DMC UNIVERSAL COUNTER 24V

3100-UC1 SERIES A

DESCRIPTION

3100-UC1 (UC86-8CH) is a general purpose 8-channel counter board which can be used for time, frequency or quantity measurement. When combined with a phase- shifted tachometer it can also be used for position measurement or direction indication. The board contains 8 optically isolated input channels with noise filters and one isolated output channel. Also included are 4 decoders for direction counting, a 2MHZ clock oscillator and LED's to monitor channel and direction.

INDICATORS

Channel LEDS
Rotation LEDs

ASSOCIATED FUNCTIONAL BLOCKS

UCINI , UCTF , UCC

SPECIFICATIONS

Location:	CPU or I/O rack
Power Requirements:	5V @ 1.2A.
Environment:	Temperature: 0 to 50°C Humidity: 5 to 95%

SELECTIONS

Device Address, Count Mode

CONNECTIONS AND ASSOCIATED PRODUCTS

3130 - UT
3130 - DIO

Switch Locations and Settings

The layout of the board and the corresponding switch setting are shown in Figure 1 and the accompanying table. The jumper numbers given in the table refer to the first channel pair. Jumper numbers for other channel pairs are given in parenthesis. Jumpers 1 thru 13 on the S27 switch set the adress range.

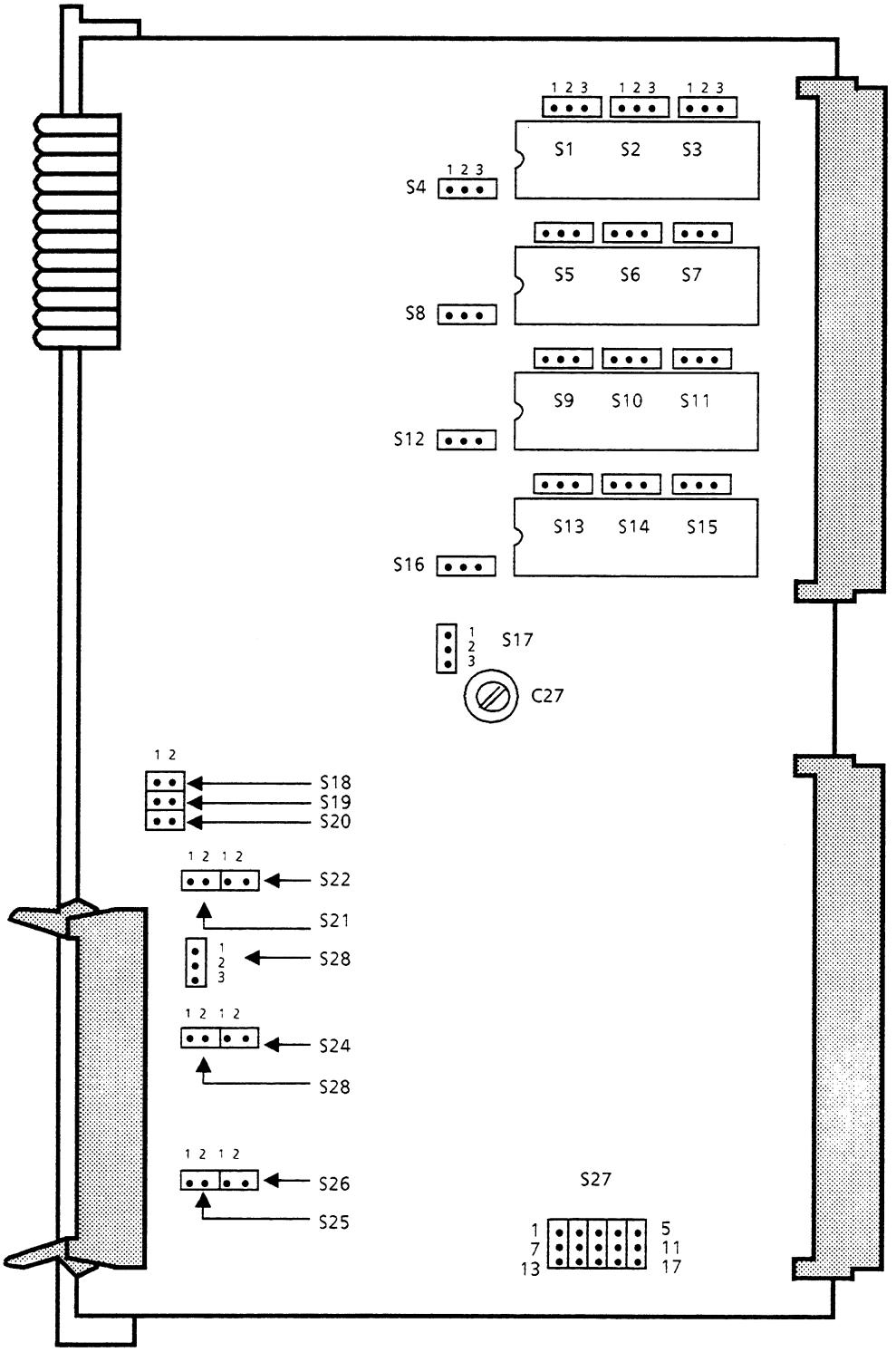

Figure 1. Layout of Switches and Jumpers on the 3100-UC1 Board

Table 1 Switch and Jumper Settings

Time measurement:		
Even channel	S1 (S5, S9, S13)	= ×
	S2 (S6, S10, S14)	= ×
	S3 (S7, S11, S15)	= 2-3
	S4 (S8, S12, S16)	= 2-3
Odd channel	S1 (S5, S9, S13)	= 1-2
	S2 (S6, S10, S14)	= 2-3
	S3 (S7, S11, S15)	= ×
	S4 (S8, S12, S16)	= ×

S17	The 8 M Hz test point
S18/1-2	Bypass of the current-limiting resistor of the output stage. Normally open.
S19/1-2	Bypass of the current-limiting resistor of channel 7.
S20/1-2	Bypass of the current-limiting resistor of channel 6.
S21/1-2	Bypass of the current-limiting resistor of channel 5.
S22/1-2	Bypass of the current-limiting resistor of channel 4.
S23/1-2	Bypass of the current-limiting resistor of channel 3.
S24/1-2	Bypass of the current-limiting resistor of channel 2.
S25/1-2	Bypass of the current-limiting resistor of channel 1.
S26/1-2	Bypass of the current-limiting resistor of channel 0.
S19-S26	normally open (= no jumpers)
S27	Board address [MSB { 1-7 = 1 ; 13-7 = 0 }]
S28/2-1	Active output channel
S28/2-3	Passive output channel

Status Indicators

The 12 LED Indicators on the board (Figure 2) are illuminated when the current is not flowing through the input stage of the board.

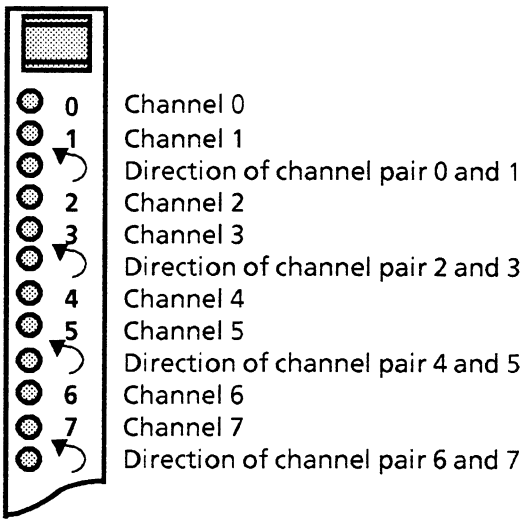

Figure 2. Location of the LEDs on the front edge of the board

Input Channel Connection

The input channels are coupled together in pairs as shown in Figure 3. Connection of channels IN0 and IN1 is shown as an example. Connection of other channel pairs is identical.

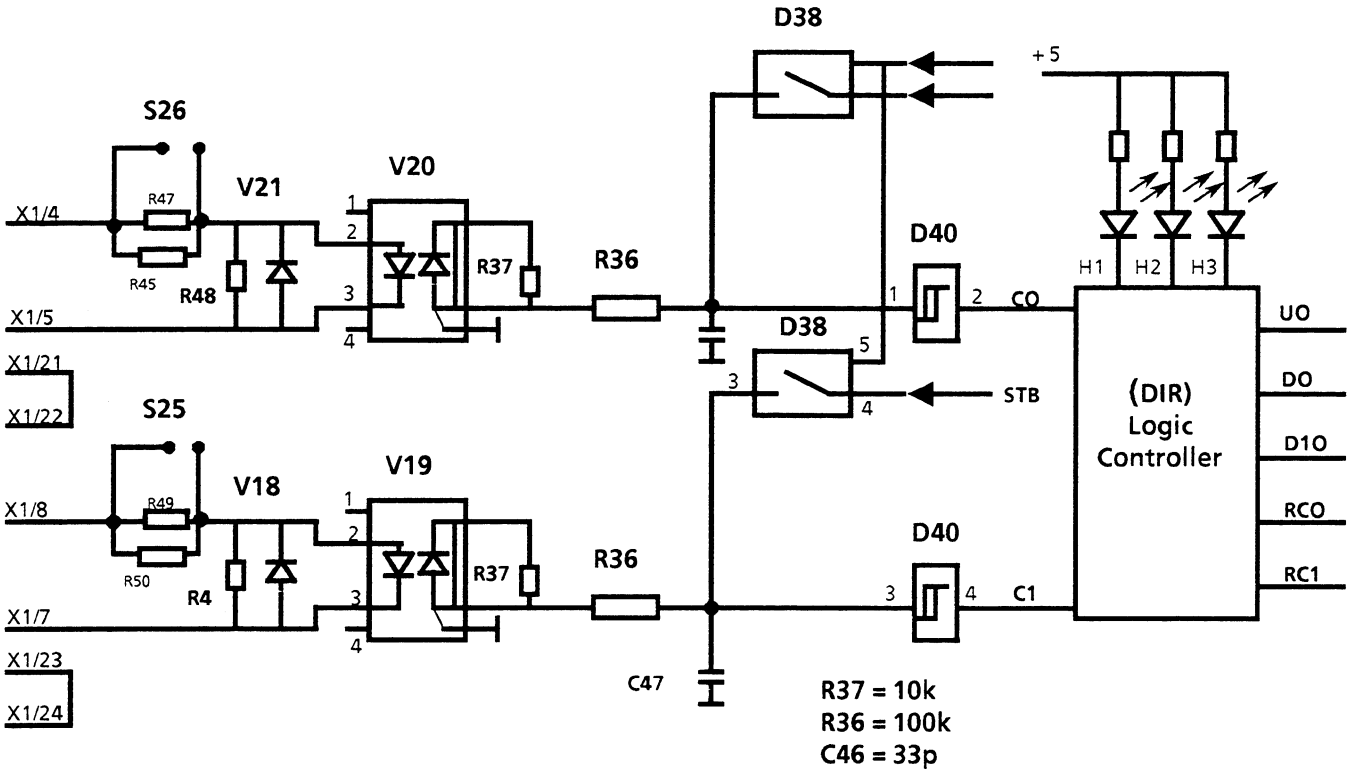

Figure 3. Connection of an Input Channel Pair