

Issue 1.0

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Os808u

PRODUCT OS808
CONTACT ECHO CARD
USER MANUAL
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USER MANUAL

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CONTACT ECHO CARD (AU910)**DESCRIPTION:**

The contact echo card is a eurocard (160 x 100 x 25mm) size pcb. Two cards are in a set echoing the contacts of eight relays over an optical fibre (or optional RS232 link).

Each unit in a pair has eight opto isolated inputs and six relay outputs. It operates in full duplex mode, echoing the local relays on the remote unit and the remote relays on the local unit.

OPERATION:

Inputs: The opto isolated inputs will sense the status of the potential free relay contacts connected to it. It will then convert this into a serial data stream that is routed to a connector that can house a variety of interfaces. (Usually a fibre optic interface). A fibre optic interface will send the information to the remote unit on optical fibre.

Outputs: The information that is received on the fibre is converted from an optical to an electrical data stream. This data stream is decoded and the remote side information it contains is used to drive the local relay outputs. Each relay has a LED that will light up when the relay is activated.

Error indication: The 'link OK' LED will indicate the status of the link both local and remote side.

No incoming data or corrupted receive data:	LED permanently OFF
Valid incoming data but remote unit has receive error:	LED flashes
Link in good condition:	LED permanently ON

Alarm Relay: The alarm relay contacts will indicate.

Power fail

Receive data fail.

The output relays will switch off when:

- 1) no data is received (100mS after data link breaks) or
- 2) when a local error condition is detected for longer than 100 mS.

Power supply: The unit is suited to be plugged into a LL700 or OS800 sub_rack.
Alternatively a separate power supply is required to operate the unit.

Power indicator. A red LED will light up when power is connected.

PREPARATION FOR USE:

The unit is shown in fig 1. On the front are the optical interfaces and indicating LEDs. At the back are the electrical connections.

OPTIC CONNECTION

Connect the optical fibres to these connectors. The local unit's transmit interface connects to the remote unit's receive interface and the local unit's receive interface to the remote unit's transmit interface. The green LED should light when this connection is made.

INPUT (OPTO ISOLATED) CONNECTION

The inputs have a common bus connected to Pins 1 & 2 of the Bottom rear connector. The inputs can use either the internal power supply which are on pins 3 & 6 of the bottom rear connector or external power supply.

To activate an input it must be shorted to the OGND connection. The inputs can sense a relay contact closure. The relay contact must be connected between the relevant inputs and OGND. OGND is common and used by all six of the opto isolated inputs.

OUTPUT (RELAY) CONNECTION

The outputs consist of voltage free normally open relay contacts. The contact is between the front and rear connector rows.

These contacts correspond to the optic inputs on the remote unit input0 to input7, etc. The outputs are potential free contacts and are not polarity sensitive.

Connection is via a plug in module for miniature PHOENIX connectors.

The alarm contacts are voltage free normally open when no alarm exists.

SPECIFICATIONS:

INPUTS:	Number:	8 inputs
	Type:	optical isolated,
	Isolation:	2500V isolation Voltage
	Connector:	Miniature Phoenix plug with screw in terminals
OUTPUTS:	Number:	8 outputs
	Type:	Relay contacts (normally open with no power)
	Rating:	220VAC, 5A
	Switch Time:	10mS on , 10mS off (worst case)

POWER REQUIREMENT

When External power supply is used.

Controller & relay connections are kept separate from Opto isolated input section.

Controller

Voltages:	+12 Vdc @ 500mA (all relays on)
	12 Vdc @ 50mA (all relays off)
	-12Vdc @ 50mA.
Connector:	Phoenix screw type

Opto Isolation input

Voltages:	between 12 to 40 Vdc @ 5mA
Connector:	Phoenix screw type

DIMENSIONS

Height:	50mm
Width:	100mm
Length:	160mm
Weight:	100g

CONTROLLER

Type:	80C31
Link Baudrate:	19200
Sampling time:	Sampled every 2.5milli-seconds.
Response time:	2.5milli-seconds + relay response time
Interlocks:	None, But software interlocks can be supplied on request

Annexure 'A' Connection Diagram.