dual relay output

tcs

system 6000

D430

product specification

Star features

- 3 port galvanic isolation: input/power supply/output
- High impedance input: input current typically 0.1mA
- Flexible input power supply
- Full changeover output: normally open, normally closed and wiper
- Direct DIN rail mounting
- Clear plant and system labelling

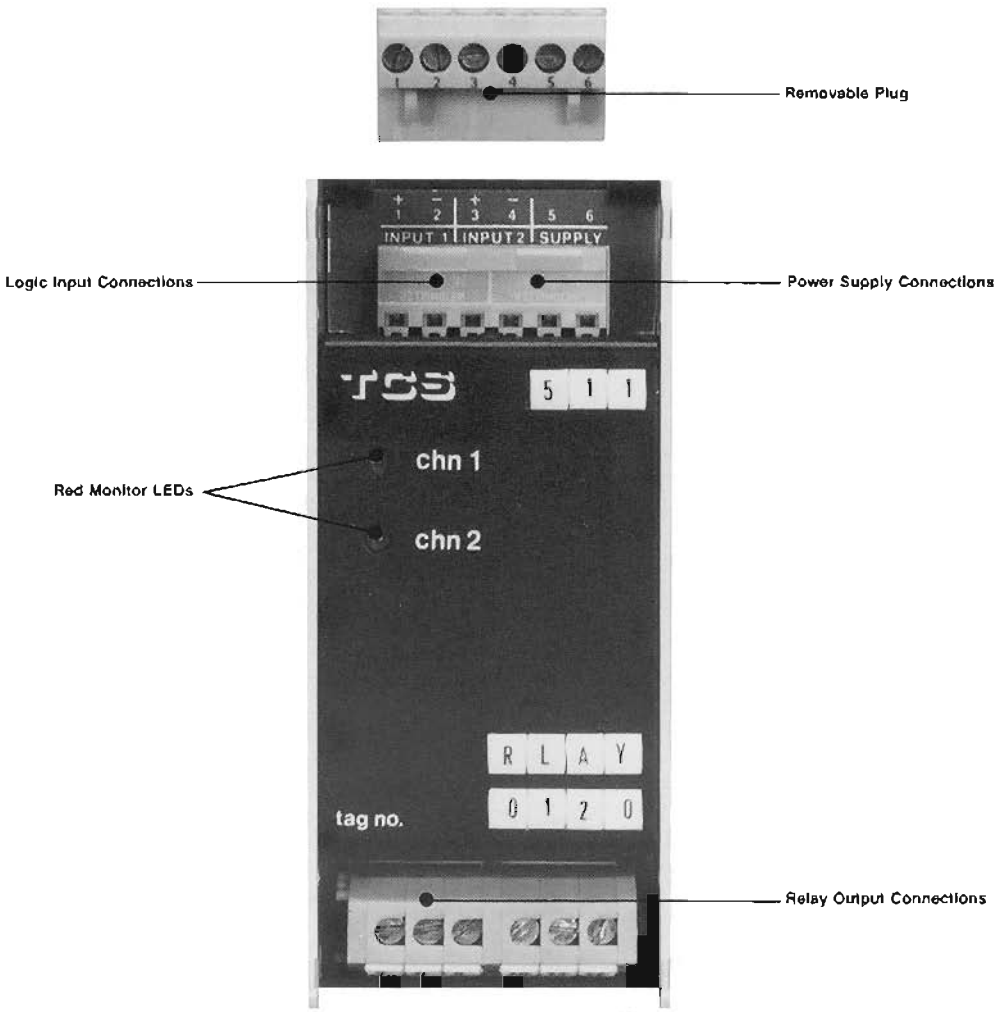
Functional description

This instrument provides two independent channels of logic input to relay output. The input pair for each channel is galvanically isolated from the rest of the circuitry. The current drawn by each input when activated is less than 1mA, typically 0.1mA, and the switching threshold is about 1.5 volts. No hysterysis is provided on the input circuitry though high gain ensures that switching occurs over an input change of about 20mV.

Each relay output channel comprises a set of changeover contacts, normally open, normally closed and wiper. The contacts are fitted with suppression circuitry. The input function is such that 0 volts input, open circuit input and removal of power from the instrument all cause the 'normal' state on the relay contacts

Indication on the front panel shows the state of each channel. The LED when ON indicates the active condition and when OFF indicates the 'normal' condition.

The power supply requirement makes this instrument directly compatible with the other instruments in this range. The supply, normally 24 volts, may be either AC or DC.



External features

The power supply and logic input connections are made with the plug-in terminal block at the top to simplify access to the instrument and to simplify system maintenance. The relay output connections are made directly to the terminal block at the base. This block will take a 4mm (solid) connection to allow direct plant wiring. Two monitor LEDs are provided to indicate the state of the relay channels.

Connection and installation

The pin numbering is 1 to 6, left to right on the top connector and 7 to 12, left to right on the bottom

PIN	FUNCTION	
1	Input + ve	Channel 1
2	Input – ve	
3	Input + ve	Channel 2
4	Input – ve	
5	Supply	
6	Supply	
7	Normally closed	Channel 1
8	Wiper	
9	Normally open	
10	Normally closed	Channel 2
11	Wiper	
12	Normally open	

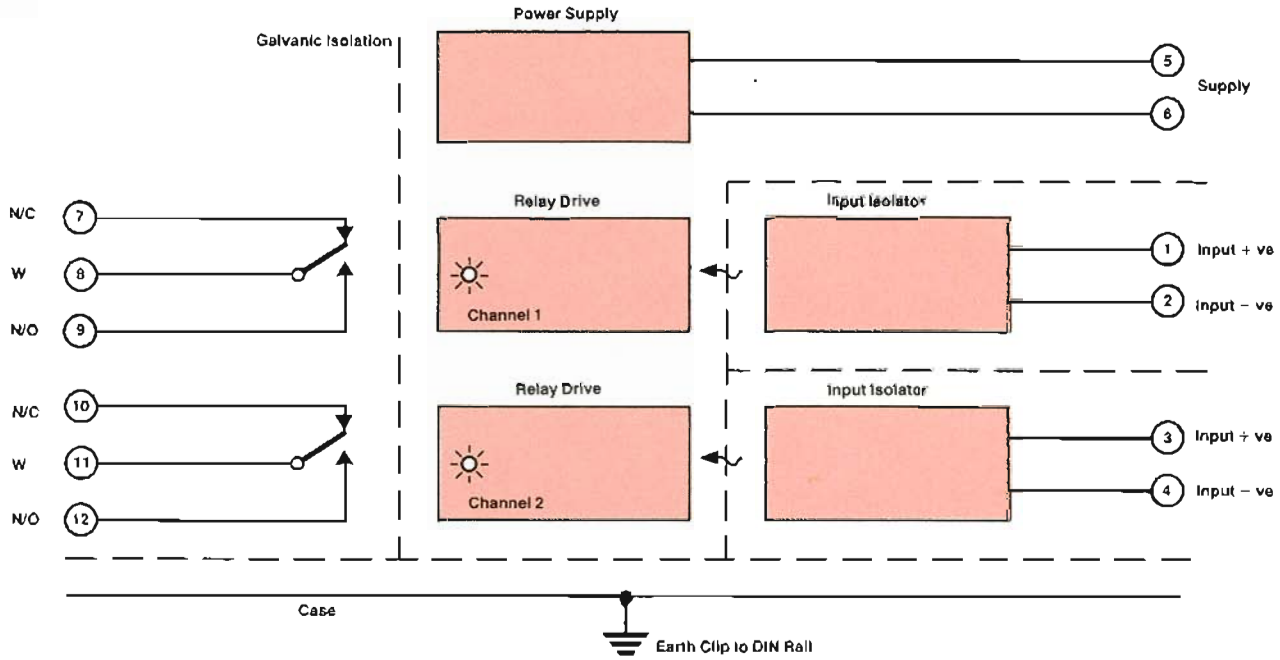
The instrument may be powered from either an AC or DC source. The DC supply voltage is nominally 24V (20–35V). The AC supply voltage range is 18–26V AC r.m.s. Internally the power supply circuit is galvanically isolated from the other circuits. This means that the power source may float, but it is recommended that the power circuit is earthed at a suitable point in the system, where this is possible.

The two input circuits are isolated from each other and have protection against reverse polarity connection. Input voltages in excess of 30 volts may damage the input circuit. The input is high impedance therefore inputs may be wired in parallel but not series.

The relay output connections are situated below their respective inputs. Where the relay is switching mains voltages particular attention must be paid to proper termination of the cable.

The internal operating voltages constitute no electric shock hazard, however, where mains is being switched care must be taken to earth the case. To facilitate this an earth spring is provided at the back of the box connecting onto the DIN rail. There are available parts which are specifically designed to provide an earth for the rail.

The mounting of the instrument is directly to the 'top hat' cross section DIN rail (type T35). To install, the unit is rolled down until it clips into position. To remove, a screw driver is used to release the spring catch.



Labelling

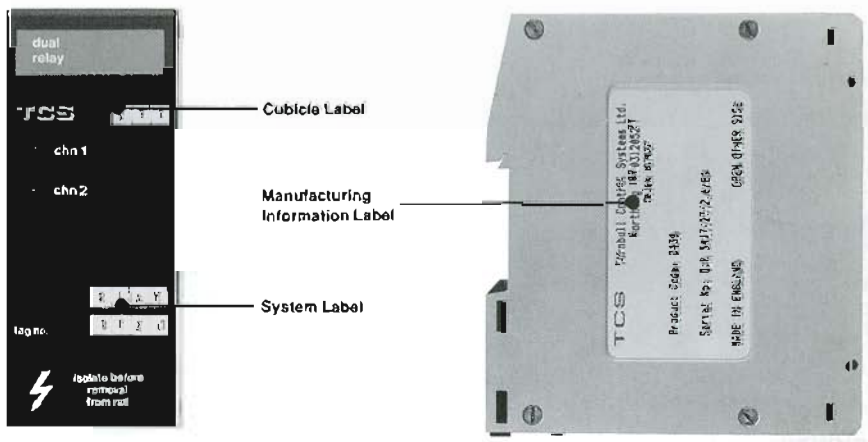
Two labelling areas are provided on the fascia. These labels are made up with Dekafix* markers. The use of this labelling system ensures that the label is legible and may be transferred if the instrument is replaced or the system reconfigured.

The upper label, three markers, is provided for system identification and will normally indicate the position of the instrument within the housing.

The lower label, eight markers, is provided for functional identification or tag number. Although only eight marker positions are provided, two or three digits are available on each marker.

These positions will normally be supplied with blank markers but particular labelling may be specified within a system order

There is a printed label on the side of the box with manufacturing information and the order code.



* Dekafix is a registered trade name of Klippon Electricals Ltd

Performance

Power supply

Range	20–35V DC 18–26V AC r.m.s.
Current drain (Both channels excited)	70mA

Input

Switching threshold	> 1 volt < 2 volts
Input current (input high)	1mA (max) 0.1mA (typ)
Operating range	0–30 volts

Output

Switching current	2 Amps
Switching voltage	250 volts

Isolation

OUTPUT to OUTPUT OUTPUT to POWER SUPPLY OUTPUT to INPUT	250 volts (Factory tested to 2kV)
INPUT TO INPUT INPUT to POWER SUPPLY	Nominal (Factory tested to 500V)

Ordering information

Specify: **D430**

Details

Overall dimensions in mm of housings.

Width	:	48
Height	:	110
Depth	:	97

TCS
Interface Products

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