# Datasheet for GPS System

Model No. : T-GPS-300  
Manufacturer : Sertel Electronics  
Category : Substation/ Automation Products  
Description : Datasheet and Schematic Drawing for GPS Receiver  
Sertel Doc No. : SER_SAS_PRO_DS_300

<table>
<thead>
<tr>
<th>Revision</th>
<th>Revision details</th>
<th>Date of Issue</th>
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<tr>
<td>00</td>
<td>-</td>
<td>03.07.2014</td>
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**SERTEL ELECTRONICS**
377, Nehru Nagar, 1st Cross Street,
Odi Mahabelliparam Road, Perungudi,
Chennai, Tamilnada, India 600 096.

Ph: +91(44)23454060, +91(44)23454062  
+91(44)65395346, +91(44)65395348  
Fax: +91(44)23454061  
sales@sertelelectronics.com  
info@sertelelectronics.com

**SERTEL ELECTRONICS UK LTD**
Rutland House, 143 Edmund Street,  
Birmingham, B3 2FD,  
United Kingdom.

Ph: +44 (0) 121 661 6473  
+44 (0) 121 661 6499  
enquiryuk@sertelelectrics.com
Note:

NTP/SNTP OUTPUT - 02 No's.

GPS ANTENNA
50 meters
LIGHTNING ARRESTOR

IRIG B(AM) OUTPUT - 01 No.

90-260V AC/DC

SERTEL Electronics

Manufacturer:

Drawn:
Checked:
Approved:
Reviewed:

SERTEL Doc No.:

REV
<table>
<thead>
<tr>
<th>Parameter</th>
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<tbody>
<tr>
<td>Manufacturer</td>
<td>SERTEL</td>
</tr>
<tr>
<td>Model no</td>
<td>T-GPA-014-S15</td>
</tr>
<tr>
<td>Receiving Frequency</td>
<td>1575.42 MHz +/-1 MHz</td>
</tr>
<tr>
<td>Tracking code</td>
<td>CA</td>
</tr>
<tr>
<td>No. of Channels</td>
<td>8 Channel / Parallel</td>
</tr>
<tr>
<td>Tracking method</td>
<td>Code / Carrier tracking</td>
</tr>
<tr>
<td>Interface</td>
<td>TTL (Normal high)</td>
</tr>
<tr>
<td>Output rate</td>
<td>Every second</td>
</tr>
<tr>
<td>Geodetic system</td>
<td>WGS-84</td>
</tr>
<tr>
<td>Power supply</td>
<td>5V DC Internal supply</td>
</tr>
<tr>
<td>Output connector</td>
<td>BNC Connector</td>
</tr>
<tr>
<td>Environment</td>
<td>a) TEMP : 0 TO 55 DEG.CEN</td>
</tr>
<tr>
<td></td>
<td>b) RH : 0-95% (non condensing)</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall mounting</td>
</tr>
<tr>
<td>Dimension</td>
<td>Ø93x133mm</td>
</tr>
<tr>
<td>Quantity</td>
<td>01 No.</td>
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</table>

All dimensions are in mm
**SERTEL**

**GPS Based Time Synchronization System**

**Lightening Arrestor**

<table>
<thead>
<tr>
<th>Description</th>
<th>Details</th>
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<tbody>
<tr>
<td>Manufacturer</td>
<td>SERTEL</td>
</tr>
<tr>
<td>Model no</td>
<td>SER-LAR</td>
</tr>
<tr>
<td>Loss</td>
<td>less than 1 dB</td>
</tr>
<tr>
<td>Maximum Power Rating</td>
<td>400W P-P</td>
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<tr>
<td>Connector</td>
<td>N-Type connector</td>
</tr>
<tr>
<td>Impulse Discharge Voltage</td>
<td>1000 V</td>
</tr>
<tr>
<td>Impulse Wave Discharge Capacity</td>
<td>6000 A</td>
</tr>
<tr>
<td>Impulse Wave Ratio</td>
<td>230V +/- 20%</td>
</tr>
<tr>
<td>Discharge Capacity</td>
<td>01 No.</td>
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</table>

**Fig 1.1**

- **ANTENNA CABLE**
- **To Ground**

**Fig 1.2**

- **ANTENNA CABLE**
- **To Ground**

All dimensions are in mm

**Manufacturer:** SERTEL Electronics

**Drawn:** DA

**Checked:** KJ

**Approved:** GS

**Reviewed:** KPK

**SERTEL Doc No.:** SER_SAS_PRO_DS_300

**REV:** 00
SERTEL

GPS Based Time Synchronization System

Manufacturer: SERTEL
Model no: T-GPS-300
Type: Micro controller based
Receiving frequency: 1575.42 MHz +/-1 MHz
No. of Channels: 8 Channel / parallel
Tracking method: Code / Carrier tracking
Interface: TTL (Normal high)
Output rate: Every second
Geodetic system: WGS-84
Input connector, Antenna cable: BNC Connector, Coaxial cable
Propagation Delay Compensation: Better than 1μs
Internal Time Base: System revert to internal time base upon loss of signal from UTC source
Time Stability of Internal Time Base: Internal stability of better than 1 PPM
Resynchronization Delay: Less than 2-3 mins
Resynchronization Accuracy: Better than 1 micro second

Display (24hrs Format)
- LC Display
- Day of the Year & Time
- Date
- Time zone
- Latitude
- Longitude
- By Pressing △
- Time zone
- Lock status
- Satellites
- By Pressing △

Alarm O/P
- * GPS LOST
- * POWER FAIL

NTP/SNTP O/P
- RJ 45 Connector
- 2 No’s.
- Back plate

IRIG B(AM) O/P
- BNC Connector
- 1 No.
- Back plate

Battery backup
- RTC backup

Environment
- a) TEMP : 0 TO 55 DEG.CEN
- b) RH : 0-95% Non Condensing

Mounting
- Panel Mounting to suit 19" rack

Time Reference
- OCXO with stability of 1 PPM

Dimension
- 1U (H)x325(D)x485 (W) mm ± 5 mm (1U=44.5mm)

Power supply
- 90-260 V AC/DC

Quantity
- 01 No.

Power cord
- Length of 1.25m will be provided

All dimensions are in mm