



## **SPECIFICATION**

### **GENERAL SUMMARY FOR SWITCH SERIES 8500**

From this range of subminiature rocker switches, a choice can be made to the type of operation that is required with a selection of SP and DP action, with or without illumination.

### **STYLING**

Appearance was in the forefront of the designers mind of this attractive range of switches with its soft appearance and fine textured finish.

### **QUALITY**

Modern methods of manufacture and constant quality control checks enable us to produce switches to conform with worldwide approvals.

### **MATERIALS**

Careful selection of materials enable us to meet the technical requirements of the various approval authorities and customer requirements. Generally, grades of Nylon or Polycarbonate are used for the Body and Actuator. The use of Brass or Copper with integral silver contacts where necessary to ensure we meet the Electrical and mechanical functions, ensuring good performance.

### **VARIANTS**

With our modern and flexible methods of production we can, as well as supplying switches in different colours and printed decor, also offer the choice of different electrical terminations.

### **ENDURANCE**

Switches are designed and manufactured to conform to both the electrical and mechanical requirements of the worldwide approval authorities. If other requirements have to be met then our technical personnel can test to meet your requirements.



**SWITCH TYPES:** 8500 Single Pole, 8550 Double Pole with ON/OFF action. 8503 single pole illuminated and 8553 double pole illuminated with ON/OFF action.

#### **ELECTRICAL CHARACTERISTICS**

- |     |                                        |                   |
|-----|----------------------------------------|-------------------|
| 1.  | Voltage                                | 250V              |
| 2.  | Resistive load                         | 6 amps            |
| 3.  | Inductive load                         | 1 amp             |
| 4.  | Dielectric strengths:                  |                   |
| 4.1 | Line parts to access metal             | 4000 volts        |
| 4.2 | Between open contacts on new switches  | 2000 volts        |
| 4.3 | Between open contacts on used switches | 1500 volts        |
| 5.  | Contact gap                            | < 3.0mm           |
| 6.  | Switch contact resistance              | < 10 milli ohms   |
| 7.  | Insulating resistance                  | < 100 Megohms     |
| 8.  | Tracking Index                         | 250 volts         |
| 9.  | Electrical endurance                   | 10,000 operations |

#### **MECHANICAL CHARACTERISTICS**

- |    |                      |                   |
|----|----------------------|-------------------|
| 1. | Operational force    | 1000 grams        |
| 2. | Contact pressure     | 150 grams         |
| 3. | Mechanical endurance | 10,000 operations |

#### **MATERIALS**

- |    |                   |                                             |
|----|-------------------|---------------------------------------------|
| 1. | Body material     | Nylon 66                                    |
| 2. | Actuator moulding | Nylon 66 or polycarbonate*                  |
| 3. | Central Terminal  | Copper, silver plated                       |
| 4. | End Terminal      | Brass with silver contact and silver plated |
| 5. | Moving contact    | Beryllium copper with silver contact.       |

\* Polycarbonate for illuminated actuators.



**8550 continued**

**ENVIRONMENTAL CHARACTERISTICS**

|                     |                                     |
|---------------------|-------------------------------------|
| Ambient temperature | 85 C maximum with present approval. |
| Appliance Class     | I or II                             |
| Flamability Rating  | According to UL94V2                 |
| Cadium content      | None                                |

**DIMENSIONS AND PANEL DETAILS**

|                           |             |
|---------------------------|-------------|
| Refer to enclosed drawing | 8500 series |
|---------------------------|-------------|

**APPROVAL STATUS**

See Status Listing  
Attached

September, 1986

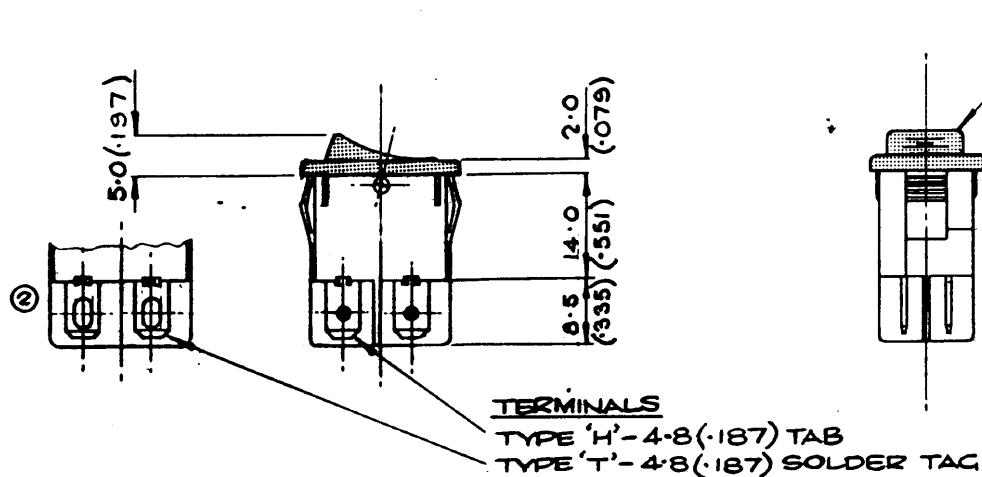
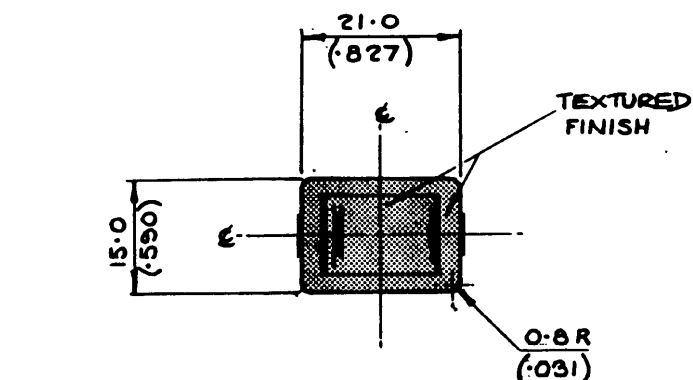
| CHANGE NOTE No. | DATE     | ISSUE | CHANGE NOTE No. | DATE | ISSUE | CHANGE NOTE No. | DATE | ISSUE | DRAWN   | DLH     | CATALOGUE N° |
|-----------------|----------|-------|-----------------|------|-------|-----------------|------|-------|---------|---------|--------------|
|                 | 10/10/84 | 1     |                 |      | 4     |                 |      | 7     | CHECKED | D.R.    | .8550..      |
|                 | 22/7/87  | 2     |                 |      | 5     |                 |      | 8     | SCALE   | 1:1     |              |
|                 |          | 3     |                 |      | 6     |                 |      | 9     | DATE    | 20-9-84 |              |

3RD ANGLE PROJECTION

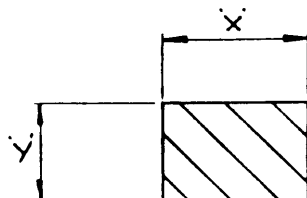
DO NOT SCALE . IF IN DOUBT - ASK

**ORDERING CODE**

PREFIX = TERMINAL TYPE  
1<sup>st</sup> SUFFIX = ROCKER SHAPE  
2<sup>nd</sup> SUFFIX = BODY SHAPE



ISSUE 2  
TYPE 'T' TERM.  
ADDED PICTORI-  
ALLY. DM.



**PANEL CUT-OUT DETAILS  
(B BODY SHAPE)**

| PANEL THICKNESS                | DIM. X                         | DIM. Y                         |
|--------------------------------|--------------------------------|--------------------------------|
| 0.75 - 1.25<br>(0.029 - 0.049) | 19.2 / 19.1<br>(0.756 / 0.752) | 13.0 / 12.9<br>(0.512 / 0.508) |
| 1.25 - 2.0<br>(0.049 - 0.079)  | 19.4 / 19.3<br>(0.764 / 0.760) | 13.0 / 12.9<br>(0.512 / 0.508) |
| 2.0 - 3.0<br>(0.079 - 0.118)   | 19.8 / 19.7<br>(0.779 / 0.775) | 13.0 / 12.9<br>(0.512 / 0.508) |

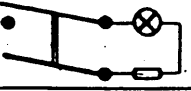
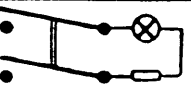
DIMENSIONS IN MILLIMETRES (INCHES)

| LIMITS UNLESS OTHERWISE STATED | MAT.   | TITLE                                                   | USED IN      |
|--------------------------------|--------|---------------------------------------------------------|--------------|
| DECIMALS ± 0.125 (0.005)       | SPEC.  | OUT-LINE DRC OF D / POLE SUB-MIN. ROCKER SWITCH ON/OFF. | CATALOGUE N° |
| FRACTIONS ± 0.4 (1/64)         | FINISH | ARCOLECTRIC SWITCHES LTD. WEST MOLESEY, SURREY.         | .8550..      |

| CHANGE NOTE No. | DATE | ISSUE | CHANGE NOTE No. | DATE | ISSUE | CHANGE NOTE No. | DATE | ISSUE | DRAWN   | MR       | DRAWING No. |
|-----------------|------|-------|-----------------|------|-------|-----------------|------|-------|---------|----------|-------------|
|                 |      | 1     |                 |      | 4     |                 |      | 7     | CHECKED |          | CH 82       |
|                 |      | 2     |                 |      | 5     |                 |      | 8     | SCALE   | F.S.     |             |
|                 |      | 3     |                 |      | 6     |                 |      | 9     | DATE    | 15/12/86 |             |

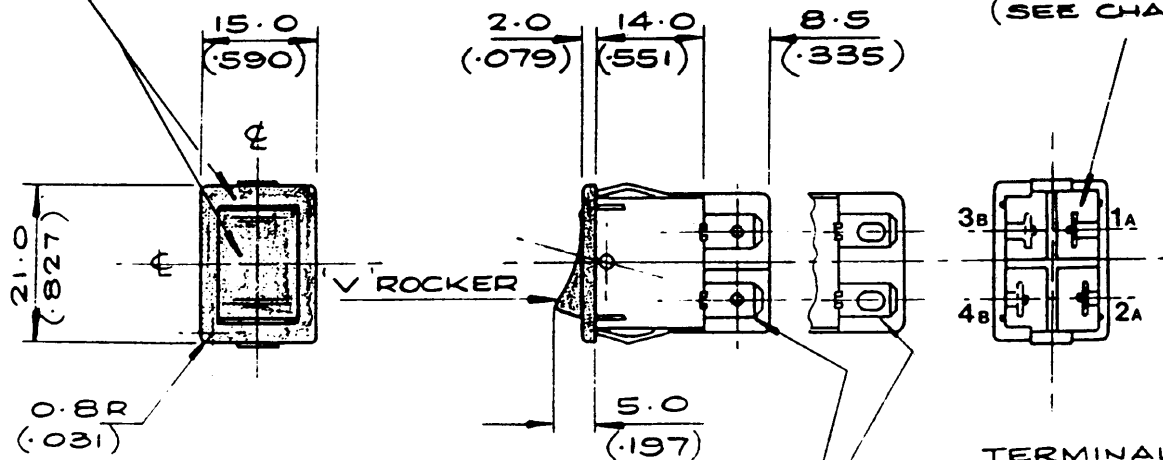
3RD ANGLE PROJECTION

DO NOT SCALE . IF IN DOUBT-ASK

| TYPE<br>ACTION                                                                    | CAT. N <sup>o</sup> . | DESCRIPTION                           | TERMINAL POSITIONS . |
|-----------------------------------------------------------------------------------|-----------------------|---------------------------------------|----------------------|
|  | 8500.                 | SINGLE POLE ,<br>ON/OFF               | 2A 1A                |
|  | 8503.                 | SINGLE POLE ,<br>ON/OFF.(ILLUMINATED) | 2A 1A<br>3B          |
|  | 8550.                 | DOUBLE POLE ,<br>ON/OFF .             | 2A 1A<br>4B 3B       |
|  | 8553.                 | DOUBLE POLE ,<br>ON/OFF.(ILLUMINATED) | 2A 1A<br>4B 3B       |
|                                                                                   |                       |                                       |                      |

TEXTURED  
FINISH .

TERMINAL ARRANGEMENTS  
FOR SWITCH VARIATIONS.  
(SEE CHART)



PANEL CUT-OUT DETAILS.  
B BODY SHAPE

| PANEL THICKNESS          | DIM <sup>n</sup> . X     | DIM <sup>n</sup> . Y     |
|--------------------------|--------------------------|--------------------------|
| 0.75-1.25<br>(.029/.049) | 19.2/19.1<br>(.756/.752) | 13.0/12.9<br>(.512/.508) |
| 1.25-2.0<br>(.049/.079)  | 19.4/19.3<br>(.764/.760) | 13.0/12.9<br>(.512/.508) |
| 2.0-3.0<br>(.079/.118)   | 19.8/19.7<br>(.779/.775) | 13.0/12.9<br>(.512/.508) |

TERMINALS .  
TYPE 'H'-4.8(.187) TAB .  
TYPE 'T'-4.8(.187) SOLDER  
TAG .

NOTE !

RATING FOR THESE  
SWITCHES IS 6(1)A  
(FOR EUROPEAN APPROVALS)  
AND 6A ONLY (FOR  
AMERICAN & CANADIAN  
APPROVALS.)

DIMENSIONS IN MILLIMETRES (INCHES)

|                                      |        |                                                                                      |             |
|--------------------------------------|--------|--------------------------------------------------------------------------------------|-------------|
| LIMITS UNLESS<br>OTHERWISE<br>STATED | MAT.   | TITLE<br>EXPLANATORY CHART<br>OF THE 8500/8550<br>SERIES SUB-MINIATURE<br>SWITCHES . | USED IN     |
| DECIMALS ± $\frac{0.125}{(0.005)}$   | SPEC.  | ARCOELECTRIC SWITCHES LTD.<br>WEST MOLESEY, SURREY.                                  | DRAWING No. |
| FRACTIONS ± $\frac{0.4}{(1/64)}$     | FINISH |                                                                                      | CH 82       |

ARCOLECTRIC SWITCHES p.l.c.

APPROVALS RELATING TO THE SWITCH/NEON REF:

H8553VB

| AUTHORITY | COUNTRY      | STATUS | REFERENCE   | PARAMETERS<br>VOLTAGE CURRENT TEMP <sup>o</sup> |
|-----------|--------------|--------|-------------|-------------------------------------------------|
| BEAB      | U.K.         | S      |             |                                                 |
| C.B.      | -            |        |             |                                                 |
| KEMA      | Netherlands  | S      |             |                                                 |
| SEMKO     | Sweden       | A      | 8744034     | 250V 6(4)A 100C                                 |
| DEMKO     | Denmark      | A      | 89134       | 250V 6(4)A 100C                                 |
| NEMKO     | Norway       | A      | M62662/01-2 | 250V 6(4)A 100C                                 |
| VDE       | West Germany | A      | 48464       | 250V 6(4)A 100C                                 |
| F.L.      | Finland      | A      | 098936-01   | 250V 6(4)A 100C                                 |
| U.L.      | U.S.A.       | A      | E45221      | 250V 6A                                         |
| CSA       | Canada       | A      | LR10990     | 250V 6A                                         |
| OVE       | Austria      | S      |             |                                                 |
| SEV       | Switzerland  | A      | 8810046801  | 250V 6(4)A 100C                                 |
| UTE       | France       | A      | 19806/807   | 250V 6(4)A 100C                                 |
| .J.       | Japan        | N      |             |                                                 |

ARCOLECTRIC SWITCHES p.l.c.

APPROVALS RELATING TO THE SWITCH/NEON REF:

H8550VB

| AUTHORITY | COUNTRY      | STATUS | REFERENCE        | PARAMETERS |         |                   |
|-----------|--------------|--------|------------------|------------|---------|-------------------|
|           |              |        |                  | VOLTAGE    | CURRENT | TEMP <sup>°</sup> |
| BEAB      | U.K.         | A      | 126349<br>CS0018 | 250V       | 6(4)A   | 100C              |
| C.B.      | -            |        |                  |            |         |                   |
| KEMA      | Netherlands  | A      | 2053.87          | 250V       | 6(1)A   | 85C               |
| SEMKO     | Sweden       | A      | 8744034          | 250V       | 6(4)A   | 100C              |
| DEMKO     | Denmark      | A      | 89134            | 250v       | 6(4)A   | 100C              |
| NEMKO     | Norway       | A      | M62662           | 250V       | 6(4)A   | 100C              |
| VDE       | West Germany | A      | 48464            | 250V       | 6(4)A   | 100C              |
| F.I.      | Finland      | A      | 098936.01        | 250V       | 6(4)A   | 100C              |
| U.L.      | U.S.A.       | A      | E45221           | 250V       | 6A      |                   |
| CSA       | Canada       | A      | LR10990          | 250V       | 6A      |                   |
| OVE       | Austria      | A      | 19457/E          | 250V       | 6(1)A   | 85C               |
| SEV       | Switzerland  | A      | 88 10046801      | 250V       | 6(4)A   | 100C              |
| UTE       | France       | A      | 19806/807        | 250V       | 6(1)A   | 85C               |
| .J.       | Japan        | N      |                  |            |         |                   |