Data Sheet no. 59500

SERIES 59 – MINIATURE SEALED PUSHBUTTON

FEATURES
- Non-spark material
- Wide temperature range
  – Up to 125°C
- Panel sealed – To IP67
- High environmental
  specifications
- Gold contacts
- Status illumination

NON-STANDARD OPTIONS
- Overboot for protection
  against icing
- PCB terminals
- High round bezel
- Surface or sublimation
  legend printing on the button
  (non-illuminated version)

ITW **Switches**

Technical Information

Series 59

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.

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).

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 & LED

SWITCH

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

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

Technical Information   ## Ordering Information

Environmental & Physical
(continued)

Illuminated

Operating temperature range	-35°C to +85°C
Body material	Zinc alloy (standard) or PBT
Button material	PBT
Contacts	Gold plated nickel
Terminals	Gold plated brass
Salt mist	BS2011 Part 2:1
Soldering information	320°C max for 3s

Body Style

59 –

Standard round bezel	1
Standard square bezel	2
Illuminated round bezel	4
PBT round bezel	5

Termination

Solder terminals	1

Button Colour

Black	1
Red	2
Green	3
White	4
Yellow	5
Blue	6
Orange	7

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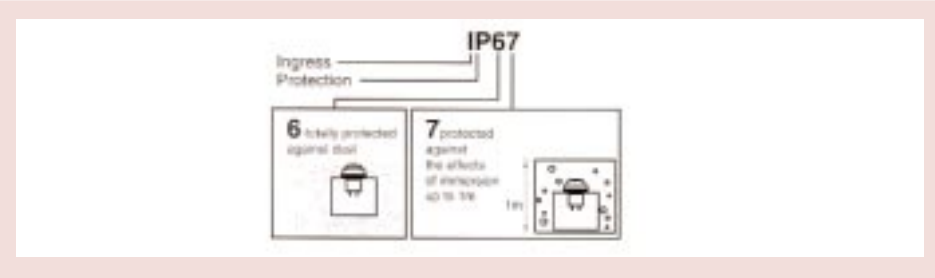
LED Colour

Red	R
Green	G

(This digit is only required for illuminated part numbers)

Panel Mounting
& 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 locknut, tightened down by a 14mm spanner, to a torque of between 1.0Nm to 2.0Nm to achieve the correct sealing pressure.
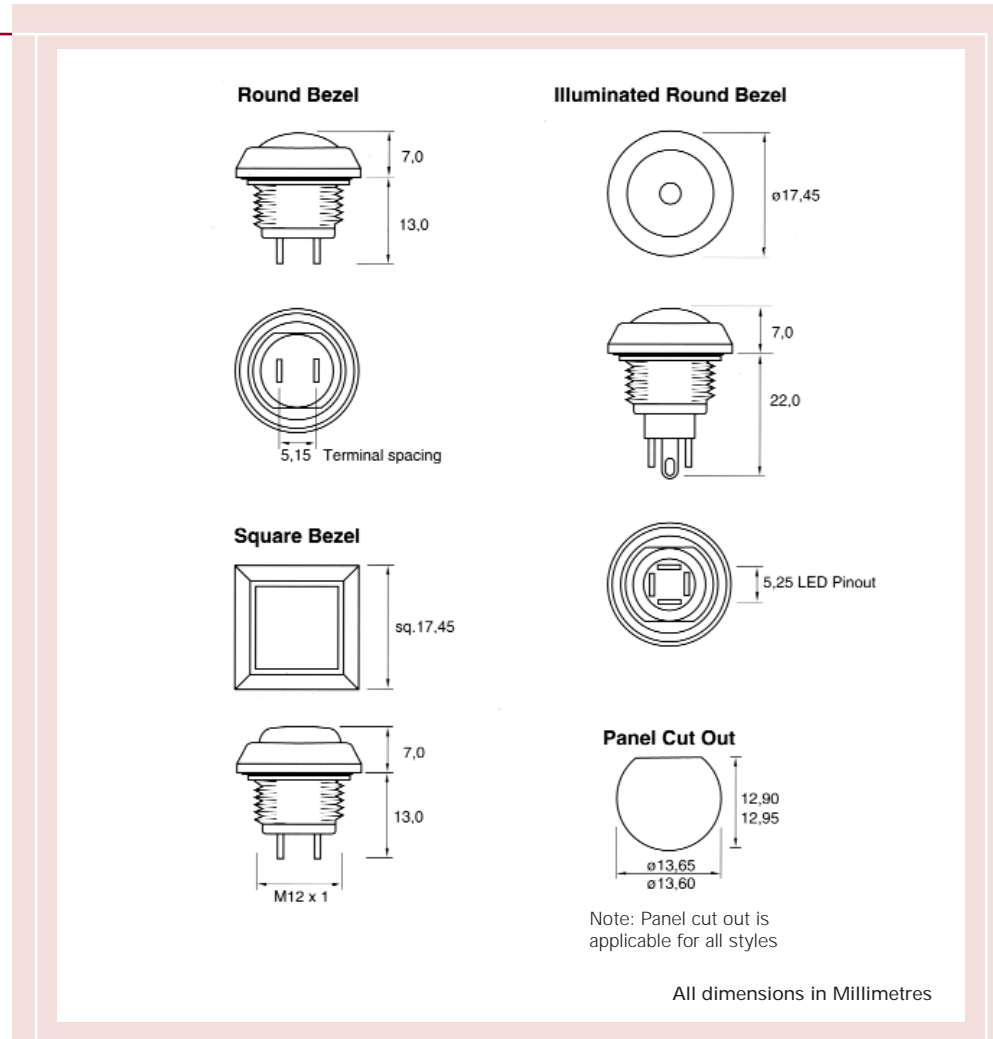
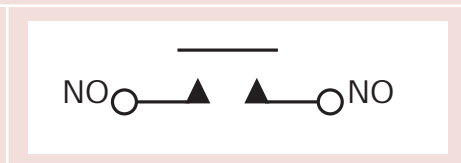A 'D' flat is provided to prevent rotation.

Ingress Protection Impact Key

SERIES 59
Miniature Sealed Pushbutton

Technical Information

Product Dimensions

Round Bezel

7,0

13,0

5,15 Terminal spacing

Illuminated Round Bezel

ø17,45

7,0

22,0

5,25 LED Pinout

Square Bezel

sq.17,45

7,0

13,0

M12 x 1

Panel Cut Out

12,90
12,95

ø13,65
ø13,60

Note: Panel cut out is
applicable for all styles

All dimensions in Millimetres

Circuit Form

NO⎯○⎯▲ ▲⎯○⎯NO

Application References

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

Further Information

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