

# 2V164K Software

## Voltage Regulating & Control Relay

relay monitoring systems Pty Ltd

### Advanced Protection Devices



User Guide



Test Manual



Relay Software



µMATRIXwin



# 2V164K Relay Software

## Links to Other Documents

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User Guide: [http://www.rmspl.com.au/userguide/2v164\\_user\\_guide.pdf](http://www.rmspl.com.au/userguide/2v164_user_guide.pdf)

User Guide: [http://www.rmspl.com.au/userguide/2v164-s\\_user\\_guide.pdf](http://www.rmspl.com.au/userguide/2v164-s_user_guide.pdf)

Software Downloads: <http://www.rmspl.com.au/digital/umatrix.htm>

## Version Control

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Issue	Date	Summary of changes
A	08/04/2009	Initial Release
B	21/08/2009	UMX updated
C	01/04/2010	UMX updated

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ARF	DG	DG	





### 3.0 DESCRIPTION – UMX2V164K.UMX

#### 3.1 Standard Features

The 2V164 & 2V164-S provide a range of standard features as described in the RMS Technical Bulletins that may be downloaded from the RMS website.

#### 3.2 Special Features of this Software UMX Version

TPI feedback mode:

When a tap change command is output to the OLTC, the tap change fail timer is started. If a single tap change restores the sensed voltage to a balanced condition the relay is reset. If the sensed voltage remains in error the interval time delay will start based on one of the three methods described below: The required operating mode is selected using the UMX order code.

VOLTAGE MONITORING (Automatic mode) UMX2V164 (As per UMX A).

In this mode the 2V164 provides a 1s output pulse to initiate a tap change. This output pulse is then repeated at a rate set by the Interval Timer setting until the sensed voltage has moved back to a balanced condition. This is the simplest connection method as it does not require a hard-wired contact between the OLTC & the VRR.

The output pulse may be selected as continuous for application with linear voltage regulators. The output pulse is reset once the sensed voltage moves back to the balanced condition & the interval timer delay does not function.

For information on the two other methods, see the 2V164 data sheet or the UMX2V164B & UMX2V164C documents.

##### 3.2.1 Alternate LDC Setting Group

An alternate group (LDC 2) for LDC resistance and reactance settings may be entered into the LDC menu with this UMX. Status Input 1 (SI1 on the wiring diagram), is used to toggle between the LDC setting groups.

When the LDC 2 Group is selected output contact 7 will pick up to signal this operational mode.

When an LDC mode is selected (Other than OFF), the message:

**\*\* LDC Group 1 \*\* or \*\* LDC Group 2 \*\*** is displayed on the HMI as determined by the 'Alternate LDC Group' input status.



#### 4.0 USER INTERFACE

Refer to the  $\mu$ MATRIX User Guides for detailed instructions on the operation of the user interface.

To download a PDF version of the guide uMatrix: [www.rmspl.com.au/userguide/umatrixInfo.pdf](http://www.rmspl.com.au/userguide/umatrixInfo.pdf)

To download a PDF version of the guide uMatrix-S: [www.rmspl.com.au/userguide/umatrix-s\\_Info.pdf](http://www.rmspl.com.au/userguide/umatrix-s_Info.pdf)

To download further  $\mu$ MATRIX software & documentation: [www.rmspl.com.au/umatrix.htm](http://www.rmspl.com.au/umatrix.htm)

#### 5.0 LOAD SOFTWARE

Loading a UMX requires at least the following:

A PC with Windows 2000 or later and at least one COM (uMatrix) or USB (uMatrix-S) port.

UMatrixWin software.

The correct communications cable.

A general understanding of how UMX and UMP files work with the relay.

*Settable parameters will be overwritten by loading a new UMX file. They can however, be saved to a UMP file and then returned to the relay later. To learn how to do this, refer to the uMatrix Userguide.*

#### 5.1 Loading the UMX

Before loading the UMX2V164K software, ensure that it is compatible with your hardware. Download the compatibility list from the RMS website at:

[www.rmspl.com.au/digital/compatibility.pdf](http://www.rmspl.com.au/digital/compatibility.pdf)

Ensure that the bios version in the relay matches the table in section 2.0 of this document. (If the bios version is different, you may not be able to load this UMX. Contact RMS for support.)

Load the UMX via the front panel COM port using the 'uMatrixWin' software.

Ensure that the UMX version matches the table in section 2.0.

*To interrogate for versions, press 'SET' and 'DATA' buttons simultaneously, then select 'Version Page'. Alternatively, use uMatrixWin – Options – Utilities.*

Check versions

#### 5.2 Customer Default UMP

Load customer UMP file as per the Job Card. If no UMP file is requested, write N/A in check box.

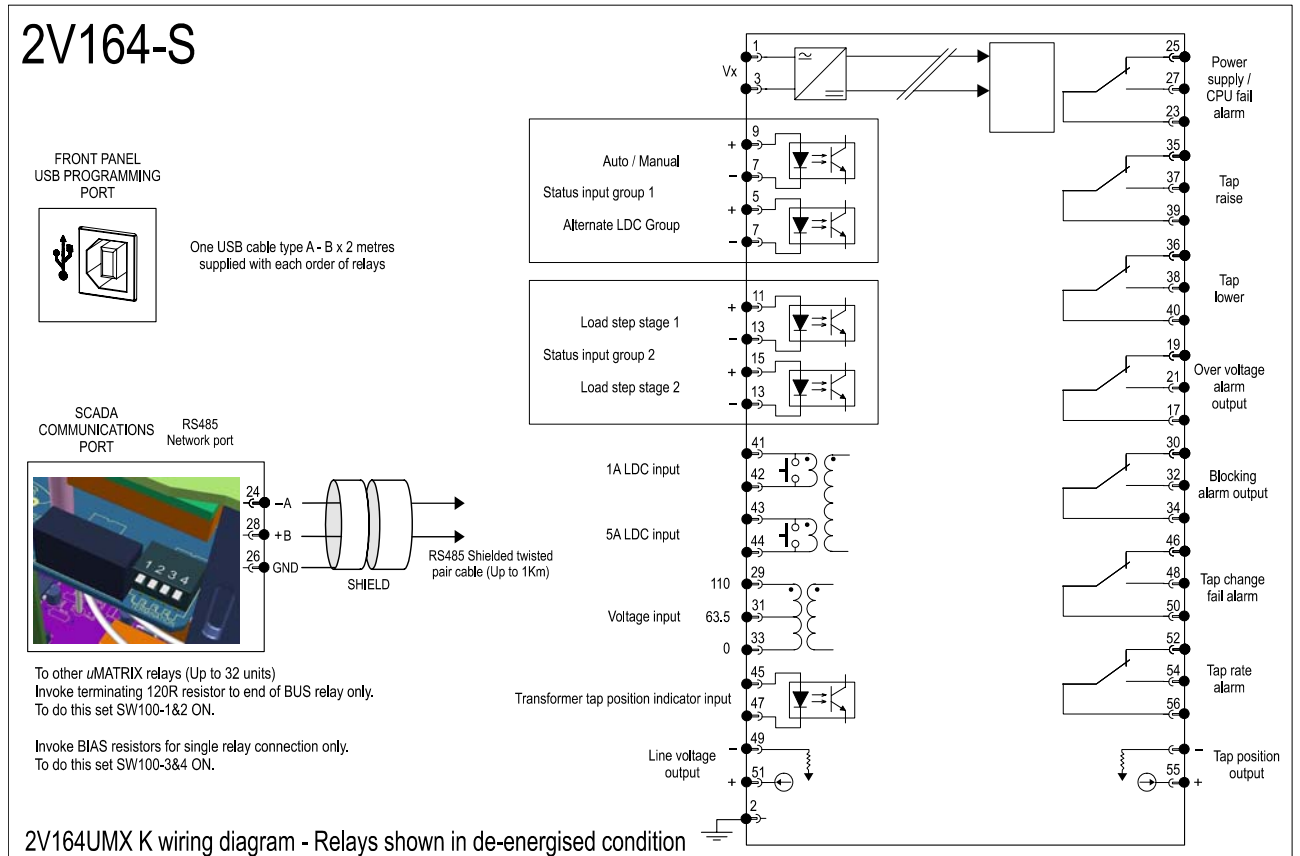
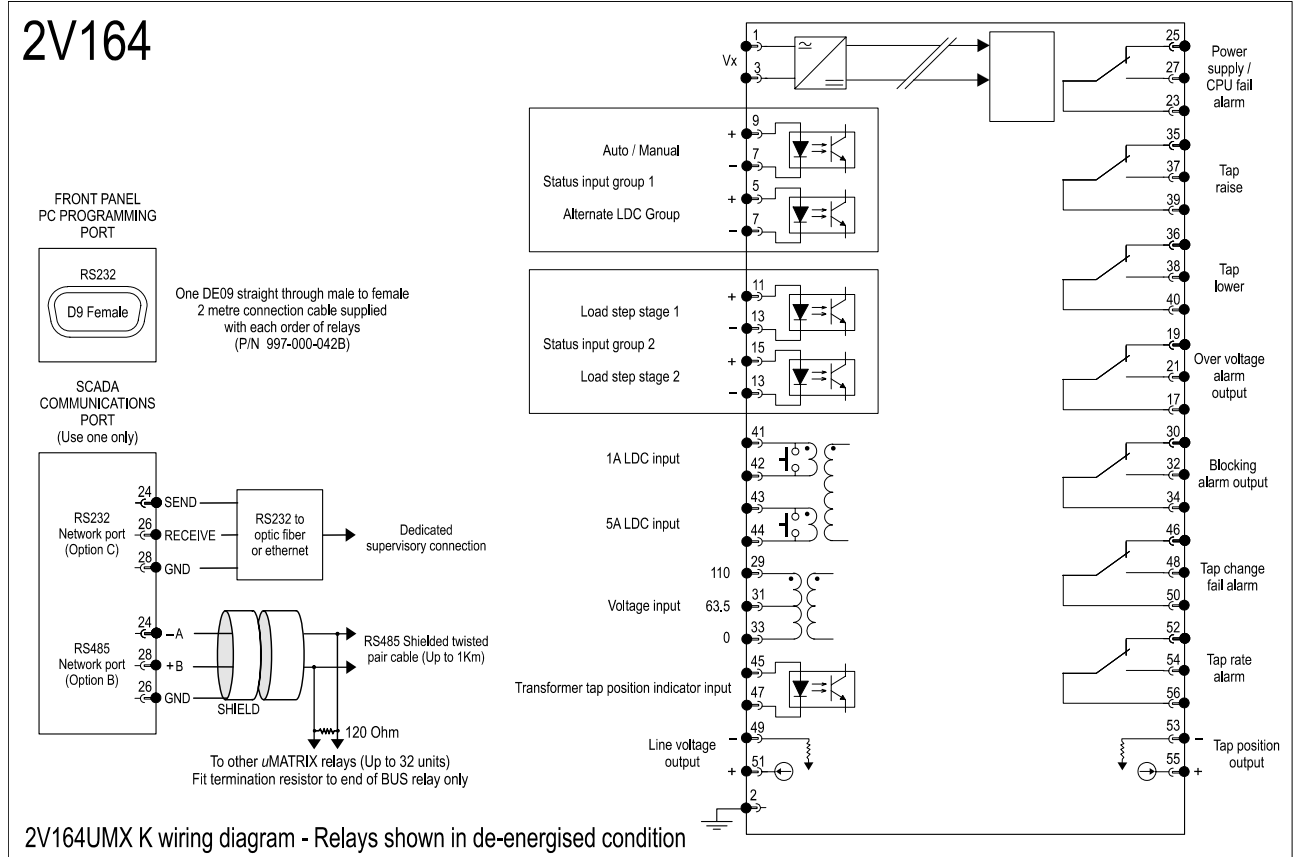
UMP file name

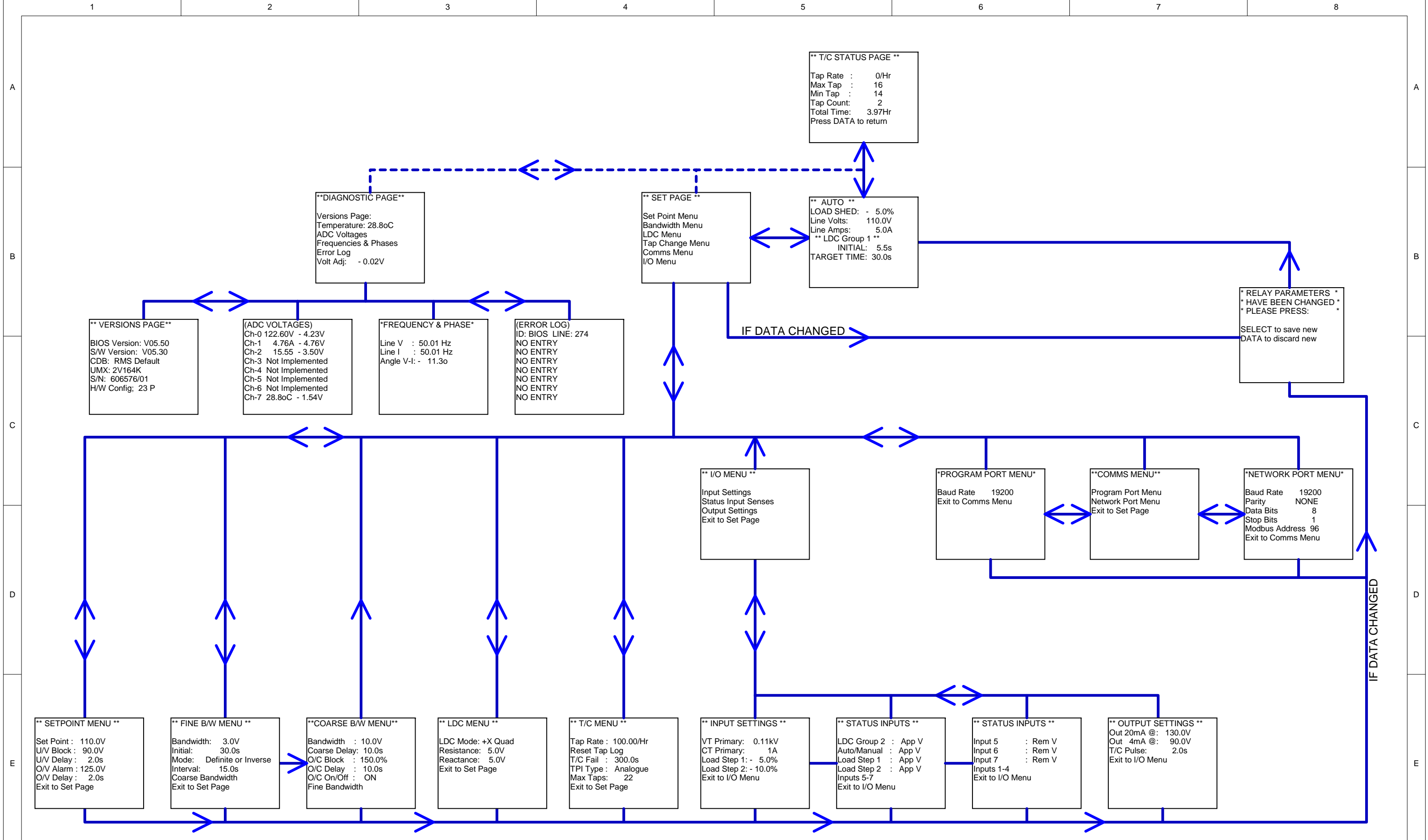
The Relay is now ready for field use.

SOFTWARE INSTALLED BY

DATE :

6.0 CONNECTION DIAGRAM





MATERIAL: See * for Materials List		FINISH: N.A.		Cannot open file D:\THE_CHIPRMS\LIBRARIES\PROTEL 98\SCHEMATIC\logo.wmf		This document is copyright to Relay Monitoring Systems PTY LTD and may not be copied or used without prior written consent.		Uncontrolled UDocument		USE ONLY FOR JOB No. J/N:	
Unless otherwise stated: SMD Resistors are 1/8W 1% 0805 Metal Film SMD Capacitors <100P are 50V 0805 NPO SMD Capacitors >100P and < 1n0 are 100V 0805 NPO SMD Capacitors >1n0 and < 1u0 are 50V 0805 X7R				www.rmspl.com.au		TYPE No. 2V164K		MENU STRUCTURE (AUTO FEEDBACK - 2 LDC GROUPS)			
DRAWN		DATE		SHEET: A3		SCALE: D.N.S		SHEET: 1 OF: 1			
D.W.B		29/03/2010		L:\ENG\Projects\2v164-s\Firmware\Specification\2V164_K_MENU_0530.schdoc		RMS-A3.SCHDOT Iss A		3rd Angle projection			

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