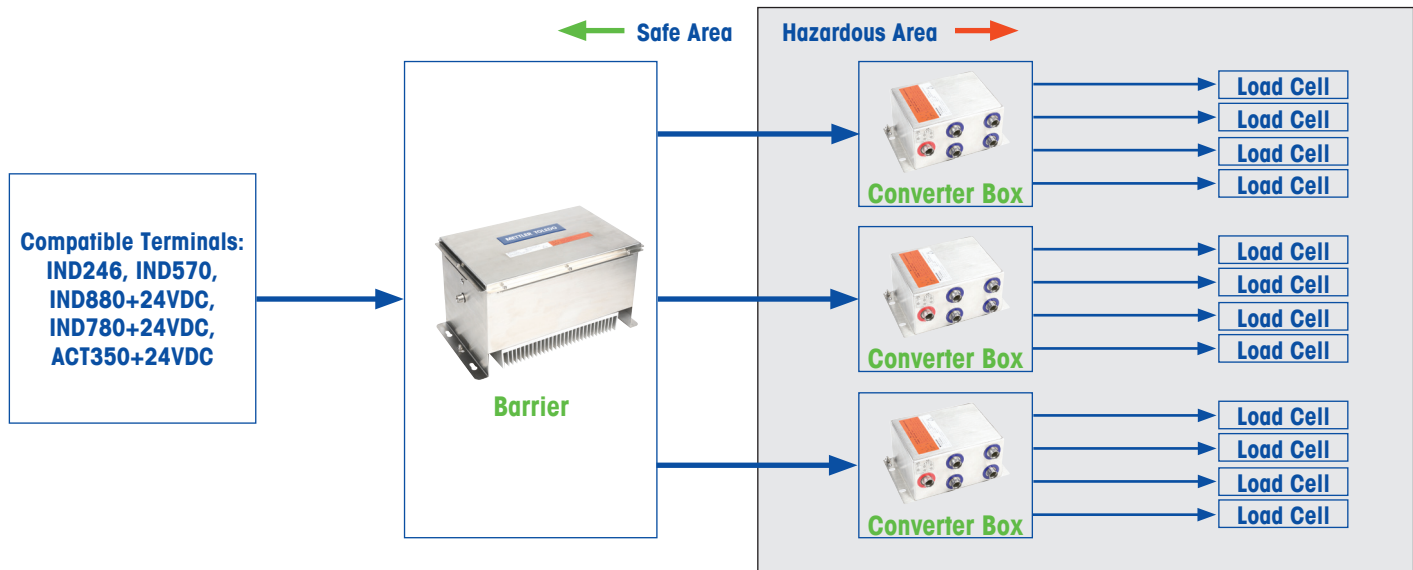


Safe Weighing for Division 1 and Zone 1/21

Combine the accurate weighing of POWERCELL® load cells with safe operation in Division 1 and Zone 1/21 hazardous areas. Our approved solution enables you to operate vehicle scales, floor scales, and tank scales in hazardous areas. The solution uses an intrinsic-safety barrier and converter box to limit the power from the scale terminal to levels that can be transmitted safely to load cells located inside the hazardous area. It provides a fully approved POWERCELL® weighing system that uses the CANbus communication protocol.

- FM approval: United States and Canada
- ATEX approval: Europe
- IECEx approval: Global

POWERCELL® Zone 1/Division 1 Solution



As many as three converter boxes can be connected to the barrier, and as many as four load cells can be connected to each converter box. All load cells in a system must be the same type of approved load cell: SLC820, SLC611D, or SLB615D.

POWERCELL® Zone 1/Division 1 Kits



CANbus Barrier

Material Number	Description	Quantity
30548986	POWERCELL® Zone 1/Division 1 Kit (for 1-4 Load Cells)	
30283767	CANbus Barrier CBR-1-X EN	1
30129884	CANbus Converter Box CCB-4-X EN	1
30302771	Connector Cap SLC POWERCELL® EN	4
61044730 ^A	PDX Home-Run Cable Assembly, 10m PMSS, Braided	1
30420537 ^B	PDX Home-Run Cable Assembly, 4m PMSS, Braided	1



CANbus Converter Box

Material Number	Description	Quantity
30548987	POWERCELL® Zone 1/Division 1 Kit (for 5-8 Load Cells)	
30283768	CANbus Barrier CBR-2-X EN	1
30129884	CANbus Converter Box CCB-4-X EN	2
30302771	Connector Cap SLC POWERCELL® EN	8
61044730 ^A	PDX Home-Run Cable Assembly, 10m PMSS, Braided	1
30420537 ^B	PDX Home-Run Cable Assembly, 4m PMSS, Braided	1



Connector Cap

Material Number	Description	Quantity
30549028	POWERCELL® Zone 1/Division 1 Kit (for 9-12 Load Cells)	
30283769	CANbus Barrier CBR-3-X EN	1
30129884	CANbus Converter Box CCB-4-X EN	3
30302771	Connector Cap SLC POWERCELL® EN	12
61044730 ^A	PDX Home-Run Cable Assembly, 10m PMSS, Braided	1
30420537 ^B	PDX Home-Run Cable Assembly, 4m PMSS, Braided	1



Home-Run Cable

^A = Americas Region Only
^B = Europe and Asia/Pacific Regions Only

Kits do not include load cells, cell-to-converter-box cables, barrier-to-converter-box cables, or scale terminal. Those items must be purchased separately.

Order Information for Cables and Cable Glands

	Description	Number of Load Cells (LC)			Cable Length					
		1-4 LC	5-8 LC	9-12 LC	3m (10 ft)	4m (13 ft)	5m (16.4 ft)	10m (32.8 ft)	12m (40 ft)	20m (65.6 ft)
		Quantity			Item Number					
1	Home-run cable (max. 20m), PU	1x			-	-	30302758	30302759	-	30302760
	Braided home-run cable (max. 40m), 4m or 10m cable included in POWERCELL kit				-	30420537 ^B (incl. in kit)	-	61044730 ^A (incl. in kit) 30398802 ^B	-	61044731 30398803 ^B
2	Cable gland for PU home-run cable with IND780PDX	1x			30095639					
	Cable gland for braided home-run cable	-			Included with terminal					
3	Braided barrier-to-converter-box cable (max. 120m)	1x	2x	3x	-	-	-	61044730 30398802 ^B	-	61044731 30398803 ^B
4	SLC820/SLC6111D LC-to-converter-box cable (max. 12m)	1-4x	5-8x	9-12x	30302766	-	30302767	30302768	Out of spec	
	SLC820/SLC6111D braided LC-to-converter-box cable (max. 12m)				-	-	61043481 30398799 ^B	61043485 30398801 ^B	61043487	Out of spec
	SLB615D LC-to-converter-box cable (max. 12m)				-	-	-	-	30494833	Out of spec

^A = Americas Region Only



^B = Europe and Asia/Pacific Regions Only

	Description	Number of Load Cells (LC)			Cable Length				
		1-4 LC	5-8 LC	9-12 LC	30m (100 ft)	40m (131 ft)	50m (166 ft)	100m (333 ft)	120m (400 ft)
		Quantity			Item Number				
1	Home-run cable (max. 20m), PU	1x			Out of spec				
	Braided home-run cable (max. 40m), 4m or 10m cable included in POWERCELL kit				61044732 30420341 ^B	61044733 30420342 ^B	Out of spec		
2	Cable gland for PU home-run cable with IND780PDX	1x			30095639				
	Cable gland for braided home-run cable	-			Included with terminal				
3	Braided barrier-to-converter-box cable (max. 120m)	1x	2x	3x	61044732 30420341 ^B	61044733 30420342 ^B	61044734 30420343 ^B	61044739 30420508 ^B	61044741 30420510 ^B
4	SLC820/SLC6111D LC-to-converter-box cable (max. 12m)	1-4x	5-8x	9-12x	Out of spec				
	SLC820/SLC6111D braided LC-to-converter-box cable (max. 12m)				Out of spec				
	SLB615D LC-to-converter-box cable (max. 12m)				Out of spec				

^A = Americas Region Only

^B = Europe and Asia/Pacific Regions Only

POWERCELL® Zone 1/Division 1 Ratings

Component	Hazardous Area	Parameter	Specification
 <p>CANbus Barrier CBR-a-X</p>	ATEX Zone 1/21	Certificate Number	DEKRA 17ATEX0065 X
		Gas Rating	⊕ II (2) G [Ex ib Gb] IIB for $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$
		Dust Rating	⊕ II (2) D [Ex ib Db] IIIC for $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$
	IECEx Zone 1/21	Certificate Number	IECEx DEK 17.0033X
		Gas Rating	[Ex ib Gb] IIB for $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$
		Dust Rating	[Ex ib Db] IIIC for $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$
	FM Division 1 Zone 1/21	Certificate Number	FM19US0085X
		Gas Rating	AIS Class I, Division 1, Groups C and D for $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$ AIS Class I, Zone 1, [AEx ib IIB] for $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$ Gb
		Dust Rating	AIS Class II, III, Division 1, Groups E, F and G for $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$ AIS Zone 21, [AEx ib IIIC] for $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$ Db
	CSA Division 1 Zone 1/21	Certificate Number	FM19CA0044X
		Gas Rating	AIS Class I, Division 1, Groups C and D for $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$ AIS Class I, Zone 1, [Ex ib IIB] for $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$ Gb
		Dust Rating	AIS Class II, III, Division 1, Groups E, F and G for $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$ AIS Zone 21, [Ex ib IIIC] for $-20^{\circ}\text{C} \leq \text{Ta} \leq +50^{\circ}\text{C}$ Db
 <p>CANbus Converter Box CCB-a-X</p>	ATEX Zone 1/21	Certificate Number	DEKRA 17ATEX0122 X
		Gas Rating	⊕ II 2 G Ex ib IIB T4 Gb for $-40^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$
		Dust Rating	⊕ II 2 D Ex ib IIIC T 130°C Db for $-40^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$
	IECEx Zone 1/21	Certificate Number	IECEx DEK 17.0057X
		Gas Rating	Ex ib IIB T4 Gb for $-40^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$
		Dust Rating	Ex ib IIIC T 130°C Db for $-40^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$
	FM Division 1 Zone 1/21	Certificate Number	FM19US0174X
		Gas Rating	Class I, Division 1, Groups C and D T4 for $-40^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$ Class I, Zone 1, AEx ib IIB T4 for $-40^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$ Gb
		Dust Rating	Class II, III, Division 1, Groups E, F and G T4 for $-40^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$ Zone 21, AEx ib IIIC T130°C for $-40^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$ Db
	CSA Division 1 Zone 1/21	Certificate Number	FM19CA0091X
		Gas Rating	Class I, Division 1, Groups C and D T4 for $-40^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$ Class I, Zone 1, Ex ib IIB T4 for $-40^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$ Gb
		Dust Rating	Class II, III, Division 1, Groups E, F and G T4 for $-40^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$ Zone 21, Ex ib IIIC T130°C for $-40^{\circ}\text{C} \leq \text{Ta} \leq +55^{\circ}\text{C}$ Db

Produced in a facility that is



Mettler-Toledo, LLC
1900 Polaris Parkway
Columbus, Ohio 43240
Tel. (800) 786-0038
(614) 438-4511
Fax (614) 438-4900

Subject to technical changes
© 2020 Mettler-Toledo, LLC
07/2020
30302290

www.mt.com/hazardous

For more information