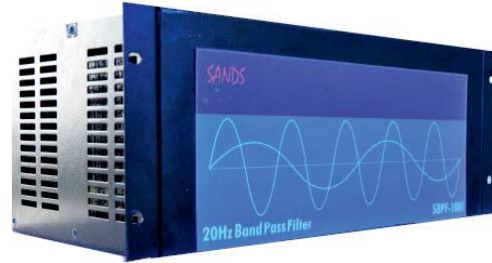


20 Hz INJECTION KIT

Stator Protection System



20-Hz Pulse Generator

| | |
|------------------------------------|--------------------|
| ▪ Supply Voltage | : 220V DC |
| ▪ Output Voltage Continuous | : 50 V |
| ▪ Output Current Continuous | : 10 A |
| ▪ Maximum Voltage Regulation | : 5% |
| ▪ Efficiency | : 85% |
| ▪ Rated Frequency | : 20Hz |
| ▪ Maximum Frequency Deviation | : $\pm 5\%$ |
| ▪ Output Wave Shape | : Square |
| ▪ Operating Mode | : Continuous |
| ▪ Cooling | : Passively Cooled |
| ▪ Operating Temp | : 3.5 to 50 Deg C |
| ▪ Enclosure | : IP-31 |
| ▪ Unit Failure Detection and Alarm | : Yes |
| ▪ Burn-in Test | : 100 Hrs |

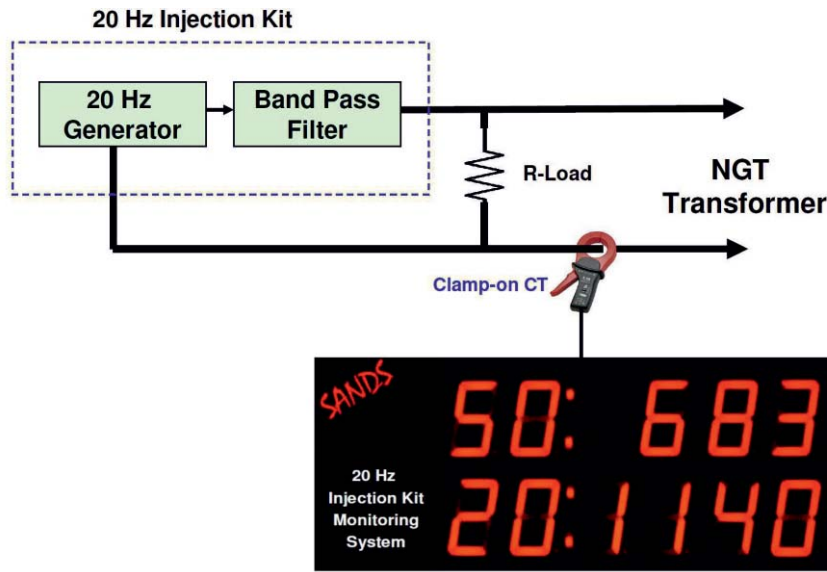
Hi-Q 20-Hz Band Pass Filter

| | |
|---|---------------------|
| ▪ Center Frequency | : 20 Hz |
| ▪ Operating Frequency Range | : 19 Hz to 21 Hz |
| ▪ Load Voltage Output (Minimum) | : 25 V |
| ▪ Continuous Current Rating | : 5 A |
| ▪ Withstand Voltage Rating (NGT V) | : 140 V at 50 Hz |
| ▪ Impedance at center frequency | : less than 5 Ohms |
| ▪ Impedance at System frequency (50 Hz) | : more than 50 Ohms |
| ▪ Cooling | : Passively Cooled |
| ▪ Enclosure | : IP-31 |
| ▪ Operating Temp | : 3.5 to 50 Deg C |
| ▪ Burn-in Test | : 100 Hrs |

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20 Hz INJECTION KIT MONITORING SYSTEM



- Large Generators use 20 Hz Injection Kit for Stator Protection System.
 - The present system configuration does not monitor the working of 20 Hz Injection kit.
 - Continuous recording of 20 Hz and 50 Hz component in the NGT path is absent.
- 20Hz Injection Kit Monitoring System Provides
 - Health monitoring of the injection Kit
 - Records both 20 Hz and 50 Hz Current every minute
 - Gives visual indication if the signals are lower /higher than the set threshold

Technical Specifications

- Display : Dual 6-Digit 7-segment 100mm
- Visibility : 100 meters
- Frequency Resolution : 1 Hz
- Magnitude Resolution : mA (Micro Amp-Optional)
- Filters : Digital Narrow Band Pass Filters for 20Hz and 50Hz
- Data Recording : Every Minute for 30-Days
- Visual Warning
 - 20 Hz flashes if 20 Hz Current is lower than threshold
 - 50 Hz flashes if 50 Hz Current is higher than threshold
- Power Supply : 220 V AC / DC – 1A

Installation

- The 20 Hz Monitoring System is non-intrusive, and does not affect working of the existing system.
- The Clamp On CT can be used in any segment of the NGT Transformer path – Bus Bar (50 x 5 mm) or Joining Cable (dia 52 mm).

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Product development is continuous process - Specification subject to change

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