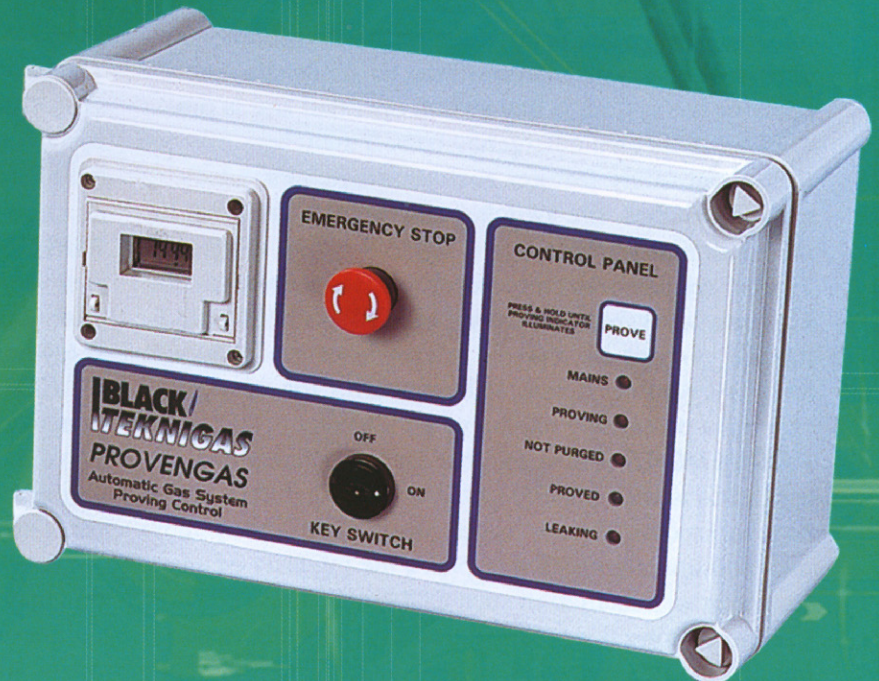
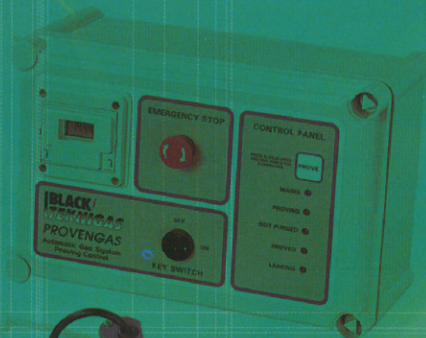




BLACK TEKNIGAS

The Leading British Controls Manufacturer

PROVENGAS AUTOMATIC PROVING SYSTEM FOR GAS INSTALLATIONS



Certificate No. FM13979

APPLICATION

PROVENGAS ensures environmental and personal safety by providing complete protection of a gas installation in locations such as schools, laboratories, workshops, kitchens and industrial sites etc.

FEATURES

- * CE approved
- * comprises control panel and isolating unit
- * control panel may be remote from isolating unit
- * connects into gas supply of safety shut-off valve
- * proving cycle manually initiated from control panel
- * low power consumption
- * integral time switch may be used to shut down the system at the end of day
- * features key switch for security
- * standard emergency cut-out switch
- * optional extra external cut-out switches etc.
- * audible alarm for system proving failure
- * easy installation and commissioning; no complex volume or orifice plate calculations required
- * for use with a solenoid or an electrohydraulic gas safety shut-off valve

DESCRIPTION

PROVENGAS is designed with safety in mind and has been tested and certified by BG Technology to the latest standards and has approval. The system provides an easy, automated means of proving the integrity of any gas installation on a regular and routine basis. An integral time switch is provided so that timed automatic control of gas installations may be achieved. For security, the system is key switch operated and is provided with its own emergency cut-off switch.

Additional safety features such as remote emergency cut-off switches, fire switches and thermal fuses can be included in any scheme.

Typical applications include schools, laboratories, kitchens, workshops or any other installation where manual gas taps etc. may be left open, either deliberately or by power failure or human error for example, causing a potentially explosive atmosphere.

PROVENGAS is also suitable for many industrial applications with manual gas ignition and shut down, such as process kilns or bakery machinery. The system may additionally be used to prove the integrity of any 'non-manual' installation such as a boiler house etc. Commissioning the system is relatively simple, requiring no complex pipework volume and orifice sizing calculations.

The system comprises two units, namely the **GAS ISOLATING UNIT** and the **CONTROL PANEL** which are used in conjunction with a **GAS SAFETY SHUT-OFF VALVE** (new or existing) complying with BS-EN161. The isolating unit connects into the gas supply upstream and downstream of the gas safety shut-off valve. The control panel may be mounted in any convenient location. A mains electricity supply is required together with electrical connections to the iso-

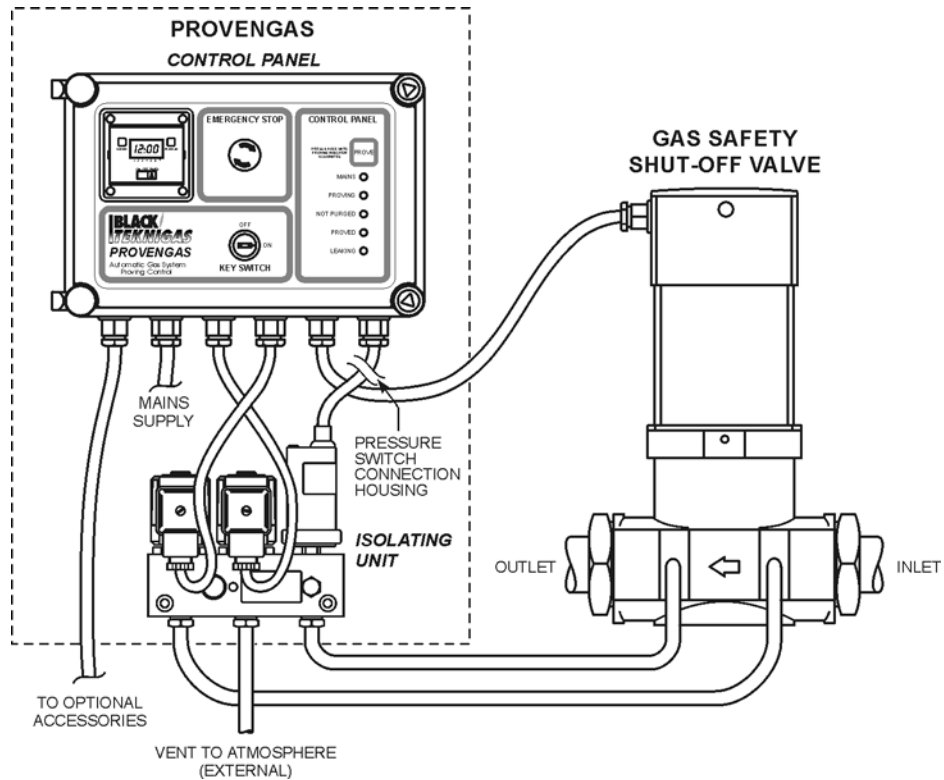
lating unit and gas safety shut-off valve.

The operation of **PROVENGAS** is controlled from the control panel which comprises a seven day time switch, a key switch, an emergency cut-off switch, a **PROVE** switch and an LED driven legend which shows the status of the system at any moment in time. The user initiates a proving cycle by ensuring the time switch is on, the cut-off switch is on, the key switch is in the 'on' position and then depresses the **PROVE** push-button. The unit then goes through a 'purge' period to vent the system and if not fully vented, the **NOT PURGED** LED illuminates. If fully vented, the system is slowly charged with gas for a further 30 seconds after which the control checks the system gas pressure. If lower than expected e.g. because a gas tap is open, the **LEAKING** LED illuminates indicating the system integrity is not intact ensuring the gas safety shut-off valve remains shut. If the system gas pressure is at or above the expected value, the **PROVED** LED illuminates and the gas safety shut-off valve is energised. An internal alarm is fitted to indicate a system leak and this may optionally be configured to sound on vent failure or following an interruption to the electrical mains supply.

The system shuts down and closes the gas safety shut-off valve when any of the following events occur:- manual shut down with the key-switch, timed controlled shut down, operation of the internal emergency cut-off switch, power failure or operation of any external safety device fitted to **PROVENGAS**.

Black Teknigas is committed to investing in Health and Safety and **PROVENGAS** is the state of the art device for gas system proving thereby ensuring safe environments for work, study and leisure.

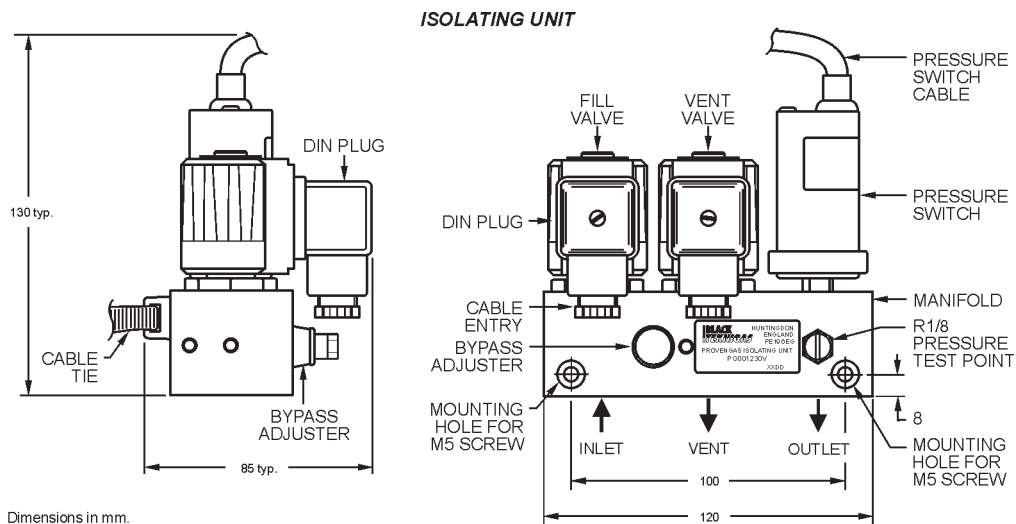
INSTALLATION SCHEMATIC



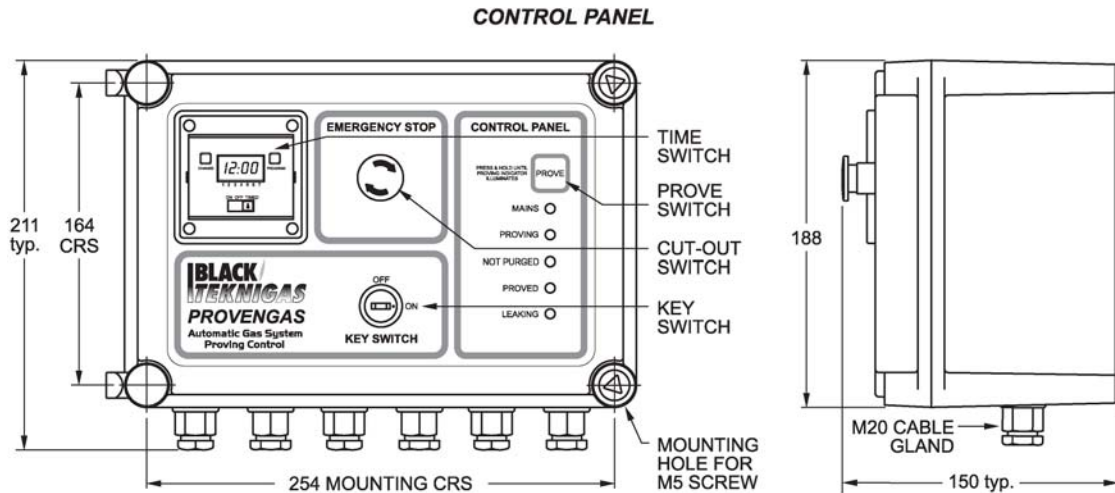
DIMENSIONS

The **ISOLATING UNIT** may be either screw mounted on a wall adjacent to the gas safety shut-off valve through the two manifold holes, or fixed to the gas safety shut-off valve using the cable ties supplied.

The **CONTROL PANEL** may be mounted in any convenient location in the same building as the **ISOLATING UNIT** using the four mounting holes in the enclosure base.



DIMENSIONS (continued)



ACCESSORIES

For new installations, **Black Teknigas** manufacture a range of solenoid and electrohydraulic gas safety shut-off valves complying with BS EN161 in all common sizes ranging from DN8 to DN200 and suitable for use in conjunction with **PROVENGAS**.

Accessories available include **POWERSEV**, an emergency cut-out switch and **POWERLINK** resettable and non-resettable thermal fuses.

For further details, contact **Black Teknigas**.



POWERSEV
emergency cut-out switch



POWERLINK
non-resettable thermal fuse



POWERLINK
resettable thermal fuse

SPECIFICATION

Gas Supply Pressure Rating:

20 mbar to 60 mbar.

Compatibility:

1st, 2nd & 3rd family gases.

Electrical Inputs & Outputs:

Supply: 230V 50Hz 13A, 2A fused.

Gas safety shut-off valve: 230V 50Hz @ 2A max.

Pressure switch: 24V DC 100mA.

Isolating Unit valves: 230V 9VA each.

Construction:

Control Panel: Polycarbonate, IP40.

Isolating Unit: Aluminium, IP40.

Ambient & Media Temperature:

0°C to 55°C.

Installation Size:

Maximum useable pipework length in metres with pressure switch set to nominally 60% of inlet pressure.

PIPE I/D	N.G. (SG 0.55)	LPG (SG 1.55)
DN25	668	400
DN50	167	100
DN80	65.2	39.0
DN100	41.7	25.0
DN150	18.5	11.0

Approvals:

BG Technology certified for gas safety to BS EN1643: 2000, electrical safety to EN60730-2-1, EMC emissions to EN50081-1 and EMC immunity to EN50165.

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