

NAME	VR – H2009-260B Electrical Specification	NO	VR-1-1-2516
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<p><b>Regulation System Connection Wire Diagram</b></p>	<p><b>System Regulator Type:</b></p> <ul style="list-style-type: none"> <li>● Voltage Set Point :28.5V</li> <li>● Regulation : A – Circuit</li> <li>● Active Lamp</li> <li>● Soft Start</li> <li>● Short Circuit Protection</li> </ul>
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PARAMETERS AND CONDITIONS	SYMBOLS	MIN.	TYP.	MAX.	UNITS
Operating Temperature Range	$T_{OP}$	-40	---	125	℃
Field	$I_F$	---	5	---	A
Voltage Set Point (2500 RPM, at 20A load)	$V_{SET}$	28.20	28.50	28.80	V
Secondary Set Point (2500 RPM ,at 20A load)	$V_{SET2}$	28.20	28.50	28.80	V
Speed Regulation (2000 RPM to 6000 RPM ,at load = 15A)	$V_{SR}$	---	-0.1	-0.3	V
Load Regulation (10% to 95% ,at Speed = 6000 RPM)	$V_{LR}$	---	-0.4	-0.5	V
Saturation Voltage @ 5A, 24Volts	$V_{SAT}$	---	0.5	0.8	V
Standby Current (Key off, $V_{BAT} = 25.2V$ )	$I_{SB}$	---	---	2.0	mA
Temperature Coefficient	$T_C$	---	---	---	mV/ ℃
Soft-Start Duty	$D_{SS}$	10	20	30	%
Over Current Protection Threshold ( @ 25℃ )	$I_{SD}$	8	10	12	A
Regulator Operating frequency	$f_{req}$	200	250	300	Hz
Cut-In Speed	$R_{CIS}$	---	---	1500	RPM

#### Safety Characteristics:

- **Over voltage :**  $V_s = 48 V$  , 60 sec. from the ignition SW. is turned ON/OFF without failure.
- **Short Circuit Protection :** The regulator stands short circuit of Field and Lamp without failure.
- **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 reliability at the rated current of alternator is 80% to100% and at 6000 rpm ( shaft speed ) for a minimum of 10 hours at 125℃.

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DATE OF FIRST EDITION	DATE OF REVISED EDITION	EDITION	MANU-SCRIPT	ORI-GINAL REVIEW	SECOND REVIEW	APP-ROVAL	ISSUED MARK	COPY'S NUMBER