

## HEAVY DUTY FOOT SWITCHES



**BCH ELECTRIC LIMITED**  
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# Heavy Duty Foot Switches

BCH Foot Switches are designed to open and close either AC or DC pilot circuits. The contact mechanism has single pole double throw twin break, silver contacts 1NO+1NC and double pole double throw 2NO+2NC contacts and is completely enclosed in molded phenolic block. The contact block or blocks are mounted in a watertight and oil tight enclosure. Smartly styled and compact enclosures have silver-grey hammertone baked enameled finish inside and outside. Three point mounting bosses on the back of the treadle operated switches assures stable mounting on uneven surfaces.

These heavy duty foot switches are two position, or three position spring return, front treadle operated. Pressure on the treadle closes the normally open contacts and release of the pressure returns the contact to original position. The lever assembly provides for adjustment of treadle travel to operate the contacts. When two contact blocks are supplied, adjustment of the lever assembly provides for simultaneous or differential tripping (second stage operation) of the contact blocks. The contact assembly (a precision limit switch) is fastened to the bottom of the case with the terminals up for easy wiring.

Treadle latches when supplied permit spring return or maintained contacts operations. The latch release pedal provides easy-on-the-job conversion from maintained contact to spring return. Conversion to spring returns requires only a push down and forward motion on the latch release pedal to make the treadle latch inoperative. The latch release pedal is normally located on the right hand side, it can be converted in the field to left hand extension.

The watertight and oiltight enclosure has a cast cover and treadle. A gasket between case and cover and a friction type seal on the treadle shaft assures watertight and oiltight performances.

The earthing screws provided in the enclosure allow a convenient means of attaching earth-wire if required. A safety spring within the enclosure assures treadle spring return in case the main return spring under the treadle gets damaged. All switches with second stage operation are provided either with light or medium or heavy spring. The heavy second stage feel spring are not recommended for switches with treadle latches.

Two covers are available as standard guard and shield. The selection of the cover depends on the degree of protection desired, to prevent accidental treadle operation.

## Electrical and Mechanical Ratings

Utilisation	:	AC 11 and DC 11 as per IEC-337-1
Contact combination	:	i) Two sets of 1NO + 1NC contacts ii) Two sets of 2NO + 2NC contact
Thermal current (Ith)	:	15A
Insulation voltage (Ui)	:	600V



## Operational Current & Voltage

AC 11 RATING (50Hz)		SINGLE POLE		DOUBLE POLE	
600V		0.8A		0.6A	
440		1.0A		0.8A	
240		2.0A		1.5A	
110		4.0A		3.0A	
DC 11 RATING	SINGLE THROW	DOUBLE THROW	SINGLE THROW	DOUBLE THROW	
600V	0.1A	0.02A	0.1A	-	
220	0.5A	0.20A	0.3A	0.1A	
115	2.0A	0.50A	1.0A	0.2A	

Mechanical and electrical life	:	10 x 10 <sup>6</sup> operations
Frequency of operation	:	2500 operations per hour.
Terminal capacity	:	2.5 mm <sup>2</sup> solid or stranded conduct
Entries	:	One 1" conduit entry at the back of the case.
Standard assemblies	:	Foot switches are available in two (full down) or three (half down full down) position operations. The switches may have guard or shield and be with or without latch depending on the requirement.
Method of operation	:	Treadle operation with spring return. With two limit switches, sequential operations also possible. Force required to operate the second stage feel spring of foot switch Type Z. Light spring - 1.6kg Medium spring - 5.2kg Heavy spring - 13.6kg
Enclosure category	:	IP 65/67 as per IS : 2147 of 1962
Finish	:	Silver-grey Hammer tone baked enamel finish inside and out on cast aluminum case and cover.

## Catalogue Code

Product code	:	<b>FS</b> - Foot switch
Kind of cover	:	<b>G</b> - With guard <b>S</b> - With shield
Type of foot switch	:	<b>X</b> - 1 contact block 2 positions <b>Y</b> - 2 contact block 2 positions <b>Z(L)</b> Light spring <span style="border: 1px solid black; padding: 2px;">2 contact block</span> <b>Z(M)</b> Medium spring <span style="border: 1px solid black; padding: 2px;">3 positions</span> <b>Z(H)</b> Heavy spring
Type of contact block	:	1 - Contact block with 1NO + 1NC contacts 2 - Contact block with 2NO + 2NC contacts

Suffix 'L' if latched operation is required

eg: FSGY1	-	Spring return two position foot switch with guard and two 1NO + 1NC contact blocks.
FSGY1L	-	Two position foot switch with guard and two 1NO + 1NC contact blocks suitable for latched operation.

Latching is not possible with Z type of foot switch.

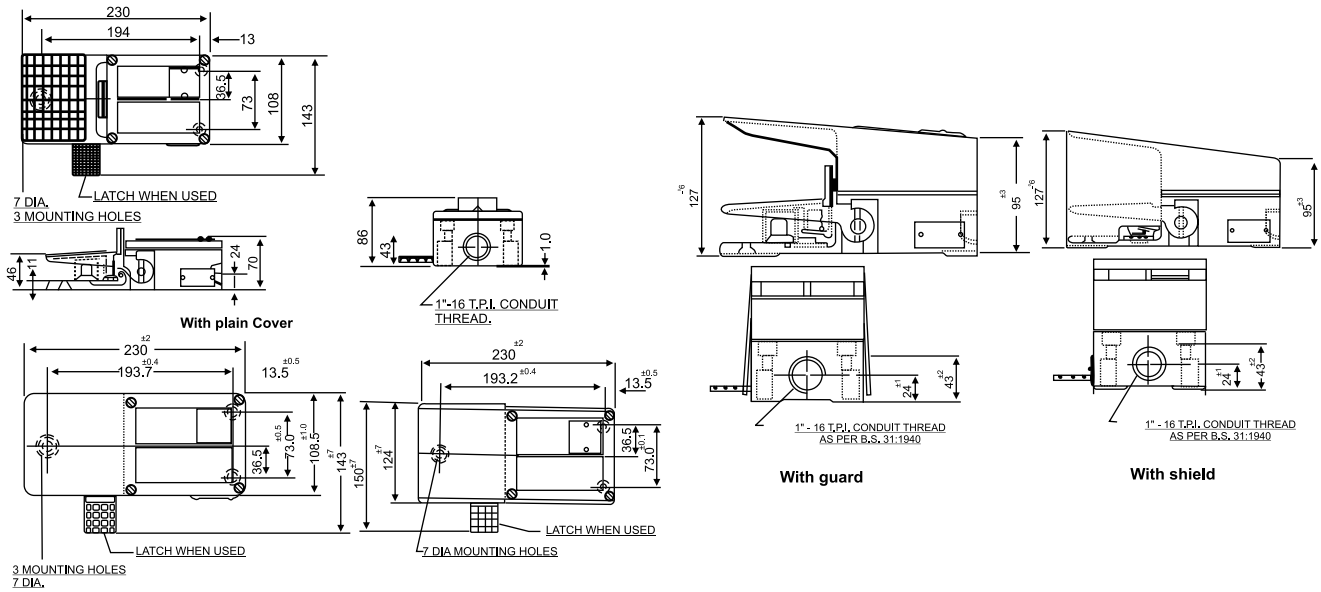
## Weights (Kg)

With shield	:	2.25
With guard	:	2.00
Without guard or shield	:	1.50

## Operational 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 block 1NO + 1NC or 2NO + 2NC 2 positions
Z				2 contact block 1NO + 1NC or 2NO + 2NC 3 positions

# Dimensions (mm)



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