

Controller carrier

8750-CA-NS

- ◆ accommodates two controllers/EBIMs
- ◆ accommodates Power Supply Monitor module
- ◆ serial port connections for controllers
- ◆ manual “change state” buttons
- ◆ seven* power fail inputs
- ◆ panel mounting

The controller carrier provides a mounting platform for up to two controllers or EBIMs (8521-XX-XX). It can also accommodate a Power Supply Monitor module (8410-NS-PS) which can monitor up to seven system power supplies in the node and alert the controller to failures. The “powerfail” signals are brought to the module via a screw terminal block at the rear of the carrier. For each controller /EBIM there is a serial port connection on the carrier and a manually operated “change state” (failover) button.

CARRIER SPECIFICATION

See also System Specification

CARRIER MOUNTING MODULES

Controller/EBIM (x2)8521-XX-XX
Power Supply Monitor module8410-NS-PS

HAZARDOUS AREA APPROVALS

Location of carrier Zone 2, IIC T6 hazardous area
.....or Class 1, Div 2, Groups A, B, C, D T6 hazardous location

Applicable standards:

- ◆ Factory Mutual Research Co., Class No. 3611 for Class I, Division 2, Groups A, B, C, D hazardous locations
- ◆ CSA Std C22.2 No. 213 for Class I, Division 2, Groups A, B, C, D hazardous locations
- ◆ ATEX Category 3 (for Zone 2 installation) to EN50021:1999 protection type ‘n’

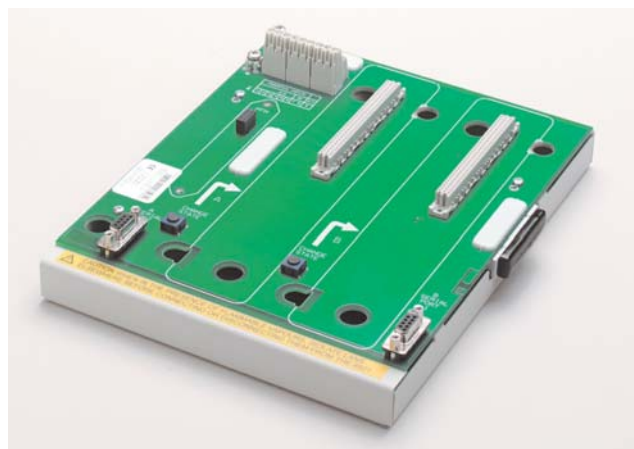
ELECTRICAL

Railbus connector.....male out
Serial port connectors.....9-pin, D-type (female) (x2)
Power “health” connectionsscrew terminals (x7 pairs)
Ground terminals.....M4 screw terminal (x2)

DC POWER

External power12.0 V dc (±5%)
A 6-pin connector (see next page) is provided at the top of the carrier. This connection powers the Power Supply Monitor module and other modules on carriers connected to this one.

Note: This connection does not provide power to the controller/EBIM module(s).



ENVIRONMENTAL

Ambient temp

Operating– 40°C to + 70°C
Storage– 40°C to + 85°C

Relative Humidity5 to 95% RH (non-condensing)

Vibration and Shock.....See System Specification

MATERIALS

Carrier bodyPainted 1.6mm ZINTEC to BS EN 10152
Printed wiring boardEpoxy Resin Woven Glass Laminate

MECHANICAL

Dimensions (footprint)200 (w) x 253 (d) mm
Height (top of circuit board)28 mm
(overall)55 mm
Weight (approx.)1.43 kg
Mounting methodsflat panel (4 fixings)

USER CONTROLS

Two “change state” buttons, one for each controller/EBIM, are provided on the carrier to enable the user to change the state of a controller from master to standby, standby to offline or offline to standby. The controller/EBIM affected by each “change state” button is indicated on the circuit board. The state change depends upon the controller state before the button is pressed. See table below for effects.

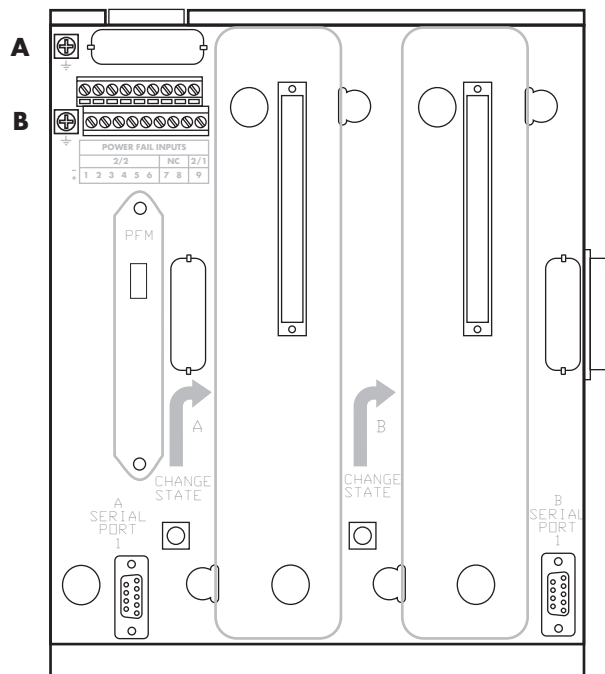
State	Effect
Master	Change to standby if current standby is healthy
Standby	Change to offline state
Backup	Re-synchronize and return to standby

* up to six 2/2 power supplies plus one 2/1 power supply.



Controller carrier

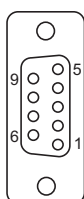
8750-CA-NS
continued



Ground terminals (A & B)

A & B provide the same ground connection. B is recommended for terminating any shielding on the power "health" cable(s).

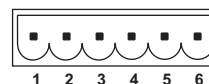
SERIAL PORT CONNECTORS (X2)



Pin #	Function
1	0V
2	NC
3	Tx/Rx (+)
4	Tx/Rx (+)
5	Tx/Rx (-)
6	Tx/Rx (-)
7	NC
8	NC
9	0V

RAILBUS POWER SUPPLY CONNECTIONS

External power

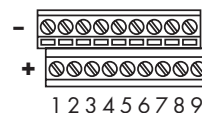


Terminal	External power
1	No connection
2	0 V
3	+12 V
4	+12 V
5	0 V
6	No connection

Power supply pins are provided in pairs. This enables one pin to be used for the supply input and the second to loop to another connector, when required.

Note: The controllers/EBIMs do not draw main power from this supply. See previous page.

PSU POWER "HEALTH" CONNECTOR



This power "health" facility is operational only when a Power Supply Monitor module (8410-NS-PS) is fitted on the carrier.

Terminal pairs 1 - 6

These terminal pairs (+ and -) are provided for external 2/2 power supplies, e.g. 8913-PS-AC or 8914-PS-AC. For each pair:

- + Power health signal from PSU
- negative (-ve) connection from PSU

Note: On the 8913-PS-AC, it is the 12V output that provides the power health signal, therefore connect the -ve terminal from the **12V output** to the -ve terminal on the power health connector.

Each unused terminal pair must be fitted with a shorting link to prevent an alarm condition being signalled to the controller.

Terminal pairs 7 & 8

These terminal pairs are disconnected and should not be used.

Terminal pair 9

If a Railbus Isolator (8922-RB-IS) is **not** used in the node, this terminal pair **must** be fitted with a shorting link to prevent an alarm condition being signalled to the controller/EBIM.