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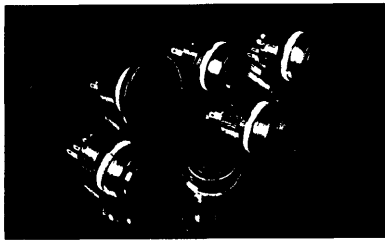
# Series 76-94

WATER SEALED RANGE



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**TW** Switches



# Series 76-94

## PANEL SEALED RANGE

### Description

The 76-94 series has been designed to cover a wide range of harsh environmental applications.

The range is available in 3 styles, push button, rotary and panel lamp.

The push button comes in 4 button styles with 3 colour options and has solder/faston terminals as standard. The rotary is a single pole, 2 position, snap action switch with green or red spot indicator on the black actuator. To complete the range an indicator version is available with red, green or amber lens.

The entire range is panel sealed to IP67 and due to the construction and the

materials used, all are capable of surviving the impact of a 5kg mass dropped from 40cm (20J). All the bezels and the actuators of the pushbuttons and rotaries are made from a non-sparking zinc alloy whilst the panel lamp lens is manufactured from polycarbonate, which maintains the specification of the range.

Non-standard options for the range include custom colours, PCB terminals, gold contacts and 2 pole variants.

The features of the series makes it ideal for robust, potentially explosive environments, such as the mining industry.

### Features

- Non-spark material – To NCB 481/1965
- Explosive protection – For volatile atmospheres
- Wide temperature range – from -40°C to +125°C
- Panel sealed product – Protection against immersion
- Approved product – UL & CSA
- Impact rating – 20J
- Choice of actuators and styles – Pushbuttons, rotary and panel lamp

#### Non-standard Options:

- PCB terminals
- Gold contacts
- 2 poles available
- Colour variants
- In-filled engraving (Pushbutton only)

### Specification

The pushbutton and rotary variants utilise ITW Switches' proven series 16 snap action microswitch.

#### Mechanical

Travel	2,5mm (PB)
Life (nom)	2 x 10 <sup>6</sup> cycles (PB), 50,000 cycles (R) 1 x 10 <sup>5</sup> cycles (Latched Pushbutton)
Operating force	7N (PB)
Contact bounce	5ms (PB, R)
Panel thickness (max)	6mm (PB, R, L)

#### Electrical

Dielectric strength	1000V RMS (PB, R)
Insulation resistance	1GΩ (PB, R)
Contact resistance (initial)	25mΩ (PB, R)
Current rating (max)	10A resistive 250VAC (PB, R)
Life	100,000 cycles 20°C (PB, R) 50,000 cycles 70°C (PB, R)
Illumination type	T1¾ Wedge base bulb (L)

#### Environmental & Physical

Ingress protection	IP67 (PB, R, L)
Impact rating	20J (PB, R, L)
Shock	50g (PB, R, L)
Operating temperature range	-40°C to +125°C (PB, R, L)
Body material	Zinc alloy (PB, R, L)
Actuator material	Zinc alloy (PB, R)
Lens material	Polycarbonate (L)
Contact material	Fine silver (PB, R)
Terminal material	5µm bright acid tin plate nickel flash undercoat (PB, R, L)

#### Key:

- PB – Pushbutton
- R – Rotary
- L – Panel Lamp Indicator



PANEL LAMP



MICRO



PADDLE



PUSH



ROCKER



ROTARY



SLIDE

### Ordering information

#### Button style

- Flush
- Raised
- Large circular (latching)
- Large circular (momentary)
- Domed
- Panel lamp indicator
- Rotary

#### Indicator colour

(No addition to the part number is required for the indicator after this)

#### Pushbutton & rotary

- Red
- Green
- Amber

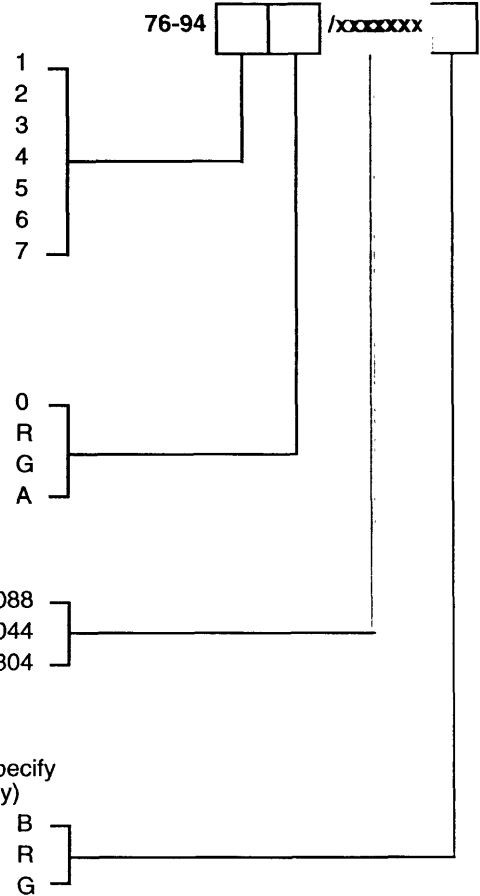
#### Termination & No. of Poles

Solder/faston	1 pole	439088
Solder	1 pole	4044
Solder	2 poles	804

#### Button colour

(For rotary: standard black actuator, specify colour of dot indicator, red & green only)

- Black
- Red
- Green



### Panel mounting & construction information

The 76-94 mounts easily into panels not exceeding 6mm thickness. Front panel sealing to IP67 is achieved by use of the sealing washer which is fitted to the switch before it is inserted into the panel hole cut out. It is held into the panel by means of a zinc lock nut, tightened down

by the tool part number 76-T1 to a torque of between 1,5Nm to 2,85Nm to achieve the correct sealing pressure.

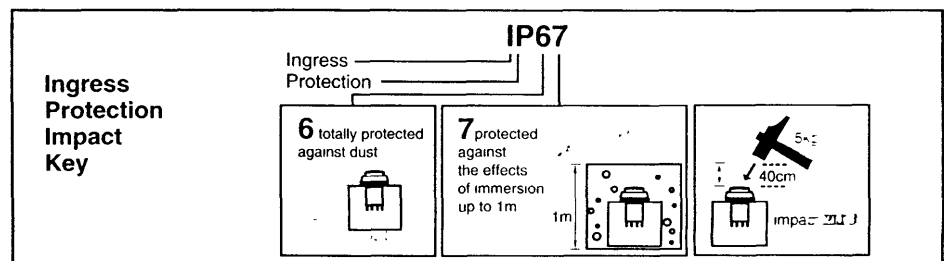
It is mounted into a standard 22.5mm diameter hole and a double 'D' fast is provided to prevent rotation if required.

### Lamp construction & multi-pole information

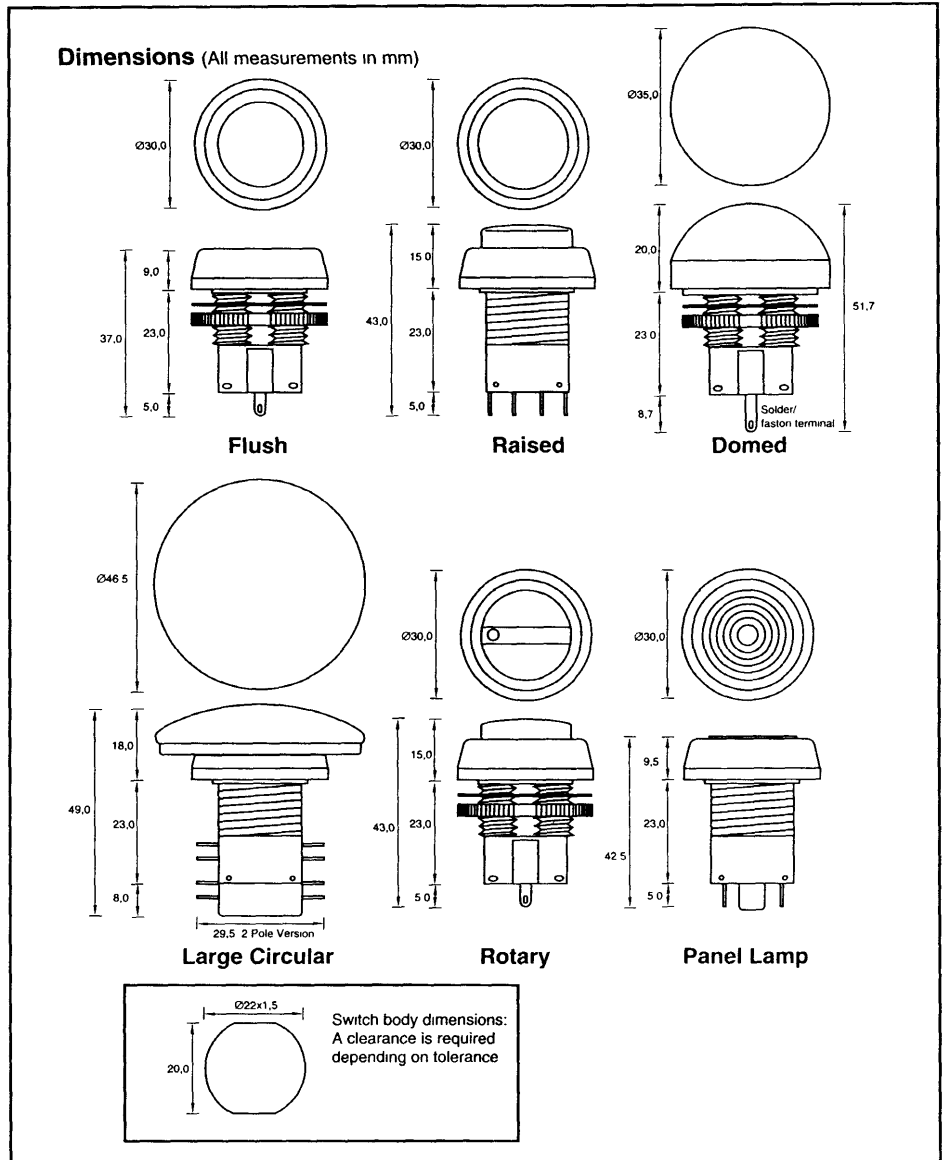
The 76-94 panel lamp variant is supplied with a quick release bulb holder that will accept a T13/4 wedge base filament lamp. Because of the wide range of illumination available (different voltage lamps, multi chip LED's etc.), we do not supply a bulb as standard although we are prepared to do so if required.

The pushbutton and rotary versions have a non-standard option of 2 poles. The 2 pole switch is provided separate to the switch body and must be fitted via a spring clip, after the switch body has been mounted in the panel.

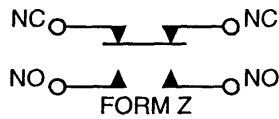
For more information, please contact the Sales Office.



**Product drawings**



**Circuit form**



**Application references**

- Military environments
- Petrochemical
- Robust industrial
- Process control
- Vandal resistant requirements
- Material handling
- Mining industry

For information on our complete range of switch products, please contact the Sales Office.

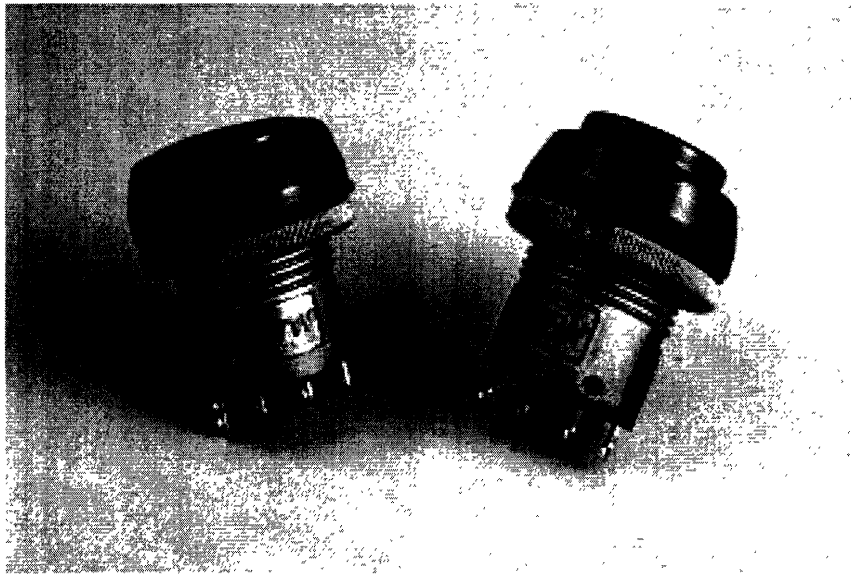
**ITW Switches**

ITW Switches  
 A Division of ITW Limited  
 Norway Road  
 Portsmouth, England PO3 5HT

Telephone: (01705) 694971 (INT +44 1705 694971)  
 Facsimile: (01705) 666352 (INT +44 1705 666352)

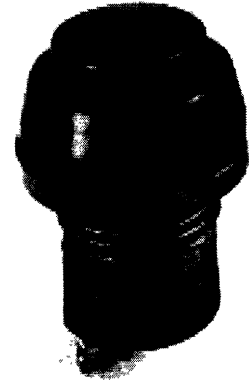
Due to our policy of continuous product development, ITW Switches retain the right to change the specification at any time without prior notice

## Series 76-94-Panel Switches for Harsh Environments

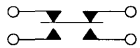


### Typical Applications

- Lift trucks
- Subway door controls
- Gasoline pumps
- Railroad train intercoms



actual size



Form Z

### Features

- Panel sealed
- Nonspark material
- Explosive environment protection
- Dustproof
- Splashproof
- Wide temperature range  
-40 °C to +135 °C (-40 °F to +275 °F)
- Impact resistant
- Choice of actuating buttons
- Approvals: UL, CSA

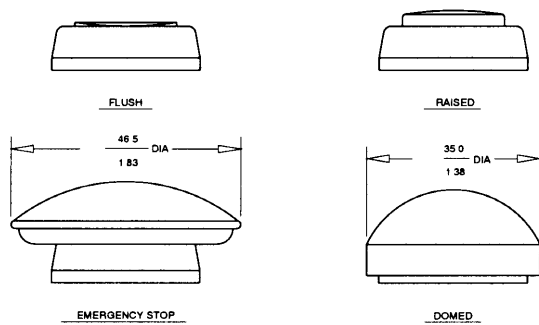
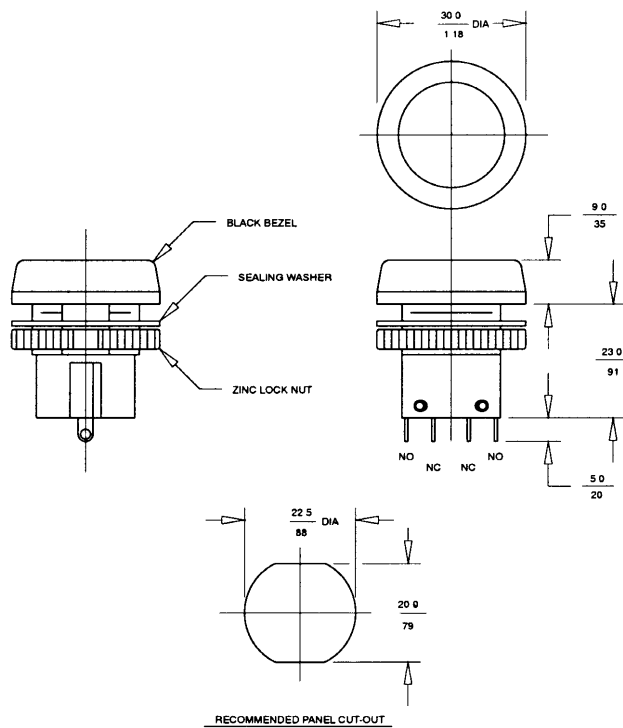
### Description

Series 76-94 pushbutton switches are designed for harsh environmental applications. All exposed metal parts are made of a nonsparking zinc alloy making this switch ideal for rugged, potentially explosive environments. Four button styles are available in this momentary action switch. A lock nut and panel seal washer are supplied with each switch.

### Mounting Information

The 76-94 mounts easily into panels not exceeding 0.236 in (6 mm) thickness. Front panel sealing is achieved by use of the sealing washer. The switch is held on to the panel by a zinc lock nut, tightened down by the lock nut wrench to a torque of between 15 and 30 lbs-in to achieve the correct sealing pressure. It is mounted into a 0.886 in diameter hole with a double "D" flat to prevent rotation.

It is recommended the switch cut-out be punched from front of panel.



BUTTON STYLES

## Mechanical Characteristics

Travel: 0.098 in. (2.5 mm)  
 Life (nominal): 1,000,000 cycles  
 Operating force: 7N (approx 28 oz)  
 Contact bounce: 5 ms  
 Panel thickness (max): 0.236 in (6 mm)

## Environmental and Physical Data

Shock: 50 G  
 Operating temp range:  
 -40 °C to +135 °C (-40 °F to +275 °F)  
 Body material: Zinc alloy  
 Button material: Zinc alloy  
 Contacts: Silver (Std)  
 Terminals: Solder

## Electrical Data

Dielectric strength: 1,000V RMS  
 Insulation Resistance: 1 G Ω  
 Contact Resistance(Initial): 25 m Ω  
 Life (full load):  
 1,000,000 cycles at 20 °C (68 °F)  
 50,000 cycles at 70 °C (158 °F)

## Electrical Characteristics

Circuitry	Current	Voltage
SPDT	10.1 amps Res	125/250 VAC

## Ordering Information

Part Number	Circuit/Action	Button Style	Button Color	Terminals	Contacts
76-9410/4044/B	SPDT/Mom	Flush	Black	Solder	Silver
76-9420/4044/R	SPDT/Mom	Raised	Red	Solder	Silver
76-9440/4044/R	SPDT/Mom	Stop	Red	Solder	Silver
76-9450/4044/R	SPDT/Mom	Domed	Red	Solder	Silver

1-800-544-3354

**ITW SWITCHES**

**T76/94 SWITCH ASSY AND TEST WORK INSTRUCTION  
FOR APPLICATION OF THREAD LOCK AND TORQUE  
SETTING OF FIXING SCREWS**

**APPROVED BY: B Greenstreet**

**ISSUE: 4**

**DATE: 2 March 1998**

**ANY AMENDMENTS SHALL CAUSE THIS WHOLE DOCUMENT TO BE RE-ISSUED**

976Assy  
2 March 1998

## **1 INTRODUCTION**

The application of threadlock and torque settings this instruction applies to can be used on a number of different types of finished switch assembly. It covers the 76/94 series of switches.

## **2 INSPECTION POINTS**

- 2.1 Threadlock dispenser - setting number 5, check on test piece daily
- 2.2 Pneumatic screwdriver - calibration label current, equipment to be checked weekly  
28-32 Ncm (40-45 ozf-in)

## **3 PROCEDURE**

- 3.1 Before starting work, check that the dispensing equipment is functioning correctly and the screwdriver press is set. Inspection points 2.1 and 2.2 refer.
- 3.2 Build switch in accordance with the Assembly Instructions stated and General Assembly Drawing.
- 3.3 Check that the 'piston' is not free to rotate; this confirms that the torque setting is correctly set on the screwdriver.

## **4 INFORM SUPERVISOR IMMEDIATELY IF:**

- 4.1 The dispenser stops dispensing threadlock
- 4.2 The torque setting does not tighten the fixing screw onto the 'piston'

INFORM SUPERVISOR IMMEDIATELY:  
IF SUPERVISOR IS NOT AVAILABLE, INFORM QA MANAGER,  
IF HE IS ALSO NOT AVAILABLE, THEN STOP THE LINE.

**IF IN DOUBT ASK**

APPROVED BY: B Greenstreet

ISSUE: 4

DATE: 2 March 1998



## **5 ASSEMBLY INSTRUCTIONS**

- 5.1 Select the correct nest to assemble the switch components in. Ensure screwdriver bit is not worn and that the dispenser is working correctly.
- 5.2 Build the switch in accordance with the drawing, paying particular attention to the type of fixing screw used to hold button to body - ITW Part No 80-769594.
- 5.3 Before inserting the screw, put some threadlock onto the thread, just enough to wet the threads. (This amount is to be pre-set on the dispensing machine).
- 5.4 Drive the fixing screw into the button using the air driven screw driver.
- 5.5 Check that the 'piston' is secure and complete the build.

## **6 ASSEMBLY NOTES**

- 6.1 Ensure that the 'piston' does not get stuck to the body by the application of excessive threadlock to the thread.
- 6.2 All switches are to be 100% checked after a period of not less than 12 hrs to allow the Loctite to fully cure for freedom of actuator movement. No stiction is permissible. Any switches that deviate from the testing/manufacturing process are to be placed in a Red reject container for review at the end of each shift by Manufacturing and Q.A.
- 6.3 Read and understand the attached memo regarding application of loctite 270.
- 6.4 Read and understand the attached memo dated 24/10/97 concerning the switch testing.
- 6.5 All switches are to be operated in the central position as well as the compass point testing position.

**IF IN DOUBT ASK**

**APPROVED BY:** B Greenstreet

**ISSUE:** 4

**DATE:** 4 February 1998



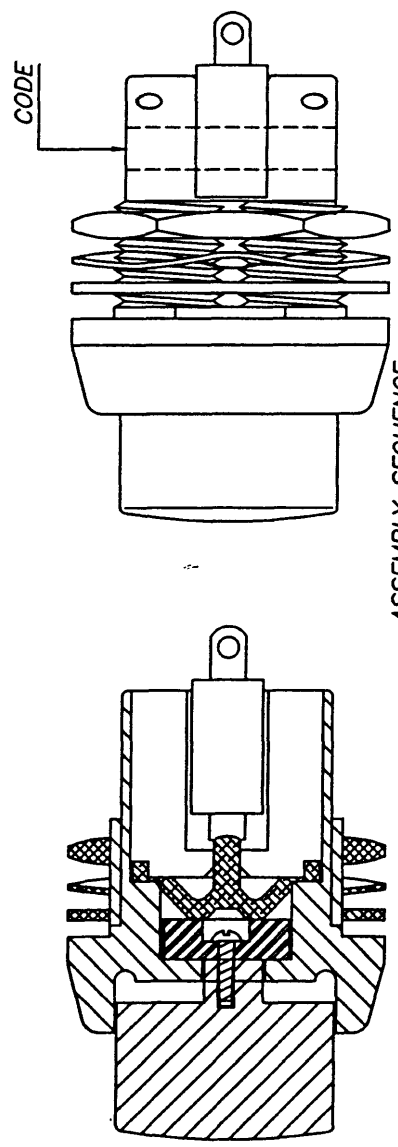
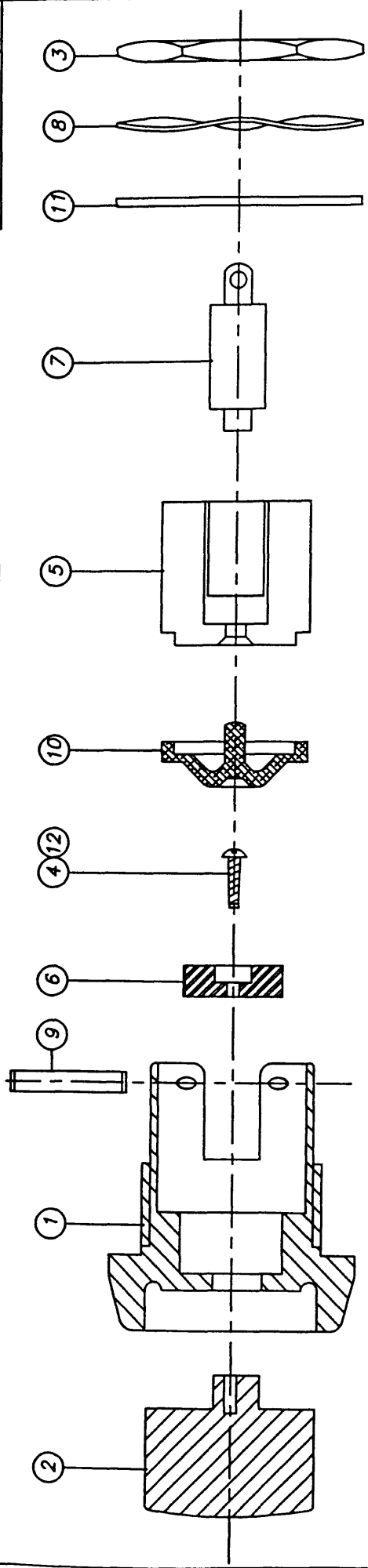
TOLEANCE UNLESS OTHERWISE SPECIFIED - 0.005 INCHES FOR DIAMETERS 1

ROUGHNESS - 32 CLA DIAMETERS TO BE CONCERNING WITHIN - HOLD-NORMAL AND PARALLEL FACES WITHIN -

REMOVE ALL BURRS AND BREAK ALL SHARP EDGES - DIMENSIONS ARE BEFORE PLATING OR FINISH

DRAWN IN ACCORDANCE WITH BS. 308. THIRD ANGLE PROJECTION. DO NOT SCALE. DIMENSIONS ARE IN MILLIMETRES.

DRAWING No. 76-949043 SHT2 ISS. D



- ASSEMBLY SEQUENCE**
1. REFER TO T76-94 ASSEMBLY WORK INSTRUCTIONS.
  2. FIT BUTTON, BODY AND PISTON TOGETHER WITH TAPITE SCREW AND THREADLOCK.
  3. FIT DIAPHRAGM, PLUG AND SWITCH TO BODY WITH 2 ROLL PINS.
  4. TEST.
  5. CODE.
  6. FIT SEALING WASHER, WAVY WASHER AND NUT AS SHOWN.
  7. PACK IN CARDBOARD TRAYS.

PART No.	QTY. REQ.	DESCRIPTION
1	1	BODY
2	1	BUTTON
3	1	NUT
4	1	TAPITE SCREW
5	1	PLUG
6	1	PISTON
7	1	SWITCH
8	1	WAVY WASHER
9	2	ROLL PIN
10	1	DIAPHRAGM
11	1	SEALING WASHER
12	A/R	LOCTITE THREADLOCK 270
13		
14		
15		

ISS.	CHANGE NOTE No.	DATE	DRAWN	ISS.	CHANGE NOTE No.	DATE	DRAWN	FINISH	MATERIAL & SPEC.
A	ECN85636	18/11/93	RE					NOT APPLICABLE	SEE BOM ABOVE
B	ECN85968	10/08/93	RE					NOT APPLICABLE	
C	ECN86307	30.4.97	JPL						
D	ECN86608	23.2.98	BV						

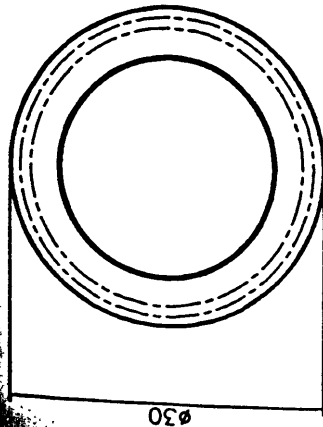
ITW Switches  
 Union Switches, Chicago Switch, RC/UD Switches  
 © 1993  
 The Copyright in this drawing and in the article shown belongs to ITW Switches and no reproduction in whole or in part of the drawing or the article shown may be made without prior written permission.

HEAT TREAT: NOT APPLICABLE  
 DRAWN CHKD. APPR. SCALE: 2:1  
 DATE: 18/11/93  
 TITLE: HIGH BUTTON ROUND P/B G.A.  
 DRAWING No. 76-949043 SHT2 ISS. D

A3



# SPECIFICATION



## ENVIRONMENTAL

Temperature Range -40 to +125°C

Sealing (Front of panel) I.P. 67

Impact 20 J

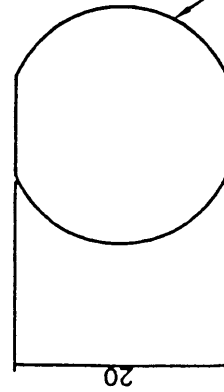
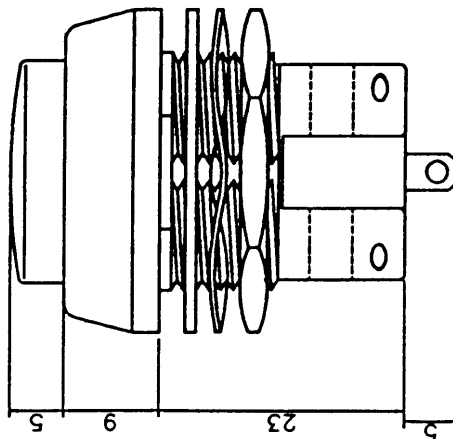
Vibration DEF-STAN 07-55  
Part 2 Section 1/1  
Test A2

Shock 100 G. to  
DEF-STAN 07-55  
Part 2 Section 1/1  
Test A3

Bump DEF-STAN 07-55  
Part 2 Section 1/1  
Test A5

Designed in accordance with  
British coal (N.C.B) non-spark  
metals specification 481/1965.

CENELEC EN50014 "Component Approval" Explosive protection class - ExS (Special protection certified for use in Zone 0.) Gas Group - 11C. Temperature classification T6. Hazard area - Zone 0.



M22 x 1.5

## MECHANICAL

### Dimensions

Body diameter 22mm.  
Body across flats 20mm.  
Max. panel thickness 6mm.  
Min. pitching 30.2mm.  
Installation torque 2 - 5N.

### Construction

"All metal" external parts.  
"Stripable" switching element can be replaced.

### Finish

Body Red P.T.F.E  
Button Red P.T.F.E

Life 2 000 000 cycles

## ELECTRICAL

### Configuration

SP/ON/OFF - SP/C/O  
DP/ON/OFF OFF/OFF  
Double break

### Contacts

Silver / Gold Plated

### Current

5A @ 250 VAC  
10A with life & max. temperature derated to 50,000 & +70°C

Life 100 000 cycles

Dielectric Strength 1,000 Vrms.

Insulation Resistance 1 Gohm

Contact Resistance 25m.ohm initial

Switch meets Mil spec No.

MIL - S - 8805/7

ISS	ECN	SGN	DATE	ISS	ECN	SGN	DATE
A	86329	BV	13.5.97				
B	86402	BV	29.7.97				

STANDARD TOLERANCES	NO PLACE DEC. ±0.5	1 PLACE DEC. ±0.2	2 PLACE DEC. ±0.1	ANGULAR ±0.5	UNLESS STATED OTHERWISE
SCALE:	2	1			

DRAWN BY	DATE	SKW	DATE
BV	12.5.97		26/9/97

TITLE RAISED BOTTOM ROUND MOM. SW.

DRAWING No 76-949070 SHT 1 A3

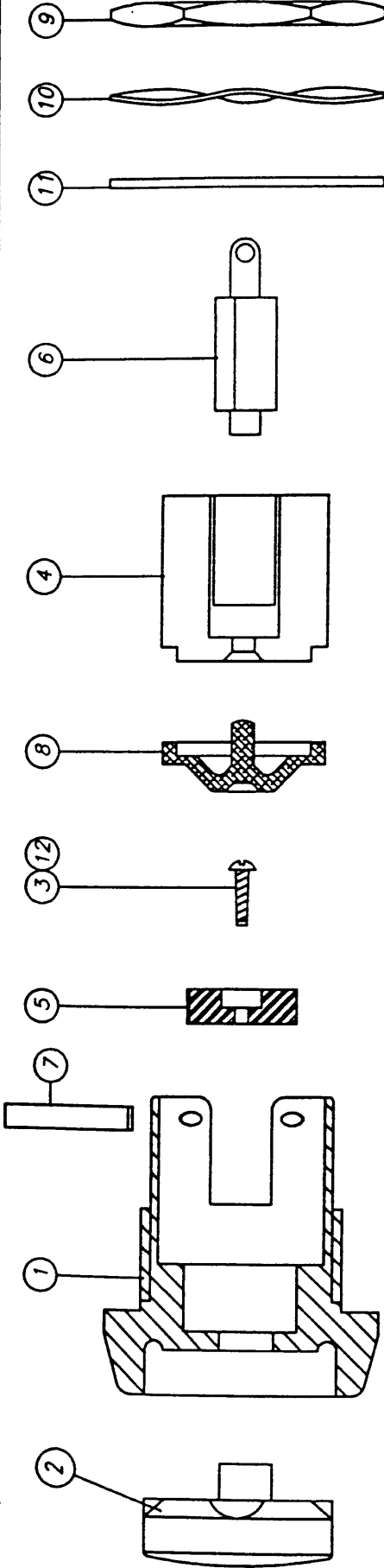
**ITW** Switches  
Switchpanels  
Chronomatic

NORWAY ROAD, HILSEA, PORTSMOUTH,  
HAMPSHIRE, ENGLAND PO3 5HT,  
Tel: 01705 694971 Fax: 01705 653356/666352

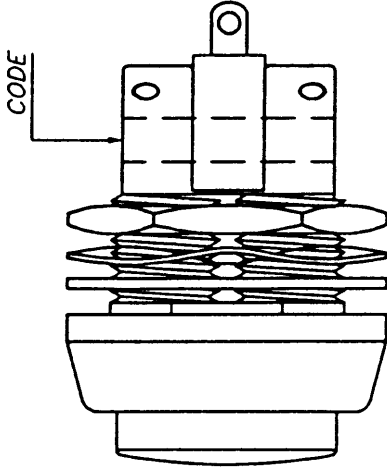
© 1997

MATERIAL

FINISH



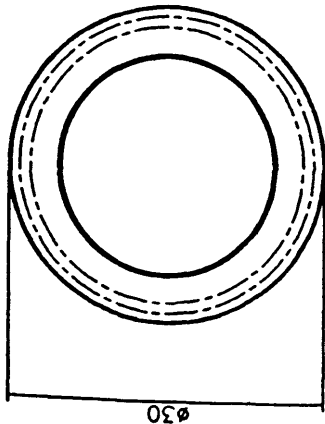
PART No.	QTY. REQ.	DESCRIPTION
1	1	BODY, RED
2	1	BUTTON, RED (P-9491)
3	1	TAPITE SCREW
4	1	PLUG
5	1	PISTON
6	1	SWITCH
7	2	ROLL PIN
8	1	DIAPHRAGM
9	1	NUT
10	1	WASHER
11	1	WASHER, SEAL
12	A/R	LOCTITE THREADLOCK 270



**ASSEMBLY SEQUENCE**

1. REFER TO 176-94 ASSEMBLY WORK INSTRUCTIONS.
2. FIT BUTTON, BODY AND PISTON TOGETHER WITH TAPITE SCREW AND THREADLOCK
3. FIT DIAPHRAGM, PLUG AND SWITCH TO BODY WITH 2 ROLL PINS.
4. TEST.
5. CODE.
6. FIT SEALING WASHER, WAVY WASHER AND NUT AS SHOWN.
7. PACK IN CARDBOARD TRAYS

ISS	ECN	SIGN	DATE	ISS	ECN	SIGN	DATE	DRAWN	DATE	SIGN	DATE
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B	86402	BV	29.7.97					TITLE		Raised Circular Mom.	
								DRAWING No		Sw. Red Button & Body.	
								DRAWING No		76-949070 Sht. 2	
								MATERIAL		SEE BOM. ABOVE	
								FINISH		UNLESS STATED OTHERWISE	
								STANDARD TOLERANCES		SCALE: 2 : 1	
								NO PLACE DEC. ±0.5			
								1 PLACE DEC. ±0.2			
								2 PLACE DEC. ±0.1			
								ANGULAR ±0.5			
								NORWAY ROAD, HILSEA, PORTSMOUTH,			
								HAMPSHIRE, ENGLAND PO3 5HT			
								Tel: 01705 694971 Fax: 01705 653556/666352			
								NOTICE			
								ALL RIGHTS RESERVED:			
								UNAUTHORISED USE,			
								REPRODUCTION IN			
								WHOLE OR IN PART IS			
								STRICTLY PROHIBITED.			
								© 1997			



ENVIRONMENTAL

Temperature Range -40 to +125°C

Sealing (Front of panel) I.P. 67

Impact 20 J

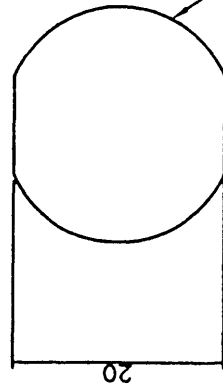
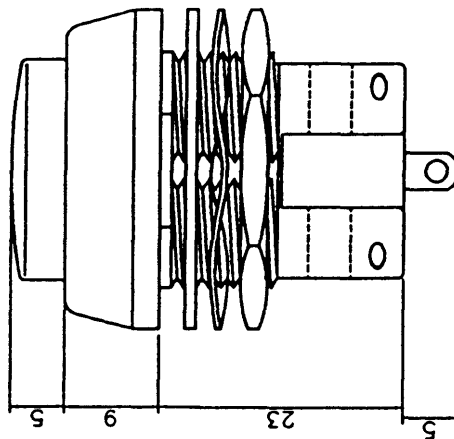
Vibration DEF-STAN 07-55  
Part 2 Section 1/1  
Test A2

Shock 100 G. to  
DEF-STAN 07-55  
Part 2 Section 1/1  
Test A3

Bump DEF-STAN 07-55  
Part 2 Section 1/1  
Test A5

Designed in accordance with  
British coal (N.C.B) non-spark  
metals specification 481/1965.

GENELEC EN50014 "Component  
Approval" Explosive protection  
class - ExS (Special protection  
certified for use in Zone 0.)  
Gas Group - 11C.  
Temperature classification T6.  
Hazard area - Zone 0.



M22 x 1.5

SPECIFICATION

MECHANICAL

Dimensions

Body diameter 22mm.  
Body across flats 20mm.  
Max. panel thickness 6mm.  
Min. pitching 30.2mm.  
Installation torque 2 - 5N.

Construction

"All metal" external parts.  
"Stripable" switching element  
can be replaced.

Finish

Body Black P.T.F.E  
Button Black P.T.F.E

Life 2 000 000 cycles

ELECTRICAL

Configuration

SP/ON/OFF - SP/C/O  
DP/ON/OFF OFF/OFF/ON  
Double break

Contacts

Silver / Gold Plated

Current

5A @ 250 VAC  
10A with life & max.  
temperature derated to  
50,000 & +70°C

Life 100 000 cycles

Dielectric Strength 1,000 Vrms.

Insulation Resistance 1 Gohm

Contact Resistance 25m.ohm  
initial

Switch meets Mil spec No.  
MIL - S - 8805/7

ISS	ECN	ECN	ISS	DATE	SIGN	DATE	SIGN	DATE	SIGN	DATE
A	86329	BV	13.5.97							
B	86402	BV	29.7.97							

NOTICE ALL RIGHTS RESERVED. UNAUTHORIZED USE, REPRODUCTION OR DISCLOSURE IN WHOLE OR IN PART IS STRICTLY PROHIBITED.		STANDARD TOLERANCES NO PLACE DEC. ±0.3 1 PLACE DEC. ±0.2 2 PLACE DEC. ±0.1 ANGULAR ±0.5° UNLESS STATED OTHERWISE		MATERIAL FINISH	
RAISED BUTTON ROUND MOM. SW.		SCALE: 2 : 1		DRAWING NO 76-949071 SHT. 1 A3	

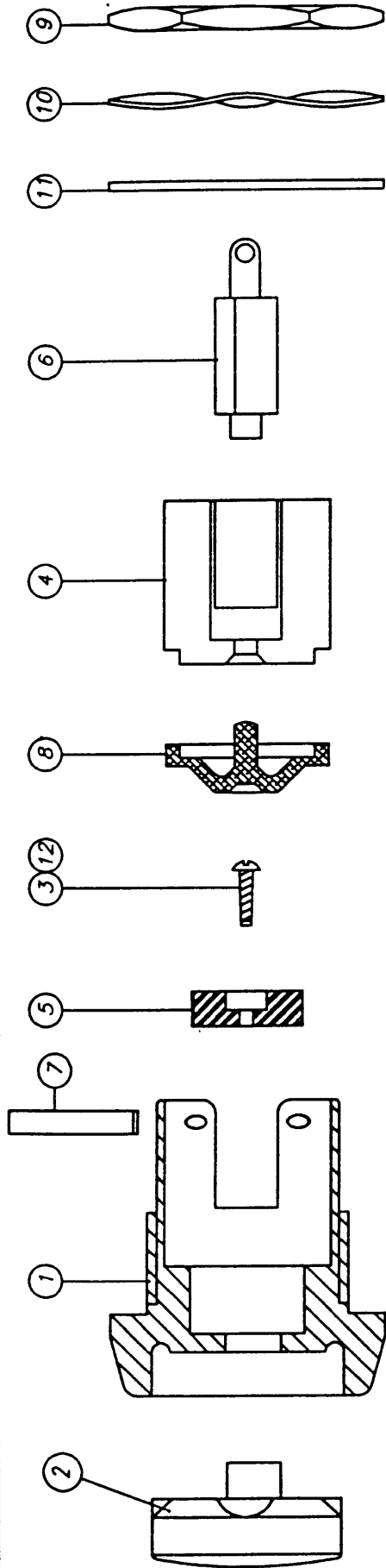
Switches Switchpanels Chromomatic		NORWAY ROAD, HILSEA, PORTSMOUTH, HAMPSHIRE, ENGLAND PO3 5HT Tel: 01705 694971 Fax: 01705 653356/666352	
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DRAWING No 76-949071 Sht. 2 DO NOT SCALE

CAD SYSTEM: 1

DIMENSIONS IN MILLIMETRES THIRD ANGLE PROJECTION

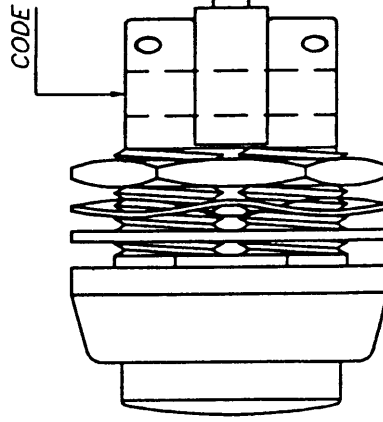
CAD FILE NAME: C:\ACAD\CUSTOMER\769471GA



PART No.	QTY. Req.	DESCRIPTION
1	1	BODY, BLACK
2	1	BUTTON, BLACK (P-9491)
3	1	TAPTITE SCREW
4	1	PLUG
5	1	PISTON
6	1	SWITCH
7	2	ROLL PIN
8	1	DIAPHRAGM
9	1	NUT
10	1	WASHER
11	1	WASHER SEAL
12	A/R	LOCTITE THREADLOCK 270

**ASSEMBLY SEQUENCE**

1. REFER TO 76-94 ASSEMBLY WORK INSTRUCTIONS
2. FIT BUTTON, BODY AND PISTON TOGETHER WITH TAPTITE SCREW AND THREADLOCK.
3. FIT DIAPHRAGM, PLUG AND SWITCH TO BODY WITH 2 ROLL PINS.
4. TEST.
5. CODE.
6. FIT SEALING WASHER, WAVY WASHER AND NUT AS SHOWN.
7. PACK IN CARDBOARD TRAYS



FSS	ECN	SIGN	DATE	FSS	ECN	SIGN	DATE	DRAWN	DATE	SIGN	DATE
A	86329	BV	12.5.97					BV	12.5.97		
B	86402	BV	29.7.97								

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(C) 1997	

STANDARD TOLERANCES	
1	NO PLACE DEC. ±0.5
1	PLACE DEC. ±0.2
2	PLACE DEC. ±0.1
	ANGULAR ±0.5°
UNLESS STATED OTHERWISE	
SCALE	? 1

MATERIAL	
SEE BOM. ABOVE	
FINISH	
TITLE Raised Circular Mom. Sw. Black Button & Body	
DRAWING No 76-949071 Sht 2 A3	

**ITW** Switches  
Switchpanels  
Chromatic

NORWAY ROAD, HILSEA, PORTSMOUTH,  
HAMPSHIRE, ENGLAND PO3 5HT  
Tel: 01705 694971 Fax: 01705 653556/666352



**SPECIFICATION**

**ENVIRONMENTAL RANGE:-**

TEMPERATURE RANGE -30°C TO +60°C  
 Sealing (Front of panel) I.P. 67  
 Impact 20 J

Vibration DEF-STAN 07-55  
 Part 2 Section 1/1  
 Test A2

Shock 100 G. to DEF-STAN 07-55  
 Part 2 Section 1/1  
 Test A3

Bump DEF-STAN 07-55  
 Part 2 Section 1/1  
 Test A5

**MECHANICAL:-**

DIMENSIONS BODY THREAD M22 x 1.5  
 BODY ACROSS FLATS 20mm  
 MAX PANEL THICKNESS 6mm  
 INSTALLATION TORQUE 2-5Nm

**CONSTRUCTION:-**

"ALL METAL" EXTERNAL PARTS.  
 "STRIPABLE" SWITCHING ELEMENT  
 CAN BE REPLACED.

**FINISH:-**

BODY BLACK P.T.F.E.  
 BUTTON BLACK P.T.F.E.

**LIFE:-**

2 MILLION CYCLES

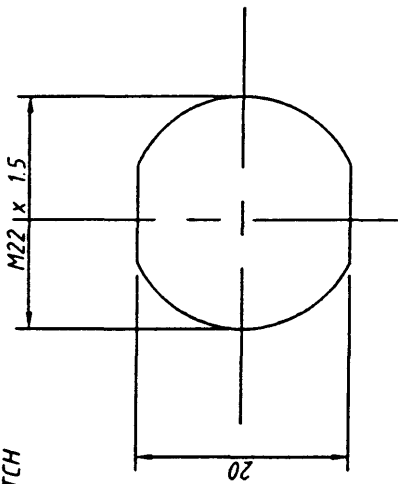
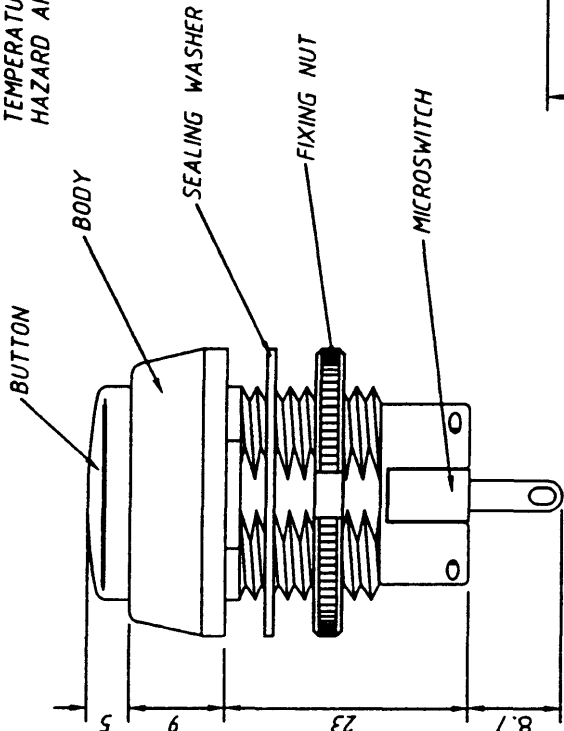
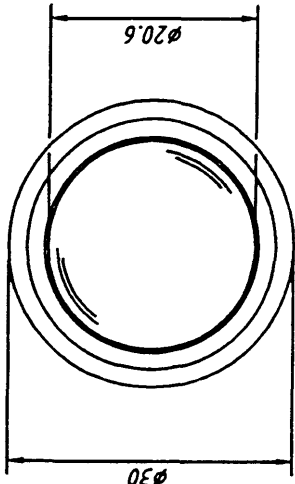
**ELECTRICAL:-**

CONFIGURATION SP/ON/OFF - SP/C/O  
 DP/ON/OFF OFF/ON  
 DOUBLE BREAK  
 CONTACTS-MICROSWITCH TYPE 16-439088 (SILVER)  
 CURRENT-MICROSWITCH 5 AMPS @ 250 V A.C.

**LIFE:-**

100 000  
 DIELECTRIC STRENGTH 1,000 V r.m.s.  
 INSULATION RESISTANCE 1 Giga ohm  
 CONTACT RESISTANCE 25 milli ohm (initial)

USE 76-T1 DRIVER TO SECURE FIXING NUT FOR ASSEMBLY



DESIGNED IN ACCORDANCE WITH:-  
 BRITISH COAL (N.C.B.) NON-SPARK METALS  
 SPECIFICATION 481/1965  
 CENLEC. ENS0014 "COMPONENT APPROVAL"  
 EXPLOSIVE PROTECTION CLASS -EX 5  
 (SPECIAL PROTECTION CERTIFIED FOR USE  
 IN ZONE 0.)  
 GAS GROUP - 11C.  
 TEMPERATURE CLASSIFICATION T6.  
 HAZARD AREA - ZONE 0.

ISS	ECN	SIGN	DATE	ISS	ECN	SIGN	DATE	DRAWN	DATE	SIGN	DATE
A	86329	BV	13.5.97					BV	13.5.97		7.7.97
B	86402	BV	29.7.97					TITLE Raised Circular Mom. Switch Black Button			
								MATERIAL		DRAWING No 76-949072 Sht. 1 A3	
								FINISH		UNLESS STATED OTHERWISE	
								STANDARD TOLERANCES		SCALE: 2:1	
								NO PLACE DEC. ±0.5			
								1 PLACE DEC. ±0.2			
								2 PLACE DEC. ±0.1			
								ANGULAR ±0.5			
								NORWAY ROAD, HILSEA, PORTSMOUTH, HAMPSHIRE, ENGLAND PO3 5HT			
								Tel: 01705 694971 Fax: 01705 653356/666352			
								© 1996			



NORWAY ROAD, HILSEA, PORTSMOUTH,  
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Tel: 01705 694971 Fax: 01705 653356/666352



76 949072 2

DRAWING No 76-949072 Sht. 2

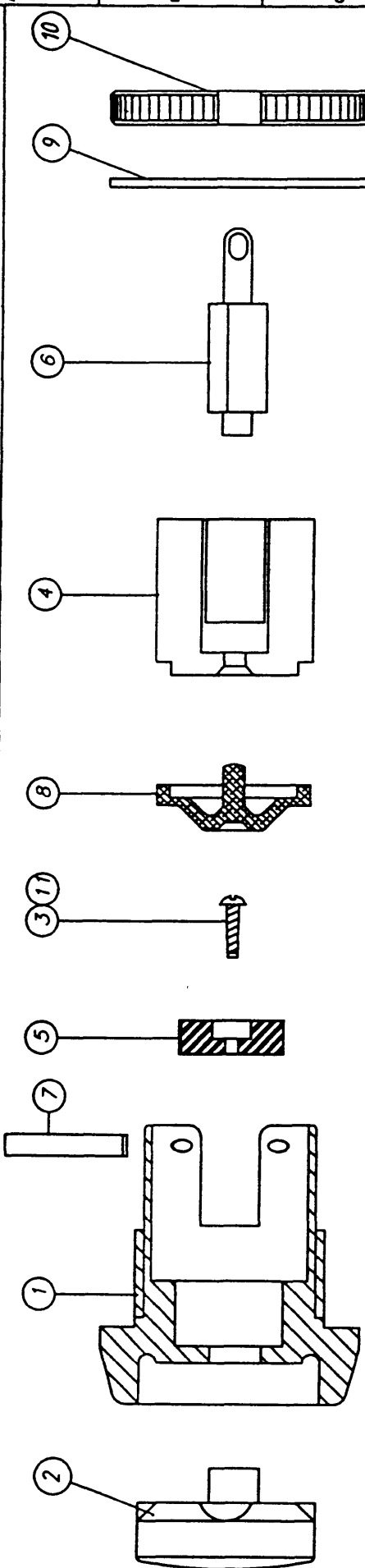
DO NOT SCALE



DIMENSIONS IN MILLIMETRES  
THIRD ANGLE PROJECTION

CAD SYSTEM: 1

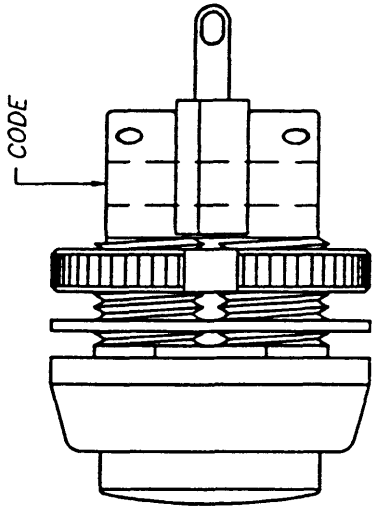
CAD FILE NAME: C:\ACAD\CUSTOMER\769472CA



PART No.	QTY. REQ.	DESCRIPTION
1	1	BODY
2	1	BUTTON, BLACK(P-9491)
3	1	SCREW, TAPTITE
4	1	PLUG
5	1	PISTON
6	1	SWITCH
7	2	ROLL PIN
8	1	DIAPHRAGM
9	1	WASHER, SEAL
10	1	NUT
11	A/R	LOCTITE THREADLOCK 270
12		

**ASSEMBLY SEQUENCE**

1. REFER TO T76-94 ASSEMBLY WORK INSTRUCTIONS.
2. FIT BUTTON, BODY AND PISTON TOGETHER WITH TAPTITE SCREW AND THREADLOCK.
3. FIT DIAPHRAGM, PLUG AND SWITCH TO BODY WITH 2 ROLL PINS.
4. TEST.
5. CODE.
6. FIT SEALING WASHER AND NUT AS SHOWN.
7. PACK IN CARDBOARD TRAYS



ISS	ECN	SKN	DATE	ISS	ECN	SKN	DATE	ISS	ECN	SKN	DATE
A	86329	BY	13.5.97								
B	86402	BY	29.7.97								
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<p>STANDARD TOLERANCES          NO PLACE DEC. ±0.5          1 PLACE DEC. ±0.2          2 PLACE DEC. ±0.1          ANGULAR ±0.5          UNLESS STATED OTHERWISE</p>											
<p>MATERIAL: SEE BOM. ABOVE</p>											
<p>FINISH: /</p>											
<p>SCALE: 2 : 1</p>											
<p>SWITCHES Chromatic          NORWAY ROAD, HILSEA, PORTSMOUTH,          HAMPSHIRE, ENGLAND, PO3 5HT          Tel: 01705 694971 Fax: 01705 653356/666352</p>											
<p>DRAWN BY: 13.5.97          TITLE: Raised Circular Mom. Switch, Black Button          DRAWING No: 76-949072 Sht. 2 A3</p>											