



# THE 8800 SERIES RACK MONITOR

8800 Series Overfill Prevention  
& Ground Verification



[www.opw-es.com](http://www.opw-es.com)

ENGINEERING | WHAT'S NEXT

## A PICTURE IS WORTH A THOUSAND WORDS

The 8870 Series Overfill Prevention & Ground Verification Monitor from OPW Engineered Systems helps make miscommunication at the loading rack a thing of the past. Rather than relying on written directions or blinking lights to indicate a permissive or non-permissive status for API bottom loading of multi-compartment tank trucks, the 8870 rack monitor uses symbols and pictograms for a more intuitive and simpler to understand loading process.

This gives the driver added peace of mind that the loading operation is being performed properly and safely. This also allows the 8870 rack monitor to be used anywhere in the world, no matter the native language of the driver, region or country.

### THE 8870 SERIES INTERFACE FEATURES

- 1 LED ground status-indicator lights
- 2 Enhanced detailed OLED display with diagnostic readout
- 3 Compact, low-profile housing withstands extreme weather conditions
- 4 Three separate output relays
- 5 Optional SmartSocket parking receptacle provides notification when plug is properly stored (Not pictured)



## OPW 8870 Series

The OPW 8870 Overfill Prevention and Ground Verification Monitors are designed for API bottom loading applications on single and multi-compartment tank trucks at storage depots. It is the first unit with a simplified OLED Graphic Display. Vehicle Sensor & Grounding status is shown at a glance!

Product Specifications	
Input power supply	85-264 Vac 50/60Hz
Nominal power consumption	4VA
Output relays	250V ac/dc 2AT
Communication	Optional RS485/422 datacomms port
Operating temperature	-45°C to +70 °C
Response time	< 200ms
Approvals	ATEX / IECEx / QPS / PESO
Enclosure	IP65 acc. to IEC 60529
Weight	7.3 kg
Dimensions	270x230x60 mm



NOTE: Based on the truck-wiring configuration, the 8870 Rack Monitor truck graphic displayed may vary.

## 8870 FEATURES & BENEFITS

- **Automatic recognition** of sensor technology
- **Supports** up to 12 five-wire or 8 two-wire optic sensors
- **Self-checking** at Start-Up; continuous Self-Monitoring
- **1 separate** user-definable output relay. Overfill & Ground, Overfill, Ground, Smart Socket.
- **Fail-Safe** redundant permissive output relays
- **LED** individual status-indicator lights
- **Graphic OLED** Display for simplicity
- **Real-time** clock
- **Event logging** time stamped
- **Vehicle data** communication prepared
- **Sophisticated** wireless multiple-function & by-pass key
- **Dead-man switch** connection
- **Low-temperature** useable in extreme environmental conditions as low as -45°C
- **MODBUS** communication available
- **Conforms to** NEN EN13922, API RP1004 and VOC directive 94/63/EC
- **Combine with** OPW-Civacon Cane Probe for top-loading applications on tank truck or railcars
- **SIL 1** standard, SIL 2 optional

## 8851 FEATURES & BENEFITS

- **8851 for 5-wire** OPTIC sensor technology
- **Combined** Optic-monitoring and Ground Verification
- **Monitors** up to 12 optic sensor compartments
- **Self-checking**
- **One separate** user-definable secondary output relay. Overfill & Ground, Overfill, Ground, Smart Socket.
- **Fail-Safe** redundant permissive output relay
- **LED status**-indicator lights
- **Real-time** clock
- **Wireless** by-pass key
- **Dead-man switch** prepared
- **Low-temperature** useable in extreme environmental conditions as low as -45°C
- **Combine** with OPW-Civacon Cane Probe for top-loading applications on tank truck or railcars
- **SIL-1** capabilities

## OPW 8851N Series

The OPW 8851N Overfill Prevention and Ground Verification Monitors are designed for API bottom loading applications on single and multi-compartment tank trucks at storage depots.

Product Specifications	
Input power supply	90-250 Vac 50/60Hz
Nominal power consumption	15VA
Output relays	250V ac/dc 2AT
Communication	Optional RS485/422 datacomms port
Operating temperature	-45°C to +70 °C
Response time	< 400ms
Approvals	ATEX / IECEx / QPS
Enclosure	IP65 acc. to IEC 60529
Weight	7.3 kg
Dimensions	270x230x60 mm



# OPW Civacon 8811N Ground Verification Controller

For ground-only verification, the OPW Civacon 8811N Ground Verification Controller is designed to allow the operator to visually confirm when a ground connection between the vehicle and the loading terminal is established. The controller is equipped with green and red LEDs for visual status indication.



Product Specifications	
Input power supply	90-250 VAC 50/60Hz
Nominal power consumption	15VA
Output relays	250 ac/dc 2AT
Operating temperature	-45°C to +70°C
Response time	< 200ms
Approvals	ATEX / IECEx
Enclosure	IP68 acc. to IEC 60529
Weight	7.3 kg
Dimensions	270x230x60 mm

## OPW Rack Monitor Contractor Packs

Makes it easy to order rack monitors and support components including junction boxes and plugs. Simply select the rack monitor, junction box option (standard or breakaway) and cord type. We pack all the components in a single carton.



Rack Monitor



Junction Box



Plug

Item #	Monitor	Junction Box	Cord	Breakaway	Cord Set
8870-PACK1-B0	8870	7500-7500	7100-7100	NO	5-Wire Blue Optic
8870-PACK2-B1	8870	7540-7540	7120-7120	YES	5-Wire Blue Optic
8870-PACK1-G0	8870	7500-7500	7300-7300	NO	2-Wire Green Thermistor
8870-PACK2-G1	8870	7510T-7510	7320-7320	YES	2-Wire Green Thermistor
8851N-PACK1-B0	8851N	7500-7500	7100-7100	NO	5-Wire Blue Optic
8851N-PACK2-B1	8851N	7540-7540	7120-7120	YES	5-Wire Blue Optic

## Contractor Pack Ordering Information

1	2	3
8870	PACK 1	B0



SCAN HERE FOR OTHER  
PLUG AND CORD  
OPTIONS, AND SELECT  
**ORDER GUIDE**

<b>1</b>	<b>RACK MONITOR</b> 8870 Ground and Overfill Rack Monitor with OLED Display 8851N Ground and Overfill Rack Monitor
<b>2</b>	<b>JUNCTION BOX OPTION</b> PACK1 7500-7500 Standard Junction Box PACK2 7540-7540 Breakaway Junction Box (Optic) 7510T-7510T Breakaway Junction Box (Thermistor)
<b>3</b>	<b>CORD TYPE</b> B0 - 7100-7100 Blue Optic Standard B1 - 7120-7120 Blue Optic Breakaway G0 - 7300-7300 Green Thermistor Standard G1 - 7320-7320 Green Thermistor Breakaway