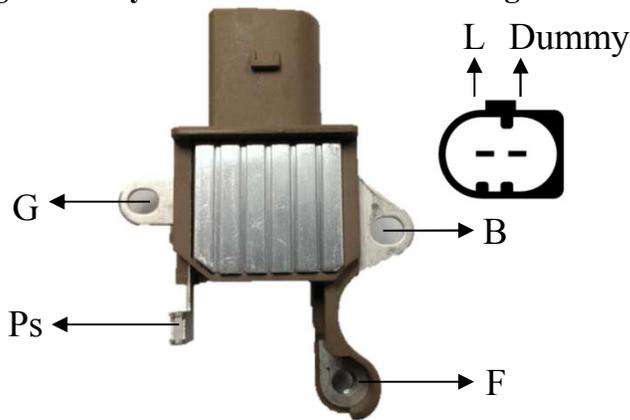


## Regulation System Connection Wire Diagram



## System Regulator Type:

- Voltage Set Point :14.5V
- Regulation : B - circuit
- Inactive Lamp
- Soft start, 3 sec LRC
- Short Circuit Protection

PARAMETERS AND CONDITIONS	SYMBOLS	MIN.	TYP.	MAX.	UNITS
Operating Temperature Range	$T_{OP}$	-30	---	125	°C
Field	$I_F$	---	5	---	A
Voltage Set Point (2500 RPM, at 20A load)	$V_{SET}$	14.30	14.50	14.70	V
Secondary Set Point (2500 RPM, at 20A 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	$V_{SAT}$	---	0.4	0.5	V
Standby Current (Key off, $V_{BAT} = 12.6V$ )	$I_{SB}$	---	---	1	mA
Temperature Coefficient	$T_C$	-6	-3	0	mV/ °C
Over voltage Indication	$V_{OV}$	---	---	---	V
Under voltage Indication	$V_{UV}$	9.8	10.3	10.8	V
Soft-Start Duty	$D_{SS}$	5	15	25	%
LRC Delay Time	$T_{LRC}$	1	3	5	Sec
Cut-in Speed	$R_{CIS}$	---	---	1300	RPM
Over Current Protection Threshold ( @ 25°C)	ISD	10	12	14	A
Regulator Operating frequency	fReg	225	250	275	Hz

## 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 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°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 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°C.

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