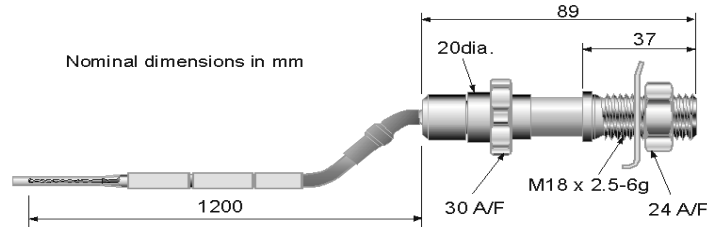


Leaffield

Engineering Limited



M18 EXPLOSIVE BOLT C98-220

GENERAL DATA

Weight	265g (approx.)
Material	Stainless steel body and nut
Cable details	Dual sheath (Raychem ZHTM), dual screen (Raybraid 90), twisted pair of conductors (2x0.5 tinned copper/PVC) The cable interfaces with the body via a rigid angled conduit.
Operating temperature	-40°C to +70°C
Life	20 years (accelerated ageing trials completed)
HSE classification	1.4S, UN Serial No. 0173 packaged
Net explosive content	800mg

OPERATION

On firing, the body will fracture and separate rapidly at a pre-defined break-plane. There will be release of hot gas and small fragments of body may be projected from the fracture area.

PERFORMANCE

Tensile failure load	100kN
Shear failure load	90kN
Torque to induce bolt failure	140Nm
Qualification trial summary	Humidity 95-100%RH; vibration - random 20g, 60-1000Hz and sine 22.5g, 60-200Hz; shock 1000g; acceleration 15g; electrostatic discharge – see below; acc. ageing – see above

ELECTRICAL CHARACTERISTICS

Nominal circuit resistance	1.25 Ω
Screen resistance	<55m Ω
Insulation resistance	100M Ω at 50VDC, between both pins (shorted) to body
Maximum no fire current	1.0A for 5min
Recommended firing current	5.0A for 50ms
Maximum test current	0.010A
Electrostatic resistance	Withstands discharge from 500pF capacitor charged to 25kV with 500 Ω resistor in series, applied between both pins (shorted) and the body, non-contact.

Note: this device can be modified to comply with customer requirements

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PRODUCT SAFETY DATA SHEET

1. **PRODUCT NOMENCLATURE**

M18 EXPLOSIVE BOLT C98-220 (3m) & C98-225 (1.3m)

2. **USES**

To provide a release function.

3. **HAZARDOUS INGREDIENTS**

<u>Material</u>	<u>Hazard</u>	<u>Nominal Per Unit</u>
EXPLOSIVE	Detonation	800 mg max.

4. **PHYSICAL PROPERTIES, CHEMICAL PROPERTIES, SENSITIVENESS CHARACTERISTICS**

Physical Properties

Appearance: Stainless Steel body to BS 3S145.
Hazardous material contained within body with encapsulation material to fully seal.

Chemical Properties

Incompatible with acids and alkalis.

Sensitiveness Characteristics

Sensitive to flame: may burn to cause operation.

Conditions to avoid: open flame, electric spark, or charge exceeding the specified no-fire threshold (1A or 1W for 5 minutes), prolonged exposure to temperatures above 125°C.

5. **HEALTH HAZARDS**

Precautions

- (1) When functioned the body of the device will forcefully separate at the defined breakplane. Hot gas and metal fragments will be expelled.
- (2) In an unpackaged condition, hazard may result if an attempt is made to tamper with or dismantle these devices before use, due to the hot gas expelled and projectiles formed by fragmentation of the metal body.

6. **FIRE AND EXPLOSION**

The device will operate in the presence of excessive heat, typically above 125°C.
 Hazardous decomposition: Functioning will result in outgassing including minor blast effect.

7. **STORAGE PRECAUTIONS**

Store in original packaging in a well ventilated, dry store.
 Storage life in original packaging is 22 years under ideal temperature conditions (20°C).

8. **TRANSPORT PACKAGING AND LABELLING**

These packaged items are classified UN No: 0173, Hazard Code: 1.4S as required for transport, packaging and labelling (HSE ref: XI/5015/2/9). Any onward shipment must be within the designated package.

9. **PROTECTION INFORMATION**

Eye protection during installation.

10. **DISPOSAL INSTRUCTIONS**

Used or life expired devices, may be returned to Leaffield Engineering Limited for disposal.

11. **EMERGENCY ACTION**

Fire represents the principal risk to safety due to the likelihood of operation. If possible and without risk to safety the devices should be removed from the immediate location of fire.

If the packaging is burning, do not attempt to fight fire - Possible Projection Hazard.
 Call emergency services. Evacuate the immediate area.

12. **ADDITIONAL INFORMATION**

Refer to Leaffield Engineering Limited, Tel: 01225 810771.