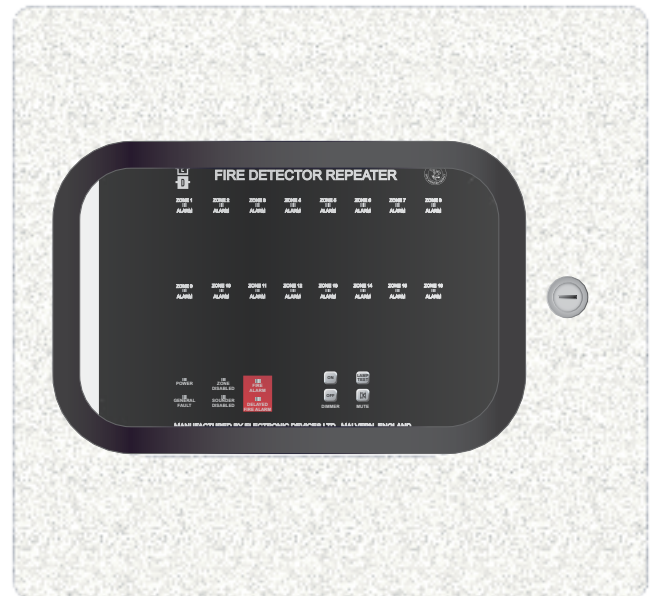


FIRE DETECTOR - TYPE ED816 AND ED816 REPEATER



The 16 zone **ED816** fire detector control panel is conventional in operation and can therefore be utilised with many different detection heads of various manufacture. Economy and ease of installation are major factors which allow new installation and retrofitting to be accomplished with a minimum of trouble. The circuitry is derived from the well known and long established ED820 which has achieved an enviable reputation amongst small commercial craft. A full range of approved and compatible peripheral devices is normally available from stock. The **ED816R** is a compatible repeater panel which mimics each alarm and all common lamps.

APPROVED BY



Type approved by
the American
Bureau of Shipping



SGS Baseefa
Certified
II(1)G [Ex ia Ga] IIC



Quality Assurance
SGS Baseefa
Certificate
Number: 0344

ED816 FEATURES

- Individual zone fire alarm indicators
- Individual zone and sounder disable switches and indicators
- Individual and common fault indication
- Main and emergency power fault monitoring
- Lamp and alarm test facility
- Delayed alarm Indicator
- Two fault monitored sounder circuits
- EN54-2:1997+A1:2006 compliant
- The ED816 accepts dual 24VDC inputs.
- Where two DC supplies are not available ED recommend that the Type 3 Power Supply Unit and integrated battery charger are used (Approved to BSEN54-4:1997+A1:2002 & A2:2006 and ABS Type approved)

GENERAL FUNCTIONS

COMPATIBILITY

The ED816 fire detection system is a multi-zone conventional control panel which will accept the standard range of smoke, heat and flame detectors operating on a nominal 24V system. The open circuit zone line voltage is 20V DC and the industry standard 470 ohm alarm resistors and 4K7 end of line resistors are used. For marine use the detection heads, alarms, call points etc should be approved by the appropriate classification society.

POWER SUPPLY

The control unit requires a nominal 24V DC for both main and emergency inputs. The fully approved Type 3 Power Supply, an optional extra, can provide both power supply and charging facilities for the integral sealed lead acid standby batteries of maximum 24V 12AH capacity. The PSU will accept 110 or 230V 50/60Hz mains supplies and provide up to 27.6V at 5A. (The maintained supply is used to drive the control unit, associated repeater panel and external 24V DC alarms).

DIMENSIONS

365 x 340 x 110mm (Same for repeater)

WEIGHTS

ED816	7.2Kg
ED816 Repeater	6.7Kg

REPEATER PANEL

- Individual zone alarm indicators
- Common fault indicator
- Common fault disable indicator
- Main power indicators
- Lamp Dim facility
- Lamp and alarm test
- Common sounder disable indication
- Local alarm mute
- 24V input

HAZARDOUS AREA OPERATION

A SGS Baseffa certified Interface unit which may include zener barriers is also available. This facility enables fire zones and alarms to be made intrinsically safe. Supplied in an IP66 weatherproof enclosure the ZBD7 zener barrier is also ABS approved. All hazardous area equipment, for example detection heads, audible alarms etc should be certified intrinsically safe to the appropriate group, zone, temperature and be compatible with the relevant zener barriers.

Attention is also drawn to the need for cable having the correct electrical parameters of capacitance, inductance and resistance ratio. These parameters will vary depending on the gas group certification required. For further information please contact Electronic Devices.

APPROVALS

The ED816 and ED816 R and Type 3 power supply unit are all approved by the American Bureau of Shipping. A summary of the tests successfully accomplished are given below:

INSULATION RESISTANCE

Greater than 100 Mohm at 500V and greater than 10 Mohm after humidity, low temperature and salt mist tests (see below).

INCLINATION STATIC

22.5° on either side of the vertical in all planes.

INCLINATION DYNAMIC

22.5° on either side of the vertical with a roll period of 10 seconds.

VIBRATION

2.0-13.2 Hz amplitude +/- 1.0mm
13-100 Hz acceleration +/- 0.7g

DAMP HEAT

25° to 55°C +/- 3°C at 95% RH

SALT MIST

Exposure to standard salt solution at 35°C, 95% RH for 28 days.

DRY HEAT

Temperature: +70°C.

LOW TEMPERATURE

Temperature: - 25°C.

HIGH VOLTAGE

2KV AC.

ELECTRO STATIC DISCHARGE

8KV direct to enclosure.

POWER SUPPLY PERMANENT

+6% / -10% voltage variation, combined with +/- 5% frequency variation.

POWER SUPPLY FAILURE

3 power interruptions with a minimum break time of 30 seconds.

ELECTRO-MAGNETIC INTERFERENCE

Frequency range 80MHz to 6GHz modulation 80% AM at 1000Hz

CONDUCTED LF

10% of input voltage to the fifteenth harmonic, decreasing to 1% at the hundredth harmonic. Input supply frequency 50Hz to 10kHz.

CONDUCTED HF

150 kHz to 80 MHz modulated 80% at 1kHz, with a carrier level of 3V.

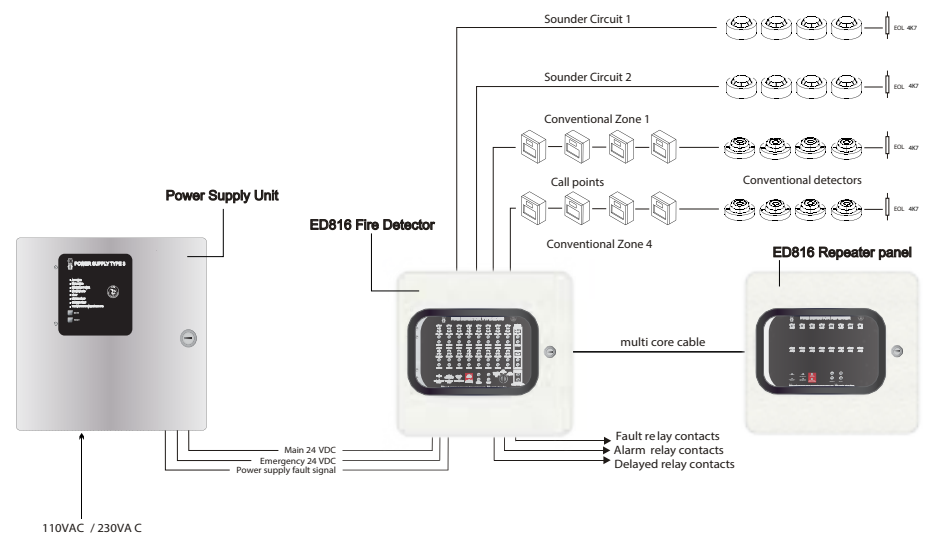
SPATIAL RFI

30 kHz to 1000 MHz amplitude modulated 30% at 1 kHz, with an electric field strength of 10 V/m.

POWER LINE TRANSIENTS

1 kV amplitude 50 ns width pulses with a rise time of 5ns at a PRF OF 5000 P/S
1 kV amplitude 50 microsec width pulses with a rise time of 1.2 microsec at a PRF of 1 p/s

TYPICAL SYSTEM LAYOUT



Also available in this range of fire detectors are the following models:
ED 320 and ED820