![RMS Mors Smitt - A Wabtec Company]

Features

- Designed to interface with the RMS 2V200 TPI transducer
- Optional BCD / BIN input interface
- 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.

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.
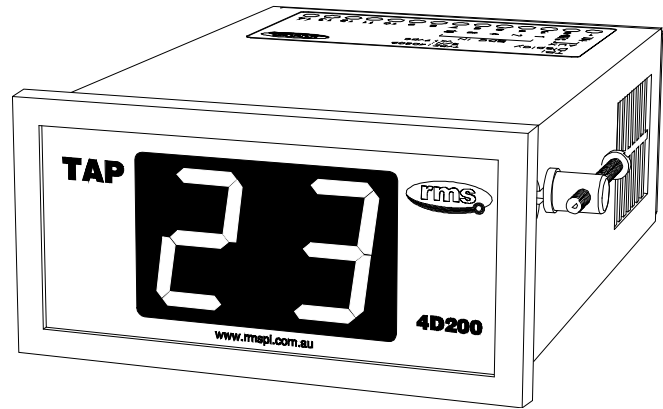

Description

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.

Application Examples

1

3

4
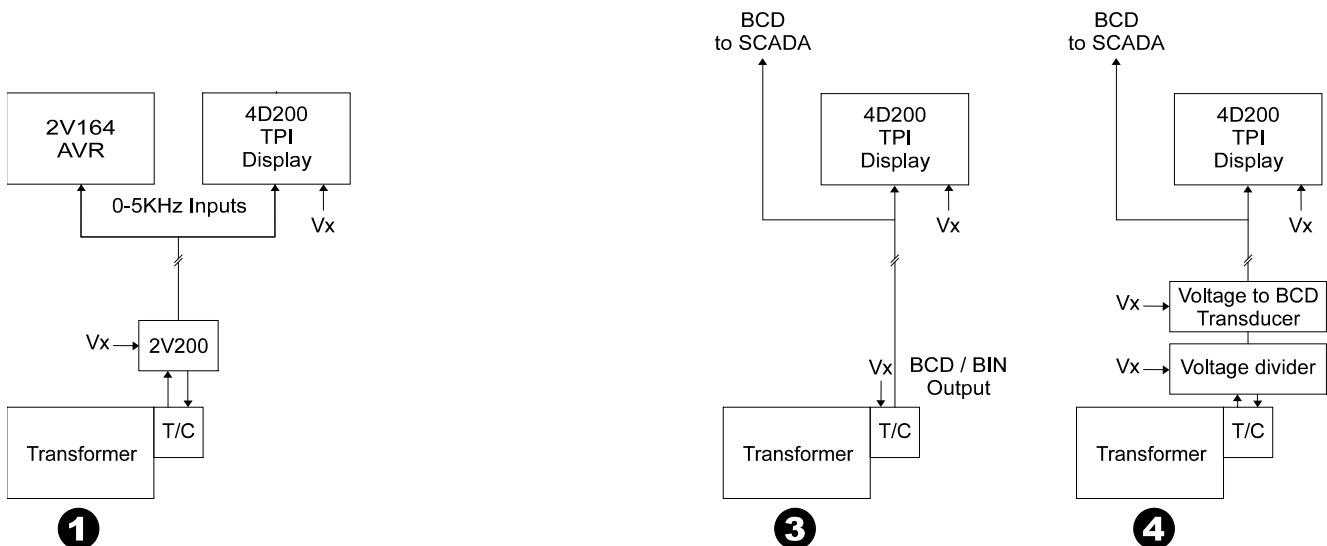
AUXILIARY POWER SUPPLY
Vx input: 12V DC
Use separate Idec PS5R-VB12 isolating power supply module to interface with AC or DC auxiliary supplies.

POWER CONSUMPTION
<4VA (3W)

4D200 INPUTS
Application example 1
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.

OPERATING TEMPERATURE RANGE
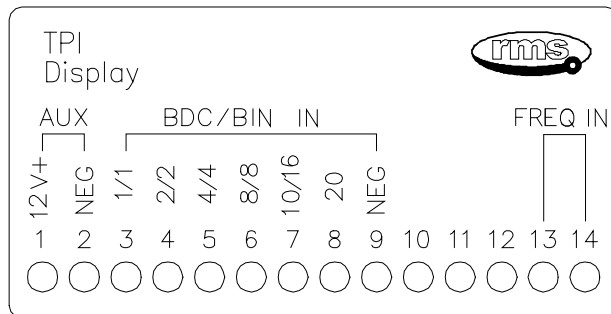-5 to 55 degrees C.

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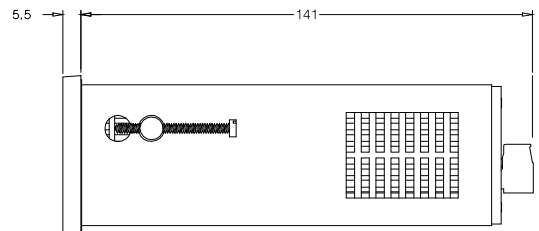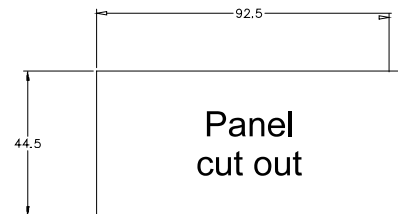2KV RMS between input & output. 1.2/50 5KV impulse input & output.

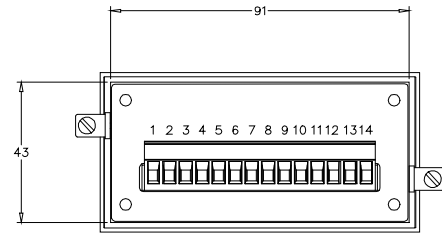## NOISE IMMUNITY
Withstands the high frequency interference test detailed in IEC 255-22-1.

CASE DIMENSIONS & MOUNTING
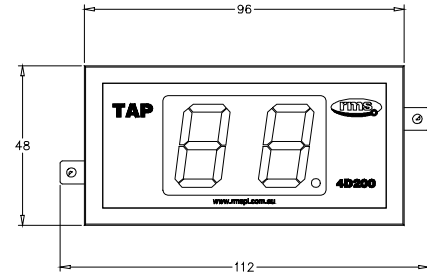
CASE TERMINALS
14 way plug in screw terminal block.

IDEC PS5R-VB12 POWER SUPPLY MODULE
The Idec PS5R-VB12 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
                 100 to 370V DC
Power output: 15W continuous

4D200 Rear Panel Screw Terminals

TPI Display

AUX		BDC/BIN IN						FREQ IN

12V+	NEG	1/1	2/2	4/4	8/8	10/16	20	NEG				
1	2	3	4	5	6	7	8	9	10	11	12	13	14

PS5R Power Supply Module

Generate the required ordering code as follows: e.g. PS5R-VB12

PS5R-V [**1**] **12**

1 **OUTPUT POWER RATING**

B   15W version to power up to three 4D200 modules

Ordering Information

4D200 TPI Display Module

Generate the required ordering code as follows: e.g. 4D200-A

4D200 [**1**]

1 **I/O INTERFACE SPECIFICATION**

A	0-5KHz frequency input version	(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)

Application ❶   Wiring diagram for interface to tap changer using 2V200 transmitter

Transformer TPI selector switch

400 Ohm 1% 0.5W resistors
(Other resistor values possible:
refer to 2V200 Technical bulletin
for tap 1 reference
padding resistor values)

The RMS type 4O200
Resistor Box
provides 27 resistors

Tap 1 internal reference resistor

Tap 1

Alternative
Binary or BCD coded interface

Tap 1 external padding resistor

13 12 4 5 10

11

2V200
V→F TPI
Transducer & sender unit

110V AC
or 240V AC

Vx

1
2

15 Frequency output 5KHz Max. 13
16 14

TAP **4D200**
www.rmspi.com.au

+ 1
− 2

Vx
12V DC

4D200 [A] version

Vx
85-264V AC
100 -370V DC

Idec
PS5R-VB12
DIN rail
isolating
power
supply

Application ❸ or ❹   Wiring diagram for interface to tap changer using 7 wire BCD signal

Tap changer or transducer
to provide BCD / BIN output

1/1
2/2
4/4
8/8
10/16
20

BCD / BIN Input option

+ −
Vx
BCD / BIN
DC Supply Voltage

9 8 7 6 5 4 3

TAP **4D200**
www.rmspi.com.au

+ 1
− 2

Vx
12V DC

4D200 [C] or [D] version

Vx
85-264V AC
100 -370V DC

Idec
PS5R-VB12
DIN rail
isolating
power
supply

Visit www.morssmitt.com/rms for the latest product information.
Due to RMS continuous product improvement policy this information is subject to change without notice.