



MICRO & PUSH BUTTON SWITCHES. STANDARD, MINIATURE & SUB MINIATURE 15A, 10A, 5A, 3A & 1.5A AT 250V. A. C. OR 28V D. C.

"R1" STANDARD MICRO SWITCHES

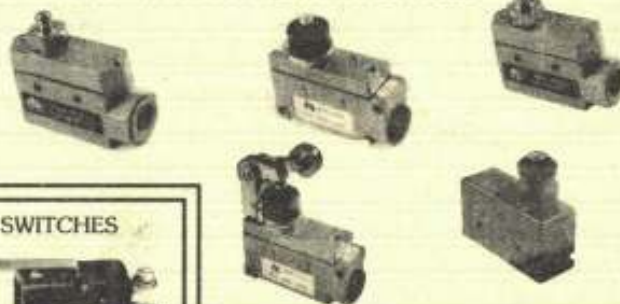


INS. FIN BODY

T' TYPE CASING

CONCELED TERMINAL CASING

ALLUMINIUM DIE CAST HOUSING & METAL CLAD WITH DIFFERENT ACTUATORS



R3 MINIATURE MICRO SWITCHES



DIFFERENT TERMINALS & ACTUATORS

10A PUSH BUTTON SWITCHES



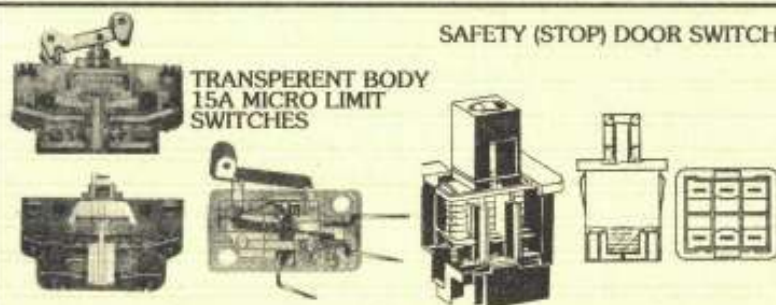
N. O.

N. C.

CONTACT BLOCKS

IN PLASTIC CASING

SAFETY (STOP) DOOR SWITCHES



TRANSPARENT BODY
15A MICRO LIMIT
SWITCHES

**WIRE OPERATED
ROTARY ACTION
LOW TORQUE
MICRO SWITCH**

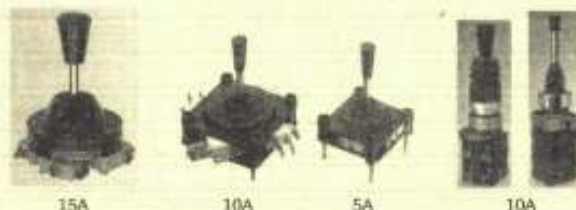
5A "R4" SUB MINIATURE MICRO SWITCHES WITH ACTUATORS



IND JOY STICK

ROTARY ACTUATOR

JOY-STICK CONTROLLERS



15A

10A

5A

10A

METAL CLAD LIMIT SWITCHES 10 & 15A



1.5A, 3A, 5A, 10A & 15A AT 250V. AC. PUSH BUTTON SWITCHES



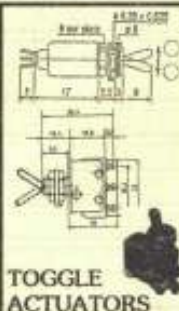
1.5, 3 & 5A NON ILLUMINATED
SWITCHES



10 & 15A ILLUMINATED
PUSH BUTTON
SWITCHES

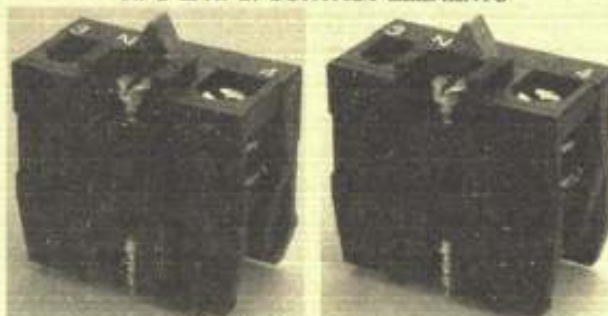
RECT., SQUARE, ROUND

EXTRA LARGE



TOGGLE
ACTUATORS

N. O. & N. C. CONTACT ELEMENTS



H - 31 W - 29 D - 15

PUSH BUTTON SWITCHES

10Amp. 250 V. AC.
N. O. & N. C. contacts

DIFFERENT EXECUTIONS

Trigger Action Emergency Stop



H-68 W-68 D-102 D-WITH KEY 120

- Supplied with 1 N/O + 1 N/C contacts
- Complies with European machinery directive on emergency stops
- Suitable for internal and external uses

Turn to Release Stop



H-68 W-68 D-82

- Suitable for both indoor and outdoor applications
- Fitted with 1 N/C contact with provision for one additional block

Spring Return Stop



H-68 W-68 D-72

- Suitable for both indoor and outdoor uses
- Fitted with 1 N/C contact block with provision for one additional block

Spring Return Start



H-68 W-68 D-72

- Suitable for both indoor and outdoor uses
- Fitted with 1 N/O contact block with provision for one additional block

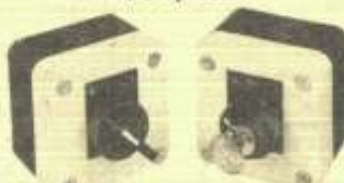
Stop/Start Spring Return



H-104 W-68 D-62

- Stop button fitted with 1 N/C contact block
- Start button fitted with 1 N/O contact block
- Each actuator will accept one additional contact block

Start/Stop Selector



H-104 W-68 D-77

- Fitted with 1 N/O contact
- Key removable in "O" position only

Start/Stop with Pilot Light



H-134 W-68 D-62

- Stop button fitted with 1 N/C contact block
- Start button fitted with 1 N/O contact block
- Bulb supplied for pilot light suitable for 240V 220/250V use
- Each switch will accept one additional contact block

Up/Down Stations Spring Return.



- 2 spring type supplied with 1 N/O contact on each push button (3 spring has additional N/C contact on stop button)
- Provision of additional contact on each push button

Up/Down



H-70 W-120 D-66 FC 100 x 54

- Arrows can be moved round for right/left operation
- Each push button fitted with a N/O contact block
- Space to fit one additional block

Industrial Push Button Switches



- 22mm dia. fixing hole
- Finger protection is provided on contact blocks
- Suitable hole cutter
- Actuators will accept up to 3 contact blocks or 1 lampholder block plus 2 contact blocks

Selector Switches (Rotary Action)



- Up to 6 contact blocks can be fitted to each unit

Start/Stop



stock no.
start/stop
start/light/stop

Rotary Action Lever Selector



- The two position selector will operate all the contacts in the clockwise position whilst the 3-position selector will operate alternative contacts in both clockwise and anti-clockwise direction
- In centre position no contacts blocks are operated
- A maximum of 2 contact blocks may be fitted to these units

Non-Illuminated Momentary Push Buttons



- Each push button supplied with one contact block as below
- Total no. of contact blocks, 2 rows of three blocks any combination of N/O and N/C
- The momentary action can be changed to a latching action (push-push) by addition of a latching device to the rear of the switch.

Start/Stop Combinations



- Illuminated version has protection and supplied without contact blocks
- The sealing boot only fits the illuminated version

Industrial Joystick



- 22mm mounting hole
- Supplied with contact blocks which are removable for ease of wiring
- protection when mounted in a panel
- High wearing rubber shroud
- Non spring return

- Each joystick supplied with 1 N/O contact per direction
- Up to 2 contacts per direction can be used
- Legend plate supplied with each joystick



MINIATURE MICRO SWITCHES SERIES 'R3'



SOLDER TERM.

SCREW TERM.



PUSH-ON TAB TERM.

TYPE R3 (SPDT)

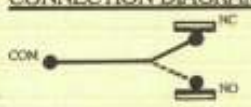
RECOM Micro Switches (Miniature) Type R3 series (SPDT) are unsealed sensitive light weight momentary switches featuring snap action contact movement, high electrical rating and long life. These switches are precision built and small in size and shape of international design standards to meet requirements of numerous AC & DC applications where repeat accuracy is an essential need. R3 Switches are operated by small force or movement either directly acting on the plunger or through a wide range of integral and auxiliary actuators including roller type and push buttons.

CIRCUITRY

Single Pole Double Throw
Single Pole Normally Closed*
Single Pole Normally Open*

* Available on request

CONNECTION DIAGRAM



TERMINALS

Screw • Solder • Push-On • PCB

TEMPERATURE RANGES

-55° / +85° C

HV TEST

Switches stand 2KV for 1 minute

ELECTRICAL RATING

Voltage	Resistive Load AMPS	Inductive Load AMPS
125 V AC	15	10
230 V AC	15	5
440 V AC	5	2
30 V DC	8	On Application
125 V DC	0.5	On Application
230 V DC	0.25	On Application

RANGE

Operating Force Max.	Release Force Min.	Ratings	Colour of Plunger
400 gms	125 gms	15A/250V AC	White
200 gms	75 gms	5A/250V AC	Yellow
100 gms	40 gms	3A/250V AC	Blue
50 gms	20 gms	2A/250V AC	Red

LIFE EXPECTANCY

Mechanical 1,000,000 operations

Electrical 50,000 operations
at rated resistive
current under
normal conditions

MATERIALS

Housing - Glass filled Nylon
Contacts - Silver alloy
Blade - Beryllium copper
Terminals - Brass

SPECIFICATIONS

Switches comply with
IS 6089 Non-Defence use
JSS 51 201 Defence use on request

GUARANTEE

Standard Guarantee
of one year applies.

BASIC SWITCH WITH ACTUATORS (INTEGRAL)



SHORT PLAIN LEVER RATIO 1:1



SHORT ROLLER LEVER RATIO 1:1



MEDIUM PLAIN LEVER RATIO 2:1



MEDIUM ROLLER LEVER RATIO 2:1



RATIO 4.25:1



MEDIUM LEVER WITH V NOTCH



TWO R3 WITH SQUARE BUTTON & BEZEL

BASIC SWITCH WITH ACTUATORS (AUXILIARY)



ROLLER LEAF



HINGED LEVER



HINGED LEVER WITH ROLLER



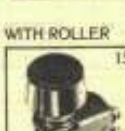
EXTENDED HINGED LEVER



WITH ROLLER



PUSH BUTTON S.P. PUSH BUTTON D.P.



PUSH BUTTON S.P.



PUSH BUTTON D.P.

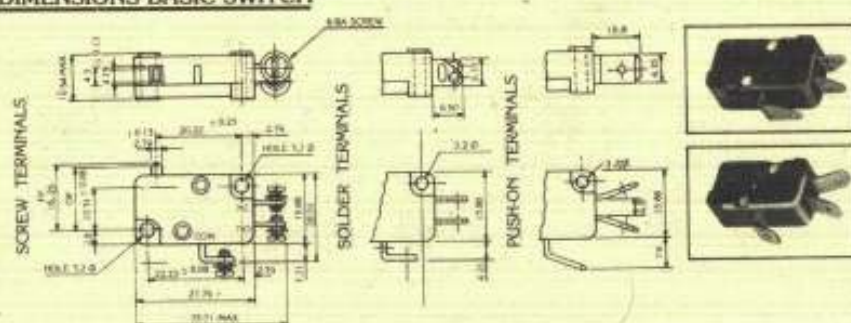


SHORT LEVER D.P.



THUMB PRESS BUTTON

DIMENSIONS BASIC SWITCH



TESTED &
CERTIFIED BY
DEFENCE &
C.A.C.T. FOR USE IN
TELECOM.
APPLN.

RECOM SNAP ACTION STANDARD MICRO SWITCHES SERIES "R1"

Recom "R1" series snap action switches are rugged in construction featuring snap action contact movement and are manufactured in compliance with international standard. These have wide range of terminal types and actuating devices. The contact security is optimal due to high contact force of around 400 grms., serrated contact surfaces and contact wiping. These are rated at 5, 10 and 15 amps. at 250 & 415 volts AC. These switches have very short differential travel of a maximum of 0.08 and are designed for very high repeat accuracy of operating position. The case moulding is thermosetting bakelite having high creepage resistance. The snap action system is achieved through Heat - Treated Beryllium Bronze hook spring. These switches withstand 2000 volts AC between metal part and 1000 volts AC for 1 minute between open contacts. The contact gap is a maximum of 0.7 mm. These switches have a high electrical endurance of over 50000 operations at Rated current and over 1 million operation at no load. Switches conform to ISS 6089 & for defence use JSS 51201

STANDARD TYPE R1 BASIC

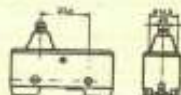


List of types Basic type Pin plunger Leaf-spring levers

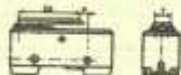
Dimension drawings:
(with terminal type 1 as a
change-over switch)



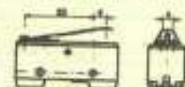
Pin plunger with extended
over-travel



Short leaf-spring lever



Long leaf-spring lever



Leaf-spring lever with roller

List of types Straight lever Bent levers Roller levers

Dimension drawings:
(with terminal type 1 as a
change-over switch)

Straight lever 5 mm. length
69.4 mm



Bent lever, length 51.9 mm



Bent lever, length 28 mm



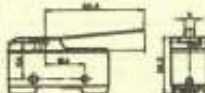
Roller lever, length 46 mm



Roller lever, length 66.5 mm

List of types Straight reversing lever Reversing levers with roller Reversing lever with Swivel roller

Dimension drawings:
(with terminal type 1 as a
change-over switch)



Straight reversing lever 5 mm.
length 62.5 mm



Reversing lever with roller
length 20.0 mm



Reversing lever with roller
length 40 mm



Reversing lever with
swivel roller, length 22.2 mm

List of types Pin plungers Roller plunger

Dimension drawings:
(with terminal type 1 as a
change-over switch)

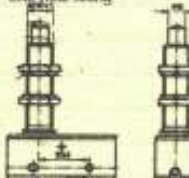
Pin plunger with threaded
sleeve for one-hole fixing



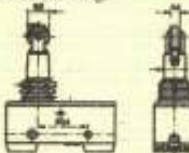
Pin plunger with oil-resistant
sealing cap



Pin plunger with extended
threaded sleeve for
one-hole fixing



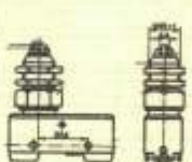
Roller plunger (stainless steel)
with threaded sleeve for
one-hole fixing



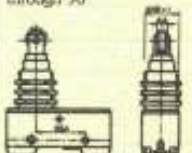
VT. List of types Roller plungers Roller lever

Dimension drawings:
(with terminal type 1 as a
change-over switch)

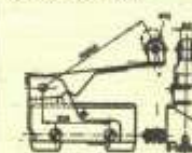
Roller-tipped plunger with
threaded sleeve for one-hole
fixing. Roller may be turned
through 90°



Roller-tipped plunger with
threaded sleeve for one-hole
fixing and sealing cap.
Roller may be turned
through 90°



Rigid lever with nylon roller
pivoted in side-plates



Metal Clad Micro Limit Switches



Plunger with Rubber Bellow to prevent entering of Dust & foreign substance



JOYSTICK CONTROLLERS/JOYSTICK SWITCHES WITH MICROSWITCHES/CONTACT BLOCKS



ILLUSTRATIONS
WITH
MICRO
SWITCHES



body
L. 78
W. 78
D. 25

joystick
height

body
L. 46
W. 46
D. 22

15A/250 VA. C

6A/250 VA. C

Type 2-way, 4-way, 6-way, 8-way

Robust construction, tamperproof design, convenient single-hole mounting and easy action ensure suitability for a wide variety of applications. Among 50 standard options are latching, momentary or stirring action, lift-to-operate or normal operation, two gates or four and either R3 or R4 switching. Up to two switches per gate using R3 switches; three switches per gate can be accommodated using the smaller R4 series.

Switches per gate	Number of gates	Micro Switch reference	Rating 250V ac	Dimensions Axial Height (max)	Effective Diameter
1	2	R4	5A	104	60
2	4	R3	10A	105	75
3	(stirring)	R4	5A	104	60

Assemblies can be made available with many different options including one or three gates and latching action in any of up to four directions. All units may be ordered with silicone cowls and 'O' rings for low temperature use down to - 50°C.

Joy Stick controllers with 10A N. O. & N. C. contact blocks are available in Momentary or Stay put combinations.

INDUSTRIAL
JOY STICK
CONTROLLER



These Industrial Joy-Stick controllers can be fitted with 1, 2, 4, 6 & 8 nos. of with N. O. & or N. C. contact blocks (maxm.) Stay-Put & or Momentary posi.

2 or 4 way
JOY STICK
CONTROLLER

LIMIT SWITCHES - 10 AMP 250 v. AC 1 SET OF N. O. N. C. & 2 SETS OF N. O. N. C. CONTACTS

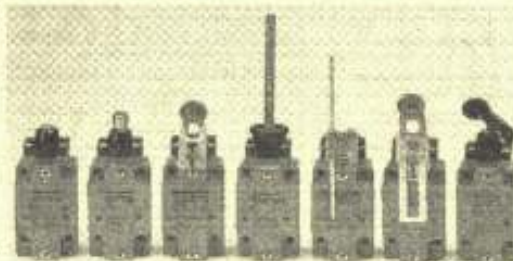
Developed to address Indian and Global standards with one offering. These range offers a comprehensive portfolio of limit switches addressing industrial applications. The following range spans the miniature standard in both metal and plastic versions and a very compact metal three conduit entry style. Also available are standard size limits comprising a complete range of actuator heads unique to the Recom offering is a universal voltage indicator style which accepts input voltages from 12 to 250 volts a.c. to d.c.

● Suitable for most industrial applications ● Bifurcated contacts for switching wide current and voltage requirements ● Galvanically isolated contacts for switching different polarities between circuits ● Safety switches with forced disconnect mechanism- independently tested

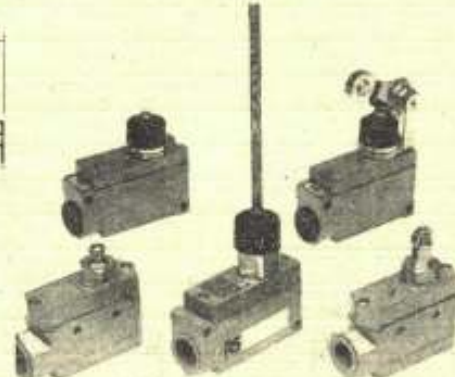
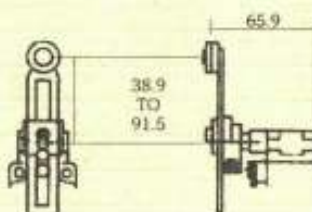
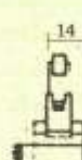
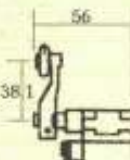
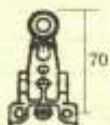
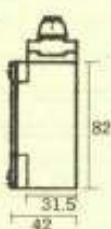
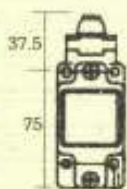
Safety contacts: IN/C (10A lth)

Auxiliary contacts: IN/O (10A lth)

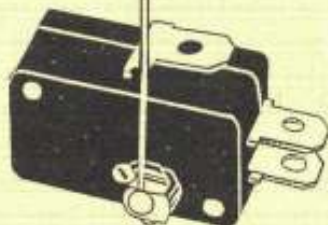
Body material: Metal or Plastic



MICROSWITCHES
IN INDUSTRIAL
METAL HOUSINGS
AS LIMIT SWITCHES



- To work low electronic voltages or mains
- Fit "fast on" terminals for easy machine wiring.
- Gives sufficient differential to enable a coin on a cotton pawl to work.
- Give a wide gap to prevent arcing.
- Locks the operating wire in the actuator to prevent "creep".
- Resists the contacts being "bounced across" if the machine is slammed.
- Prevent oxidation by serrating and gold plating the contacts as standard.



RECOM 'WRM' series micro switches are wire operated, rotary action, sensitive light momentary action switches featuring snap action contact movements. 'WRM' series micro switches are specially designed for operating under very small forces. These switches are built on principle of operation by wire operated rotary type cam mechanism working on a very light operating force. These are specially designed keeping in view requirements of a wide application in instruments, coin operated vending machines and appliances working at very low electronic voltages or mains.

OPERATING FORCES: 40gms cm, 24gms cm, 6gms cm.
COLOUR OF OPERATING CAM: WHITE. BLACK. RED

1. TECHNICAL SPECIFICATIONS: a. Single pole changeover contacts silver with finely serrated fixed contacts.
b. Housing G.F. Nylon. c. Operating Spring Stainless Steel. d. Blade Beryllium copper.
e. Terminals 6.35 x 8mm thick push on type terminals in brass. f. Actuator wire 7mm
II. RATING: 5 AMPS 250 volts A. C.
III. LIFE: a. Mechanical Life over one million operations
b. Electrical Life over 50,000 operations at rated resistive load under normal circumstances.
IV. TEMPERATURE: Ranges from - 55 C to + 85 C
V. HIGH VOLTAGE: Switches with stand 2kv for 1 minute.
VI. SPECIFICATIONS: Switches comply with IS 6089

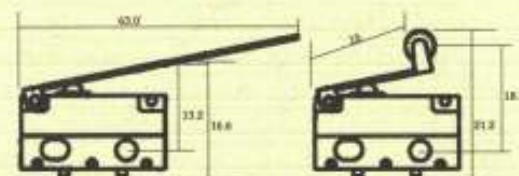
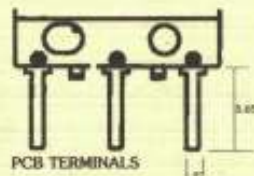
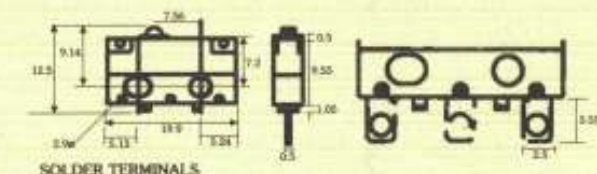
[illegible]

Four types of relays are shown: Base, Rubber, Lead, and Long lead.

A range of R4, SPDT microswitches, having Push Button, leaf, long (63mm) leaf and roller actuator variants are available. For cam-actuated applications it is recommended that leaf types are used to prevent damage. The switches are available with solder or PCB terminations, Moulded - in pins to prevent flux ingress during soldering.

Contact rating	250V a. c./5A 28V d. c./3A
Electrical life	50,000 operations
Temperature range	-40°C to + 80°C
Operating limits	

Operating force		Button	Leaf	Roller	
			std	63mm	
Pre-travel	(mm max)	1.2	4.1	21.0	3.45
Differential	(mm max)	0.2	0.7	6.35	0.35
Over-travel	(mm max)	0.2	0.7	6.0	0.55
Operating force	(N max)	2.0	0.6	0.17	0.7
Release force	(N max)	0.27	0.08	0.02	0.09



PIN PLUNGER



ROLLER LEVER



PLAIN LEVER

TRANSPARENT MICRO SWITCHES

These are available in Transparent poly - carbonate Moulded casing which enables the users to see the contact condition while in use. Two type of switches are available.

A) Heavy Duty Rated at 15Amp. 250 V. AC & or 10Amp. 440 V. AC.

B) Miniature Micro Rated at 15Amp. 250 V. AC & or 10Amp. 440 V. AC. Both these switches have flat surfaces which enables stacking up of many no - of switches for multiple application.

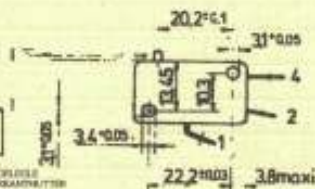
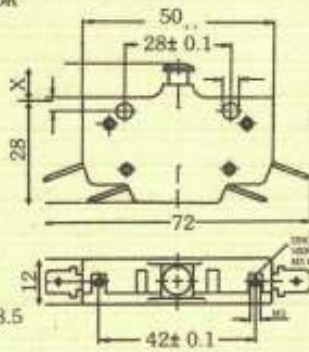
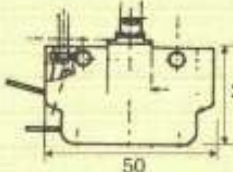
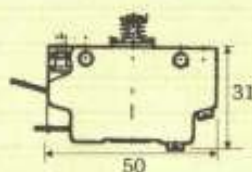
FEATURES :

- High reliability by fail safe positive contact break
- Ganging of switches is greatly facilitated by their flat design
- Transparent housing allows inspection of contact condition
- Termination : Screws and flat tabs available

SWIVELLING LEVER
ROLLER ACTUATOR



PIN PLUNGER
ACTUATOR

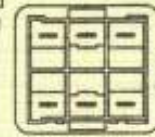
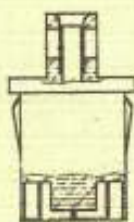
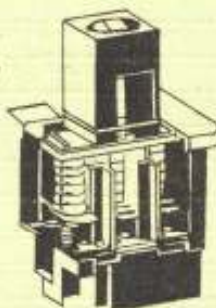


SAFETY DOOR SWITCH (STOP SWITCH)

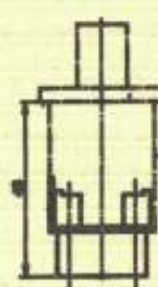
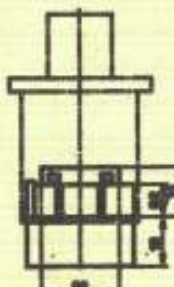
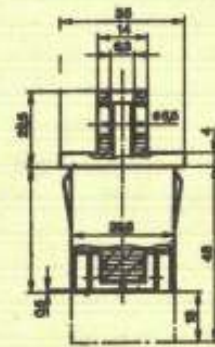
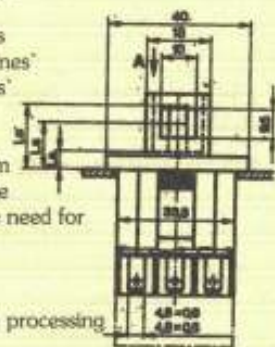
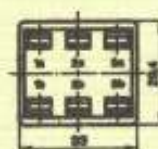
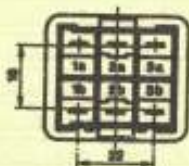
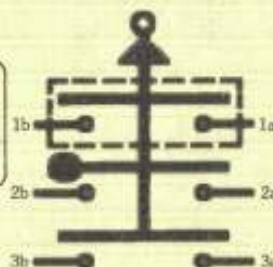
Safety Door Switch is used in Office Equipment like Xerox, Fax machines & in other equipment where Electric Supply is Cut-Off when the Door of the equipment is opened thus ensuring Safety to Human Life.

Characteristic features

- All-poles cut-out for the main and neutral contacts together with a low-voltage contact (with a retard of 0.8mm) for driving electronics.
- Isolates the equipment from the mains with increased or double insulation. 8mm contact gap, 8mm creepage and clearance distances between individual poles and to exposed conductive parts.
- Fail-safe breaking of the normally open contacts. Reliable contact breaking guaranteed by three reset springs acting independently.
- Switching-on due to error or through carelessness is totally excluded. Plunger is surrounded by a shroud which precludes unintentional switching by the hand test-finger or with a coin.
- Complies with international safety standards 'Safety of electrically energized office machines', 'Office Appliances and Business Equipments', 'Electronic Data-Processing Units and Systems'.
- Simplified fitting by means of snap-in system (no extra fixing elements required). The large over-travel of minimum 6.5mm obviates the need for adjustment of the switch-on position.



Connection diagram
terminal markings

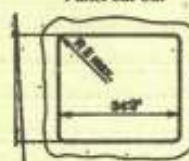


Applications : As a safety door-switch in:

- Office machines such as photocopiers, data processing equipment, sorting machines, etc.
 - Vending machines A Switch cabinets
 - Industrial appliances for hospitals, hotel and catering trades, laundries and launderettes, etc.
- When machines and appliance are operated it must be ensured that no danger is present for the operator due to electrical-shock or from moving parts when the door is opened or covers removed.

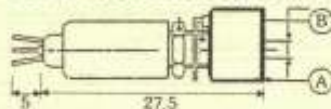


Panel cut-out



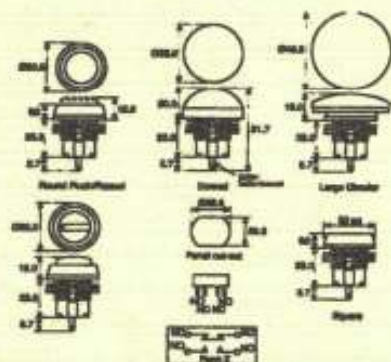
1.5A, 3A, 5A, 10A & 15A AT 250 V. AC. PUSH BUTTON SWITCHES

Sub. miniature Push Button
1.5 A/-250V or 2.5 A/ 110V AC



S. P. D. T. Sub miniature Push Button switch of Rating 1.5 A/ 250V or 2.5 A/110V AC. The switch is operated thro' square Button, or pin plunger Available as stay put change over NO-OFF 2 pos. switch for use in electronic Instrument & telecom equipment. Also available as momentary contact spring return. S. P. S. T. or S. P. D. T. switching combination with soldering type terminals.

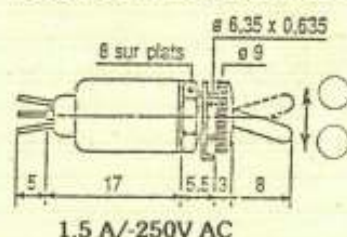
10A/250V AC



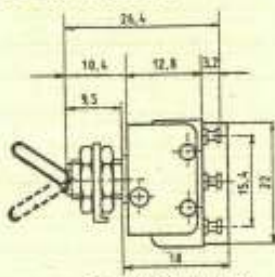
A range of single pole panel mounting switches for harsh environments. These switches are available in a choice of five pushbutton styles and a two-position rotary actuator. The large circular style is particularly suitable for applications where a large actuation area is required and is available in momentary and 'pull-to-reset' latching versions.

- Panel sealed ● Highest impact rating (9)
- Non-sparking alloy construction
- Supplied with lock nut and sealing washer

PUSH BUTTON SWITCHES WITH TOGGLE ACTUATOR



1.5 A/-250V AC



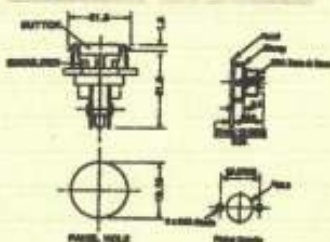
5 A/-250V AC



10 & 15A - -250V AC

Description: Micro switches are available with toggle actuator suitable to mount on M12 hole for 15 & 10 Amps. and M6 hole for 5 Amp & 1.5 Amp. rating. All the Micro switches have contact configuration of 1 NO/1NC (changeover). Switches are available with screwing, soldering or Push- ON type terminals.

5A 250V AC



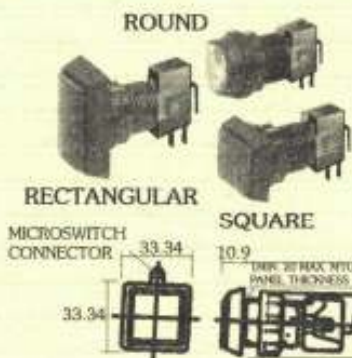
Robust, vandal-resistant, push-button switches, manufactured in stainless steel. The low profile push-button activates a 5A, 250V a.c. microswitch and bears against a solid shoulder which resists 'knock through' as well as the ingress of water etc. Two styles are available. A front mounting switch, which can be secured against the panel with a lock nut. The button sits 1-6mm above the panel. Also clamped against the panel using the bracket supplied. In this case the button and panel are flush. A suitable punch and die is available for the front mount version and for the rear mount versic



Panel cut-out for 1.5 & 3A Overall length 37.8
Max. depth behind panel 28
Bezel 15.5 Button 11x11

A square-faced SPST push-button switch available in alternate or momentary action, with silver contacts rated at 250V a.c., 3A. A suitable punch and die is available. Type: Alternate red button, momentary red button, alternate black button, momentary black button, alternate cream button, momentary cream button.

15A/250V ILLUMINATED PUSH BUTTON SWITCHES



RECTANGULAR
MICROSWICH CONNECTOR

SQUARE

EXTRA LARGE
ILL. PUSH BUTTONS
ROUND 44MM DIA

25mm Dia hole for
Fixing



EXTRA LARGE
ILL. PUSH BUTTONS
SQUARE 44MM



A range of circular, rectangular and square push-button (non-latching) actuator/ indicators for use with R3 microswitches and T31/4 wedge bulbs supplied without microswitch or bulb. When used as an indicator only, a button inhibitor ring (supplied) is fitted as follows: Remove the switch carrier from the rear body moulding (snap fit). Remove the button and spring by squeezing the guide prongs at the rear together and withdrawing the button assembly from the front. Fit the inhibitor ring behind the button head, discard the spring and replace assembly in the switch body. Body, retaining nut and inhibitor ring are moulded in black high impact ABS; the switch carrier in white acetal copolymer resin and the push button/ lens in polycarbonate. Max operating temperature 55°C. Note: These actuators should not be illuminated for long periods by lamps exceeding 2 Watts.

Type: lens colour, Rectangular: Blue, Yellow, Green, Red, Circular: Blue, Yellow, Green, Red, Square: Blue, Yellow, Green, Red