

# K1D012ULH

cam changeover switch - 2-pole - 90° - 12 A -  
screw mounting



## Main

|                                                          |                                                              |
|----------------------------------------------------------|--------------------------------------------------------------|
| Range of product                                         | Harmony K                                                    |
| Product or component type                                | Complete cam switch                                          |
| Component name                                           | K1                                                           |
| [I <sub>th</sub> ] conventional free air thermal current | 12 A                                                         |
| Product mounting                                         | Front mounting                                               |
| Fixing mode                                              | Multifixing                                                  |
| Cam switch head type                                     | With front plate 45 x 45 mm                                  |
| Type of operator                                         | Black handle, length = 35 mm                                 |
| Rotary handle padlocking                                 | Without                                                      |
| Presentation of legend                                   | With metallic legend, 1 - 2 black marking                    |
| Cam switch function                                      | Changeover switch                                            |
| Return                                                   | Without                                                      |
| Off position                                             | Without Off position                                         |
| Poles description                                        | 2P                                                           |
| Switching positions                                      | Left: 330°<br>Right: 30°                                     |
| IP degree of protection                                  | IP40 conforming to NF C 20-010<br>IP40 conforming to IEC 529 |

## Complementary

|                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Switching angle                                           | 30 °                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| [U <sub>i</sub> ] rated insulation voltage                | 690 V degree of pollution 3 conforming to IEC 60947-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| [I <sub>the</sub> ] conventional enclosed thermal current | 10 A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Rated operational power in W                              | 8300 W AC-21 / 400 V 3 phases conforming to IEC 947-3<br>600 W AC-3 / 230 V 1 phase conforming to IEC 947-3<br>4800 W AC-21 / 230 V 3 phases conforming to IEC 947-3<br>2200 W AC-23A / 690 V 3 phases conforming to IEC 947-3<br>2200 W AC-23A / 500 V 3 phases conforming to IEC 947-3<br>2200 W AC-23A / 400 V 3 phases conforming to IEC 947-3<br>1500 W AC-3 / 690 V 3 phases conforming to IEC 947-3<br>1500 W AC-3 / 500 V 3 phases conforming to IEC 947-3<br>1500 W AC-3 / 400 V 3 phases conforming to IEC 947-3<br>1500 W AC-3 / 400 V 1 phase conforming to IEC 947-3<br>1500 W AC-23A / 230 V 3 phases conforming to IEC 947-3<br>1100 W AC-3 / 230 V 3 phases conforming to IEC 947-3<br>10500 W AC-21 / 500...660 V 3 phases conforming to IEC 947-3 |
| [I <sub>e</sub> ] rated operational current AC            | 5.6 A at 230 V AC-23A 3 phases conforming to IEC 947-3<br>4.8 A at 400 V AC-23A 3 phases conforming to IEC 947-3<br>4.6 A at 230 V AC-3 3 phases conforming to IEC 947-3<br>3.8 A at 500 V AC-23A 3 phases conforming to IEC 947-3<br>3.3 A at 400 V AC-3 3 phases conforming to IEC 947-3<br>2.8 A at 690 V AC-23A 3 phases conforming to IEC 947-3<br>2.8 A at 500 V AC-3 3 phases conforming to IEC 947-3<br>1.8 A at 690 V AC-3 3 phases conforming to IEC 947-3<br>3 A at 230 V AC-15 conforming to IEC 947-5-1<br>2 A at 400 V AC-15 conforming to IEC 947-5-1<br>1 A at 500 V AC-15 conforming to IEC 947-5-1                                                                                                                                                |
| Electrical durability                                     | 500000 cycles AC-3<br>500000 cycles AC-23<br>1000000 cycles AC-21<br>1000000 cycles AC-15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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|                                        |                                                                                                                                 |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Operating rate                         | 8.333 cyc/mn AC-15<br>2.5 cyc/mn AC-3<br>2.5 cyc/mn AC-23<br>2.5 cyc/mn AC-21                                                   |
| Short-circuit current                  | 10000 A                                                                                                                         |
| Short circuit protection               | 16 A by cartridge fuse, type gG                                                                                                 |
| [Uimp] rated impulse withstand voltage | 6 kV conforming to IEC 947-1<br>4 kV in isolating function                                                                      |
| Contacts operation                     | Slow-break                                                                                                                      |
| Positive opening                       | With                                                                                                                            |
| Electrical connection                  | Captive screw clamp terminals solid, 1 x 2.5 mm <sup>2</sup><br>Captive screw clamp terminals flexible, 2 x 1.5 mm <sup>2</sup> |
| Mechanical durability                  | 1000000 cycles                                                                                                                  |
| CAD overall width                      | 45 mm                                                                                                                           |
| CAD overall height                     | 45 mm                                                                                                                           |
| CAD overall depth                      | 87 mm                                                                                                                           |
| Product weight                         | 0.14 kg                                                                                                                         |

## Environment

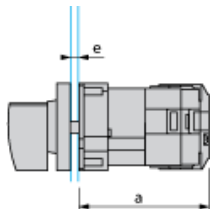
|                                            |                                                                                                                                                            |
|--------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Standards                                  | IEC 60947-5-1 for control circuit<br>IEC 60947-3 for power circuit<br>EN 60947-5-1 for control circuit<br>EN 60947-3 for power circuit<br>CENELEC EN 50013 |
| Product certifications                     | UL 240 V 0.33 hp 1 phase 2 -pole(s)<br>UL 240 V 1 hp 3 phases<br>CSA 240 V 3 hp 3 phases 2 -pole(s)<br>CSA 240 V 1 hp 1 phase                              |
| Protective treatment                       | TC                                                                                                                                                         |
| Ambient air temperature for operation      | -25...55 °C                                                                                                                                                |
| Ambient air temperature for storage        | -40...70 °C                                                                                                                                                |
| Shock resistance                           | 30 gn conforming to IEC 68-2-27                                                                                                                            |
| Vibration resistance                       | 5 gn, 10...150 Hz conforming to IEC 68-2-6                                                                                                                 |
| Class of protection against electric shock | Class II conforming to NF C 20-030<br>Class II conforming to IEC 536                                                                                       |

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Operating Head and Body

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Front Mounting "Multi-Fixing"

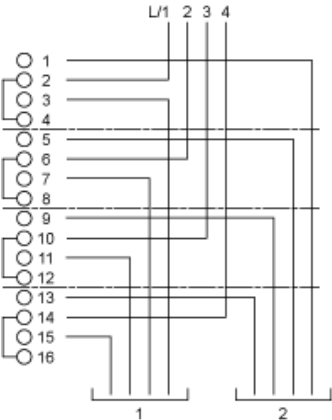


- a 63 mm/2.48 in.  
e support panel thickness 1 mm to 6 mm./0.039 in. to 0.24 in.

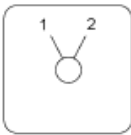
Link Positions (Factory Mounted)

Diagram for 1 to 4-pole Switches

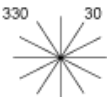
Select the number of poles according to the product characteristics.



Marking



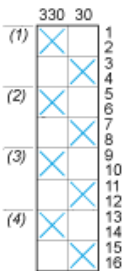
Angular Position of Switch



Switching Program

Diagram for 1 to 4-pole Switches

Select the number of poles according to the product characteristics.



- (1) 1-pole
- (2) 2-pole
- (3) 3-pole
- (4) 4-pole

Convention Used for Switching Program Representation

 Contact closed

 Contact closed in 2 positions and maintained between the 2 positions

 Sealed assembly for auto-maintain control

 Overlapping contacts

 Spring return position: for a switching angle of  $90^\circ$ , spring return is over  $30^\circ$  after the last position (for a maximum of 3 simultaneous contacts).

Example:

