

<b>NAME</b>	<b>VR-H2005-273 Electrical Specification</b>	<b>NO</b>	<b>VR-1-1-2536</b>
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<p style="text-align: center;"><b>Regulation System Connection Wire Diagram</b></p>	<p><b>Regulator Features :</b></p> <ul style="list-style-type: none"> <li>● Standby mode</li> <li>● Leakage current control</li> <li>● Default mode</li> <li>● LIN (COM) mode</li> <li>● 19200 Baud Rate (4byte)</li> <li>● Variable V setting</li> <li>● Field out duty monitor</li> <li>● Temperature &amp; Field current</li> <li>● Regulation : B – Circuit</li> </ul>
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Parameters and conditions	Specification	Min.	Type	Max.	SYMBOLS
Operating Temperature	Operating Temperature	-30	---	125	℃
Switch OFF Leakage Current	Ps < 800rpm , LIN= Low , B+=12.0V	---	---	1.0	mA
Regulator Set Point	Default Mode	13.8	14.0	14.2	V
	Defined by external ECU/LIN command.	10.6	---	16.0	V
Output Saturation Voltage	I <sub>f</sub> = 5A	---	---	0.8	V
Field Current Limit	F shorted to ground	10	---	---	A
Field Control Frequency	10% < duty cycle < 95%	175	200	225	Hz
Error Display High Temp. Protection Threshold on board(substrate)	Field output OFF	---	160	---	℃
Self Drive Initiation rpm Threshold	Safe mode frequency given according to the programmed number of generator poles	2550	3000	3450	rpm

**Safety Characteristics:**

- **Over voltage :** Vs = 24 V , 60 sec. from the ignition SW. is turned ON/OFF without failure.
- **Short Circuit Protection :** The regulator shall stand **short circuit on Field** without failure and return normal operation within 2 seconds once short condition is removed.
- **Repetitive Thermal Shock :** The Regulator shall be designed to withstand 500 cycles of -30℃ to 125℃ in 20 minutes and 125℃ to -30℃ in 20 minutes.
- **High Temperature Test :** The regulator shall be designed to operate reliably at the load from 80% to 100% of the alternator rated current and at 6000 rpm ( shaft speed ) for a minimum of 10 hours at 125℃.

2024.09.03		1	王毅賢	柯文彬	林勝雄	林勝雄		
DATE OF FIRST EDITION	DATE OF REVISED EDITION	EDITION	MANU-SCRIPT	ORI-GINAL REVIEW	SECOND REVIEW	APP-ROVAL	ISSUED MARK	COPY'S NUMBER