



MEPS Central Inverter Options Reference Guide

Explore the available options for Illuminator Central Inverters to design the perfect emergency lighting inverter solution for your unique application.

Note: not all options are available for each model. See Table 1 on page 8 to quickly determine option availability per model, or consult individual specification sheets.

Options Category:

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BAC - BACnet MS/TP Interface

Equips the Illuminator Inverter System with an RS-485 serial port for remote communications to a Building Management System (BMS) via the BACnet MS/TP protocol. The BACnet interface supports standard baud rates (9600, 19200, 38400, 57600, 115200) and MAC addressing (0-127), and has a programmable system-wide Device Instance number. The BACnet interface supports standard BACnet discovery and provides read-only access to the following telemetry about the Illuminator Inverter System:

- Input Voltage(s)
- Output Voltage(s)
- Output Current(s)
- Total Output Power
- Ambient Temperature
- Battery Voltage
- Battery Current
- Total Time on Battery (in Emergency Mode)
- Days of Operation
- Results of the Inverter's last automatic monthly self-test
- Results of the inverter's last automatic yearly self-test
- Alarm states including no utility, on battery, battery low, input voltage high/low, inverter failure detected, inverter overloaded and overload shutdown, 'load reduction' activated, ambient temperature high, and battery charger fault
- Event logs, alarm logs, and test logs as text files downloadable via BACnet file transfer

BIP - BACnet IP Interface

Equips the Illuminator Inverter System with an RJ-45 Ethernet port for remote communications to a Building Management System (BMS) via the BACnet IP protocol. The BACnet IP interface supports standard IP network settings (DHCP or static IP address, subnet mask, default gateway and programmable port number) and has a programmable system-wide Device Instance number. This BACnet IP interface provides read-only access to the following telemetry about the Illuminator Inverter System:

- Input Voltage(s)
- Output Voltage(s)
- Output Current(s)
- Total Output Power
- Ambient Temperature
- Battery Voltage
- Battery Current
- Total Time on Battery (in Emergency Mode)
- Days of Operation
- Results of the Inverter's last automatic monthly self-test
- Results of the inverter's last automatic yearly self-test
- Alarm states including no utility, on battery, battery low, input voltage high/low, inverter failure detected, inverter overloaded and overload shutdown, 'load reduction' activated, ambient temperature high, and battery charger fault.

IoT Inverter Connect - Cloud Interface

IoT (Internet of Things) Inverter Connect is our most modern and feature-rich communication option. Inverters equipped with this option will send their telemetry securely and seamlessly (with no involvement from IT departments) to a trusted server on the cloud (via a wired Ethernet Internet connection provided by the customer).

Customers that own those inverters (and thus have the right user credentials) may then access user friendly dashboards – securely via the cloud on any device (mobile phone, tablet, or PC) that has an Internet connection and a web browser.

An Overview dashboard instantly summarizes the state of all inverters, provides a map view (with color coded pins based on inverter states), plus a sortable 'events' table. The customer may click on a specific inverter to access detailed data on that inverter. The customer may also set up notifications (when alarms happen) via email or SMS.

IoT Connect can also generate historical reports (in PDF or spreadsheet format) across user specified date ranges, providing the historical results of periodic inverter self-tests, as well as alarm/event logs in a format that can be provided to building inspectors or maintenance departments.

A customer with many inverters (there is no limit on numbers) can organize their inverters in a hierarchy of areas, and can share their inverters with other users at any level in the hierarchy.



MIP - MODBUS TCP Interface

Equips the Illuminator Inverter System with an RJ-45 Ethernet port for remote communications to a Building Management System (BMS) via the MODBUS TCP protocol. The MODBUS TCP interface supports standard IP network settings (DHCP or static IP address, subnet mask, default gateway, and programmable port number). The MODBUS TCP interface provides read-only access to the following telemetry about the Illuminator Inverter System:

- Input Voltage(s)
- Output Voltage(s)
- Output Current(s)
- Total Output Power
- Ambient Temperature
- Battery Voltage
- Battery Current
- Total Time on Battery (in Emergency Mode)
- Days of Operation
- Results of the Inverter's last automatic monthly self-test
- Results of the inverter's last automatic yearly self-test
- Alarm states including no utility, on battery, battery low, input voltage high/low, inverter failure detected, inverter overloaded and overload shutdown, 'load reduction' activated, ambient temperature high, and battery charger fault

MOD - MODBUS Serial (RTU or ASCII) Interface

Equips the Myers Inverter System with an RS-485 serial port for remote communications to a Building Management System (BMS) via the MODBUS RTU or MODBUS ASCII protocol (selectable). The MODBUS Serial interface supports standard baud rates (9600, 19200, 38400, 115200), parity (no parity or even parity) and device addressing (1-247).

The MODBUS Serial interface supports setting a custom Device/User ID string (via Function Code 0x15) and retrieving it (via Function Code 0x11 – Report Server ID – or Function Codes 0x2B/0x0E – Encapsulated Interface Transport 'Read Device Identification'). The MODBUS Serial interface provides read-only access to the following telemetry about the Myers Inverter System (via MODBUS Function Codes 0x01 through 0x04, and 0x14 for retrieving log files):

- Input Voltage(s)
- Output Voltage(s)
- Output Current(s)
- Total Output Power
- Ambient Temperature
- Battery Voltage
- Battery Current
- Total Time on Battery (in Emergency Mode)
- Days of Operation
- Results of the Inverter's last automatic monthly self-test
- Results of the inverter's last automatic yearly self-test
- Alarm states including no utility, on battery, battery low, input voltage high/low, inverter failure detected, inverter overloaded and overload shutdown, 'load reduction' activated, ambient temperature high, and battery charger fault
- Event logs, Alarm logs and Test logs, as text files downloadable via MODBUS Read File Record function code 0x14

SEA - Serial to Ethernet Network Adapter

AdapterEquips the Myers Inverter System with an RJ-45 Ethernet port for remote communications to a Building Management System(BMS) or Network Manager via SNMP protocol. The SNMP interface supports standard IP network settings including DHCP or static IP address, subnet mask, and default gateway.

The SEA interface supports SNMP v1 and v2c, and supports the programming of SNMP traps when user defined alarm conditions are met. The SNMP interface supports standard "SNMP Get," as well as standard SNMP MIB walking via "SNMP Get Next," and provides read-only objects (OIDs) for the following telemetry about the Inverter System:

- Input Voltage(s)
- Output Voltage(s)
- Output Current(s)
- Total Output Power
- Ambient Temperature
- Battery Voltage
- Battery Current
- Total Time on Battery (in Emergency Mode)
- Days of Operation
- Results of the Inverter's last automatic monthly self-test
- Results of the inverter's last automatic yearly self-test
- Alarm states including no utility, on battery, battery low, input voltage high/low, inverter failure detected, inverter overloaded and overload shutdown, 'load reduction' activated, ambient temperature high, and battery charger fault.

DISPLAY

M - Remote Keypad and Display Panel (SR series only)

Included with the SR Series, a 4 x 20 vacuum fluorescent display and a 4-button keypad that allows users to view alarm, test, and operating data about the Myers SR 1750 and set test and alarm parameters. The M option is used for system setup and status and is recommended to order one M Remote Keypad & Display per site. The M option allows users to view the following telemetry about the Myers Inverter System.

- Input Voltage
- Output Voltage
- Output Current
- Battery Voltage
- Battery Current
- Battery Temperature
- Ambient (Internal) Temperature
- Total Time on Battery (in Emergency Mode)
- Days of Operation
- VA Output
- Battery DC Watts (total battery wattage the inverter is processing)
- Results of the Inverter's last automatic monthly self-test
- Results of the inverter's last automatic yearly self-test
- Alarm states including High/Low Battery Charger Fault, Near Low Battery, Low Battery, Load Reduction Fault, Output Overload, High/Low AC Input Volts, High Ambient Temperature, Inverter Fault, Output Fault

BATTERY

F - Fast Charge, Battery Charger UpgradeUpgrades

Upgrades the battery charger on the Myers Inverter System to decrease the time it takes to recharge a fully discharged battery bank to full capacity from the standard 24-hour period to a ~12 hour period.

BTM - Battery Temperature Monitor

Includes a Battery Temperature Monitor with Shunt Trip DC breaker(s) (1 breaker per battery string). The BTM monitors the batteries for over-temperature or thermal runaway conditions and trips the battery string DC breaker if over-temperature/thermal runaway conditions exist. Includes a Form C Dry Contact to connect to a Fire Alarm Panel for remote alarm signaling.

Additionally, an external Exhaust Fan Monitoring System will observe a "state of health" dry contact input that is part of the external exhaust fan. If the exhaust fan is in an alarm condition and the normally-open contact is closed, then a signal is sent to the Myers Emergency Inverter to stop charging the batteries.

Requires factory startup to be ordered. This option is required in California when the Myers Inverter System has more than 50 gallons of electrolytes or more (typically applies to 16.7VA through 50000VA 90 minute runtime single and three phase models).

GENERAL

DR - Dimming Relay

Allows a 0-10V dimming signal to reach interfacing emergency luminaires during normal power conditions and will interrupt the 0-10V dimming signal if a power loss is detected. This will cause the emergency luminaires to operate at full light output in power loss conditions regardless of the position of a 0-10V dimming control.

Note: the usefulness of on-board dimming relays is limited in large applications with multiple circuit breakers since this only allows for a single dimming control to be employed for each output circuit. Consider using an ALCR device such as the Myers / LVS EPC-A-2-D.

Please note that dimming bypass cannot be available on every output breaker because there is only one switched input. Any 0-10v lighting control zone will need switching bypass as well as 0-10v dimming bypass in these scenarios.

ZM(#) - Zone Monitoring

Allows the Myers Inverter System to monitor the presence of AC power in a specific zone (ex: area circuit or distribution panel). Upon loss of normal power in the zone(s), the inverter will switch to emergency mode and power any connected emergency equipment via its internal battery. Any normally-off loads will turn on and normally-on loads will remain on.

Once AC power is restored to the zone(s), the inverter will return to normal mode. Any normally-off loads will turn off and normally-on loads will not be affected and continue operating via AC utility power.

T - Output Breaker Trip Alarm

Equips optional output distribution circuit breakers on the Myers Inverter System with an audible and visual alarm that activates with the circuit breaker is open or has tripped. If the system includes a display panel, the output circuit breaker trip alarms will also cause an alarm-state notification to appear on the display panel when a circuit breaker has tripped.

This option is especially useful with normally-off breakers since normally-off breakers don't provide a visual indication that they have been tripped.

C - Status Monitoring Dry Form C Contacts

Equips the Myers Inverter System with a series of Dry Form "C" contacts that are pre-configured to various indicators on Inverter status including:

- Utility power present (indication)
- Inverter bypass (indication - if optional maintenance bypass is included, see EMBP, M(BBM), M)
- High temperature (alarm)-Summary fault (alarm)
- Inverter on (emergency mode - indication)

These contacts will change state when their associated Inverter state is triggered. For example, if the Myers Inverter System detects a high temperature fault, the high temperature Status Monitoring Contact will change state. These contacts can be connected to an external panel (see "MDCP" option) or indicator (not provided) for external monitoring of the Myers Inverter's alarm status. Typically utilized for connection to a fire alarm panel or BMS for outbound alarm notification.

I - Inverter On - Form C Dry Contact

Equips the Myers Inverter System with a Form "C" dry contact that is pre-configured to indicate Inverter status:

- Inverter on /on utility /on battery(emergency mode) (indication)

This contact will change state when there is a loss of utility power and the inverter transfers and is running on battery power (emergency mode).

LF - TVSS Line Filter

Protects the emergency inverter against short duration, excessive voltage spikes (such as lightning strikes) on the utility line by suppressing the voltage to a safe level and diverting the excess current to the ground. TVSS stands for Transient Voltage Surge Suppressor.

O - Output Transfer Delay to Emergency

This option causes the Myers Inverter System to delay the transfer from normal operation (AC utility power) to emergency operation (battery power). When power is lost, the Myers Inverter System will take 3 seconds (factory default) to apply battery-supplied power to the emergency circuit. This is useful in some fixture applications where sensing controls need to detect the loss in utility power to default to full light output in emergency mode. The transfer delay is factory set at 3 seconds but may be field adjusted by an Myers Inverter Technician to 1-8 seconds.

E - Emergency Load Enable

Only available on the SR Series. Requires a 120 or 277 VAC feed from the control switch. Provides the ability to enable emergency output for typically unoccupied venues (such as a stadium) only when emergency egress is required. The Myers Inverter is equipped with an Enable On/Off circuit at the feed panel, separate from the inverter supply feed. When the Enable On/Off circuit is OFF, the Myers Inverter will continue to charge the batteries, but will not energize the emergency load.

The emergency output may be re-enabled by switching the Enable On/Off circuit to ON. This option is useful in situations (such as stadiums) where the building isn't always occupied and emergency egress lighting isn't always required. Note: this option may not be acceptable in certain jurisdictions. Consult local and national codes before ordering.

PARTS**SPARES - Spare Parts Kit**

Provides recommended parts kit includes Fuses and PC Boards.

SPAREF - Spare Fuses

Provides spare fuses for the Myers Inverter System.

BCF - Battery Cabinet Fan

The Inverter battery cabinet(s) are equipped with a fan (one per battery cabinet) for additional airflow and ventilation. Typically ordered with BTM option.

DT - NEMA 2 Drip Top

Provides a NEMA 2 drip top shield to protect the electronics and batteries from falling water. Typically one NEMA 2 Drip Top is required per electronics and battery cabinet. Note: this option is NOT intended for use outdoors and will NOT allow indoor rated inverters to be suitable for outdoor applications.

F - Floor Mount Bracket for EM Series (add 4" to height of system)

Provides a bracket for securing the EM Inverter System to the floor. This option will add 4" to the total system height depending on model (see individual specification sheets for more details). This bracket is automatically included with Seismic option (Z).

B - Floor Mount Bracket for LV Series (add 2.7" to height of system)

Provides a bracket for securing the LV Inverter System to the floor. This option will add 2.7" to the total system height depending on model (see individual specification sheets for more details).

W - Wall Mount Bracket

Provides a wall mount bracket for securing the Myers Inverter System to a building wall. Includes unistrut with hardware kit.

S - Battery Strapping

Provides battery strapping to secure the batteries in the enclosure. Already included as part of the Seismic option (Z) on the EM Series, available optionally on the LV Series. Included on OSHPD rated LV H units.

SEISMIC

Z - Seismic Mounting

Certified Seismic bracing and floor anchoring.

Note: this option does not include shaker table “withstand” testing to meet OSHPD/ICC requirements.

H - OSHPD Rating

Shaker table “withstand” tested units that meet OSHPD/ICC requirements that can withstand a seismic event and remain operational.

SERVICE

5YP - 5-Year Service Plan

Provides additional service plan up to a total of five years on electronic components. See MyersEPS.com for full service details. Batteries are covered under a separate pro-rated warranty. **Requires factory startup (2YW).**

MAINTENANCE

EMBP - External Maintenance Bypass (Make Before Break)

Equips the Emergency Inverter with a maintenance bypass switch mounted exterior to the unit in a NEMA 1 enclosure with a hinged door measuring 20” high x 16” wide x 9” deep. This device allows maintenance personnel to route power from the AC utility directly to the lighting load, bypassing the inverter electronics.

The switch isolates the system to perform routine maintenance or servicing while allowing the lighting load to remain in normal operation. The “make before break” switch connects the direct AC utility power to the lighting load immediately without interruption allowing the inverter to be shut down for maintenance and /or repair.

This option cannot be used in conjunction with more than one output circuit breaker and, if a single output circuit breaker is used, it must be sized for the total system current.

M - Internal Maintenance Bypass (Make Before Break)

Includes a Maintenance Bypass Switch that is mounted inside the Myers Inverter System. This device allows maintenance personnel to route power from the AC utility directly to the output circuit breakers, bypassing the inverter electronics.

The switch isolates the system to perform routine maintenance or servicing while allowing the lighting load to remain in normal operation. The “make before break” switch connects the direct AC utility power to the lighting load immediately without interruption, allowing the inverter to be shut down for maintenance and /or repair. If output circuit breakers are not desired, an External Maintenance Bypass may be available (see EMBP).

M(BBM) - Internal Maintenance Bypass (Break Before Make)

Includes a Maintenance Bypass Switch that is mounted inside the MEPS Inverter System. This device allows maintenance personnel to route power from the AC utility directly to the output circuit breakers, bypassing the inverter electronics. The switch isolates the system to perform routine maintenance or servicing while allowing the lighting load to remain in normal operation.

The “break before make” switch disconnects the power inside the inverter immediately before it makes the direct electrical connection from the AC utility to the connected loads. If output circuit breakers are not desired, an External Maintenance Bypass may be available (see EMBP).

WARRANTY

5YW - 5-Year Ext. Electronics Warranty

Provides additional warranty coverage up to a total of five years on electronic components. See MyersEPS.com for full warranty details. Batteries are covered under a separate pro-rated warranty. **Requires factory startup.**

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START-UP & TRAINING

2YW - Factory Start-up

Factory startup provides the confidence and reliability of expert installation on Myers Inverter Systems. A qualified Myers technician will visit the job site to oversee the startup and initial testing of the Myers Inverter to ensure it performs to factory specifications. Should any problems be detected, the Myers Technician will take corrective action to repair the affected components. See www.MyersEPS.com for more information about what is included in Factory Startup.

Must be scheduled with the factory at least two weeks out from when the unit has been received at the job site.

The Myers Inverter must already be physically installed in its final operating location before the technician arrives and all conduit/wiring must be extended to the Myers Inverter System. Note: system should not be energized before the Myers Inverter technician arrives.

Purchasing Myers Inverter Factory startup provides an additional year of Warranty coverage on all electronic components, provided Factory Startup occurs within 90 days of ship date. **Note: the additional warranty provided by Factory Start-up does not apply anywhere outside the continental USA. Contact factory for specific options for other geographic locations.**

TESTING

R - Infrared Remote Test

Provides a method to manually trigger an Inverter self-test via a laser remote (remote included). Test can be performed using a specially designed infrared pen. Available on LV Series only.

RT - Remote Test Switch, Alarm, & Indicator

Provides a remote test switch, alarm, and indicator that can be used to remotely trigger a life safety test. Alarm conditions and failure modes will be communicated via the accompanying audible alarm and visual indicator. Available on LV Series only.

Table 1: Option Availability per Series/Model

 Option is available

Option	Code	Hyper-nova	Super-nova	EM	LV T1	LV T2/T3	LV Grid T1	LVM	LVU	CR	DR	SR
Remote Summary Alarm Panel	A											
Battery Cabinet Fan	BCF											
Battery Temperature Monitor	BTM											
Output Circuit Breaker lock(s)	BL											
Status Monitoring Contacts	C											
Drip Top (NEMA 2)	DT											
Dimming Relay	DR											
Floor Mount Bracket (add 4" to height of system)	F											
Floor Mount Bracket (add 2.7" to height of system)	B											
Fast Charge	F											
Grid Plenum Rated	G											
Handheld Meter	HH											
Inverter on Dry Form C Contact	I											
Infrared Remote test	R											
Load Control Relay Dimmer or Bypass Switch	L											
TVSS Line filter	LF											
Internal Maintenance Bypass	M											
Internal Maintenance Bypass Break Before Make	M(BBM)											
No Test (Theater applications)	NT											
Output Transfer Delay	O											
Remote Status Panel (Status alarms, Requires C Option)	P											
Remote Meter Panel	R											
Remote Meter Panel	RMP											
Remote Test Switch, Alarm & Indicator	RT											
Summary Fault Form C contacts	S											
Serial to Ethernet Adapter	SEA											
Output Trip Alarm	T											

Table 1: Option Availability per Series/Model (Continued) Option is available

Option	Code	Hyper-nova	Super-nova	EM	LV T1	LV T2/T3	LV Grid T1	LVM	LVU	CR	DR	SR
Time Delay 15 minutes	V											
Wall Mount Bracket	W											
Seismic Mounting	Z											
Battery Strapping	S											
Zone Monitoring (Qty must be specified 3 maximum)	Z											
Zone Monitoring (Qty must be specified)	ZM											
BACnet	BAC											
BACnet IP	BIP											
IOT inverter Connect Cloud communication	IOT											
Modbus TCP/IP	MIP											
Modbus RTU	MOD											
Startup & Same day training	2YW											
Startup & Same day training and full run test	2YWT											
5-Year Service Plan	5YP											
5-Year Extended Electronics Warranty	5YW											
Training (if required on separate day)	TR											
External Maintenance bypass switch	EMBP											
Spare parts kit	SPARES											
Spare fuses	SPAREF											
Heater	H											
Keypad/Display Panel	M											
Emergency Load Enable	E(xxx)											