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|-------------|--|-----------|--------------------|
| <b>NAME</b> | <b>VR-V0243 Electrical Specification</b> | <b>NO</b> | <b>VR-1-1-2629</b> |
|-------------|--|-----------|--------------------|

|   |   |
|---|---|
| <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>● Regulation : B – Circuit</li> <li>● Standby mode</li> <li>● Leakage current control</li> <li>● Default mode</li> <li>● LIN (COM) mode</li> <li>● 9600 &amp; 19200 Baud Rate (4byte)</li> <li>● Variable Voltage setting</li> <li>● Field out duty monitor</li> <li>● Temperature &amp; Field current</li> </ul> |
|---|---|

| 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   | ---  | ---  | 30   | mA      |
| Regulator Set Point   | Default Mode  | 14.1 | 14.3 | 14.5 | V       |
|   | Defined by external ECU/LIN command.  | 10.7 | ---  | 16   | V       |
| Output Saturation Voltage   | If = 5A   | ---  | ---  | 0.8  | V       |
| Field Current Limit   | F shorted to ground   | 10   | ---  | ---  | A       |
| Field Control Frequency   | 10% < duty cycle < 95%  | ---  | 220  | ---  | 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℃.

|                       |                         |         |             |                  |               |           |             |               |
|-----------------------|-------------------------|---------|-------------|------------------|---------------|-----------|-------------|---------------|
| 2025.07.04            |                         | 1       | 張育誠         | 柯文彬              | 林勝雄           | 林勝雄       |             |               |
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