

Electro K™ / Electroclock 2™ SERIES 184, 185 & 186



Technical Data



E.184/6.00.0900

Technical Data

Introduction

The Series 184, 185 and 186 are used where it is desirable to reduce the outlet pressure during periods of low demand.

The Electro K™ is for pilot operation of main line regulators, whilst the Electroclock 2™ is for operation with standard auxiliary control equipment.

Operation

The function of the electronics is to drive a bistable solenoid valve into the required state at pre-set times by a clock module. The clock follows a seven-day cycle with up to six switching times being available for each day (3 High/Low).

The times are programmable through an external connector by means of specially written software loaded onto a laptop computer and used in conjunction with an intrinsically safe interface. Set times and battery conditions may also be read via the laptop.

A switch is provided for manual override. The units will revert to programmed setting at the next clocking time.

Pressure indication is by means of two LED indicators (HIGH/LOW). The High-pressure indicator flashing when the switch is pressed indicates a Low battery state.

The electronics are housed in a moulded polycarbonate Pod. The pod fits into the die-cast aluminium body, which houses the solenoid and in the case of the Electro K™ the valve diaphragms.

The Electro K™ contains K1 & K2 pilots, which are operated by the solenoid valve, switching between the preset High and Low setting.

Certification:

The units are Certified for use in an hazardous area - Zone 0

System: EEx ia 11B BAS No. Ex91C2050

Serial Interface: EEx ia 11B BAS No. Ex90C2307

Service Conditions

| | |
|---|--|
| Maximum Inlet Pressure | 350 mbarg |
| Maximum Differential Pressure | 25 mbarg (Series 184) |
| Max. K1 Outlet Pressure: Max. K2 Outlet Pressure | 75 mbarg (Series 184) 25 mbarg (Series 184) |
| Temperature Range: Operating Storage | -20°C to +50°C -20°C to +85°C |

Models Available

| | |
|-------------------|---|
| Series 184 | Electro K™ 3/4" Connections Pressure Rating 350 mbarg Battery Powered |
| Series 185 | Electroclock 2™ 1/8" Connections in vertical orientation Pressure Rating 350 mbarg Battery Powered |
| Series 186 | Electroclock 2™ - VS Specially designed to fit Vent Stack on Krysalis below ground module. Pressure Rating 350 mbarg Battery Powered Electronics Pod with separate Solenoid Valve. |

Options

Units are available for operation by a Data Logger, see separate technical brochure for K Switch™ & Electroswitch™

Note: Both the Electro K™ & Electroclock 2™ are convertible to K Switch™ & Electroswitch™ by removal and replacement of internal modules

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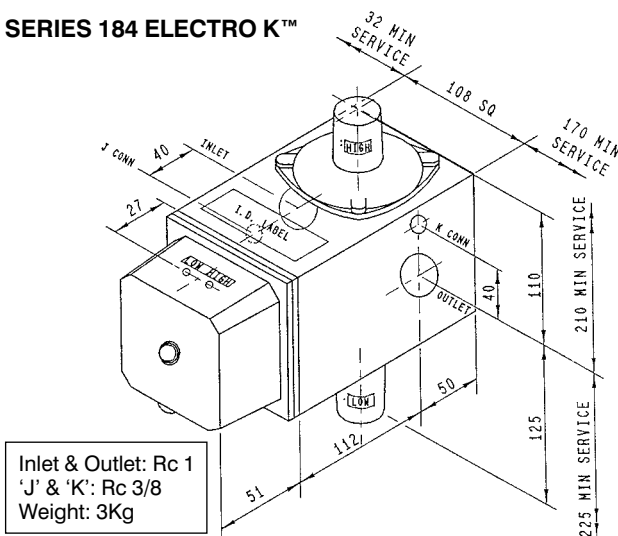
Pressure Range (Series 184)

| Outlet Pressure Range in mbarg | Spring | |
|--------------------------------|--------|--------|
| | Number | Colour |
| 14 to 23.5 | 1044 | Red |
| 21 to 37 | 1045 | Green |
| 34 to 60 | 1046 | Blue |
| 45 to 75 | 1185 | Yellow |

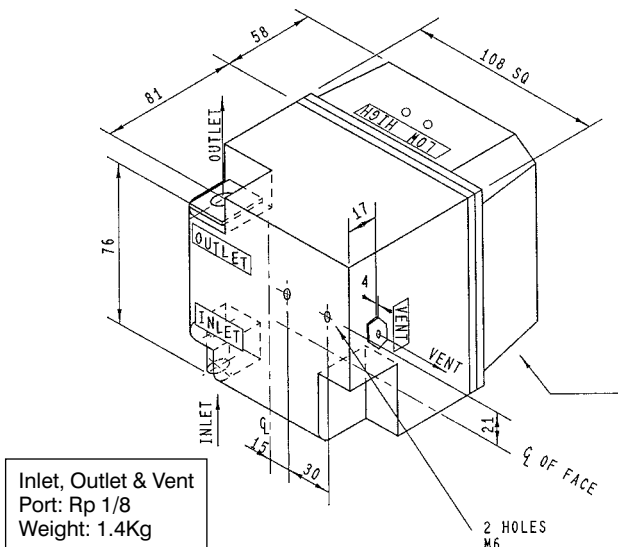
| Pressure Reduction Range in mbarg | Spring | |
|-----------------------------------|--------|--------|
| | Number | Colour |
| 5 to 20 | 1043 | Self |
| 5 to 25 | 1046 | Blue |

Dimensions & Weights

SERIES 184 ELECTRO K™



SERIES 185 ELECTROLOCK 2™



Performance

Environmental

| | |
|--------------------|---|
| Enclosure Rating | IP67 |
| Damp Heat | C BS2001 (Part 2) |
| Safety | IS EEx ia IIC T4 (Zone 0) |
| Radio Interference | No measurable effect from: 27-500 MHz at 3 volts per metre 500-1000 MHz at 10 volts per metre |
| Packing | To withstand 1m drop test |

Clock Function

- 7 Day cycle
- Up to 3 High/Low switching times each day: Weekdays and Weekend Options
- Accuracy +/- 5min/year
- Current Day/Time. In hours and minutes
- Day & Switching times
- British Summer Time adjustment on programmed date

Programmable Functions

- Daily high/low pressure times, hours, minutes
- High or Low Override or Low until next switch setting
- Manual Control when Laptop computer connected
- Auto Download or Pre-Programmed selections
- British Summer Time Dates

Power Supply

Internal Lithium Batteries: 3 'C' size cells,
Life: >3 years when programmed to switch 4 times daily
Battery Test: by push button on case.

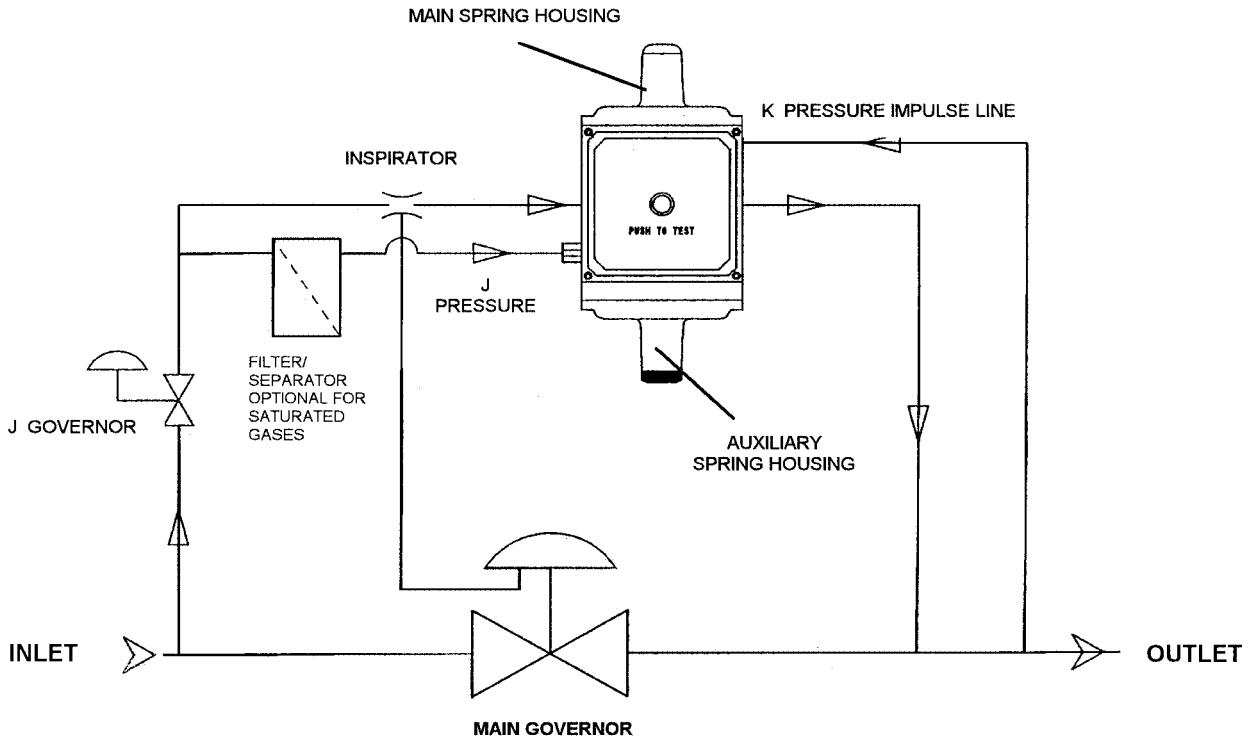
Failure Mode

The units fail to district HIGH pressure in the event of;

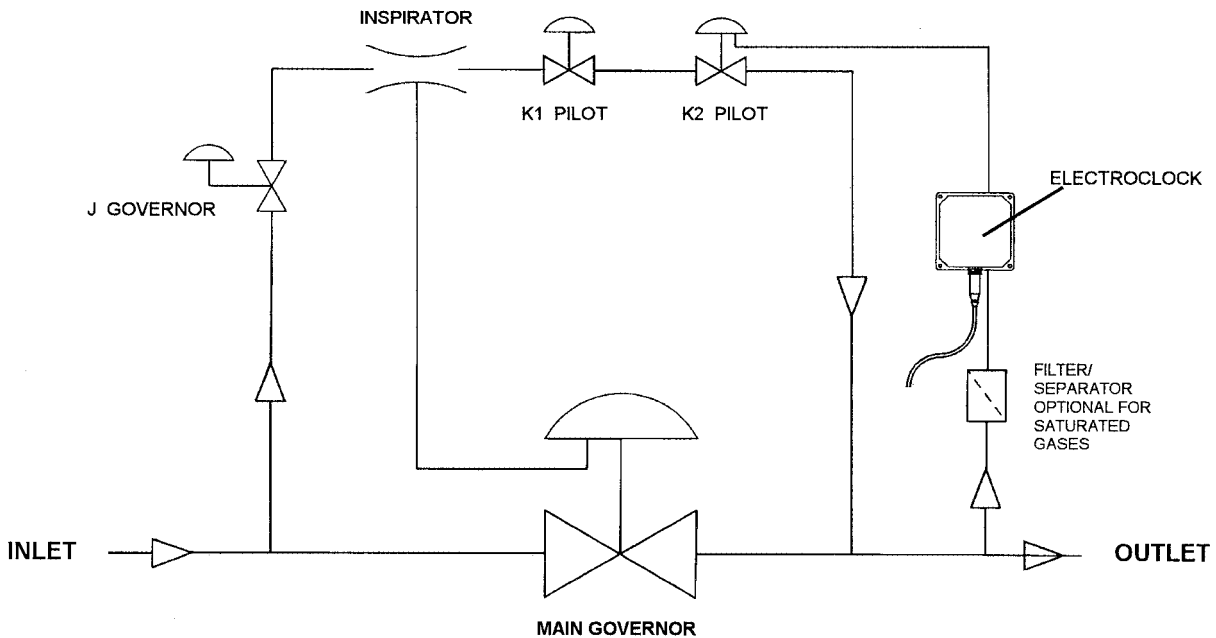
- Low Battery
- Incorrect Programming or No Settings

Technical Data

SERIES 184 ELECTRO K™



SERIES 185 ELECTROLOCK™



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The Bryan Donkin RMG Gas Controls policy is one of continuous improvement and development. The Company reserves the right to change and introduce improved designs without notice