

NAME	VR – V1658 Electrical Specification	NO	VR-1-1-2152
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<p>Regulation System Connection Wire Diagram</p>	<p>System Regulator Type:</p> <ul style="list-style-type: none"> ● Voltage Set Point :14.5V ● Regulation : B – Circuit ● Active Lamp ● Soft Start ● Short Circuit Protection
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PARAMETERS AND CONDITIONS	SYMBOLS	MIN.	TYP.	MAX.	UNITS
Operating Temperature Range	T_{OP}	-30	---	125	°C
Field	I_F	---	5	---	A
Voltage Set Point (6000 RPM, at 5A load)	V_{SET}	14.30	14.50	14.70	V
Secondary Set Point (6000 RPM ,at 5A load)	V_{SET2}	---	---	---	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, 12Volts	V_{SAT}	---	0.5	0.8	V
Standby Current (Key off, $V_{BAT} = 12.6V$)	I_{SB}	---	---	1.0	mA
Temperature Coefficient	T_C	-9	-6	-3	mV/ °C
Over voltage Indication	V_{OV}	---	---	---	V
Under voltage Indication	V_{UV}	9.0	9.5	10.0	V
Soft-Start Duty	D_{SS}	5	15	25	%
LRC Delay Time	T_{LRC}	---	---	---	Sec
Cut-in Speed	R_{CIS}	---	---	1300	RPM

Safety Characteristics:

- **Over voltage :** $V_s = 24 V$, 60 sec. from the ignition SW. is turned ON/OFF without failure.
- **Short Circuit Protection :** The regulator stands short circuit of Field without failure.
- **Repetitive Thermal Shock :**
The Regulator shall be designed to withstand 500 cycles of -30°C to 125 °C in 20 minutes and 125 °C to -30 °C in 20 minutes.
- **High Temperature Test :**
The Regulator shall be designed to operate reliability at the rated current of alternator is 80% to 100% and at 6000 rpm (shaft speed) for a minimum of 10 hours at 125 °C.

2021.06.17		1	柯文彬	陳建文	陳建文	MOBILETRON
Date of first edition	Date of revised edition	Edition	Manu-script	Review	Approval	Jun.22.2021
						Release