

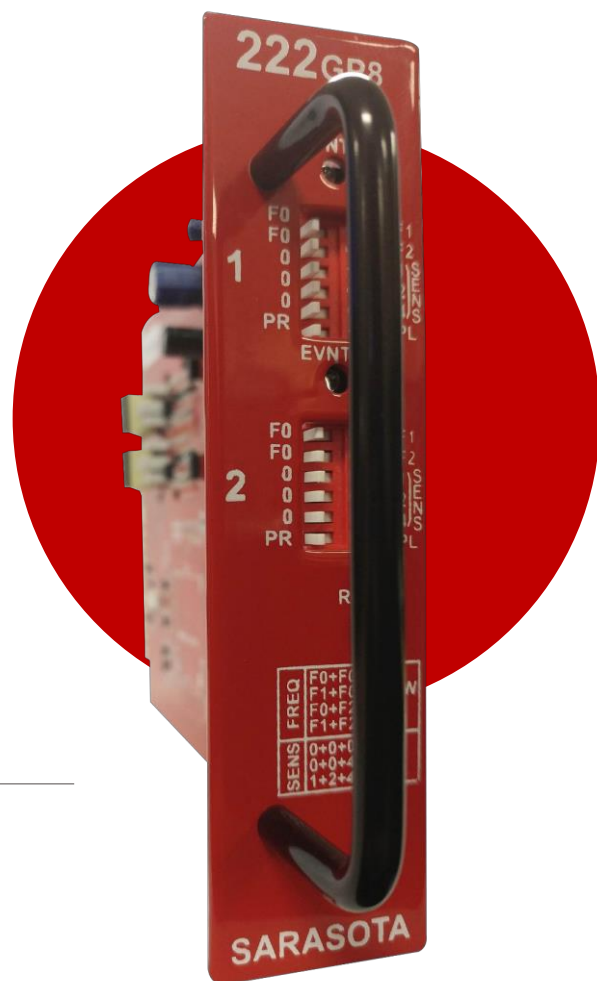
222 AND 224 GP8

Two and Four Channel Detector Modules

Oriux's GP8 detectors allows you to optimize the detector's performance parameters for the most demanding detector application intersection control. For any application, the Oriux's GP8 detectors identifies loop events such as open loops, shorted loops or loops with excessive inductance changes. The event LED, using special flash rates, identifies the condition of loop fault, whether present or historical. This is the standard operation for intersection control where reliability is the major concern.

Designed especially for intersection control where crosstalk must be eliminated, the Oriux's GP8 detectors provides four different front panel selectable frequencies. In addition the Oriux's GP8 detectors also functions as a scanning detector, further reducing the possibility of crosstalk between two loops connected to the same detector.

Fast, predictable and consistent response times facilitate accurate speed and occupancy measurements. This level of performance is increasingly important for IVHS applications. Simple set-up is also a key feature of the Oriux's GP8 detectors. Front panel frequency, sensitivity and mode switches allow the user to simply plug the unit in, adjust switches to desired positions and walk away.



PN: 82-2039-01

Features & Benefits

- Optimized for intersection detection
- Excellent noise filtering
- Four frequency settings to eliminate crosstalk
- Pulse or presence modes per channel
- Sensitivity boost to hold small and high vehicles
- Fault LED to indicate present and historical loop faults
- Seven sensitivity levels per channel
- Sequentially scanned loops
- Quick, simple set-up

Specifications

Operating Modes	Two modes of operation are available via a mode selection switch, Pulse (PLS) and Presence (PR).		
Presence	Presence times of 16, 60, 120 minutes or permanent are available by setting the on board switch. Optional: any presence time value can be set from 1 to 127 minutes in 1 second increments.		
Pulse	In pulse mode, a momentary output 125ms +/- 25ms (optional 250ms ± 30ms) is provided on vehicle entry. If the vehicle remains in the loop, a maximum of 3 seconds pulse paralysis time is provided before additional vehicles are detected.		
Frequency	F1F2 mode: 80 to 2400 µH nominal F0F2 mode: 50 to 1700 µH nominal F1F0 mode: 30 to 1200 µH nominal F0F0 mode: 20 to 700 µH nominal		
Sensitivity	Seven levels of sensitivity can be selected by DIP switch as follows:		
	7	1+2+4 = 0.01%	
	6	0+2+4 = 0.02%	
	5	1+0+4 = 0.04%	
	4	0+0+4 = 0.08%	
	3	1+2+0 = 0.16%	
	2	0+2+0 = 0.32%	
	1	1+0+0 = 0.64%	
	0	0+0+0 = Channel Off	
Response Times	Channel X	Other Channel	Resoonse Times
	.01 to .02%	.01 to .02%	35ms +/- 4ms
	.04 to .16%	.04 & above	20ms +/- 2ms
	.16 & Above	.04 & above	5ms +/- 1ms

Requirements	10.8 to 30 VDC. Maximum permissible RMS ripple = 700 mV.
Outputs	Solid State optically-isolated NPN Transistor VCE ON voltage +1.2 VDC @ 50mA. This output conducts a maximum of 500 µA in the OFF state at a collectoremitter voltage of +40 VDC
Failsafe Output	A DETECT Output Is given when the detector power supply fails. (Failsafe 1s default)
Input Supply Current	For each Detector Module: Nominal Current, normal operation 80mA Maximum, with shorted loop-inputs = 90mA
Inductance Range	20 to 2400 µH, automatically tuned
Lightning Protection	Meets or exceeds NEMA
Temperature Range	-40°F to +176°F (-40°C to +80°C)

22 pin card edge connector, mates with Cinch Jones 50-44A-30M

Pin	Function	Pin	Function
A	DC common (-)	N	Not used
B	DC 24V (+)	P	Not used
C	Reset	R	Not used
D	Ch. 1loopinput (+)	S	Not used
E	Ch. 1loopinput (-)	T	Not used
F	Ch. 1outputcollector (+)	U	Not used
H	Ch. 1outputemitter (-)	V	Not used
J	Ch. 2loopinput (+)	W	Ch. 2output collector (+)
K	Ch. 2loopinput (-)	X	Ch. 2output emitter (-)
L	Chassis ground	Y	Not used
M	Not used	Z	Not used
1	Not used	12	Not used
2	Not used	13	Not used
3	Not used	14	Not used
4	Not used	15	Not used
5	Not used	16	Not used
6	Not used	17	Not used
7	Channel 1 Status Output	18	Not used
8	Not used	19	Not used
9	Not used	20	Channel 2 Status Output
10	Not used	21	Not used
11	Not used	22	Not used

625X

Inductive Loop Detector

The Model 625X inductive loop detector from Oriux is designed for the parking and access control markets. After more than 40 years in the traffic control industry, Oriux's Model 625X detector is the latest in the company's long line of reliable, full-featured detectors. Time-tested detection techniques combined with state-of-the-art manufacturing result in a compact unit that offers increased performance and compatibility with existing equipment.

The 625X detector is a single-channel inductive loop vehicle detector that provides vehicle presence information required by gate operators, ticket spitters, card readers, etc. Although compact and lightweight, the 625X is designed to operate in the most demanding high volume access control installations in all environmental conditions. The 625X detector does not sacrifice features for the evolutionary reduction of size.

Two outputs are available: one to provide the presence of a vehicle over the loop, the second is switch selectable to provide pulse on entry of the loop, pulse on exiting the loop, a second presence output or a loop fault output. Easy to use front panel slide switches provide positive identification of frequency and sensitivity settings.



Features & Benefits

- Small size 3"H x 1.5"W x 2.8"L (76 x 38 x 71 mm)
- Failsafe or failsecure outputs
- Four selectable sensitivities
- Second relay is output mode selectable
- Pulse on entry and exit
- Second presence output
- Loop fault output
- Current and historical loop fault indicators
- Galvanic separation of loop and detector electronics
- Compatible with existing equipment
- Automatic tuning
- Constant readjustment of frequency to avoid environmental impacts
- Advance settings via software
- USB interface for modern diagnostic and service software
- Automatic system adjustment directly after power on
- Basic settings easily adjustable with DIP switches

Area of Application

- Barrier controls
- Door and gate controls
- Parking and traffic engineering

Specifications

Supply Power 1030V AC/DC, max. 1.0VA 100-240V AC, 50-60Hz, max 2.0VA.

Relay 2 Output Relay 2 Control switches Output 2 (SW4) and Edge 2 (SW3) are on the front side

SW4 SW3
OFF + OFF = Pulse Output on Entering the loop OFF + ON = Pulse Output on Leaving the loop ON + - = Second Presence Output

Sensitivity Sense a (SW8) and Sense b (SW7) on the front side.

SW8 SW7 (% sensitivity in df/f)
OFF + OFF = LOW (0,64%)
ON + OFF = MED LOW (0,16%)
OFF + ON = MED HIGH (0,04%)
ON + ON = HIGH (0,01%)

The entire range of sensitivity adjustment from 001%... 2.55% df/f is possible with the diagnostic program DetectorTool.

Frequency Setting One of two operating frequency ranges can be selected with the front panel slide switch to eliminate cross talk, SW6 off for low, on for high.

Hold Time SW5
OFF 5 Minutes
ON Infinite

Reset The Reset button must be depressed for one seconds for automatic retune, and 5 seconds for factory settings.

Loop Fault Indicators	Red	Blue	Function
	OFF	OFF	No supply voltage
	OFF	Fast Flashing	Calibration/Retuning Loops Ready for operation,
	OFF	ON	free
	ON	ON	Ready for operation,
	ON	OFF	active
	x	Flashing	Loop Fault
	DIP		Historical Loop Fault or
			Switch Setting overwritten by USB
	Blinking	Blinking	Output Loop Frequency in kHz

Presence Time 60 minute standard Options 8, 16 minutes, or permanent.

Dimensions 3"H x 1.5"W x 2.8"L (w/o connector).

Detector Fail Secure Default setting when loop fails is detect state. You can change this via USB.
SW1 and SW2 inverts the output signal for Relay1 or Relay2.

Inductance 20 to 700 μ H, recommended 100 to 300 μ H

Frequency Range 30 to 130 kHz

Temperature Range -35°F to +158°F (37°C to +70°C)

Outputs Presence and Relay2 are changeover relay contacts rated at 230VAC, 2A, 60W/125VA max

Lightning & Transients protection **Power supply** 1030V AC/DC -protected with Zener diode and Varistor
100-240VAC -protected with Varistor
Loop supply Loop inputs are protected with Zener diodes

The Detector has no connection to earth.

Connections

Pin	Function
1	AC Live (DC Positive)
2	AC Neutral (DC 0V)
3	R2 Pulse N.O. No
4	Connection
5	R1 Presence Com R1
6	Presence N.O. Loop
7	Loop
8	R2 Pulse Com
9	R1 Presence N.C. R2
10	Pulse N.C.
11	

Contacts are shown in the "NO VEHICLE PRESENT" condition with power applied and loop connected to the detector.

More Settings or more detailed settings can be done via USB interface with the service program.

Backplates

Oriux offers a variety of one-piece aluminum signal backplates as optional add-ons for all its vehicle signals, including 12" signals with 1, 2, 3, 4, or 5 sections, and 8" signals with up to 3 sections. Individual backplates can be ordered either flat or louvered (to allow air to flow through the plate.) Backplates will fit on either aluminum or polycarbonate bodied signals.

Oriux backplates are fabricated from 0.06" (1.5mm) sheet aluminum which is electro-statically powder-coated in your choice of color. You can specify the color of powder-coating of each backplate by inserting the appropriate color suffix to the end of the part number when ordering.

Available colors include:

- Flat back (Standard) – Specify 'FBK'
- Federal Yellow – Specify 'FYL'
- Olive Green – Specify 'OGR'
- Custom Color (Paint chip required) – Specify 'CST'

Borders are 5 inches wide (127mm) on the backplates for 12" signals, and 8 inches wide (203mm) on the backplates for the 8" signals.

Heavier gauge aluminum is available upon request. Stainless steel attaching screws and washers are included with each backplate.

Two inch (51mm) or three inch (76mm) wide reflective tape is also available as an optional item around the edges of flat backplates.

In addition to those pictured here, backplate assemblies are also available to custom-fit all Oriux 2-2-1 and 3-2 signal clusters in 12 inch signal sizes. Options are also available for any of the mounting methods being used for both inline and clustered signals, including standard, Plumbizer, mast arm clusters, and span wire clusters. Plumbizer, mast arm and span wire backplate assemblies include extra filler strips to cover gaps in the signal assembly caused by the mounting hardware. These filler strips require additional mounting screws and associated hardware, available as a cluster hardware kit.



Signal Backplate

Ordering information

Style	# of sections	Description	Part Number
Inline 12"	1	Aluminium, flat with attachment screws	\$400000
Inline 12"	1	Aluminium, louvers with attachment screws	\$400005
Inline 12"	2	Aluminium, flat with attachment screws	\$400001
Inline 12"	2	Aluminium, louvered with attachment screws	\$400006
Inline 12"	3	Aluminium, flat with attachment screws	\$400002
Inline 12"	3	Aluminium, louvered with attachment screws	\$400007
Inline 12"for plumbizer mount	3	Aluminium, flat with attachment screws & filler strip*	\$400010
Inline 12"for plumbizer mount	3	Aluminium, louvered with attachment screws & filler strip*	\$400013
Inline 12"	4	Aluminium, flat with attachment screws	\$400003
Inline 12"	4	Aluminium, flat with attachment screws	\$400008
Inline 12"for plumbizer mount	4	Aluminium, louvered with attachment screws	\$400011
Inline 12"for plumbizer mount	4	Aluminium, flat with attachment screws & filler strip*	\$400014
Inline 12"	5	Aluminium, louvered with attachment screws & filler strip*	\$400004
Inline 12"	5	Aluminium, flat with attachment screws	\$400009
Inline 12"for plumbizer mount	5	Aluminium, louvered with attachment screws	\$400012
Inline 12"for plumbizer mount	5	Aluminium, flat with attachment screws & filler strip*	\$400015
Inline 8"	1	Aluminium, louvered with attachment screws & filler strip*	\$400016
Inline 8"	1	Aluminium, flat with attachment screws	\$400019
Inline 8"	2	Aluminium, louvered with attachment screws	\$400017
Inline 8"	2	Aluminium, flat with attachment screws	\$400020
Inline 8"	3	Aluminium, louvered with attachment screws	\$400018
Inline 8"	3	Aluminium, flat with attachment screws	\$400021
Cluster 8 pieces adjustable	2-2-1	Aluminium, louvered with attachment screws	\$300021
Cluster 8 pieces adjustable	2-2-1	Aluminium, flat with attachment screws	\$300022
Cluster 3 pieces TSH Plum	2-2-1	Aluminium, louvered with attachment screws	\$400060
Cluster 3 pieces TSH Plum	2-2-1	Aluminium, flat with attachment screws	\$300059
Cluster 3-2 Fiat	3-2	Aluminium, louvered with attachment screws	\$400055
Cluster 3-2 Louvered	3-2	Aluminium, flat with filler strip*	\$400055L
Cluster Pelco mast arm	2-2-1	Aluminium, louvered filler strip*	\$400057
Cluster Pelco mast arm	2-2-1	Aluminium, flat with attachment screws	\$400057L
Cluster, span wire	2-2-1	Aluminium, louvered with attachment screws	\$400058
Cluster, span wire	2-2-1	Aluminium, flat with filler strip*	\$400058L
		Aluminium, louvered filler strip	

*All clusters require the additional Cluster Hardware Kit for attaching the filler strips to a variety of mounting hardware options



Backplate for 8",
1-Section
Signal, flat



Backplate for 12", 5-Section
louvered, flat

BIU (Bus Interface Unit)

The Oriux TS2 NEMA Bus Interface Unit (BIU) is a rack mounted modular-by-function unit that allows easy adaptation to many applications. Its primary function is to interface the 24 VDC logic based inputs and outputs (I/O) to the Synchronous Data Link Control (SDLC) serial bus within the TS2 cabinets. The Controller Unit functionality in a Type 1, and some Type 2 configurations, is interfaced to the TS2 cabinet through the BIU(s). This functionality includes controlling all load switch outputs, detector inputs and resets, and functions previously accessed via TS1- A,B,C connectors and/or additional I/O (MSD).

The BIU is in full compliance with NEMA TS2 Standards for the interface, power, environmental, electrical and physical hardware requirements. The BIU is powered by a separate 24 VDC power supply external to the Controller Unit. The front panel contains a handle for easy removal and insertion of the unit power on and transmit status indicators, a 15 pin female Port 1 connector and an optional RS232 connector.

The BIU interfaces to the Port 1 facilities termination panel through a 15 pin metal shell D sub miniature type connector that is equipped with latching blocks. Connection to the Terminal and Facilities (TF) back panel or card rack is provided by a 64 pin DIN 41612 type B series connector.

The TS2 Controller Unit communicates through the BIUs based on the digital addressing of each BIU. Each BIU shall be capable of having their logical position and subsequent cabinet functions, assignable through specific address select inputs. This cabinet function flexibility allows for cabinet expansion, enhances reliability and provides a standard interface with Oriux or other manufacturers TS2 cabinets.



Specifications

Dimensions	4.5" H x 2.34" W x 6.5" D (114.3 mm H x 59.44 mm W x 165.1 mm D)
Weight	0.525 lb. (0.283 kg)
Power	18 to 30 VDC,
Requirements	200 mA
Environment	-30°F to +165°F (-34°C to +74°C)

Features & Benefits

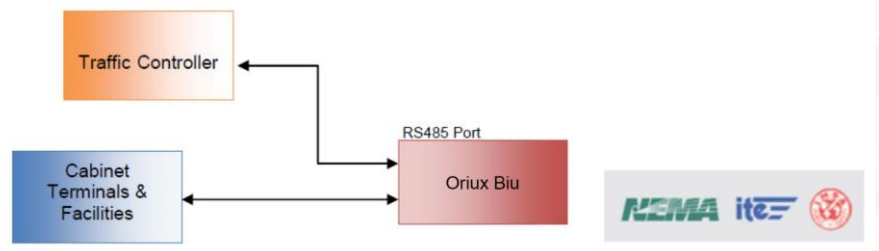
- Full compliance with NEMA TS2-2003
- Port 1 RS-485 SDLC interface
- Facilitates high speed data exchange between controller, cabinet, detector racks and malfunction management unit
- Performs conversion for 24VDC I/O logic signals to serial bus
- Rack mounted for modularity and Interchangeability
- BIU address programmable via Terminal and Facilities

The Port 1 15 Pin D Connector meets the requirements for the physical layer and the protocol for the full duplex SDLC serial data bus and is in full compliance with Sections 3.3.1 and 8.6.2 of the NEMA TS2 -2003 Standard. The BIU card rack connector is a 64 pin DIN 41612 type B series connector with pin assignments as specified in Section 8.6.3.1 of the NEMA TS2 Standard.

Address select inputs shall define the logical position of each BIU. The BIU positions 1-8 are designated for Terminals and Facilities (TF) and BIU positions 9 -16 are designated for Detector Racks. Currently up to 16 detector channels are assignable per BIU allowing up to a maximum of 64 detector channels. BIU positions 5-8 and 13-16 are reserved for future expansion requirements for TS2 or reserved for manufacturer specific functions.

Ordering Information

Description	Model Number
Oriux Bus Interface Unit	82-1886-01



LED-Ready Pedestrian Signals

When you first look at a pedestrian signal from Oriux, you see a sign of experience — it comes from more than 40 years of building pedestrian signals.

Look even closer and you'll find the quality and durability that have made it our most popular signal ever...

Features & Benefits

- Available in polycarbonate and aluminum
- Vandal-resistant construction
- Compatible with our patented clamshell mount, which makes installing the 4302 a quick and clean process
- Compatible with mounting hardware used on California type A, B, C, and G pedestrian signal types
- Z-Crate Visor virtually eliminates sunphantom
- Designed for long years of service in all types of weather and harsh environmental conditions.

Our aluminum and polycarbonate lines are completely interchangeable with one another, allowing you to design the exact pedestrian signal you need. If you need a polycarbonate body with an aluminum door, or an aluminum body with a polycarbonate door, we can accommodate you. Couple that with the ability to exchange the Z-crate for an open visor, or just a door alone, and Oriux is sure to have the pedestrian signal that meets your exact needs



Specifications

Weight	Aluminum: 15 pounds (6.8kg) Polycarbonate: 12 pounds (5.5kg)	Coatings	All aluminum items are coated with electrostatically applied powder after undergoing a five stage pre-wash. Housings, Open Visors, and Clamshells come in Yellow, Black, or Green, as standard options. Other colors are available upon request. All aluminum doors are powder coated black.
Dimensions	18.75"H × 9.0"D × 18.5"W (476mm × 229mm × 470mm)		
Temperature Range	-4°F to +158°F (-20°C to +70°C)		
Z-Crate Visor	100% impregnated black polycarbonate plastic with a flat black finish		
Aluminum Door	One piece corrosion resistant aluminum alloy die-cast door, containing two integrally cast hinge lugs and two latch slots	Environmental	Dustproof and weatherproof when properly mounted Door Frame
"Vision" Z-Crate Visor/Door Combo	One piece door and z-crate combination, cast from 100% impregnated black polycarbonate, including two hinge lugs and two latch slots.	Door Frame Hardware	Stainless steel. Stainless steel spring pins. Latching and unlatching of door requires no tools
Housing Types	Smooth Top, Shurlock Top, or Ports Cast Closed housings are available in both Aluminum and Polycarbonate. All types contain 72 teeth on each Shurlock (if applicable) to allow for 5° alignment angles and four integrally cast lugs. All housings have a Shurlock boss on the bottom and can be ordered Standard, Drill- Right, Drill Left, or Maintained.	Terminal Strio	An aluminum terminal strip with a pre-mounted three-position quickconnect terminal block is a standard feature in all Oriux LED ready pedestrian signals

NEMA TS-2 Cabinet Power Supply

The Oriux NEMA TS-2 Cabinet Power Supply is a shelf mounted unit that provides all regulated DC and AC voltages for all Bus Interface Units (BIU), load switches, and detectors for a TS-2 Type 1 cabinet assembly. Other auxiliary equipment, requiring the same voltages, that may be present within the terminal facilities can also be operated from the cabinet power supply.

The power supply is a requirement of the TS-2 standard for all Type 1 cabinets. Its primary function is to provide the 12 VDC, 24 VDC, 12 VAC outputs and line frequency reference within the TS2 cabinets.

The construction and design of the unit facilitates ease of access to all major components. The chassis is constructed of anodized aluminum that is finished with an attractive and durable red coating.

The flexibility of the Oriux cabinet power supply allows for cabinet expansion, enhances reliability and provides a superior power supply interface with Oriux or other manufacturers' TS-2 cabinets.



Features & Benefits

- TS-2 cabinet power supply
- Regulated 12 VDC and 24 VDC voltages rated at 2.0 Amps
- 12 VAC voltage with 0.25 Amp current capability
- 60 Hz line frequency reference output
- Each voltage output fused and has own LED indicator
- Front panel test points
- Shelf mounted for modularity and interchangeability
- Compliant with NEMA TS-2-2016

Specifications

ELECTRICAL OUTPUTS: Four outputs listed below meet the electrical requirements as referenced in Section 5.3.5.3 of the NEMA TS-2-2016 Standard.

- 12 VDC rated at 2 Amps
- 24 VDC rated at 2 Amps
- 12 VAC rated at 250 Amps
- 60 Hz Timing Reference

POWER SUPPLY INPUTS AND OUTPUTS:

The power supply connector located on the front panel has a metallic shell which is connected to the chassis ground and mates with an MS3106-18-1SW cable connector or equivalent.

PIN ASSIGNMENTS:

Pin	Function
A	AC Neutral
B	Line Frequency Reference
C	AC Line
D	+12 VDC
E	+24 VDC
F	Reserved
G	Logic Ground
H	Earth Ground
I	12 VAC
J	Reserved

Over current protection is provided on the front panel for the AC line power and all output voltages along with LED indicators to indicate the presence of voltage.

Test Points	Test points are provided for all output voltages
Dimensions	5.125"H × 6.7"W × 7.8"D (130mm × 170mm × 196mm)
Temperature	-40°F to +176°F (-40°C to +80°C)
Range Weight	2.5 pounds (1 . 1 3 kg)
Power	89 to 135 VAC, (standard) or 180 to 265 VAC (220 variant)

Ordering Information

Description	Catalog Information
Cabinet Power Supply 110V	82-1894-01 110V
Cabinet Power Supply 220V	82-1894-02 220V

PB-2000

Traffic control Battery Backup from a traffic control company – the logical choice for reliable intersection operation.

The PB2000-ITS automatically provides emergency back-up power to traffic signals and controls whenever normal electric power is lost. It increases or decreases voltage to maintain normal operation during brownouts and power spikes, reducing the chance of dangerous intersection collisions due to “dark” signals, thus reducing the need for law enforcement and emergency personnel resources.

Minimizes component damage and signal tech callouts due to power failures.

Using the new web-card, it is easier than ever to connect to the Oriux PB2000 via Ethernet. We now have the ability to setup multiple users and check current status from anywhere using most web browsers. The new Firmware will also send email notifications.

Specifications

ENVIRONMENTAL

Operating Temp°C	-37 to +74°C (See Notes 1 & 2)
Storage Temp°C	-50 to +75°C
Humidity	<95%non-condensing
Altitude, ft(m)	10,000 (3000) (See Note 2)

NOTES:

- Between 55° and 74°C, the unit is de-rated to a maximum rectified-capacitive load of 1500VA / 1,200W
- De-rate operating temperature above 4,900 ft (1,500 mts 2°C per each additional 1,000 ft (300m).



COMMUNICATIONS

RS-232 / USB	Monitors, controls with terminal emulation software
/ Ethernet ports	DB-9, Female, Opto-Isolated, straight-thru cable
RS-232	
USB	B-Ty receptacle 10/100 Mbps
SNMP (optional)	Ethernet, autodetected
Ethernet	10/100 Mbps
(optional)	Ethernet, autodetected
Display Panel	2-line LCD

CERTIFICATION AND APPROVALS

Electrical	UL-1778, CSA-
Safety	107.1, UL-1950
EMI	FCC Class A
Surge	Tested to: IEC
Immunity	1000-4-5, IEEE C62.41

PERFORMANCE

Transfer	
Time	
Controller	4 to 10 ms
PTS	<30 ms
TOTAL	<65 ms
Efficiency, >95%	
Line Mode (Resistive Load)	
Efficiency, >80%	
Inverter (Resistive Mode Load)	

INPUT

Voltage Range, VAC	90 to 150 programmable Default 100 to 130 +/- 2VAC
Frequency, Hz	60 +/- 3Hz
Maximum Input Current A, Inrush Current	A 30 A (resistive)
Over Current Protection	Load Dependent Double pole single throw circuit breaker rated 30 A for input and output, DC bus 60 A breaker
Transient Suppression	MOV Transient suppression elements (>150V)
Step Load Response (50% Load Change)	1/2 Cycle Full Recovery (Full resistive load)
Short Circuit Protection	15 A Circuit Breaker
Battery String Voltage, VDC	48 (Four 12VDC Batteries)

OUTPUT

Apparent Power, VA	2000VA (inverter mode) 2000VA (line mode)
Active Power, W	1500 (Inverter Mode) 1500 (Line mode)
Power Factor	.075
Output Voltage, VAC Line and Buck/Boost Mode	120 nominal 100-130 +/-2 VAC (follows input voltage)
Inverter Mode	120 VAC +/-5%
Frequency, Hz	60 +/- 0.4 Hz
Transformer Output	Linear (nonisolated) Sine Wave
Waveform	
Output	<3% (Resistive Load)
Waveform THD	
Load Crest Factor	3:1 (Max)
Overload Capacity	110% for 3 min.

CONTROL TERMINAL BLOCK

A. Provides 6 sets of programmable contacts at pin 1 thru pin 18 for intersection flash control, Remote Alarms, Pagers or other user interface.

1. "Low Batt": batteries have reached approximately 40% capacity remaining
2. "On Batt": unit is in inverter mode
3. "Timer": unit has been in inverter mode for 2 hours (programmable)
4. "Alarm": any of the following conditions occur:
Line Frequency error, low Output voltage, no Temperature Probe, overload, no battery connected, high temperature, low temperature
5. "Fault": any of the following conditions occur:
temperature, low temperature, short circuit, Batt low voltage, Batt high voltage, high temperature, overload.

B. Provides 48 VDC signal to PTS on pins 21 & 22 C. Triggers self-test by momentarily shorting pin 19 & 20 with less than 100 ohm.
Form C. Dry contacts rated 1 Amp at 240V Uses 14-26 AWG

FUNCTIONS

Brownout Protection	Unit boosts output voltage (or transfers to battery) during brownout or low input line conditions and returns to normal when input power stabilizes over user-selected time period. Set points for Transfer /Retransfer, To / From Battery / Boost are users programmable
Generator Compatibility	Generator mode allows wider variation in input voltage and frequency for use with an AC generator
Battery Charger 10 A	PFC switch-mode, two-stage charger, temperature compensated (-2.5 to -5 mV/°C/cell, auto shutoff above 50°C) Capable of running continuously in inverter mode Continuous electronic current limit is provided
Inverter Mode	
Inverter Mode Current Limit	- Input and output voltages
Remote monitoring	- Input line frequency - Output power - Battery voltage - Battery temperature

MECHANICAL

PB2000 Dimensions (WxDxH) inch/mm	w: 17.5 / 444 19 / 483 w/flange D: 10.5 / 267 H: 5.25 / 133
PB2000 Weight (lb/kg)	46.2 / 21
PB2000 Mounting	19" (483mm) rack or shelf mount
PB2000 Input Connection	3 Position Terminal Blocks
PB2000 Output Connection to Loads	Two 3 Position Terminal Blocks
PB2000 Cooling	Microprocessor controlled, 12 VDC, 3.6" (92mm) fan <40
PB2000 Audible Noise Level, dBA	
MBS/PTS Dimensions (WxDxH) inch/mm for standard rack mount	W: 17.5 / 444 19 / 483 w/flange D: 8 .5 / 216 H: 3.5 / 89
MBS/PTS Mounting	
MBS/PTS Weight (lb/kg)	7.0/3.2
MBS/PTS Input Connection	Shelf or 19" rack mount Terminal block
MBS/PTS Output Connection to Loads	Terminal block
MBS/PTS Output	
MBS/PTS cooling dissipation)	6 foot cable ready for hard wire to connection to UPS UPS terminal block Convection (approx. 7 W contactor coil

ABS Backplates

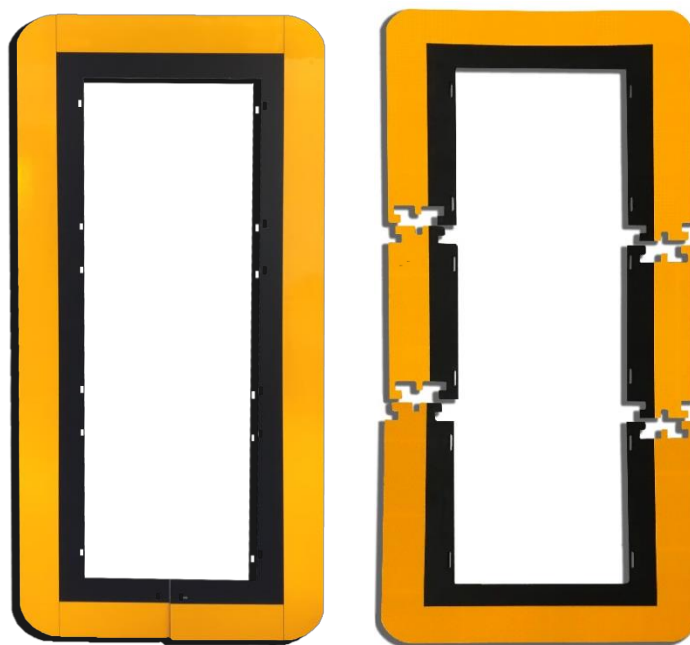
Oriux offers a variety of one-piece and multi-piece backplates in 1/8" and 1/4" black plastic ABS as optional add-ons for all of its vehicle signals, including 8" and 12" signals with 1, 2, 3, 4 or 5 sections in a variety of configurations: in-line, "T", cluster, etc. Backplates can be ordered flat or slotted (to allow air to flow through the plate). Some backplates will fit signal brands such as Oriux, McCain, LFE, Old Eagle Round, Econolite, and Durasig signals depending on their dimensions.

Backplates are fabricated with a 3" corner radius. Borders are 5 inches wide (127mm) on the backplates for 12" signals, and 8 inches wide (203mm) on the backplates for the 8" signals.

Stainless steel attaching screws and washers are included with each backplate.

2" (51mm) or 3" (76mm) wide reflective tape is also available as an optional item around the edges of the flat and slotted backplates. In addition to the backplate pictured above, backplate assemblies are also available to custom-fit 2-2-1 signal clusters in 12" signal sizes.

Options are also available for any of the mounting methods being used for both inline and clustered signals, including mast arm clusters, and span wire clusters. Mast arm and span wire backplate assemblies include extra filler strips to cover gaps in the signal assembly caused by the mounting hardware. These filler strips require additional mounting screws and associated hardware, available as a cluster hardware kit.



One And Multi-piece Backplate for 12", 3-Section

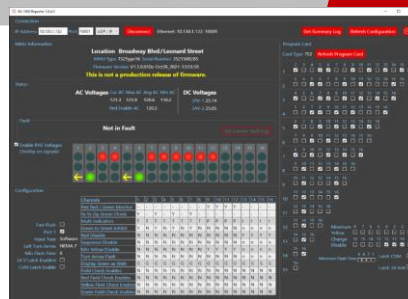
The evolution of **PEEK**

SG-1000 NEMA MMU2 and Conflict Monitor

Oriux sets the new standard for NEMA Conflict Voltage Monitors and NEMA Malfunction Management Units with the Oriux SG-1000 Series Monitors.

The Oriux SG-1000 Series Monitors offer an improved display for the dynamic status display of each input on each channel.

SG-1000 Companion Software



Features & Benefits

- Supports Flashing Yellow Arrow per amendment 4 of NEMA TS2-2003
- Exceeds both NEMA TS1-1989 functional and environmental requirements for a conflict monitor and NEMA TS2-2003 for functional and environmental requirements for an MMU. USB port is an industry 1st.
- The large keyboard reduces menu steps and complexity in the data entry system and eliminates the clutter and confusion of multiple dip switches.
- Records high and low voltage conditions. Initially brought in Double Diamond, continued in SG-1000
- Voltage measurement and display of all signal indicators for each channel and color input for TS1/TS2
- 4 x 20 yellow OLED - fully operational over temperature without the need for backlight or contrast control.
- Event log - downloadable to USB flash drive or to PC through USB device port or optional serial/Ethernet port.
- User-friendly, menu-driven 16-key data entry system has tactile and audible feedback, eliminating the need for cumbersome dip switches.
- Front panel USB device port, optional EIA232 or ethernet, for printing the event log and all user settings and program card jumper.
- SG-1000 Companion Software provides a Graphical User Interface with all list status, fault status, configuration and program card info on a single and intuitive main view.

Specifications

Power	89 to 135V AC, 50/60Hz
Requirements	220V option: 89 to 265 V AC, 50/60 Hz
Humidity	0 - 95% non-condensing
Environment	Meets NEMA environmental standards
Compatibility	NEMA TS-1 12 channel or NEMA TS-2 16 channel
Operating Temperature	-40°F to 176°F (-40°C to 80°C)

Event Logging & Recording

- Logs 200 events including reset
- Voltage log records outside of users thresholds
- Replay mode allows a user to view the last twenty GYR displays prior to a fault
- Real-time clock provides time and date stamp in each event to nearest second
- Logs complete channel status at time of fault
- Keyboard options allow separate printing of event log and unit settings

Additional Features

- 12 channel NEMA TS-1 and 16 channel NEMA TS-2
- Compatible with both NEMA TS-1 and TS-2 Standard compatibility programming cards
- Viewing of Port 1 RS-485 R-Y-G status in addition to field status of R-Y-G AC inputs
- Dedicated RESET button for simplicity
- Selectable latch options for CVM and 24 volt faults
- Enhanced absence monitoring allows absence detection with Walk input
- Enhanced channel monitoring permits selectable color fault combinations
- Enhanced signal sequence monitoring feature is compatible with all NEMA controllers
- Individual channel absence timers
- DC input for remote flash command
- Non-volatile retention of fault status and logs; displays all channels and colors when power is restored

Traffic Signals

Features & Benefits

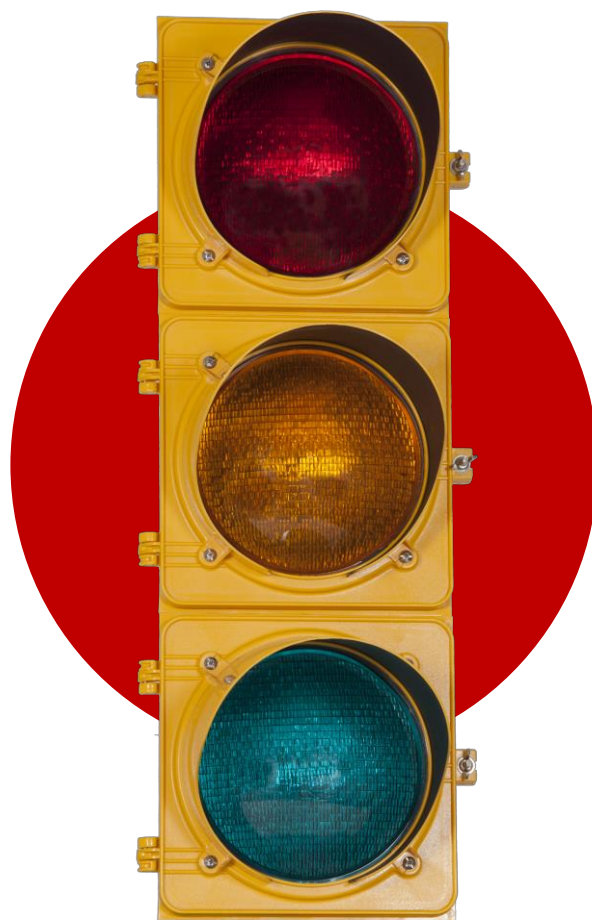
Unique design and technological advantages make Oriux Signals "Best in class"

Polycarbonate Signals

- Unaffected by scratches
- Impregnated color means that they never need painting
- Impervious to corrosive atmospheres
- One-piece doors, grooved.
- Simple alignment and positive locking in 5 degree steps
- Ribbed for structural stability
- Reinforced plates available
- Adaptable to span wire or mast suspension
- Universal vertical and horizontal ready mounting arrangement
- Exterior hardware in stainless steel available
- LED ready or equipped with reflectors
- Weatherproof and dust tight one piece doors plus gasket
- Fifty percent lighter than aluminum

Aluminum Signals

- Equipped with exterior stainless-steel hardware
- Doors and lens gaskets make the signal weatherproof and dust-tight
- Integral visor rims prevent leakage
- Available reflectors in Alzak®
- The lamp receptacle can be rotated 360 degrees for filament alignment
- Integral locking rings included
- Adaptable for span wire, mast arm suspension, side pole or post top mounting



Specifications

Polycarbonate

Material	Ultraviolet-stabilized polycarbonate resin. Stainless steel exterior hardware. Couplers are standard steel-zinc, but a stainless steel option is available.
Reflector	Snap-out assembly. Swing out frame. Lane control uses a standard reflector.
Lamp receptacle	Heat-resistant molded phenolic, Rotatable through 360°. Pre-wired with 26" #18 AWG 105°C type TEW color-coded leads with Quick-disconnect terminals
Wire opening between sections	Accommodates three 3/4" diameter cables
Terminal Block	1-section 2-point 2-section 3-point 3-section 5-point 4-section 5-point 5-section 5-point, and 5 point
Signal alignment	Integral 72-tooth serrated adjustable in 5 steps.
Weight	8" (200mm) LED-Ready Section = 1.85 lb (0.84kg) 12" (300mm) LED-Ready Section = 3.15 lb (1.43kg)
Overall dimension	8"(200mm) Section = 9.75"W x 10"Hx 6.16"D 12"(300mm) Section = 13.5"W x 13.44"H x 6.44"D

Aluminium

Material	Die-cast aluminum alloy housing and door. Stainless steel exterior hardware. Couplers are standard steel-zinc, but a stainless steel option is available.
Finish	Electrostatically applied powder coat with five stage iron phosphate treatment.
Reflector	Snap-out assembly. Swing out molded frame. Lane control uses a standard reflector
Lamp receptacle	Heat-resistant molded phenolic, Rotatable through 360°. Pre-wired with 26" #18 AWG 105°C type TEW color-coded leads with Quick disconnect terminals
Wire opening between sections	Accommodates three 3/4" diameter cables
Terminal Block	1-section 2-point 2-section 3-point 3-section 5-point 4-section 5-point, 2-point 5-section 5-pointx2, and 3-point
Signal alignment	Integral 72-tooth serrated adjustable in 5° steps.
Weight	8" (200mm) LED-Ready Section = 4.2 lb. (1.9 kg) 12" (300mm) LED-Ready Section = 5.5 lb. (2.5 kg)
Overall dimension	8"(200mm) Section = 9.75"W x 10"Hx 6.16"D 12"(300mm) Section = 13.5"W x 13.44"H x 6.44"D

Poly and Aluminum signals are also available with LED ready Weights do not include hardware modifications. Door only, no visors.