Ovation Spare Parts

Emerson Factory-Certified

Emerson offers a wide inventory of factory-certified Ovation™ parts to help you minimize downtime, and maintain control system integrity.

Emerson follows a rigorous set of quality procedures for the design, manufacture, installation and testing of replacement parts in order to provide a high level of confidence that our systems will operate as intended.

Request a Quote or More Information	
Email	PWS.Aftermarket@Emerson.com
Phone	1-800-445-9723 extension 2

Parts List*

Part Number	Description
1B30023H01	ASSY, I/O BUS TERMINATOR - INTERNAL GUIDES
1B30035H01	BASE ASSY, 2 SLOT STANDARD I/O
1C31116G04	PMOD ASSY, ANALOG INPUT (VOLTAGE W/ TEMP SENSOR) 8CH
1C31122G01	EMOD ASSY, DIGITAL OUTPUT 16CH (5-60VDC)
1C31166G02	EMOD ASSY, LINK CONTROLLER (R1120 CPU)
1C31179G02	EMOD ASSY, MEDIA ATTACHMENT UNIT (4 CHAN)
1C31181G02	PMOD ASSY, MEDIA ATTACHMENT UNIT (4CH - 850NM)
1C31194G01	EMOD ASSY, VALVE POSITIONER (1KHZ) - LEGACY OVATION 3.4 & EARLIER
1C31194G03	EMOD ASSY, VALVE POSITIONER (G03) - OVATION 3.5 & LATER
1C31194G04	EMOD ASSY, VALVE POSITIONER (G04) - OVATION 3.5 & LATER
1C31197G05	PMOD ASSY, VALVE POSITIONER
1C31203G01	EMOD ASSY, REMOTE NODE CONTROLLER
1C31204G01	PMOD ASSY, REMOTE NODE CONTROLLER (850NM FIBER PORT)
1C31219G01	MODULE ASSY, RELAY OUTPUT 16CH
1C31224G01	EMOD ASSY, ANALOG INPUT 8CH 14BIT (4-20MA CURRENT)
1C31227G01	PMOD ASSY, ANALOG INPUT (CURRENT) 8CH
1C31232G03	EMOD ASSY, DIGITAL INPUT 16CH - COMPACT (125V)
1C31233G04	EMOD ASSY, SEQUENCE OF EVENTS INPUT 16CH - COMPACT (CONTACT INPUT)
1C31234G01	EMOD ASSY, CONTACT INPUT W/ ONBOARD 48V WETTING 16CH - COMPACT
1C31238H01	PMOD CAVITY INSERT, COMPACT DIGITAL INPUT / EVENTS INPUT / CONTACT INPUT 16CH
1X00030H01	FUSE MICRO 0.062A 125V VERY FAST ACTING RADIAL PLUG-IN TH
1X00030H02	FUSE MICRO 0.5A 125V VERY FAST ACTING RADIAL PLUG-IN TH
1X00030H04	FUSE MICRO 0.05A 125V VERY FAST ACTING RADIAL PLUG-IN TH
1X00416H01	(LT-Buy) POWER SUPPLY, AC INPUT, 24V 300W & 25V 500W OUT DIN-RAIL MOUNT
1X00529H23	MEDIA CONVERTER, MM, ST, 2KM, HW:REV3; FW:2.0
1X00569H01	PMOD CAVITY INSERT, BLANK (W/ SILKSCREENED PART # ON BOTTOM)

Ovation I/O Architecture

The Base

Ovation packaging reduces the system footprint by using base units which attach to mounting plates by DIN rail; these hold four independent Ovation I/O modules of any style. This approach simplifies maintenance by making it easy to install, move or replace individual base units.

Base unit features include:

- Field terminal blocks that accept two 14 AWG or a single 12 AWG
- I/O bus communications built into the base
- I/O modules automatically addressed by location
- I/O modules may reside in any location
- I/O module redundant power distribution
- No interconnecting cables for I/O bases
- Built-in spare fuse holders and strip gauge in base

The base unit's high-impact plastic housing protects the backplane, exposing only the connectors as modules are removed.

The I/O Module

The I/O module includes an electronic module and a personality module or cavity insert. The I/O module converts field signals into data and sends it to the controller. Electronic module styles include digital and analog input and output modules, contact inputs, RTD inputs, pulse accumulator / counter, HART input and output modules, FOUNDATION Fieldbus, Profibus, DeviceNet, Ethernet and serial link controller modules.

I/O modules offer a number of protective features including:

- Signal conditioning, part of the surge-withstand feature, dissipates voltage "spikes" to protect the electronics
- Fuses protect the circuit in case of a short in the field device line

Each module is "hot swappable," allowing it to be removed and replaced without interrupting system power or using mechanical tools. The standard Ovation system configuration allows for up to 128 I/O modules in a local configuration. This modular approach simplifies maintenance by requiring less assembly and offering a compact and uniform architecture.

Controller I/O Capabilities

The Ovation controller supports multiple I/O capabilities in various combinations, including:

- Hardware I/O interfaces to Ovation I/O
- Q-Line I/O plus software I/O in the form of simulated I/O
- Virtual I/O generally communicated from OEM models and systems

Ovation I/O has two methods of implementation: locally within the controller and remotely away from the controller. Remote I/O provides a means to distribute I/O throughout a plant.

Controller I/O Capabilities		
Item	**Capability**	
Local Ovation I/O	2 sets of up to 8 independent branches of 8 modules per branch for a total of 128 modules	
Remote Ovation I/O*	Up to 16 nodes of 8 branches of 8 modules per branch for a total of 64 modules per node	
Local Q-Line I/O*	1 node of 48 Q cards	
Local Q-Line I/O*	1 additional node of 48 Q cards	
Remote Q-Line I/O*	Up to 8 nodes of 48 cards	
Smart device capability	FOUNDATION™ Fieldbus – PROFIBUS - DeviceNet	
Virtual I/O capability ** (via Ethernet TCP/IP and standard protocols)	Allen-Bradley PLCs DF-1 GE Mark V/VI GSM Modbus/TCP GE Genius I/O	Toshiba turbine control MHI turbine control External Ovation network
Note: * Refer to the Ovation controller documentation for valid combinations of the above listed hardware interface capabilities since not all can be supported concurrently. ** The valid combinations of software I/O interfaces depend upon the ports available and controller device capability.		

Ovation Local I/O

The Ovation controller can directly support up to 16 independently driven branches of Ovation I/O. For local I/O, all modules reside in up to four standard cabinets, which are placed side by side. All field wiring leads to these cabinets.

Ovation Local I/O Specifications	
Max branches per controller	16 branches
Max I/O modules per branch	8 modules
Max I/O modules per controller	128 modules
Max local I/O bus length	20 m (60 ft)

Ovation Redundant I/O

Redundant Ovation I/O modules are installed in the same fashion as standard Ovation I/O modules, but are associated in pairs located in adjacent branches.

The module pairs exchange health, status and I/O information via their personality module interconnections. This approach allows the user to take advantage of I/O redundancy by wiring the field terminations into a single terminal block on the primary I/O base, with no special control strategy configuration required.

Redundancy is applied and configured during I/O setup, allowing the Ovation system to automatically read and compare during normal operation, the I/O channels of both modules and determining which value to use. When a fault is detected the system automatically switches to the backup module thus increasing reliability and availability of the process inputs or outputs.