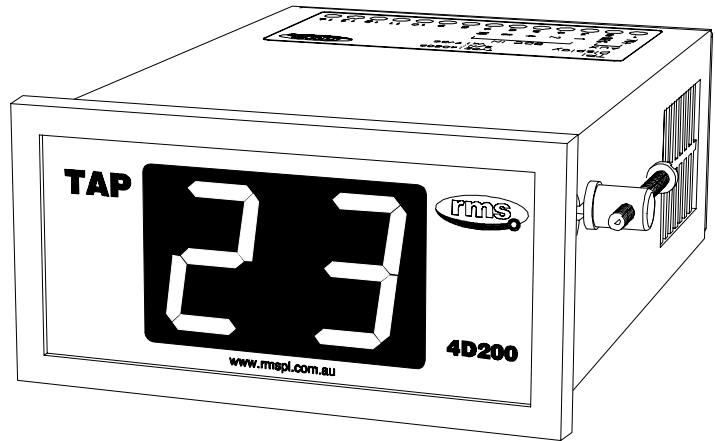


## Features

- Designed to interface with the RMS 2V200 TPI transducer
- Optional BCD / BIN input interface
- Optional BCD output signaling
- Compact panel mount case
- Bright 25mm digit red LED display
- 12V DC auxiliary supply input for use with external isolating AC power adaptor
- Double insulated high impact polystyrol case
- Simple & robust construction



## Application

The 4D200 may be applied to a number of system configurations as shown below. While the 4D200 may be specified to directly accept BCD / BIN input signals, it is more convenient to simply employ an RMS 2V200 TPI transmitter unit. Refer application block diagrams 1 & 2.

This has the advantage of only requiring a two wire connection between the 2V200 mounted at the tap changer & the 4D200 display module. Refer to the 2V200 Technical bulletin for details on the other advantages this system provides.

## Description

Made in Australia

The 4D200 is a compact panel mount module incorporating 2 bright 25mm LED digits for the display of a power transformer tap position over the range TAP 1 to TAP 30.

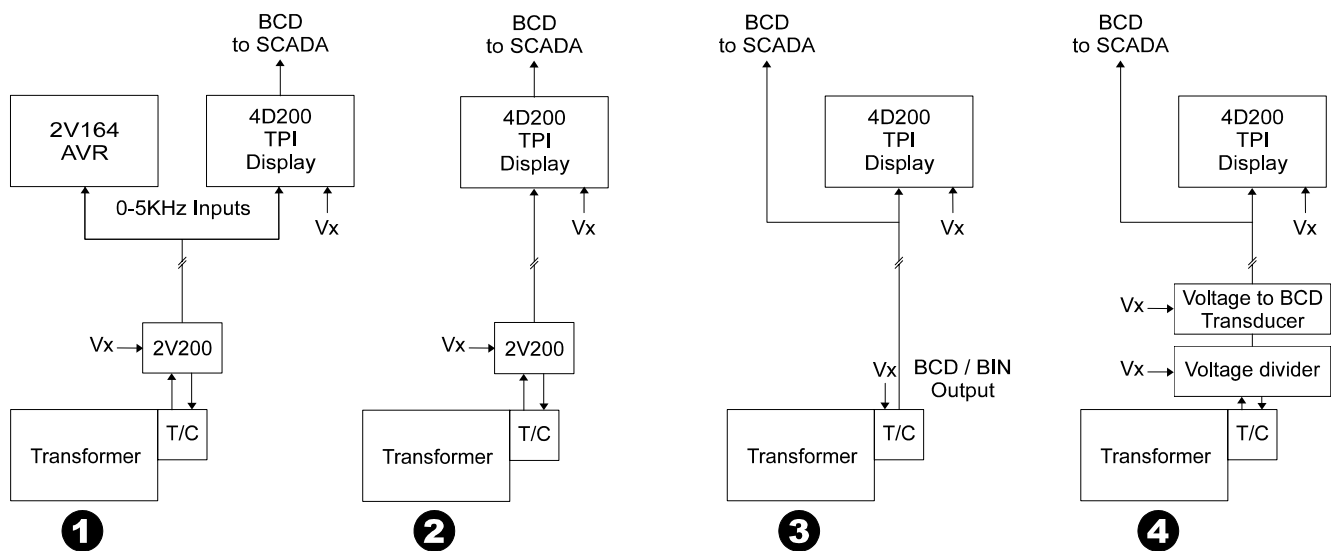
The 4D200 is specifically designed for operation with the RMS type 2V200 TPI to frequency transducer. The 2V200 provides a noise immune interface between the tap changer & the 4D200 via a 0 to 5KHZ frequency signal.

Alternatively the 4D200 may be configured to accept a BCD / BIN coded input direct from the tap changer or via a voltage to BCD / BIN transducer.

Where an RMS 2V164 Voltage Regulating Relay is being used with a 2V200 TPI Transducer, a 4D200 may be connected in parallel to provide a local easy to read tap position indication.

The 4D200 may also be optionally specified to provide a BCD output of the tap position for interface to a SCADA system.

## Application Examples



**AUXILIARY POWER SUPPLY**

Vx input: 12V DC  
 Use separate Idec PS5R-x12 isolating power supply module to interface with AC or DC auxiliary supplies.

**POWER CONSUMPTION**

<4VA (3W)

**4D200 INPUTS**

Application examples 1 & 2

0-5KHz frequency input provided by the RMS 2V200 TPI transducer.

Application examples 3 & 4

BCD/BIN input direct from tap changer or voltage divider to BCD/BIN transducer. 50V DC or 110/125V DC input range may be specified.

**BCD / BINARY SETTING**

Default setting : BCD input  
 Changing between BCD & Binary input setting is achieved by opening the case & setting a series of DIP switches in accordance with the 4D200 User Guide.

**MAXIMUM TAP SELECTION**

Where the 0-5KHz frequency input is employed the 4D200 TPI display module must be set with the maximum tap number. This is achieved by opening the case & setting a series of DIP switches in accordance with the 4D200 User Guide.

**4D200 DISPLAY**

2 x 7 segment 25mm red LED digits display the tap position over the range tap 1 to a maximum tap 30.

**4D200 BCD OUTPUTS**

Optional BCD output using clean relay contacts for interface to a SCADA system.

**BCD OUTPUT CONTACT RATING**      Order code 4D200[A][C]

**Make & carry**

- 30A AC or DC (Limits L/R=40ms & 300V max.) for 0.2s
- 20A AC or DC (Limits L/R=40ms & 300V max.) for 0.5s
- 5A AC or DC continuously

**Break** (Limits 5A & 300V max.)

- 1,250VA AC resistive
- 250VA at 0.4PF AC inductive
- 75W DC resistive
- 30W DC inductive L/R = 40ms
- 50W DC inductive L/R = 10ms

**Minimum recommended load**

0.5W, 10mA or 5V minimum.

**OPERATING TEMPERATURE RANGE**

-5 to 55 degrees C.

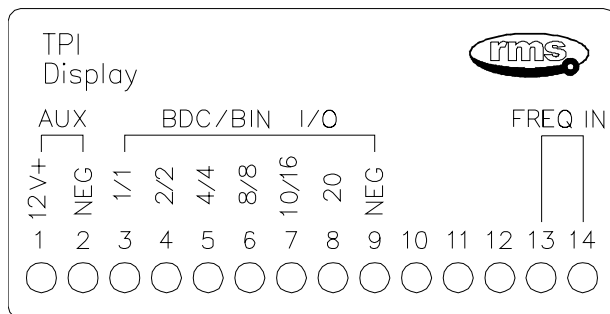
**INSULATION WITHSTAND**

In accordance with IEC 255-5:  
 2KV RMS between input & output. 1.2/50 5KV impulse input & output.

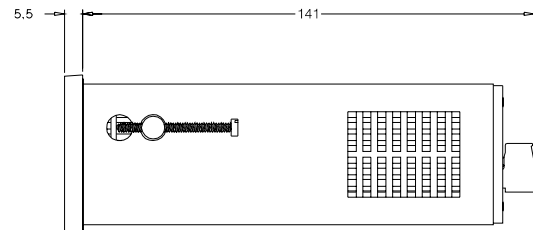
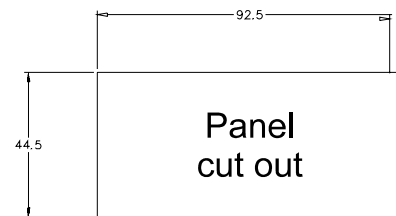
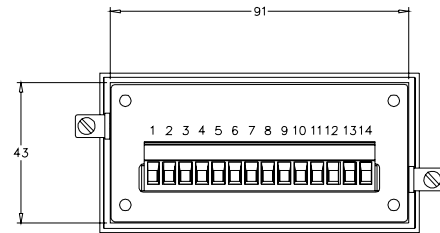
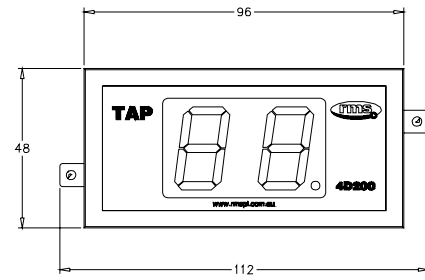
**NOISE IMMUNITY**

Withstands the high frequency interference test detailed in IEC 255-22-1.

**4D200 Rear Panel Screw Terminals**



**CASE DIMENSIONS & MOUNTING**



**CASE TERMINALS**

14 way plug in screw terminal block.

**IDEC PS5R-x12 POWER SUPPLY MODULE**

The Idec PS5R DIN rail mount power supply is suitable for providing the 12V DC auxiliary supplied required to operate the 4D200 TPI Display module.

- Vx input:            85 to 264V AC
- 105 to 370V DC
- Power output:    7.5, 15 or 30W continuous (Refer order codes)



## PS5R Power Supply Module

Generate the required ordering code as follows: e.g. PS5R A12

PS5R 

1

 12

### 1 OUTPUT POWER RATING

- A 7.5W version to power one 4D200 module
- B 15W version to power two or three 4D200 modules
- C 30W version to power four 4D200 modules

## Ordering Information

## 4D200 TPI Display Module

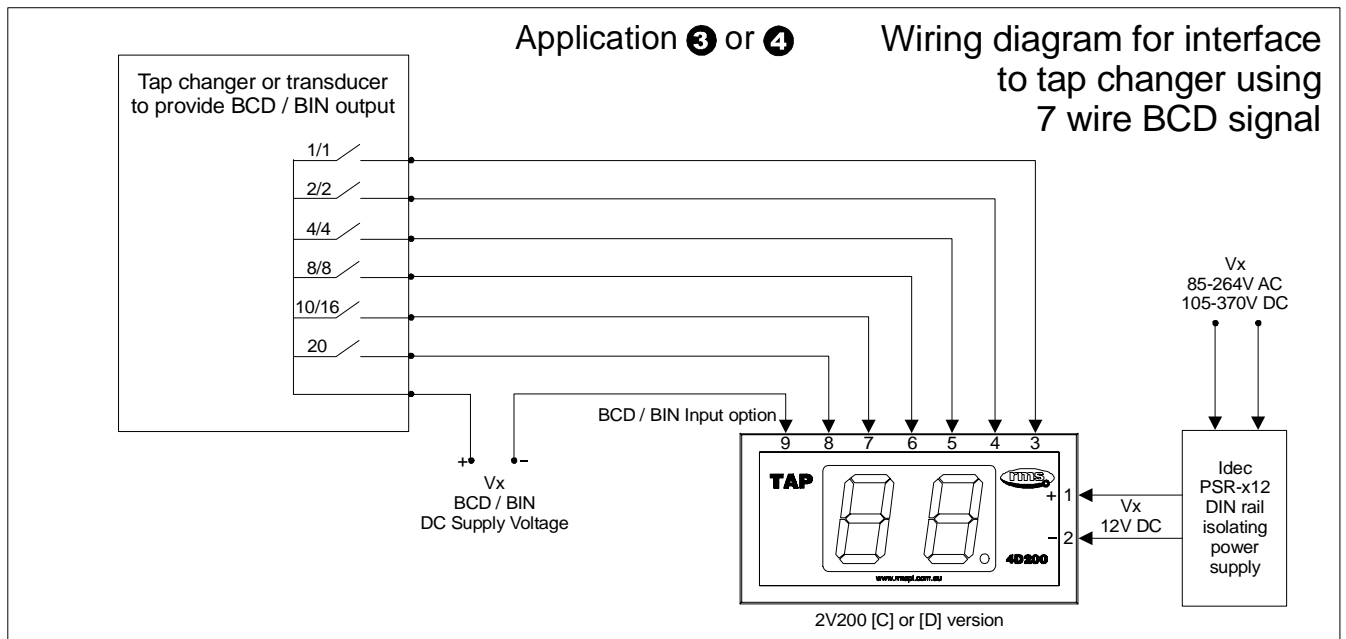
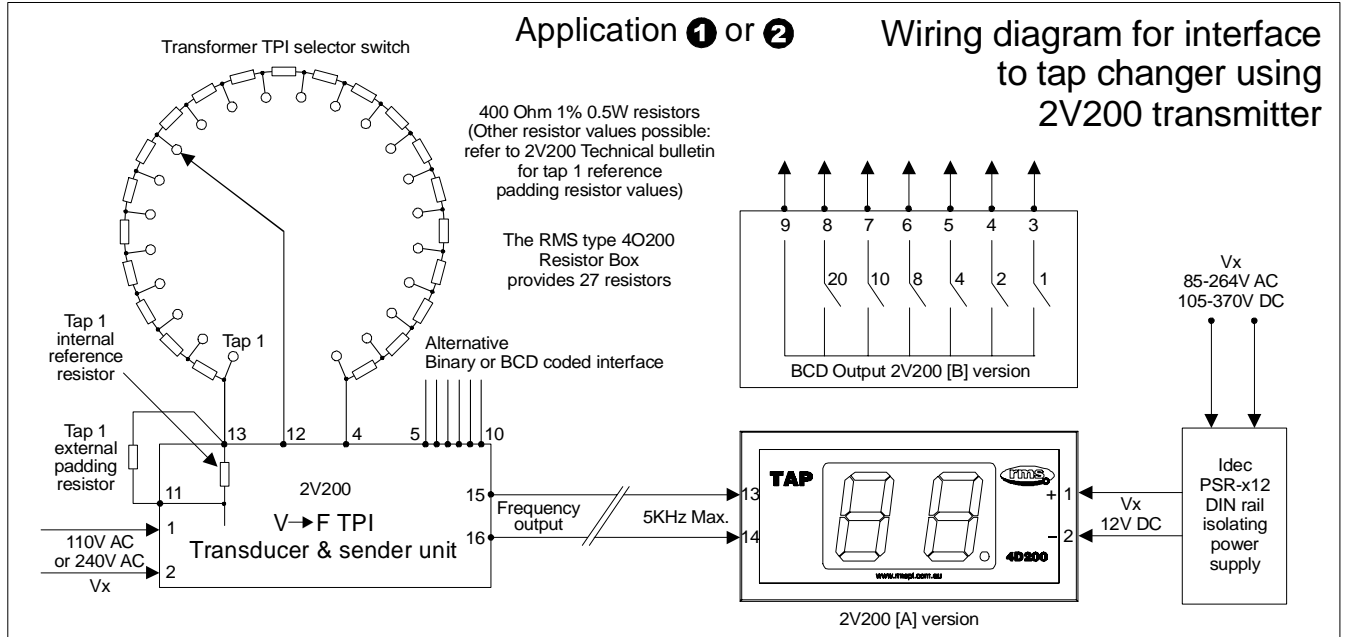
Generate the required ordering code as follows: e.g. 4D200A

4D200 

1

### 1 I/O INTERFACE SPECIFICATION

- A 0-5KHz frequency input version (Application 1 or 2)
- B [A] version with BCD output signaling (Application 1 or 2)
- C BCD/Binary input - 50V DC input (Application 3 or 4)
- D BCD/Binary input - 110/125V DC input (Application 3 or 4)



## **Australian Content**

Unless otherwise stated the product(s) quoted are manufactured by RMS at our production facility in Melbourne Australia. Approximately 60% of our sales volume is derived from equipment manufactured in house with a local content close to 90%. Imported components such as semi-conductors are sourced from local suppliers & preference is given for reasonable stock holding to support our build requirements.

## **Quality Assurance**

RMS holds NCSI (NATA Certification Services International), registration number 6869 for the certification of a quality assurance system to AS/NZS ISO9001-2000. Quality plans for all products involve 100% inspection and testing carried out before despatch. Further details on specific test plans, quality policy & procedures may be found in section A4 of the RMS product catalogue.

## **Product Packaging**

Protection relays are supplied in secure individual packing cardboard boxes with moulded styrene inserts suitable for recycling. Each product & packing box is labeled with the product part number, customer name & order details.

## **Design References**

The products & components produced by RMS are based on many years of field experience since Relays Pty Ltd was formed in 1955. A large population of equipment is in service throughout Australia, New Zealand, South Africa & South East Asia attesting to this fact. Specific product & customer reference sites may be provided on application.

## **Product Warranty**

All utility grade protection & auxiliary relay products, unless otherwise stated, are warranted for a period of 24 months from shipment for materials & labour on a return to factory basis. Repair of products damaged through poor application or circumstances outside the product ratings will be carried out at the customer's expense.

## **Standard Conditions of Sale**

Unless otherwise agreed RMS Standard Terms & Conditions (QF 907) shall apply to all sales. These are available on request or from our web site.



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