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## TUV Rheinland Group

License No. R50062176  
 EN 60947-1:2004  
 EN 60947-3:1999+A1  
 EN 60947-4-1:2001+A1  
 EN 60947-5-1:2004



Rating : 16A, 20A, 25A, 32A, 63A

| Series                                                |    | A2Y1<br>PS2Y2<br>R2Y3 | CY4                  | A3Y1                  | A4Y1                  | A6Y1         |
|-------------------------------------------------------|----|-----------------------|----------------------|-----------------------|-----------------------|--------------|
| Rated frequency                                       | Hz | 50/60                 |                      |                       |                       |              |
| Thermal current I <sub>th</sub>                       | A  | 20                    | 25                   | 40                    | 63                    | 80           |
| Utilization category<br>AC-1 (EN 60947-4-1)           | -  | 16A, 660V             | 20A, 660V            | 32A, 660V             | 40A, 660V             | 63A, 660V    |
| Utilization category<br>AC-21A (EN 60947-3)           | -  | 16A, 600V             | 20A, 600V            | 25A, 600V             | 32A, 600V             | 40A, 600V    |
| Utilization category<br>AC-22A (EN 60947-3)           | -  | 16A, 600V             | 20A, 600V            | 32A, 600V             | 40A, 600V             | 63A, 600V    |
| Utilization category<br>AC-12 (EN 60947-5-1)          | -  | 6A, 240V<br>4A, 440V  | 6A, 240V<br>4A, 440V | 14A, 240V<br>6A, 440V | 16A, 240V<br>7A, 440V | --           |
| Rated short-time<br>withstand current I <sub>cs</sub> | A  | 250                   | 350                  | 1000                  | 1000                  | 1000         |
| Rated short-time making<br>capacity I <sub>cm</sub>   | KA | None                  |                      |                       |                       |              |
| Rated conditional short<br>circuit current            | KA | 1                     | 1                    | 10                    | 10                    | 10           |
| Kind of SCPD                                          | -  | Fuse (gL/gG)          | Fuse (gL/gG)         | Fuse (gL/gG)          | Fuse (gL/gG)          | Fuse (gL/gG) |
| Rating of SCPD                                        | A  | 20A                   | 25A                  | 40A                   | 65A                   | 80A          |
| Insulation Voltage U <sub>i</sub>                     | V  | 690                   |                      |                       |                       |              |
| Impulse Withstand<br>Voltage U <sub>imp</sub>         | V  | N                     |                      |                       |                       |              |

## CSA Certified 186663

Applicable Requirements  
 CAN/CSA-C22.2 No. 0-M91-General Requirements-Canadian Electrical Code, PART II  
 CAN/CSA-C22.2 No. 14-05-Industrial Control Equipment  
 UL Standard No. 508, 17<sup>th</sup>-Industrial Control Equipment  
 CSA Std C22.2 No. 65-93-Wire Connectors

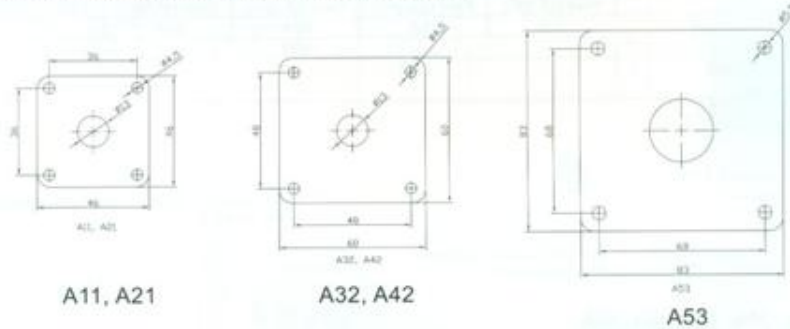


Rating : 20A, 25A, 40A, 80A

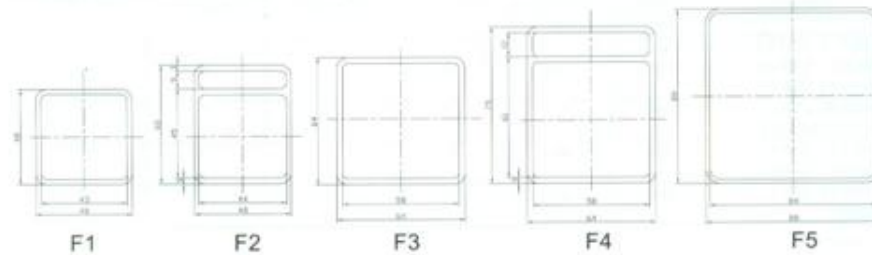
| Model No.                                          | General Purpose |                | HP Rating             |          |                      |          |
|----------------------------------------------------|-----------------|----------------|-----------------------|----------|----------------------|----------|
|                                                    |                 |                | Single Phase / 2 pole |          | Three phase / 3 pole |          |
|                                                    | Voltage<br>(V)  | Current<br>(A) | 110-120V              | 220-240V | 220-240V             | 440-480V |
| PART A: AX1Y1,<br>PSX1Y1, VSX1Y1,<br>ASX1Y1 SERIES | 600             | 20             | 1.0                   | 2        | 3                    | 5        |
| PART B: CY4,<br>PSX2Y2 SERIES                      | 600             | 25             | 1.0                   | 2        | 3                    | 5        |
| PART C: A3Y3,<br>PSX3Y3 SERIES                     | 600             | 40             | 3                     | 5        | 7.5                  | 10       |
| PART D: A6Y3<br>SERIES                             | 600             | 80             | 5.0                   | 10       | 15                   | 30       |

|                                             |                                               |                                                           |                                                                 |                                   |       |      |             |     |            |     |
|---------------------------------------------|-----------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------|-------|------|-------------|-----|------------|-----|
| A11                                         | F1                                            | VS 33                                                     | V1                                                              | K1                                |       |      |             |     |            |     |
| Type of Switch                              | Type of Frame                                 | Contact arrangement & Code No.                            | Type of Escutcheon Plate No.                                    | Handle type                       |       |      |             |     |            |     |
| A11 (20A)                                   | F1<br>F2<br>F3                                | Please refer to "Code No" on Page 5 to Page 16 for detail | Please refer to "Escutch Plate" on Page 5 to Page 16 for detail | Please refer to Page 4 for detail |       |      |             |     |            |     |
| A21 (25A)                                   | F1<br>F2<br>F3<br>F4                          | <b>NOMINAL RATING</b>                                     |                                                                 |                                   |       |      |             |     |            |     |
| A32 (32A)                                   | F3                                            |                                                           |                                                                 |                                   |       |      |             |     |            |     |
| A42 (63A)                                   | F3                                            |                                                           |                                                                 |                                   |       |      |             |     |            |     |
| A53 (100A)                                  | F5                                            |                                                           |                                                                 |                                   |       |      |             |     |            |     |
| Please refer to "Nominal Rating" for detail | Please refer to "Frame Dimensions" for detail | Type                                                      | Continuous Current Ith A                                        | Motor                             | 3ph   | 1ph  | AC 23A - KW |     | AC 3A - KW |     |
|                                             |                                               |                                                           |                                                                 |                                   |       |      | 3ph         | 1ph | 3ph        | 1ph |
|                                             |                                               | A11                                                       | 20A                                                             | 110V-120V                         | 30HP  | 10HP | 3.7         | 2.3 | 3          | 2.2 |
|                                             |                                               | A21                                                       | 25A                                                             | 220V-240V                         | 30HP  | 10HP | 7.5         | 2.7 | 5.5        | 3   |
|                                             |                                               |                                                           | 600V AC                                                         | 440V-480V                         | 30HP  | 10HP | 7.5         | 4.0 | 5.5        | 3   |
|                                             |                                               | A32                                                       | 40A                                                             | 110V-120V                         | 7.5HP | 3HP  | 7.5         | 3.5 | 5.5        | 3   |
|                                             |                                               |                                                           | 600V AC                                                         | 220V-240V                         | 7.5HP | 3HP  | 10          | 3.5 | 7.5        | 3.5 |
|                                             |                                               |                                                           |                                                                 | 440V-480V                         | 10HP  | 3HP  | 12          | 5.5 | 10         | 5   |
|                                             |                                               | A42                                                       | 80A                                                             | 110V-120V                         | 15HP  | 10HP | 15          | 11  | 11         | 5.5 |
|                                             |                                               |                                                           | 600V AC                                                         | 220V-240V                         | 15HP  | 10HP | 25          | 15  | 18.5       | 10  |
|                                             |                                               |                                                           |                                                                 | 440V-480V                         | 20HP  | 10HP | 25          | 15  | 18.5       | 10  |
|                                             |                                               | A53                                                       | 115A                                                            | 110V-120V                         | 15HP  | 10HP | 30          | 15  | 15         | 7.5 |
|                                             | 600V AC                                       | 220V-240V                                                 | 20HP                                                            | 10HP                              | 45    | 22   | 30          | 12  |            |     |
|                                             |                                               | 440V-480V                                                 | 20HP                                                            | 10HP                              | 45    | 18.5 | 30          | 11  |            |     |

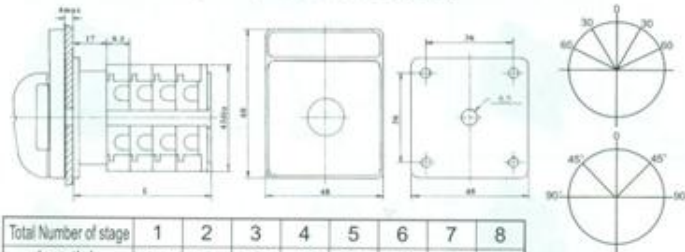
## DIMENSIONS FOR TYPE A11, A21, A32, A42, A53



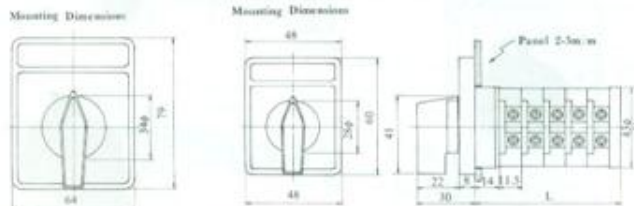
## FRAME DIMENSIONS



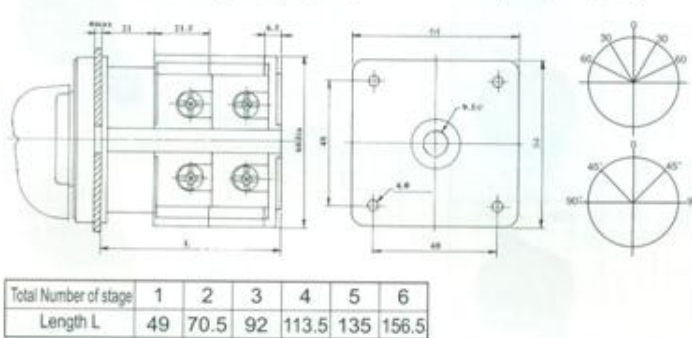
## Dimensions for A2, PS2, R2, switches (20A)



## Dimensions for C2 series switches (20A, 25A)

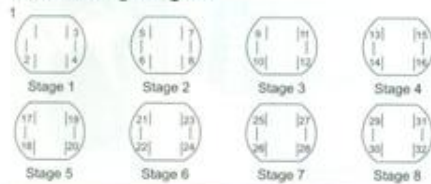


## Dimensions mounting for A3, A4, A6 switches (32A, 40A, 63A)

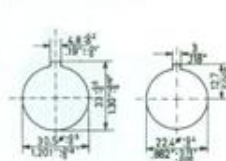


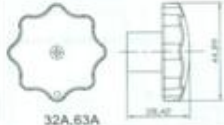
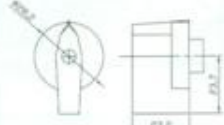
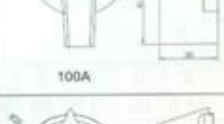
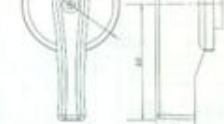
yellow safety cover

## connecting diagram



## CENTER HOLE MOUNTING



| Code | Dimension                                                                           | Type                                                                                | Code | Dimension                                                                            | Type                                                                                  |
|------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| K1   |    |    | K8   |    |    |
| K2   |    |    | K9   |    |    |
| K3   |    |    | K10  |    |    |
| K4   |    |    | K11  |    |    |
| K5   |    |    | K12  |    |    |
| K6   |  |  | K13  |  |  |
| K7   |  |  |      |                                                                                      |                                                                                       |



## ON-OFF switches 45°, 60°, 90°, switching 20A

| Code No | Function | Stage | Escutch plate | Connecting Diagram |
|---------|----------|-------|---------------|--------------------|
| A201    | 1 Pole   | 1     |               |                    |
| A201A   | 2 Pole   | 1     |               |                    |
| A202    | 3 Pole   | 2     |               |                    |
| A202A   | 4 Pole   | 2     |               |                    |
| A203    | 5 Pole   | 3     |               |                    |
| A203A   | 6 Pole   | 3     |               |                    |
| A204    | 7 Pole   | 4     |               |                    |
| A204A   | 8 Pole   | 4     |               |                    |
| A205    | 9 Pole   | 5     |               |                    |
| A205A   | 10 Pole  | 5     |               |                    |
| A206    | 11 Pole  | 6     |               |                    |
| A206A   | 12 Pole  | 6     |               |                    |

## Change over switches without OFF 90°, 60°, 45°, 30°, switching 20A (Made before Break)

|      |        |   |  |  |
|------|--------|---|--|--|
| A207 | 1 Pole | 1 |  |  |
| A208 | 2 Pole | 2 |  |  |
| A209 | 3 Pole | 3 |  |  |
| A210 | 4 Pole | 4 |  |  |
| A211 | 5 Pole | 5 |  |  |
| A212 | 6 Pole | 6 |  |  |

## Change over switches without OFF with electrically isolated contacts 20A

|      |        |   |  |  |
|------|--------|---|--|--|
| A213 | 1 Pole | 1 |  |  |
| A214 | 2 Pole | 2 |  |  |
| A215 | 3 Pole | 3 |  |  |
| A216 | 4 Pole | 4 |  |  |

## Change over switches with center OFF 60°, 45°, 90° switching 20A

|      |        |   |  |  |
|------|--------|---|--|--|
| A217 | 1 Pole | 1 |  |  |
| A218 | 2 Pole | 2 |  |  |
| A219 | 3 Pole | 3 |  |  |
| A220 | 4 Pole | 4 |  |  |
| A221 | 1 Pole | 1 |  |  |
| A222 | 2 Pole | 2 |  |  |
| A223 | 3 Pole | 3 |  |  |
| A224 | 4 Pole | 4 |  |  |

## ON-OFF Power switches 90° 20A

| Code No | Function | Stage | Escutch Plate | Connecting Diagram        |  |
|---------|----------|-------|---------------|---------------------------|--|
| PS21    | 1 Pole   | 1     |               | <p>Stage 1    Stage 2</p> |  |
| PS22    | 2 Pole   | 1     |               |                           |  |
| PS23    | 3 Pole   | 2     |               |                           |  |
| PS24    | 4 Pole   | 2     |               |                           |  |
| PS25    | 5 Pole   | 3     |               |                           |  |
| PS26    | 6 Pole   | 3     |               |                           |  |

## ON-OFF switches spring return to centre 20A

| Code No | Function | Stage | Escutch Plate | Connecting Diagram                   |  |
|---------|----------|-------|---------------|--------------------------------------|--|
| R201    | 1 Pole   | 1     |               | <p>Stage 1    Stage 2    Stage 3</p> |  |
| R201A   | 2 Pole   | 1     |               |                                      |  |
| R202    | 3 Pole   | 2     |               |                                      |  |
| R202A   | 4 Pole   | 2     |               |                                      |  |
| R203    | 5 Pole   | 3     |               |                                      |  |
| R203A   | 6 Pole   | 3     |               |                                      |  |

## Change - over switches with spring return 20A

| Code No | Function | Stage | Escutch Plate | Connecting Diagram |  |
|---------|----------|-------|---------------|--------------------|--|
| R205    | 1 Pole   | 1     |               |                    |  |
| R206    | 2 Pole   | 2     |               |                    |  |
| R207    | 3 Pole   | 3     |               |                    |  |
| R208    | 1 Pole   | 1     |               |                    |  |
| R209    | 2 Pole   | 2     |               |                    |  |
| R210    | 3 Pole   | 3     |               |                    |  |

## Change - over switches with spring return to centre 20A

| Code No | Function | Stage | Escutch Plate | Connecting Diagram |  |
|---------|----------|-------|---------------|--------------------|--|
| R211    | 1 Pole   | 1     |               | <p>R211-R213</p>   |  |
| R212    | 2 Pole   | 2     |               |                    |  |
| R213    | 3 Pole   | 3     |               |                    |  |
| R214    | 1 Pole   | 1     |               |                    |  |
| R215    | 2 Pole   | 2     |               |                    |  |
| R216    | 3 Pole   | 3     |               |                    |  |

## CAM SWITCHES 20A, 25A



### Specifications

Rated insulation voltage : 600V AC/DC  
Rated current : 25A

### ON/OFF Power Switch 90° 25A

| Code No | Poles | Stage | Escutch Plate | Connecting Diagram |  |
|---------|-------|-------|---------------|--------------------|--|
| PS251   | 1     | 1     |               |                    |  |
| PS252   | 2     | 1     |               |                    |  |
| PS253   | 3     | 2     |               |                    |  |
| PS254   | 4     | 2     |               |                    |  |
| PS255   | 5     | 3     |               |                    |  |
| PS256   | 6     | 3     |               |                    |  |

### Change-over switches without "OFF" 90° Switching 20A, 25A

| Code No | Poles   | Stage |  |  |  |
|---------|---------|-------|--|--|--|
| C001    | 1 Pole  | 1     |  |  |  |
| C002    | 2 Pole  | 2     |  |  |  |
| C003    | 3 Pole  | 3     |  |  |  |
| C004    | 4 Pole  | 4     |  |  |  |
| C005    | 5 Pole  | 5     |  |  |  |
| C006    | 6 Pole  | 6     |  |  |  |
| C007    | 7 Pole  | 7     |  |  |  |
| C008    | 8 Pole  | 8     |  |  |  |
| C009    | 9 Pole  | 9     |  |  |  |
| C010    | 10 Pole | 10    |  |  |  |

### Changeover switches without "OFF" 60° Switching

| Code No | Poles   | Stage |  |  |  |
|---------|---------|-------|--|--|--|
| C013    | 1 Pole  | 1     |  |  |  |
| C014    | 2 Pole  | 2     |  |  |  |
| C015    | 3 Pole  | 3     |  |  |  |
| C016    | 4 Pole  | 4     |  |  |  |
| C017    | 5 Pole  | 5     |  |  |  |
| C018    | 6 Pole  | 6     |  |  |  |
| C019    | 7 Pole  | 7     |  |  |  |
| C020    | 8 Pole  | 8     |  |  |  |
| C021    | 9 Pole  | 9     |  |  |  |
| C022    | 10 Pole | 10    |  |  |  |

### ON / OFF Switches with 90° Switching 20A, 25A

| Code No | Poles   | Stage |  |  |  |
|---------|---------|-------|--|--|--|
| C025    | 1 Pole  | 1     |  |  |  |
| C026    | 2 Pole  | 1     |  |  |  |
| C027    | 3 Pole  | 2     |  |  |  |
| C028    | 4 Pole  | 2     |  |  |  |
| C029    | 5 Pole  | 3     |  |  |  |
| C030    | 6 Pole  | 3     |  |  |  |
| C031    | 7 Pole  | 4     |  |  |  |
| C032    | 8 Pole  | 4     |  |  |  |
| C033    | 9 Pole  | 5     |  |  |  |
| C034    | 10 Pole | 5     |  |  |  |
| C035    | 11 Pole | 6     |  |  |  |
| C036    | 12 Pole | 6     |  |  |  |

## Change over switches with "OFF" 60° Switching 20A, 25A

| Code No. | Function | Stages | Escutch plate    | Connection diagram |
|----------|----------|--------|------------------|--------------------|
| C037     | 1 pole   | 1      | <br>P11      P12 |                    |
| C038     | 2 pole   | 2      |                  |                    |
| C039     | 3 pole   | 3      |                  |                    |
| C040     | 4 pole   | 4      |                  |                    |
| C041     | 5 pole   | 5      |                  |                    |
| C042     | 6 pole   | 6      |                  |                    |

## Change over switches with "OFF" 90° Switching 20A, 25A

| Code No. | Function | Stages | Escutch plate | Connection diagram |
|----------|----------|--------|---------------|--------------------|
| C045     | 1 pole   | 1      | <br>P13       |                    |
| C046     | 2 pole   | 2      |               |                    |
| C047     | 3 pole   | 3      |               |                    |
| C048     | 4 pole   | 4      |               |                    |

## Change over switches with "OFF" 45° Switching

| Code No. | Function | Stages | Escutch plate    | Connection diagram |
|----------|----------|--------|------------------|--------------------|
| C068     | 1 pole   | 1      | <br>P21      P22 |                    |
| C069     | 2 pole   | 2      |                  |                    |
| C070     | 3 pole   | 3      |                  |                    |
| C071     | 4 pole   | 4      |                  |                    |

## Change over switches with spring return to center

| Code No. | Function | Stages | Escutch plate    | Connection diagram |
|----------|----------|--------|------------------|--------------------|
| C049     | 1 pole   | 1      | <br>P14      P15 |                    |
| C050     | 2 pole   | 2      |                  |                    |
| C051     | 3 pole   | 3      |                  |                    |

## Change over switches with spring return 20A, 25A

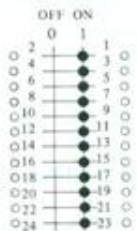
| Code No. | Function | Stages | Escutch plate    | Connection diagram |
|----------|----------|--------|------------------|--------------------|
| C052     | 1 pole   | 1      | <br>P16      P17 |                    |
| C053     | 2 pole   | 1      |                  |                    |
| C054     | 3 pole   | 2      |                  |                    |
| C055     | 4 pole   | 2      |                  |                    |

## ON/OFF Switches with 45° Switching 20A, 25A

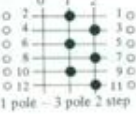
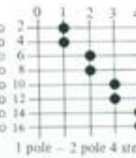
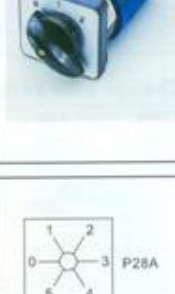
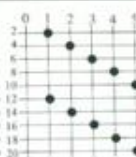
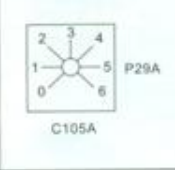
| Code No. | Function | Stages | Escutch plate    | Connection diagram |
|----------|----------|--------|------------------|--------------------|
| C056     | 1 pole   | 1      | <br>P18      P19 |                    |
| C057     | 2 pole   | 1      |                  |                    |
| C058     | 3 pole   | 2      |                  |                    |
| C059     | 4 pole   | 2      |                  |                    |
| C060     | 5 pole   | 3      |                  |                    |
| C061     | 6 pole   | 3      |                  |                    |
| C062     | 7 pole   | 4      |                  |                    |
| C063     | 8 pole   | 4      |                  |                    |



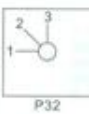
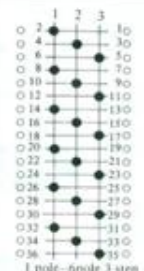
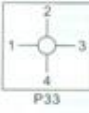
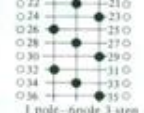
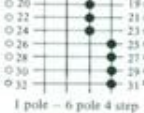
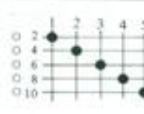
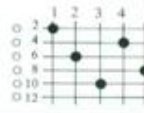
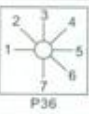
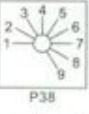
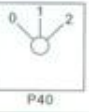
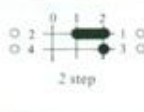
## ON/OFF SWITCHES WITH 60° SWITCHING

| Code No | Poles   | Escutch Plate                                                                            | Stage | Connecting Diagram                                                                |                                                                                     |
|---------|---------|------------------------------------------------------------------------------------------|-------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| C076    | 1 Pole  | <br>P23 | 1     |  |  |
| C077    | 2 Pole  |                                                                                          | 1     |                                                                                   |                                                                                     |
| C078    | 3 Pole  |                                                                                          | 2     |                                                                                   |                                                                                     |
| C079    | 4 Pole  |                                                                                          | 2     |                                                                                   |                                                                                     |
| C080    | 5 Pole  | <br>P24 | 3     |                                                                                   |                                                                                     |
| C081    | 6 Pole  |                                                                                          | 3     |                                                                                   |                                                                                     |
| C082    | 7 Pole  |                                                                                          | 4     |                                                                                   |                                                                                     |
| C083    | 8 Pole  |                                                                                          | 4     |                                                                                   |                                                                                     |
| C084    | 9 Pole  |                                                                                          | 5     |                                                                                   |                                                                                     |
| C085    | 10 Pole |                                                                                          | 5     |                                                                                   |                                                                                     |
| C086    | 11 Pole |                                                                                          | 6     |                                                                                   |                                                                                     |

## MULTI-STEP SWITCHES WITH "OFF" 20A, 25A

|       |                |                                                                                            |    |                                                                                     |                                                                                       |  |
|-------|----------------|--------------------------------------------------------------------------------------------|----|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|
| C087  | 1 Pole 2 step  | <br>P25   | 1  |    |    |  |
| C088  | 2 Pole 2 step  |                                                                                            | 2  |                                                                                     |                                                                                       |  |
| C089  | 3 Pole 2 step  |                                                                                            | 3  |                                                                                     |                                                                                       |  |
| C090  | 4 Pole 2 step  |                                                                                            | 4  |                                                                                     |                                                                                       |  |
| C091  | 5 Pole 2 step  |                                                                                            | 5  |                                                                                     |                                                                                       |  |
| C092  | 6 Pole 2 step  |                                                                                            | 6  |                                                                                     |                                                                                       |  |
| C093  | 1 Pole 3 step  | <br>P26   | 2  |    |    |  |
| C094  | 2 Pole 3 step  |                                                                                            | 3  |                                                                                     |                                                                                       |  |
| C095  | 3 Pole 3 step  |                                                                                            | 5  |                                                                                     |                                                                                       |  |
| C096  | 4 Pole 3 step  |                                                                                            | 6  |                                                                                     |                                                                                       |  |
| C097  | 5 Pole 3 step  |                                                                                            | 8  |                                                                                     |                                                                                       |  |
| C098  | 1 Pole 4 step  | <br>P27   | 2  |   |   |  |
| C099  | 2 Pole 4 step  |                                                                                            | 4  |                                                                                     |                                                                                       |  |
| C100  | 3 Pole 4 step  |                                                                                            | 6  |                                                                                     |                                                                                       |  |
| C101  | 4 Pole 4 step  |                                                                                            | 8  |                                                                                     |                                                                                       |  |
| C102  | 1 Pole 5 step  | <br>P28  | 3  |   |                                                                                       |  |
| C102A | 1 Pole 5 step  |                                                                                            | 5  |                                                                                     |                                                                                       |  |
| C103  | 2 Pole 5 step  |                                                                                            | 5  |                                                                                     |                                                                                       |  |
| C104  | 3 Pole 5 step  | <br>P29 | 8  |  |  |  |
| C105  | 1 Pole 6 step  |                                                                                            | 4  |                                                                                     |                                                                                       |  |
| C105A | 1 Pole 6 step  | <br>P30 | 7  |  |  |  |
| C106  | 2 Pole 6 step  |                                                                                            | 11 |                                                                                     |                                                                                       |  |
| C107  | 3 Pole 6 step  | <br>P31 | 4  |  |  |  |
| C108  | 1 Pole 7 step  |                                                                                            | 8  |                                                                                     |                                                                                       |  |
| C109  | 2 Pole 7 step  | <br>P32 | 5  |  |  |  |
| C110  | 1 Pole 8 step  |                                                                                            | 5  |                                                                                     |                                                                                       |  |
| C111  | 1 Pole 9 step  | <br>P33 | 6  |  |  |  |
| C112  | 1 Pole 10 step |                                                                                            | 6  |                                                                                     |                                                                                       |  |
| C113  | 1 Pole 11 step | <br>P34 | 6  |  |  |  |
|       |                |                                                                                            |    |                                                                                     |                                                                                       |  |

## MULTI-STEP SWITCHES WITH "OFF" 20A, 25A

| Code No | Function       | Stage | Escutch Plate                                                                       | Connecting Diagram                                                                  |                                                                                      |                                                                                     |
|---------|----------------|-------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| C114    | 1 Pole 3 step  | 2     |    |    |    |  |
| C115    | 2 Pole 3 step  | 3     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C116    | 3 Pole 3 step  | 5     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C117    | 4 Pole 3 step  | 6     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
|         |                |       |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C120    | 1 Pole 4 step  | 2     |    |    |    |                                                                                     |
| C121    | 2 Pole 4 step  | 4     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C122    | 3 Pole 4 step  | 6     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
|         |                |       |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C126    | 1 Pole 5 step  | 3     |    |    |                                                                                      |  |
| C127    | 2 Pole 5 step  | 5     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C128    | 3 Pole 5 step  | 8     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
|         |                |       |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C130    | 1 Pole 6 step  | 3     |    |    |                                                                                      |                                                                                     |
| C131    | 2 Pole 6 step  | 6     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
|         |                |       |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C134    | 1 Pole 7 step  | 4     |    |    |                                                                                      |                                                                                     |
| C135    | 2 Pole 7 step  | 7     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
|         |                |       |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C137    | 1 Pole 8 step  | 4     |   |   |                                                                                      |                                                                                     |
| C138    | 2 Pole 8 step  | 8     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C139    | 3 Pole 8 step  | 12    |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C140    | 1 Pole 9 step  | 5     |  |  |                                                                                      |                                                                                     |
| C141    | 1 Pole 10 step | 5     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C142    | 1 Pole 11 step | 6     |  |  |                                                                                      |                                                                                     |
|         |                |       |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C144    | 1 Pole 2 step  | 1     |  |  |  |                                                                                     |
| C145    | 2 Pole 2 step  | 2     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C146    | 3 Pole 2 step  | 3     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C147    | 4 Pole 2 step  | 4     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |
| C148    | 5 Pole 2 step  | 5     |                                                                                     |                                                                                     |                                                                                      |                                                                                     |



## VOLTMETERS WITCHES

| Code No. | Stage | Escutch Plate                          | connction diagram |  |
|----------|-------|----------------------------------------|-------------------|--|
| C174     | 3     | <div> <div> </div> <div> </div> </div> |                   |  |
| C175     | 4     | <div> <div> </div> <div> </div> </div> |                   |  |
| C176     | 4     | <div> <div> </div> <div> </div> </div> |                   |  |

## AMMETER SWITCHES

| Code No. | Stage | Escutch Plate                          | connction diagram |  |
|----------|-------|----------------------------------------|-------------------|--|
| C177     | 3     | <div> <div> </div> <div> </div> </div> |                   |  |
| C178     | 4     | <div> <div> </div> <div> </div> </div> |                   |  |
| C179     | 4     | <div> <div> </div> </div>              |                   |  |

## STAR-DELTA SWITCH

| Code No. | Stage | Escutch Plate | connction diagram |  |
|----------|-------|---------------|-------------------|--|
| C180     | 4     | <div> </div>  |                   |  |

## ON-OFF switches 90°, 60° witching 32A

| Code No | Function | Stage | Escutch Plate | Connecting Diagram                        |  |
|---------|----------|-------|---------------|-------------------------------------------|--|
| A301    | 1 Pole   | 1     | 0 1           | Stage 1   Stage 2   Stage 3   Stage 4<br> |  |
| A301A   | 2 Pole   | 1     | OFF ON        |                                           |  |
| A302    | 3 Pole   | 2     | 10 11         |                                           |  |
| A302A   | 4 Pole   | 2     |               |                                           |  |
| A303    | 5 Pole   | 3     | OFF ON        |                                           |  |
| A303A   | 6 Pole   | 3     |               |                                           |  |
| A304    | 7 Pole   | 4     | 13            |                                           |  |
| A304A   | 8 Pole   | 4     |               |                                           |  |

## Change over switches without OFF 90°, 60° witching 32A

|      |        |   |             |  |  |
|------|--------|---|-------------|--|--|
| A307 | 1 Pole | 1 | 1 2         |  |  |
| A308 | 2 Pole | 2 | 1 2         |  |  |
| A309 | 3 Pole | 3 | 16 ON       |  |  |
| A310 | 4 Pole | 4 | 17 AUTO MAN |  |  |
|      |        |   | 19          |  |  |
|      |        |   | 19A         |  |  |

## Change over switches without OFF with electrically isolated contacts 32A

|      |        |   |       |  |  |
|------|--------|---|-------|--|--|
| A313 | 1 Pole | 1 | 1 2   |  |  |
| A314 | 2 Pole | 2 | 16 ON |  |  |
| A315 | 3 Pole | 3 |       |  |  |
| A316 | 4 Pole | 4 | 19    |  |  |
|      |        |   |       |  |  |
|      |        |   |       |  |  |

## Change over switches with center OFF 90°, 60° witching 32A

|      |        |   |       |               |  |
|------|--------|---|-------|---------------|--|
| A317 | 1 Pole | 1 | 0 1 2 | A317-A320<br> |  |
| A318 | 2 Pole | 2 | 1 2   |               |  |
| A319 | 3 Pole | 3 | 20    |               |  |
| A320 | 4 Pole | 4 | 21    |               |  |
| A321 | 1 Pole | 1 | OFF   |               |  |
| A322 | 2 Pole | 2 | 1 2   |               |  |
| A323 | 3 Pole | 3 | 22    | A321-A324<br> |  |
| A324 | 4 Pole | 4 | 22A   |               |  |
|      |        |   |       |               |  |
|      |        |   |       |               |  |

## ON-OFF Power switches 90° 2A

|      |        |   |  |                       |  |
|------|--------|---|--|-----------------------|--|
| PS31 | 1 Pole | 1 |  | Stage 1   Stage 2<br> |  |
| PS32 | 2 Pole | 1 |  |                       |  |
| PS33 | 3 Pole | 2 |  |                       |  |
| PS34 | 4 Pole | 2 |  |                       |  |
| PS35 | 5 Pole | 3 |  |                       |  |
| PS36 | 6 Pole | 3 |  |                       |  |

## ON-OFF switches 90°, 60° witching 63A

| Code No | Function | Stage | Escutch Plate | Connecting Diagram                        |  |
|---------|----------|-------|---------------|-------------------------------------------|--|
| A601    | 1 Pole   | 1     |               | Stage 1   Stage 2   Stage 3   Stage 4<br> |  |
| A601A   | 2 Pole   | 1     |               |                                           |  |
| A602    | 3 Pole   | 2     |               |                                           |  |
| A602A   | 4 Pole   | 2     |               |                                           |  |
| A603    | 5 Pole   | 3     |               |                                           |  |
| A603A   | 6 Pole   | 3     |               |                                           |  |
| A604    | 7 Pole   | 4     |               |                                           |  |
| A604A   | 8 Pole   | 4     |               |                                           |  |

## Change over switches without OFF 60°, 90° witching 63A

| Code No | Function | Stage | Escutch Plate | Connecting Diagram |  |
|---------|----------|-------|---------------|--------------------|--|
| A607    | 1 Pole   | 1     |               |                    |  |
| A608    | 2 Pole   | 2     |               |                    |  |
| A609    | 3 Pole   | 3     |               |                    |  |
| A610    | 4 Pole   | 4     |               |                    |  |
|         |          |       |               |                    |  |
|         |          |       |               |                    |  |

## Change over switches without OFF with electrically isolated contacts 63A

| Code No | Function | Stage | Escutch Plate | Connecting Diagram |  |
|---------|----------|-------|---------------|--------------------|--|
| A613    | 1 Pole   | 1     |               |                    |  |
| A614    | 2 Pole   | 2     |               |                    |  |
| A615    | 3 Pole   | 3     |               |                    |  |
| A616    | 4 Pole   | 4     |               |                    |  |
|         |          |       |               |                    |  |

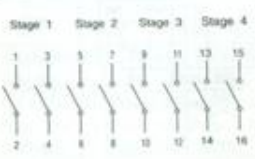
## Change over switches with center OFF 90°, 60° 3A

| Code No | Function | Stage | Escutch Plate | Connecting Diagram |  |
|---------|----------|-------|---------------|--------------------|--|
| A617    | 1 Pole   | 1     |               | A617-A620<br>      |  |
| A618    | 2 Pole   | 2     |               |                    |  |
| A619    | 3 Pole   | 3     |               |                    |  |
| A620    | 4 Pole   | 4     |               |                    |  |
| A621    | 1 Pole   | 1     |               | A621-A624<br>      |  |
| A622    | 2 Pole   | 2     |               |                    |  |
| A623    | 3 Pole   | 3     |               |                    |  |
| A624    | 4 Pole   | 4     |               |                    |  |

## ON - OFF Power switches 90° 3A

| Code No | Function | Stage | Escutch Plate | Connecting Diagram    |  |
|---------|----------|-------|---------------|-----------------------|--|
| PS61    | 1 Pole   | 1     |               | Stage 1   Stage 2<br> |  |
| PS62    | 2 Pole   | 1     |               |                       |  |
| PS63    | 3 Pole   | 2     |               |                       |  |
| PS64    | 4 Pole   | 2     |               |                       |  |

## ON-OFF switches with 60° switching

| Code No | Function | Stage | Escutch Plate                                                                     | Connecting Diagram                                                                 |                                                                                     |
|---------|----------|-------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| A100    | 1 Pole   | 1     |  |  |  |
| A100A   | 2 Pole   | 1     |                                                                                   |                                                                                    |                                                                                     |
| A101    | 3 Pole   | 2     |                                                                                   |                                                                                    |                                                                                     |
| A101A   | 4 Pole   | 2     |                                                                                   |                                                                                    |                                                                                     |
| A102    | 5 Pole   | 3     |                                                                                   |                                                                                    |                                                                                     |
| A102A   | 6 Pole   | 3     |                                                                                   |                                                                                    |                                                                                     |
| A103    | 7 Pole   | 4     |                                                                                   |                                                                                    |                                                                                     |
| A103A   | 8 Pole   | 4     |                                                                                   |                                                                                    |                                                                                     |

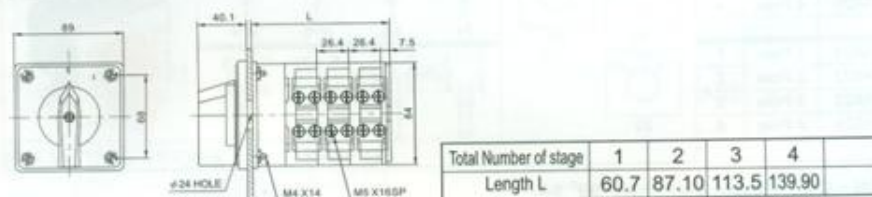
## Change over switches without OFF 60° switching

| Code No | Function | Stage | Escutch Plate                                                                     | Connecting Diagram                                                                 |                                                                                     |
|---------|----------|-------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| A104    | 1 Pole   | 1     |  |  |  |
| A105    | 2 Pole   | 2     |                                                                                   |                                                                                    |                                                                                     |
| A106    | 3 Pole   | 3     |                                                                                   |                                                                                    |                                                                                     |
| A107    | 4 Pole   | 4     |                                                                                   |                                                                                    |                                                                                     |

## Change over switches with center OFF 60° switching

| Code No | Function | Stage | Escutch Plate                                                                     | Connecting Diagram                                                                 |                                                                                     |
|---------|----------|-------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| A108    | 1 Pole   | 1     |  |  |  |
| A109    | 2 Pole   | 2     |                                                                                   |                                                                                    |                                                                                     |
| A110    | 3 Pole   | 3     |                                                                                   |                                                                                    |                                                                                     |
| A111    | 4 Pole   | 4     |                                                                                   |                                                                                    |                                                                                     |

## Dimensions for 100A frame F5



DC-Disconnect Switch

Part No: SC-40

2-pole 2-contact

Switching Angle : 90°

Application : Front mounting, central mounting

Handle : Knob type, 0-position 12 o'clock

Front Plate : without

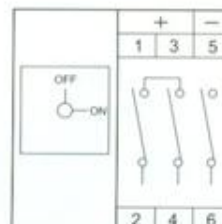
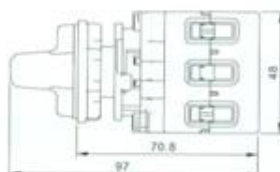
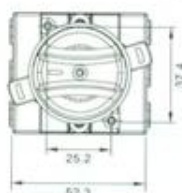
IP Rating : IP65

Electrical Data

|                              |         |     |     |     |      |
|------------------------------|---------|-----|-----|-----|------|
| Rated Operational Voltage Ue | VDC (V) | 400 | 600 | 800 | 1000 |
| Rated Operational Current Ie | VDC (A) | 40  | 25  | 16  | 10   |

Rated Impulse Withstand Voltage Uimp : 6KV

Rated Insulation Voltage Ui : 1000V



AC-Disconnect Switch

3-pole 3-contact

Switching Angle : 90°

Application : Front mounting, central mounting

Handle : Knob type, 0-position 12 o'clock

IP Rating : IP65

| Part No.            |    | PS-2    | PS-3 | PS-4 | PS-6 | PS-8 | PS-10 |
|---------------------|----|---------|------|------|------|------|-------|
| Rated Voltage       | V  | 660     | 660  | 660  | 660  | 660  | 660   |
| Rated Current       | A  | 20A,25A | 32A  | 40A  | 63A  | 80A  | 100A  |
| AC23 3φ X 240V      | KW | 4       | 5.5  | 7.5  | 11   | 18   | 22    |
| AC23 3φ X 380V/440V | KW | 7.5     | 11   | 15   | 22   | 30   | 37    |
| AC3 3φ X 240V       | KW | 3       | 4    | 7.5  | 11   | 15   | 18    |
| AC3 3φ X 440V       | KW | 5.5     | 7.5  | 11   | 18   | 22   | 30    |



| Part No. | Amp. | A  | B  | C  | D  | E  |
|----------|------|----|----|----|----|----|
| PS-2     | 25A  | 64 | 48 | 38 | 56 | 48 |
| PS-3     | 32A  | 64 | 48 | 38 | 56 | 48 |
| PS-4     | 40A  | 64 | 48 | 38 | 56 | 48 |
| PS-6     | 63A  |    |    |    |    |    |
| PS-8     | 80A  |    |    |    |    |    |
| PS-10    | 100A |    |    |    |    |    |

