

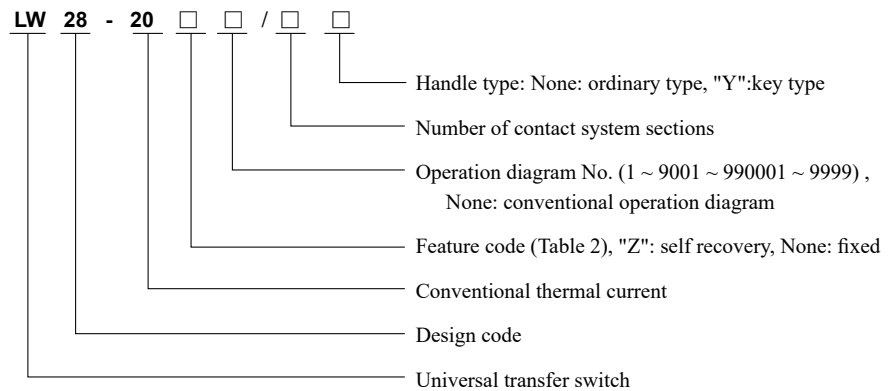
## LW28 Series Rotary Change-over Cam Switch



### 1 Overview

LW28 series Rotary Change-over Cam Switches is mainly used in AC 50Hz main circuit with a rated working voltage of 380V and below and with a DC voltage of 220V and below for power-on, power-off and change-over of circuit and also for direct master control and circuit measurement.

### 2 Type Designation



### 3 Technical Parameters

Table 1

| Name                               | LW28-20          |                 |
|------------------------------------|------------------|-----------------|
|                                    | AC-15            | DC-13           |
| Rated working voltage $U_e$ (V)    | 380              | 220             |
| Rated working current $I_e$ (A)    | 1.5              | 0.14            |
| Rated insulation voltage $U_i$ (V) | 550              |                 |
| Resistive current $I_{th}$ (A)     | 20               |                 |
| Electrical life (times)            | $20 \times 10^4$ | $6 \times 10^4$ |
| Mechanical life (times)            | $30 \times 10^4$ |                 |
| Operating frequency (times/h)      | 120              |                 |

### 4 Others

#### 4.1 Classification

- 4.1.1 There are main circuit change-over, direct control motor and master control according to the purpose.
- 4.1.2 There are location type, self-reset type and location and self-reset type.
- 4.1.3 There are location type 1-12 sections, self-reset 1-3 sections, and direct control motor 1-6 sections according to the number of the contact system sections.
- 4.1.4 There are 30°, 45°, 60°, and 90° according to the operating angle.

## LW28 Series Rotary Change-over Cam Switch

4.2 Classified according to the operating method and operator position (see Table 2)

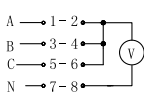
Table 2

| Use category  | Feature code  | Operator position                                   |                |
|---------------|---------------|---|----------------|
| Self-reset    | A             | 0° 30°  |                |
|               | B             | 30° 0° 30°  |                |
| Location type | C             | 0° 90°  | 0° 30°         |
|               | D             | 90° 0° 90°  | 30° 0° 30°     |
|               | E             | 90° 0° 90° 180°                                     | 30° 0° 30° 60° |
|               | F             | 60° 30° 0° 30° 60°                                  |                |
|               | G             | 60° 30° 0° 30° 60° 90°                              |                |
|               | H             | 90° 60° 30° 0° 30° 60° 90°                          |                |
|               | I             | 90° 60° 30° 0° 30° 60° 90° 120°                     |                |
|               | J             | 120° 90° 60° 30° 0° 30° 60° 90° 120°                |                |
|               | K             | 120° 90° 60° 30° 0° 30° 60° 90° 120° 150°           |                |
|               | L             | 150° 120° 90° 60° 30° 0° 30° 60° 90° 120° 150°      |                |
|               | M             | 150° 120° 90° 60° 30° 0° 30° 60° 90° 120° 150° 180° |                |
|               | N             | 45° 45°   |                |
|               | Location type | Z   | 30° 0° 60°     |
| Self-set type |               | 90° 0° 45°  |                |

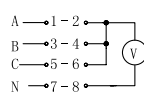
4.3 Wiring diagram of common control switch used in LW28 series voltage and current measurement switching box

Phase voltage phase-change switch

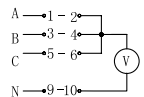
| LW28-20/YH1/2 | 0   | U <sub>A</sub> | U <sub>B</sub> | U <sub>C</sub> |
|---------------|-----|----------------|----------------|----------------|
|               | 0°  | 90°            | 180°           | 270°           |
| A → 1-2       | 1-2 | ×              |                |                |
| B → 3-4       | 3-4 |                | ×              |                |
| C → 5-6       | 5-6 |                |                | ×              |
| N → 7-8       | 7-8 | ×              | ×              | ×              |



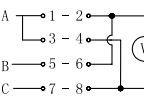
| LW28-20/YH3/2 | U <sub>A</sub> | U <sub>B</sub> | U <sub>C</sub> |
|---------------|----------------|----------------|----------------|
|               | 90°            | 0°             | 90°            |
| A → 1-2       | 1-2            | ×              |                |
| B → 3-4       | 3-4            |                | ×              |
| C → 5-6       | 5-6            |                | ×              |
| N → 7-8       | 7-8            | ×              | ×              |



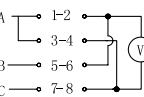
| LW28-20/YH1/3 | 0    | U <sub>A</sub> | U <sub>B</sub> | U <sub>C</sub> |
|---------------|------|----------------|----------------|----------------|
|               | 0°   | 90°            | 180°           | 270°           |
| A → 1-2       | 1-2  | ×              |                |                |
| B → 3-4       | 3-4  |                | ×              |                |
| C → 5-6       | 5-6  |                |                | ×              |
| N → 9-10      | 9-10 | ×              | ×              | ×              |



| LW28-20/YH2/2 | 0   | U <sub>AB</sub> | U <sub>BC</sub> | U <sub>CA</sub> |
|---------------|-----|-----------------|-----------------|-----------------|
|               | 0°  | 90°             | 180°            | 270°            |
| A → 1-2       | 1-2 |                 |                 | ×               |
| B → 3-4       | 3-4 | ×               |                 |                 |
| C → 5-6       | 5-6 |                 | ×               |                 |
| N → 7-8       | 7-8 |                 | ×               | ×               |

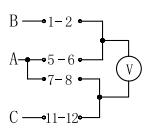


| LW28-20/YH4/2 | U <sub>AB</sub> | U <sub>BC</sub> | U <sub>CA</sub> |
|---------------|-----------------|-----------------|-----------------|
|               | 90°             | 0°              | 90°             |
| A → 1-2       | 1-2             |                 | ×               |
| B → 3-4       | 3-4             | ×               |                 |
| C → 5-6       | 5-6             | ×               | ×               |
| N → 7-8       | 7-8             |                 | ×               |

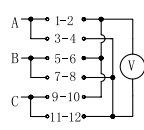


Line voltage phase-change switch

| LW28-20-YH2/3 | 0     | U <sub>AB</sub> | U <sub>BC</sub> | U <sub>CA</sub> |
|---------------|-------|-----------------|-----------------|-----------------|
|               | 0°    | 90°             | 180°            | 270°            |
| B → 1-2       | 1-2   | ×               | ×               |                 |
| A → 5-6       | 5-6   |                 |                 | ×               |
| C → 11-12     | 11-12 |                 | ×               | ×               |

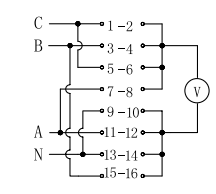


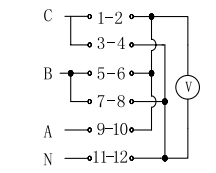
| LW28-20-YH3/3 | 0     | U <sub>AB</sub> | U <sub>BC</sub> | U <sub>CA</sub> |
|---------------|-------|-----------------|-----------------|-----------------|
|               | 0°    | 90°             | 180°            | 270°            |
| A → 1-2       | 1-2   | ×               |                 |                 |
| B → 5-6       | 5-6   |                 | ×               |                 |
| C → 11-12     | 11-12 |                 | ×               | ×               |



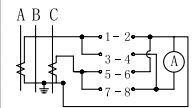
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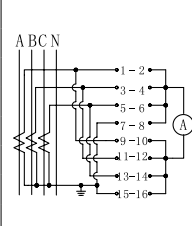
Three-phase line voltage and three-phase phase voltage phase-change switch

| LW28-20-YH5/4   | UCA   | UBC | UAB | 0  | UAN | UBN | UCN  |
|---|-------|-----|-----|----|-----|-----|------|
|   | 135°  | 90° | 45° | 0° | 45° | 90° | 135° |
|  | 1-2   | ×   |     |    |     |     | ×    |
|   | 3-4   |     |     | ×  |     | ×   |      |
|   | 5-6   | ×   |     |    |     |     |      |
|   | 7-8   |     |     |    |     | ×   |      |
|   | 9-10  |     |     |    |     | ×   | ×    |
|   | 11-12 | ×   |     | ×  |     |     |      |
|   | 13-14 |     |     |    |     |     | ×    |
|   | 15-16 |     | ×   |    |     |     |      |

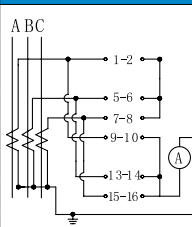
| LW28-20-YH5/3   | UCA   | UBC | UAB | 0  | UAN | UBN | UCN  |
|---|-------|-----|-----|----|-----|-----|------|
|   | 135°  | 90° | 45° | 0° | 45° | 90° | 135° |
|  | 1-2   | ×   |     |    |     |     | ×    |
|   | 3-4   | ×   |     |    |     |     |      |
|   | 5-6   | ×   |     |    |     |     | ×    |
|   | 7-8   |     | ×   | ×  |     |     |      |
|   | 9-10  | ×   |     | ×  |     | ×   |      |
|   | 11-12 |     |     |    |     | ×   | ×    |
|   |       |     |     |    |     | ×   | ×    |

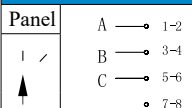
Current measurement transfer switch

| LW28-20 LH2/2   | 0   | IA  | IB   | IC   |
|---|-----|-----|------|------|
|   | 0°  | 90° | 180° | 270° |
|  | 1-2 | ×   |      | ×    |
|   | 3-4 |     | ×    | ×    |
|   | 5-6 | ×   | ×    |      |
|   | 7-8 |     |      | ×    |

| LW28-20 LH2/4  | 0     | IA  | IB   | IC   |
|--|-------|-----|------|------|
|  | 0°    | 90° | 180° | 270° |
|  | 1-2   | ×   | ×    | ×    |
|  | 3-4   | ×   |      | ×    |
|  | 5-6   | ×   | ×    | ×    |
|  | 7-8   |     | ×    | ×    |
|  | 9-10  |     |      | ×    |
|  | 11-12 |     | ×    |      |
|  | 13-14 |     |      | ×    |
|  | 15-16 | ×   |      |      |

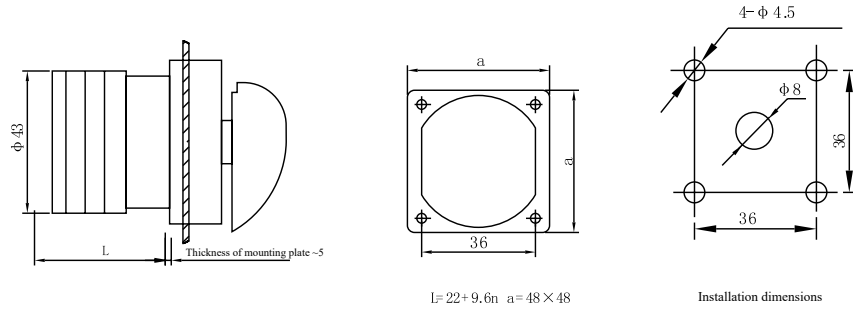
Break during direct start and operation

| LW28-20 LH3/4   | 0     | IA  | IB   | IC   |
|---|-------|-----|------|------|
|   | 0°    | 90° | 180° | 270° |
|  | 1-2   | ×   | ×    | ×    |
|   | 5-6   | ×   |      | ×    |
|   | 7-8   | ×   | ×    | ×    |
|   | 9-10  |     |      | ×    |
|   | 13-14 |     | ×    |      |
|   | 15-16 |     |      | ×    |
|   |       |     |      |      |

| LW28-20/Q1/5.5   | 0   | 1   |
|--|-----|-----|
|  | 0°  | 60° |
|  | 1-2 | ×   |
|  | 3-4 | ×   |
|  | 5-6 | ×   |
|  | 7-8 |     |

## LW28 Series Rotary Change-over Cam Switch

### 5 Outline and Installation Dimensions



### 6 Ordering Notice

Please specify the complete model of switch when ordering.

For example: To order the universal change-over switch, the wiring diagram type is order code LW28-20 D303/2.

| Wiring diagram No. | D303 |    |     |
|--------------------|------|----|-----|
|                    | 60°  | 0° | 60° |
| 1-2                | ×    |    | ×   |
| 3-4                | ×    |    |     |
| 5-6                |      |    | ×   |
| 7-8                | ×    |    | ×   |