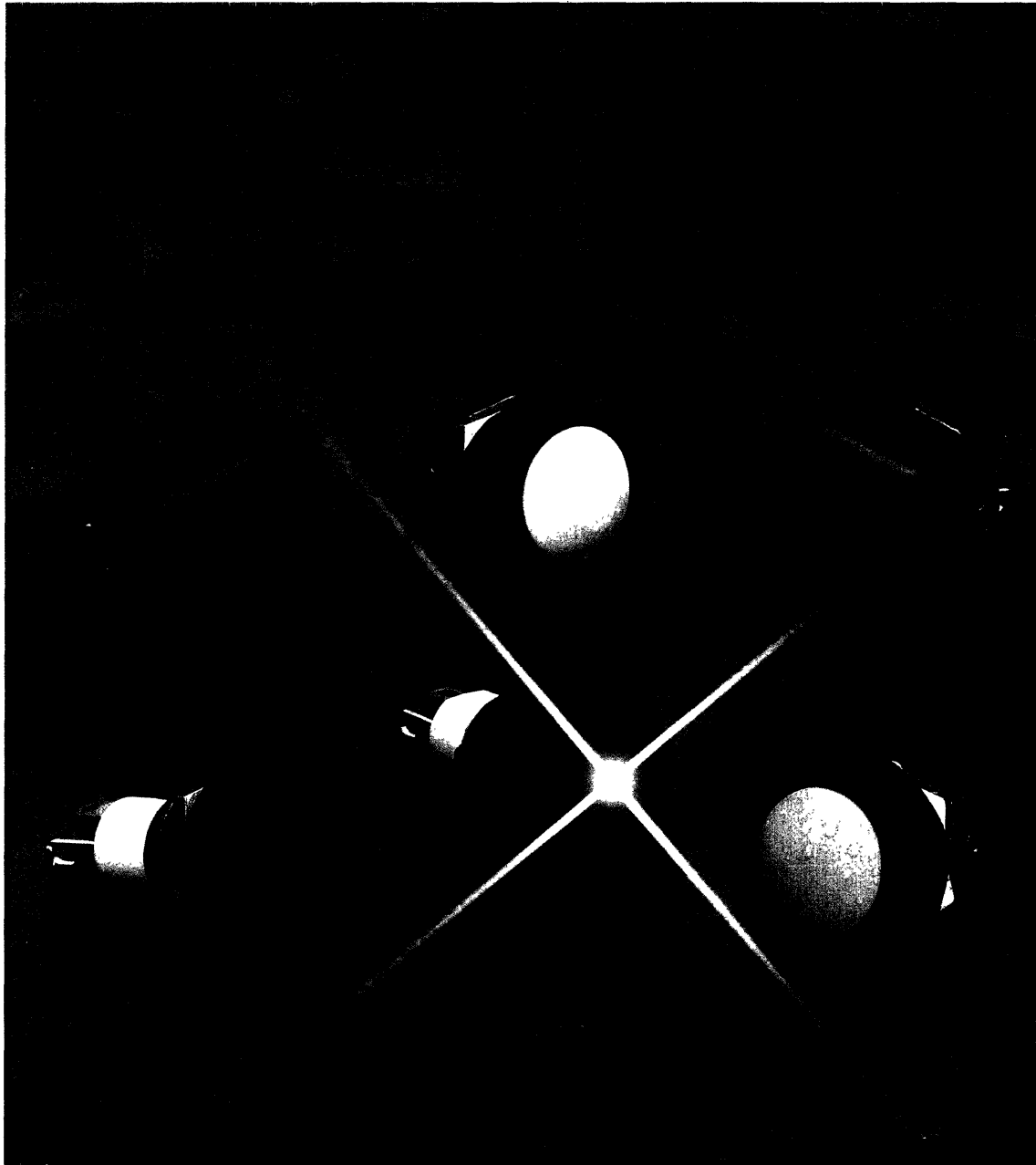
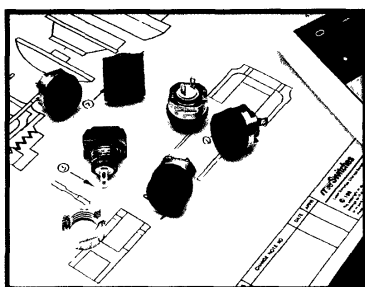

Series 59

MINIATURE SEALED PUSHBUTTON



TW Switches



Series 59

MINIATURE SEALED PUSHBUTTON

Description

The series 59 is a range of miniature, momentary action, rugged panel sealed pushbutton switches.

The series is available with square or round bezel versions, with or without LED status illumination.

A locknut is supplied with each switch.

A choice of body material is provided of either a non-spark zinc alloy or a hard wearing moulded PBT therefore making this switch suitable for use in most applications. It is panel sealed to IP67 and is designed to be impact resistant. The small size, robustness and panel sealing make this switch ideal in harsh environments.

Features

- Non-spark material – To NCB 481/1965
- Wide temperature range – Up to 125°C
- Panel sealed – To IP67
- High environmental specifications
- Gold contacts
- Status illumination
- Overboot for protection against icing

Non-Illuminated Version

The non-illuminated range includes a choice of 7 button colours with solder terminal connection. PCB terminals, a high round bezel, surface and sublimation printing are available as non-standard.

Status Illuminated Version

An illuminated version is available in the round bezel versions with a choice of 3 button colours and 2 high brightness LED colours. Non standard options include additional button and LED colours (subject to minimum order quantities).

Non-standard options:

- PCB terminals
- High round bezel
- Surface or sublimation legend printing on the button (non-illuminated version)

Specification

Mechanical

Travel (nom)	2,3mm
Life (max)	1,000,000 cycles
Operating force (nom)	3N
Contact bounce (nom)	1ms
Panel thickness (max)	1,5 – 3mm
Panel cut out	ø13,6mm (with 'D' flat)

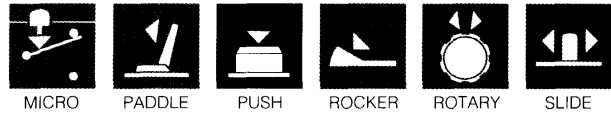
Electrical

Switch

Dielectric strength	1000 VAC
Insulation resistance	1GΩ
Contact resistance	50mΩ
Current rating (typical)	400mA at 32 VAC resistive 100mA at 50 VDC resistive 125mA at 125 VAC resistive
Life (min)	500,000 cycles
Switching power (max)	16 VA AC

LED

Typical fwd voltage (Vf at I operating)	2,2V
Max fwd voltage (Vf at I operating)	3,0V
Forward current (I operating)	20mA
Meantime between failures	100,000 hours
Luminous intensity (Iv at Iopr)	Red LED – 100mcd
Luminous intensity (Iv at Iopr)	Green LED – 160mcd



Environmental & Physical

Ingress protection	IP67
Shock	100g
Vibration	DEF STD 07-55
Non-Illuminated	
Operating temperature range	-40°C to +125°C with zinc alloy body -40°C to +105°C with PBT body
Illuminated	
Operating temperature range	-35°C to +85°C
Body material	Zinc alloy (standard) or PBT
Button material	PBT
Contacts	Gold plated palladium nickel
Terminals	Gold plated brass
Salt mist	BS2011 Part 2:1
Soldering information	320° C max for 3s

Ordering information

Body style

- Standard round bezel
- Standard square bezel
- Illuminated round bezel
- PBT round bezel

Termination

- Solder terminals

Button colour

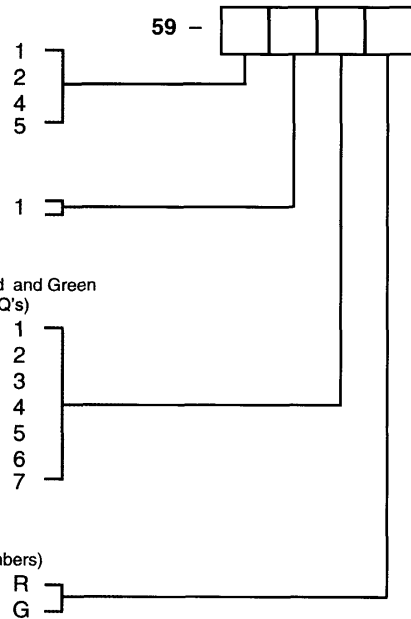
(Illuminated version only available with Black, Red and Green as standard. Non-standard colours subject to MOQ's)

- Black
- Red
- Green
- White
- Yellow
- Blue
- Orange

LED colour

(This digit is only required for illuminated part numbers)

- Red
- Green

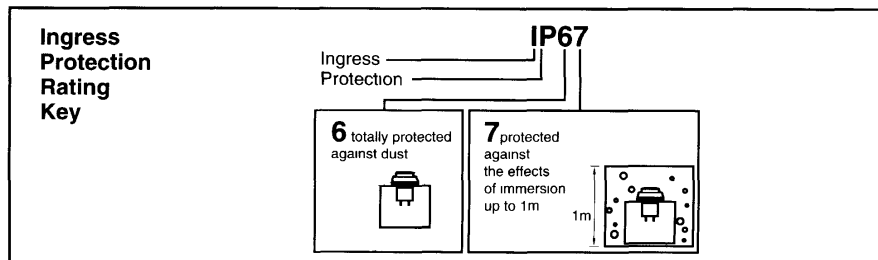


Panel mounting and construction information

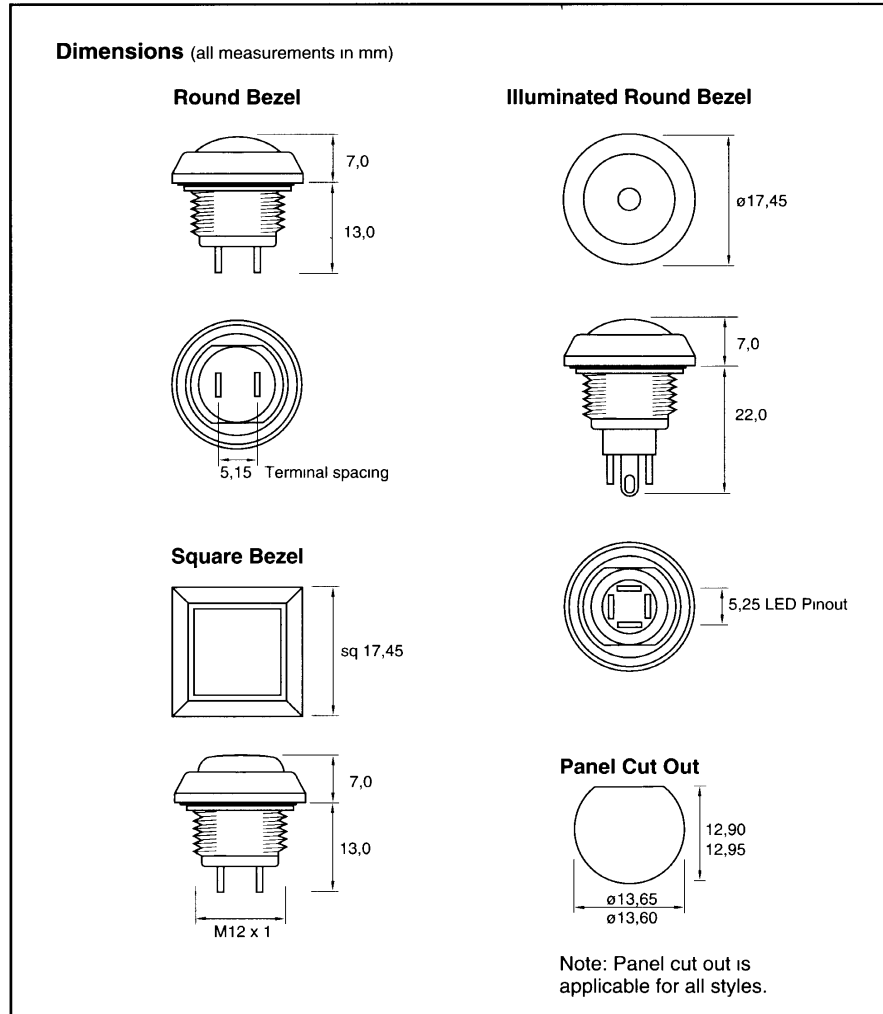
The series 59 mounts easily into panels of minimum 1,5mm and maximum 3mm thickness. Front panel sealing to IP67 is achieved by the use of a sealing 'O' ring which is fitted behind the bezel of the body of the switch before it is inserted into the panel hole cut out. It is held onto

the panel by means of a brass lock nut, tightened down by a 14mm spanner, to a torque of between 1,5 Nm to 3,0 Nm to achieve the correct sealing pressure.

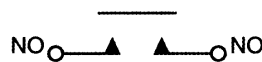
A 'D' flat is provided to prevent rotation.



Product dimensions



Switch circuit form



Typical applications

- Communications
- Instrumentation
- Data entry
- Military environments
- Environmentally demanding keypads
- Mass transport controls

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

ITW Switches

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