

**HYTEC ELECTRONICS Ltd**

5 CRADOCK ROAD, READING, BERKS. RG2 0JT, UK

Telephone: +44 (0) 118 9757770

Fax: +44 (0)118 9757566

E-mail: sales@hytec-electronics.co.uk

8901-CC 16-Channel I/O with Current Source DIN-Rail Mounted Terminal Board

USERS MANUAL

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Author: AB



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1. INTRODUCTION

The Hytec 8901-CC is a DIN-Rail mounted board which allows voltage free contacts to be sensed by connection to a VME64X carrier board. It connects to the transition board using a 50-way SCSI cable.

- 50-way terminal connection to plant equipment.
- 50-way SCSI socket connects to transition board
- Supplies twenty (16 signal + 4 control) current sources (5mA) to plant contacts and connects the contact output to digital inputs
- LED indication of current flow.
- Jumpers enable LEDs to be shorted out
- Indication of +24V presence
- Transient voltage protection

2. PRODUCT SPECIFICATIONS

Size:	DIN-rail mounted module approx 150x75x45mm
Operating temp:	0 to 45 deg C ambient
Power Requirements:	Optional +24V indication of transition board isolated power
Number of channels:	16 signal plus 4 control
Number of signals:	I/O 1-16, TRG, CLK, STR, STB, +24V, AGnd, plus 4 spare pairs
Connectors:	SCSI 50-way socket for connection to transition board 50-way terminal screws
Transient protection:	26V clamp rising to 40V max @ 10A using varistors

3. BOARD DESCRIPTION

The board is primarily intended to allow plant switch contacts to be sensed using a constant current. The currents are routed to a VME64X transition card using a 50-way twisted pair SCSI cable.

The signal pair (source current and signal return) for I/O1 connect between T26 and T1. The pair for I/O2 connect between T27 and T2 and so on up to T47 and T22. The signals are connected to the relevant pin numbers on the SCSI connector.

Jumpers J1-J20 can be used to short circuit the respective LEDs when input currents are not monitored i.e. the LED monitoring is disabled and the circuit is connected straight-through. The LED which indicates the presence of +24V is over-voltage protected by a varistor. Links LK1 and LK2 disconnect pins 25 and 50 of the SCSI so that an external PSU can be connected.

Important Note LK1 and LK2 should not be made as this connects the supply voltages incorrectly. Please contact Hytec for a solution.

4. OPERATION

4.1 Connection to Transition Board

Connect the unit to the SCSI socket on the transition board for the relevant carrier board site (e.g. lowest of the four connectors for an IP card plugged into site A)

4.2 Select power for current sources

For an external 24V supply open links 1 and 2 and close link 3.

4.3 Connection to Plant Equipment

Connect the signals to the terminals as shown in the table in section 5.
Connect the external supply +24V to terminal 50 and 0V to terminal 25.



5.8901-CC Connection DIN-Rail Board Pin-out

SCSI 50-way	Terminal	LED	Signal	Comment
	26	1	I/O1 Source	+ve to contact
26	1		I/O1 Signal	Digital input
	27	2	I/O2 Source	+ve to contact
27	2		I/O2 Signal	Digital input
	28	3	I/O3 Source	+ve to contact
28	3		I/O3 Signal	Digital input
	29	4	I/O4 Source	+ve to contact
29	4		I/O4 Signal	Digital input
	30	5	I/O5 Source	+ve to contact
30	5		I/O5 Signal	Digital input
	31	6	I/O6 Source	+ve to contact
31	6		I/O6 Signal	Digital input
	32	7	I/O7 Source	+ve to contact
32	7		I/O7 Signal	Digital input
	33	8	I/O8 Source	+ve to contact
33	8		I/O8 Signal	Digital input
	34	9	I/O9 Source	+ve to contact
34	9		I/O9 Signal	Digital input
	35	10	I/O10 Source	+ve to contact
35	10		I/O10 Signal	Digital input
	36	11	I/O11 Source	+ve to contact
36	11		I/O11 Signal	Digital input
	37	12	I/O12 Source	+ve to contact
37	12		I/O12 Signal	Digital input
	38	13	I/O13 Source	+ve to contact
38	13		I/O13 Signal	Digital input
	39	14	I/O14 Source	+ve to contact
39	14		I/O14 Signal	Digital input
	40	15	I/O15 Source	+ve to contact
40	15		I/O15 Signal	Digital input
	41	16	I/O16 Source	+ve to contact
41	16		I/O16 Signal	Digital input
	42			
42	17			
	43	17	XTRIG Source	+ve to contact
43	18		XTRIG Signal	Digital input
	44	18	STR Source	+ve to contact
44	19		STR Signal	Digital input
	45	19	XCLK Source	+ve to contact
45	20		XCLK Signal	Digital input
	46			
46	21			
	47	20	STB Source	+ve to contact
47	22		STB Signal	Digital input
48	48			
23	23			
49	49			
24	24			
50	50	21	+24V	LK1 out for Ext
25	25		0V common to SCSI pins 1-22	LK2 out for Ext