

*Reliable since 1965...*



**Heavy Duty Foot Switches**



**BCH**

**BCH  
ELECTRIC  
LIMITED**

## Heavy Duty Foot Switches

BCH Heavy Duty Foot Switches are UL marked and conforms to IS/IEC60947-5-1. These foot switches are of extremely sturdy construction to withstand very rough usage and designed to operate either AC or DC pilot circuits. BCH foot switches have wide range of contact combinations and operating positions to suit any application. These foot switches are used to control many types of equipment like hydraulic presses, machine tools, spot welding and spot brazing machines etc.

### Contact Mechanism

The contact mechanism has **single pole single throw and double throw, silver contacts 1NO + 1NC** and **double pole single throw and double throw, silver contacts 2NO + 2NC** and is completely enclosed in moulded phenolic block. These contact assemblies, in phenolic block, are fastened to the bottom of the case with terminals on top for easy wiring.

### Enclosure

These contact blocks are mounted in a watertight and oiltight Aluminium Die Cast enclosure. Smartly styled and compact enclosures have silver-grey hammertone baked enameled finish inside and outside.

## Other Features :

### Guard

The inclined portion of the cover, covers the treadle from the top and prevents accidental operation of the treadle by any falling object.

### Foot switches with treadle latch

This latch permits 'maintained contact operations'. In the operated position of the treadle (when the contacts have changed over), the treadle is held in operated position by the 'Treadle Latch'. The user can release the foot pressure completely in the latched position of the treadle.

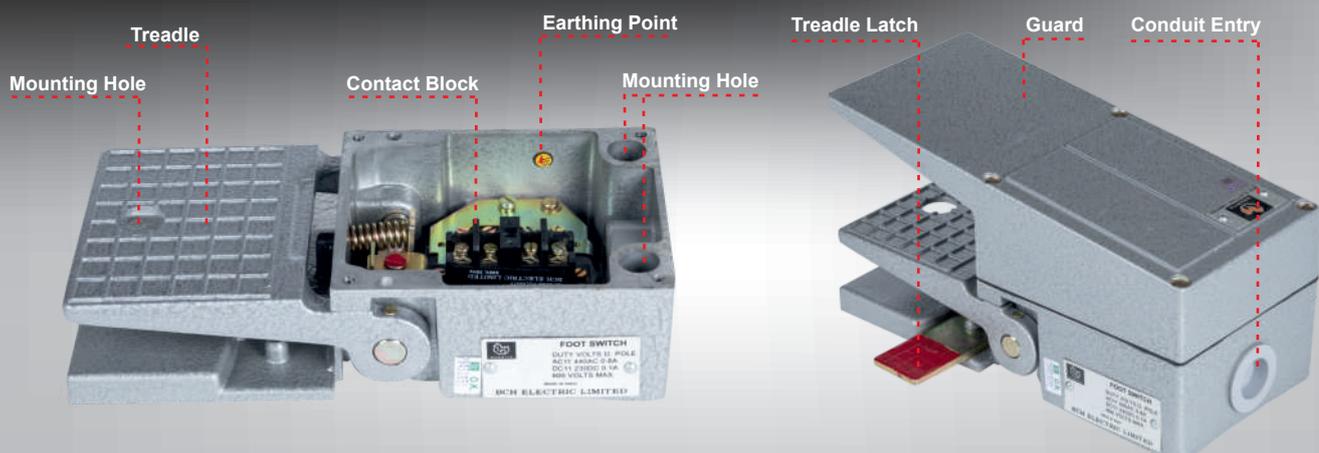
*\*Treadle latch is available only with 2 position Foot switches.*

### Earthing point

Earthing point is provided inside the foot switch enclosure.

### Mounting

There are three mounting holes of 7mm diameter each, as shown in the dimensional drawing of the foot switch.



## Operating Positions

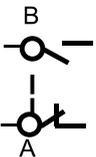
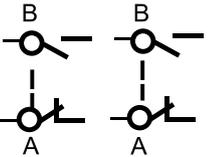
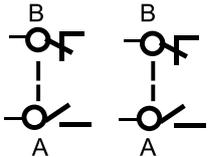
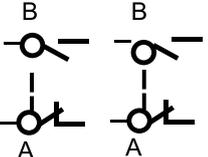
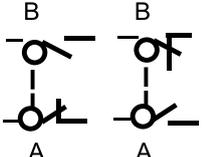
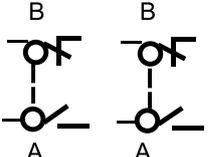
Foot switches are spring return, front treadle "operated switches". Foot pressure on the treadle closes normally open (NO) contacts and opens normally closed (NC) contacts and release of pressure returns the contacts to their original state.

Foot Switches are of 2 types :

1. 2 position
2. 3 position

2 position (1 or 2 contact block)	3 position (2 contact block)
<p><b>Position 1st</b> Treadle is in the normal / un-operated position.</p>	<p><b>Position 1st</b> Treadle is in the normal / un-operated position.</p>
	<p><b>Position 2nd</b> Treadle is in the intermediate position where the contacts change over in one contact block. The contacts in the second contact block do not change over in this intermediate position.</p>
<p><b>Position 2nd</b> Treadle is in the final position where the contacts changeover.</p>	<p><b>Position 3rd</b> Treadle is in the final position where the contacts of second contact block also changeover.</p>

## Operating Data

Circuit symbol	Treadle operation			Description
	Up	Half down	Full down	
X		—		1 contact block 1NO + 1NC or 2NO + 2NC 2 positions
Y		—		2 contact blocks 1NO + 1NC or 2NO + 2NC 2 positions
Z				2 contact blocks 1NO + 1NC or 2NO + 2NC 3 positions

## Technical Data

Applied standards	IS/IEC-60947-5-1
Contact combination	<ul style="list-style-type: none"> <li>▪ One or two sets of 1NO + 1NC contacts</li> <li>▪ One or two sets of 2NO + 2NC contacts</li> </ul>
Mechanical and Electrical life	10 x 10 <sup>6</sup> operations
Frequency of operation	2500 operations per hour.
Utilization category	AC 15 and DC 13 as per IS/IEC-60947-5-1
Thermal current (Ith)	15A
Insulation voltage (Ui)	600V
Enclosure	Silver-grey Hammer tone baked enamel finish inside and out on cast aluminium case and cover.
Protective guard	Aluminium die-cast
Contact material	Silver Alloy
Ambient temperature	-5 <sup>o</sup> to + 40 <sup>o</sup> C
Cable cross-section	2.5mm <sup>2</sup> solid or stranded conductor
Cable entry	One 1" conduit entry at the back of the case.
Degree of protection	IP 67
Operating force	Max. 0.595kg & Min. 0.387kg
Rated impulse withstand voltage	2.5kV
WEIGHT	With guard : 1.8Kg

### Rated operating current/voltage (IEC Rating)

AC 15 RATING (50Hz)	SINGLE POLE	AC 15 RATING (50Hz)	DOUBLE POLE
110V	4.0A	115V	3.0A
220V	2.0A	230V	1.5A
440V	1.0A	460V	0.8A
600V	0.8A	600V	0.6A
DC 13 RATING 1NO + 1NC	SINGLE POLE SINGLE THROW	SINGLE POLE DOUBLE THROW	
115V	2A	0.5A	
230V	0.5A	0.2A	
600V	0.1A	0.02A	
DC 13 RATING 2NO + 2NC	DOUBLE POLE SINGLE THROW	DOUBLE POLE DOUBLE THROW	
115V	1.0A	0.2A	
230V	0.3A	0.1A	
600V	0.1A	—	

### Rated operating current/voltage (UL Rating) (1NO + 1NC)

AC Voltage (V)	Breaking Current (A)	Making Current (A)
110V	15A	40A
220V	10A	20A
440V	6A	10A
600V	5A	8A
DC Voltage (V)	SINGLE THROW (A)	DOUBLE THROW (A)
115V	2.0A	0.5A
230V	0.5A	0.2A
600V	0.1A	0.02A

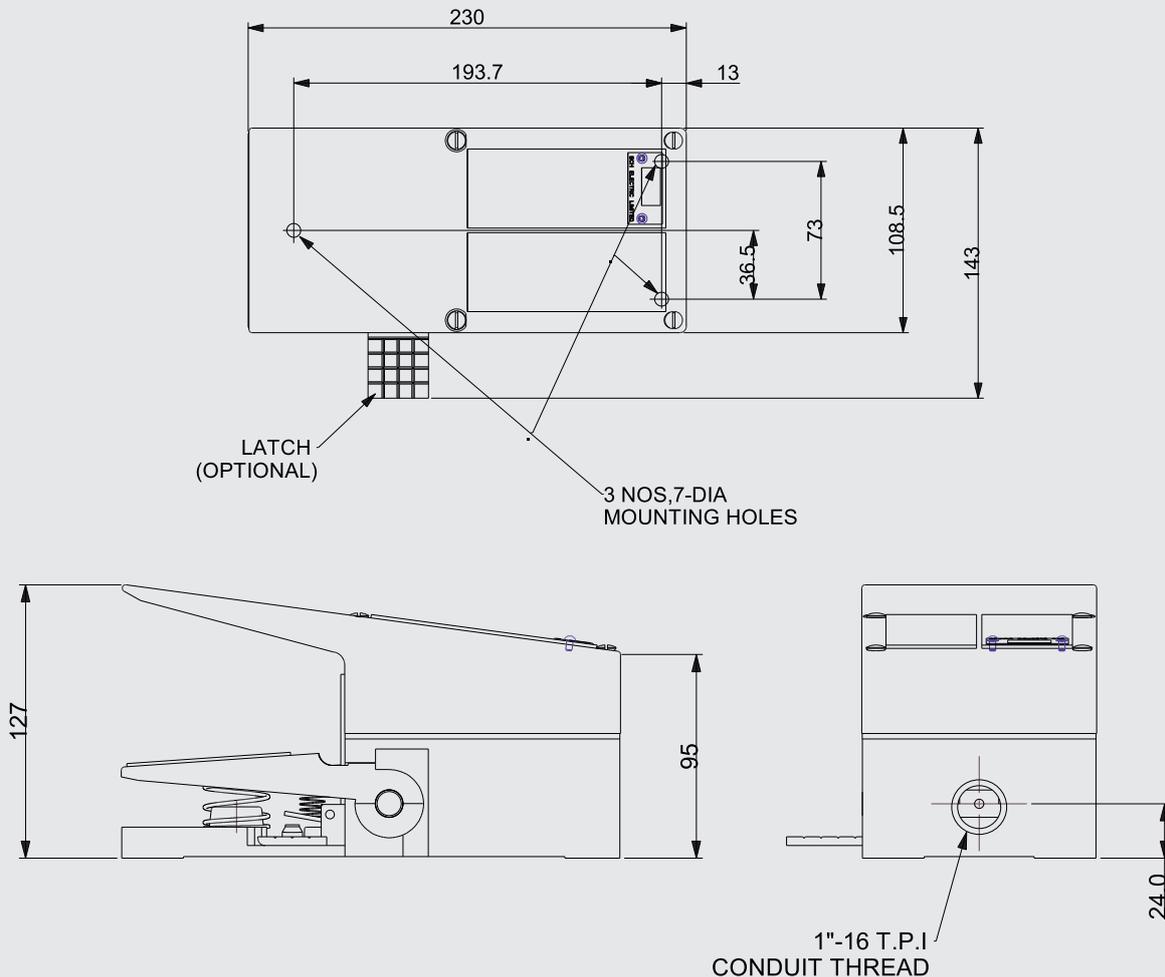
Catalogue Code

**F S G X 2 \***

- Product code** : **FSG** - Foot switch with guard
- Type of foot switch** : **X** - 1 contact block - 2 positions  
 : **Y** - 2 contact block - 2 positions  
 : **Z** - 2 contact block - 3 positions
- Type of contact block** : **1** - Contact block with 1NO + 1NC contacts  
 : **2** - Contact block with 2NO + 2NC contacts
- \*Latched operation (optional)** : **L** - With Treadle Latch (Only for 2 positions)
- \*Type of spring** : **M** - Medium spring (Only for 3 positions)

Spare Contact Block 1NO+1NC	<b>SP20S1</b>	
Spare Contact Block 2NO+2NC	<b>SP20S2</b>	
Spare Cover With Guard	<b>SP20CG</b>	

Dimensions



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