# Portable GTO Functionality Tester Product Fact Sheet

DYN-PA-19019-V1

Power Assemblies

The Dynex Portable GTO Functionality Tester is designed to test the blocking and switching functionality of a GTO at a safe voltage level.

Specifically designed and targeted towards the maintenance of GTO based traction converters.


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|---|---|---|
| 1 | General | |
| 1.1 | Device compatibility | The tester is compatible with GTO Thyristor and Diode devices. Variations can be made to suit SCR, MOSFET or IGBT technology by changing the internal gate driver PCB. |
| 1.2 | Test methodology | The tester is designed to give a Go/No-Go assessment of the DUT. |
| 1.3 | Target failure methods | • Short circuit,<br>• Open circuit,<br>• Gate malfunction. |

| | | |
|---|---|---|
| 2 | Electrical | |
| 2.1 | Power input | 110 to 220 Vac, 5 to 10 Arms, 1ph + E, 50/60Hz |
| 2.2 | Maximum test current | 10 A |
| 2.3 | Maximum anode voltage | 48 V |
| 2.4 | Gate output voltage range | -14.8 V to +15.0 V |
| 2.5 | Maximum gate current | 1.5 A |
| 2.6 | Gate voltage on GTO when not firing | -14.8 V |
| 2.7 | Gate voltage on GTO when firing | + 6.1 V |
| 2.8 | Firing pulse length | 1 second |

| | | |
|---|---|---|
| 3 | Mechanical | |
| 3.1 | Dimensions (W x D x H) | 524 x 428 x 206 mm |
| 3.2 | Weight | Approx. 15 kg |

| 4 | Operating Conditions | |
|---|---|---|
| 4.1 | Operational temperature | -10 ˚C to 70 ˚C |
| 4.2 | Storage temperature | -25 ˚C to 85 ˚C |
| 4.3 | Relative humidity | 10% to 90% |
| 4.4 | Pollution grade | 2 (non-conductive pollution) |

| 5 | Safety Features | |
|---|---|---|
| 5.1 | Low voltage testing | A low testing voltage of 48 V has been selected for safety considerations. |
| 5.2 | Panel earthing | The operating panel of the tester is fully connected to earth when plugged in to mains power. |
| 5.3 | Over-temperature protection | The PSU output will be disabled in the event of over temperature of the internal current limiting resistor. |
| 5.4 | Short circuit protection | The PSU will operate in a constant current mode in the event of short circuit of the GTO. |



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