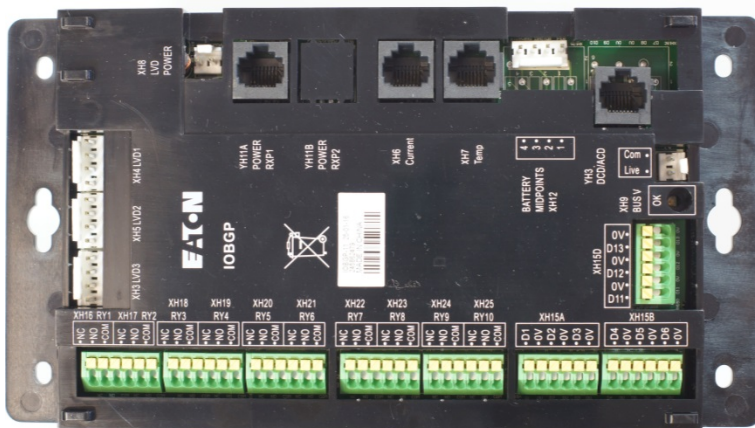


IOBGP-10 Series System I/O Board



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The IOBGP-10/11/20/21 are enhanced versions of the IOBGP-00/01



Powering Business Worldwide

Versions

IOBGP-00	Uncased, 2 x LVD, 6 x relay, 6 x user DI
IOBGP-01	Cased, 2 x LVD, 6 x relay, 6 x user DI
IOBGP-10	Uncased, 3 x LVD, 10 x relay, 9 x user DI
IOBGP-11	Cased, 3 x LVD, 10 x relay, 9 x user DI
IOBGP-20	Uncased, 2 x LVD, 8 x relay, 9 x user DI
IOBGP-21	Cased, 2 x LVD, 8 x relay, 9 x user DI

System Configuration

System Controller:	<p>All functions Limited functions</p>	<p>SC200, SC300 SC100 (2x LVD, 6 relays, 6 user digital inputs only, no mid-point monitoring)</p>
Location:	Within the DC power system	


Mechanical

Dimensions H, W, D:	<p>Uncased versions Cased versions</p>	<p>106mm [4.17"], 175mm[6.89"], 20mm [0.79"] 120mm [4.72"], 223mm[8.78"], 29mm [1.14"]</p>
Weight:	<p>Uncased versions Cased versions</p>	<p>170g [6 oz] 350g [12.4 oz]</p>
Mounting:	Panel mount	

Environmental Requirements

Ambient Temperature:	-10°C to +80°C [14°F to 176°F] <i>Reduced accuracy above +70°C [158°F]</i>
Storage Temperature:	-40°C to +85°C [-40°F to 185°F]
Humidity:	<95% RH (non-condensing)
Altitude:	<3000m (9800 feet)

DC Input

Rated Voltage:	24V / 48V nominal; 0.4A - 0.2A maximum; current depends on LVD option and state <i>From an earthed SELV non-polar power source.</i>
Operational Range:	19 - 60V
Power input connector:	RJ-45 (part of RXP bus)
Earthing:	Class II 
Fault Protection (external):	Over-current protection of the IOBGP power supply (RXP bus) is required to prevent excessive current flow during fault conditions.
Approved over-current devices:	Eaton Voltage Feed Module (VFN), or Tyco RXEF135 or Littelfuse 60R135 polyswitch in series with LIVE input of the DC power source.

Indicators

OK LED (green):	Indicates the IOBGP status
LVD1 contactor indicator (green):	Indicates LVD contactor 1 status
LVD2 contactor indicator (green):	Indicates LVD contactor 2 status
LVD3 contactor indicator (green):	Indicates LVD contactor 3 status (IOBGP-10/11 only)

Communications

RXP bus	
Interface:	RS-485
Connector:	RJ-45
Protocol:	RXP (Rack Extended Protocol)

Outputs

Digital Outputs	
Quantity	Refer to <i>Versions</i>
Type:	Configurable, including 1 also used for Monitor OK
Rating:	Relays, Voltage free, NO-C-NC, 0.3A at 60V DC/1A at 30V DC
Connections:	Screwless terminal blocks
Wire size:	0.5 - 2.0mm ² [20 - 14 AWG]

Low Voltage Disconnect (LVD) Control Functions

Number of LVD contactors supported:	Refer to <i>Versions</i>
LVD Contactor Type	
SC200 systems:	Normally Open (NO) or Normally Closed (NC)*, with auxiliary contacts Latched with auxiliary contacts
SC100 (Version 2.0 or later) systems:	Normally Open (NO) or Normally Closed (NC)*, with or without auxiliary contacts Latched with auxiliary contacts <i>* For NC contactor operation the SC100 and IOBGP must be powered from the battery side of the LVD.</i>
LVD Contactor Coil Ratings	
Nominal Voltage (with auxiliary contacts fitted):	24V (nom) dc power systems: 12V / 24V*
Nominal Voltage (without auxiliary contacts):	48V (nom) dc power systems: 12V / 24V / 48V*
Maximum NO/NC contactor Hold-in Current:	24V (nom) dc power systems: 24V
Maximum latched contactor pulse current	48V (nom) dc power systems: 48V 1.2A 2A for 1 second <i>*Applies to SC200 systems and SC100 systems with auxiliary contacts fitted. The SC100 or SC200 uses LVD Characterization to determine the optimum LVD coil drive voltages.</i>
LVD power feed input:	Required only if LVDs fitted
LVD power feed type:	Live bus/Common bus connections
LVD operated input:	From contactor auxiliary switch (if fitted)

Inputs

<p>Bus Voltage</p> <p>Number: Range: Resolution: Accuracy:</p>	<p>1</p> <p>-60V to +60V 30mV ±0.5% of full scale at 25°C [77°F], ±1% over rated temperature range</p>
<p>Current Sensor/Shunt</p> <p>Number: Range: Resolution: Accuracy:</p>	<p>3</p> <p>-50 to +50mV <50µV ±0.5% of full scale at 25°C [77°F], ±1% over rated temperature range</p>
<p>Temperature</p> <p>Number: Range: Resolution: Accuracy:</p>	<p>2</p> <p>2.53V to 3.23V (-20 to +70°C) <0.01V (<1°C [1.8°F]) ±1°C [1.8°F] at 25°C [77°F], ±2°C [3.6°F] over rated temperature range</p>
<p>Battery mid/quarter-point monitoring</p> <p>Number of inputs: Range: Resolution: Accuracy:</p>	<p>4</p> <p>-66 to +66V <30mV ±0.5% of full scale at 25°C [77°F], ±1% over rated temperature range</p>
<p>User Digital Inputs</p> <p>Number: Connectors: Wire size: Input Types: Input Range: Input Common: Input Protection:</p>	<p>Refer to <i>Versions</i></p> <p>Screwless terminal blocks 0.5 - 2.0mm² [20 - 14 AWG] Voltage-free switch or relay contacts only Live Bus to Live Bus + 5V Same bus as used for current shunts (Live bus is standard) Protected against damage from short circuit to live or common bus</p>
<p>System digital inputs:</p>	<p>MOV Fail, Fan Fail, Load Fuse Fail, Battery Fuse Fail</p>

Compliances

<p>Safety:</p>	<p>EN 60950-1, AS/NZS 3260.1, UL 60950-1</p>
<p>EMC – immunity</p> <p>Electrostatic discharge: Radiated radio frequency: Electrical fast transients: Surge: Conducted radio frequency:</p>	<p>EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6</p>
<p>EMC – emissions</p> <p>Radiated emissions:</p>	<p>EN 55022, CISPR 22</p>
<p>Environmental:</p>	<p>RoHS and WEEE Directives</p>

Certifications

<p>Europe:</p>	<p>CE-mark</p>
<p>Australia/New Zealand:</p>	<p>RCM</p>