

TECHRITE

TECHRITE PRESSURE PROVING SYSTEM

The Techrite Gas Check Pressure Proving System is a self-contained automatic system for use on either Natural Gas or LPG installations, where an emergency shutdown of the gas has occurred for any reason and a Pressure Proving System is required to test downstream piping and appliance valving before resumption of gas supply.

This system must be installed to the requirements of local authorities both gas and electrical and must be installed by an authorised person. The installation must also comply to the relevant areas of gas installation code AS/NZS 5601.

Automatic shut down of the gas supply is achieved via the building fire panel, sprinkler or power system, or alternatively by a manual emergency stop station at the entrance and or exit of the kitchen, boiler room etc.

The system is available in either 240 Volt/50 Hz or 24V DC models.

The operating ambient temperature range of this unit is 0-60 °C. For 240V AC the maximum current drawn is 1 amp and 5 amp for 24V DC. This system is used in conjunction with a solenoid valve fitted to the gas fitting line as close to the kitchen or boiler room being monitored as possible and pressure switches fitted both upstream and downstream of this valve.

The system is reset by either turning the power off and on or switching the key switch off and on.



GAS CHECK PROVING SYSTEM

Wiring and pipe work by installer

GAS CHECK SPECIFICATIONS

Manufacturer	Techrite Controls Australia Pty Ltd
Models	240V AC and 24V DC
Ambient Temperature Range	0–60 °C
Maximum Amp Rating	5 Amp
Electrical Voltage Rating	+10% and –15% of declared rating
Mounting position	Multi-position (Control Box)
Weight	0.9kg
Dimensions	187mm x 147mm x 80mm
Cable Gland Connections	RP M165-10mm

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FUNCTION

When gas resumption is required, voltage is applied to the Gas Check Pressure Proving System via the central key switch. The system briefly opens the main shutoff valve V1 causing pressurization of the downstream line under test.

The downstream pressure switch monitors the gas pressure downstream of the solenoid valve for a test period approximately 60 seconds. The downstream piping is assumed to have no leaks if the gas pressure has not dropped below the downstream pressure switch setting after this test period. The Gas Check then releases the gas flow to the downstream appliances.

PROGRAM SEQUENCE

The test program is controlled by a microprocessor-based controller. When the power is supplied to the Gas Check and the unit is started by switching power off then on via the key switch the Gas Check program will commence.

If there is no pressure to the inlet of the solenoid valve the screen display will say "NO INLET PRES". If the inlet pressure switch contacts are made then the solenoid will be opened for 1 second and close again. The outlet pressure switch is then monitored for 60 seconds to see if the contacts have been made. This sequence is repeated up to 10 times. The display screen indicates the current status of the system.

If the downstream switch makes indicating the downstream pipe work is secure then a second 60-second test is carried out.

After the test is completed, the outlet pressure switch is no longer monitored. The unit will display "SYSTEM RUN".

If at the end of the full test sequence the outlet pressure switch contacts have not been made, then the unit will go into lockout and the solenoid will remain closed.

If the inlet pressure drops below the set value at any stage the system will show "NO INLET PRES" and the valve will remain closed.

The auxiliary relay contacts can be wired back to a BMS system or any other type of indicator. The auxiliary contacts have a maximum rating of 5 amps @ 250V AC.

GAS CHECK SETUP

During the installation of this system, the pressure switches must be set correctly.

The outlet pressure switch should be set at approximately 10% below the measured operating outlet pressure or 0.2 kPa (whichever is the greater). A manometer should be used for this purpose. The inlet pressure switch should be set at approximately 20 % below the operating inlet pressure value.

If the unit is installed in the gas fitting line too far from the area to be tested the line may not be capable of filling with gas in the maximum total of 10 seconds given in the test period. Care should be taken to ensure test pipe segment is kept to a minimum as the more volume in the test segment the larger the leakage rate required before the pressure switch detects pressure loss.

A maximum gas pressure of the system is determined by the maximum pressure rating of the solenoid valve and pressure switches. Please specify gas pressure at the time of ordering Gas Check. There is manual purge button on the circuit board. This is for installation and service personnel only. When the button is held in there will be a maximum 5 seconds purge rather than the standard 1 second purge.

MAINTENANCE

The Gas Check leak tester requires no maintenance however functional reliability of the system should be carried out on a regular basis by simulating a downstream leak as the Gas Check cannot test pressure switches automatically.

IMPORTANT NOTE

This device is not a substitute for the testing of fitting lines as required under AS/NZS 5601.

OTHER RELEVANT DATA SHEETS & INSTALLATION INSTRUCTIONS

Data Sheet No 5.16 Dungs GW A6 Pressure Switch.

Data Sheet No 6.02 Dungs MVD/5 Safety Solenoid Valve.

DIAGRAM 1 GAS CHECK PRESSURE PROVING SYSTEM 240V AC

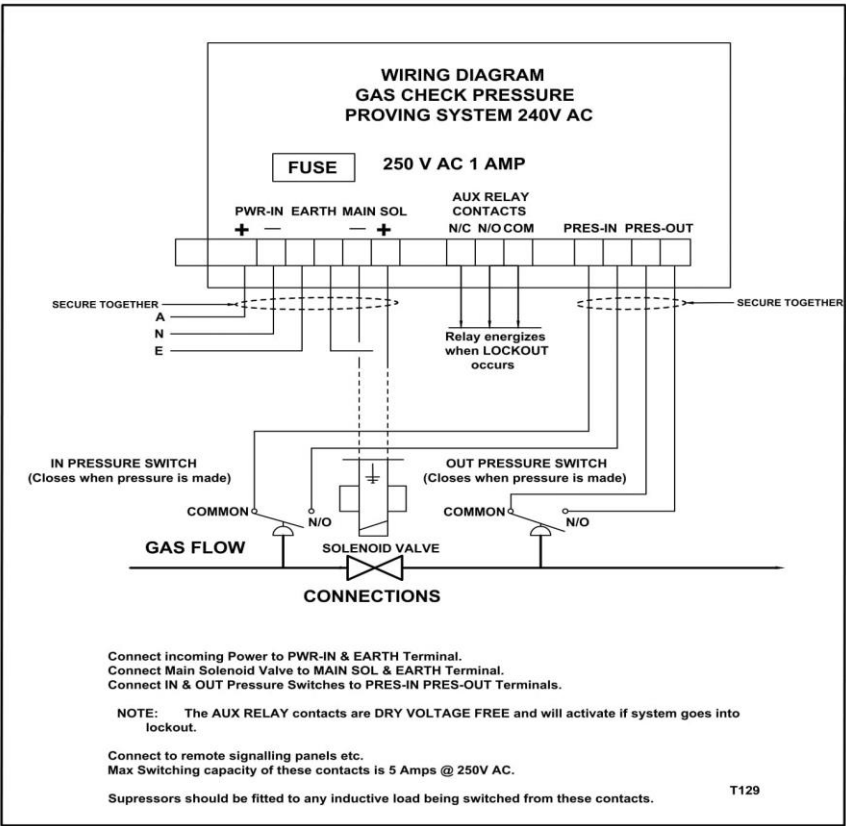
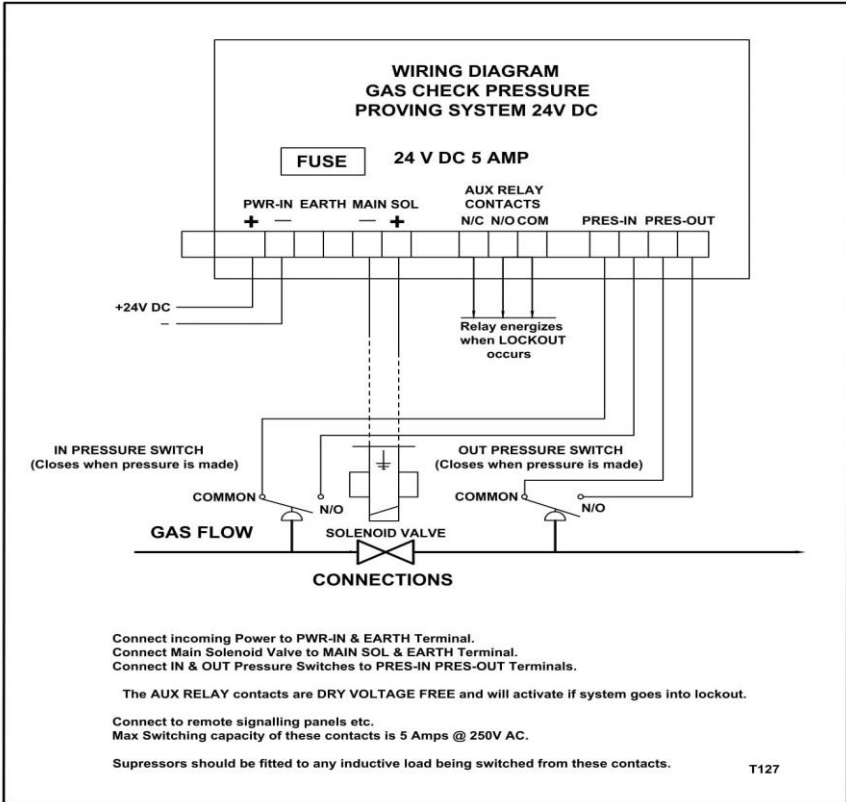


DIAGRAM 2 GAS CHECK PRESSURE PROVING SYSTEM 24V DC



Techrite Controls practices a policy of continuous product improvement. It reserves the right to alter specifications in the interest of technical progress without prior notice.



- SOLENOID & CONTROL VALVES
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TECHRITE CONTROLS AUSTRALIA PTY. LTD.

Victoria - Head Office
12 Yiannis Court
Springvale, VIC 3171
Phone: +61 3 9549 4444
Fax: +61 3 9546 6069

New South Wales Office
Unit 10/19 Boden Road
Seven Hills NSW 2147
Phone: +61 2 9624 4486
Fax: +61 2 9624 6449

Queensland Office
Unit 20, 28 Burnside Road
Ormeau QLD 4208
Phone: +61 7 3807 9094
Fax: +61 7 3807 9095

Email: techrite@techrite.com.au

www.techrite.com.au