# © 5chmershl Non-IIlluminated 30 mm ||P65 Plastic Key Selector Switches 



ESS21S1.V


ESS32S1.V

| Non-IIIUminated 30mm IP65 Plastic Key Selector Switches* |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Part Number | Price | Color | Drawing <br> Link | Operation |
| ESS21S1.V | $\$ 103.00$ | Black | $\underline{\text { PDF }}$ | 2-position, maintained, key removable left position |
| ESS21S12.V | $\$ 103.00$ | Black | $\underline{\text { PDF }}$ | 2-position, maintained, key removable left and right position |
| ESS21S2.V | $\$ 103.00$ | Black | $\underline{\text { PDF }}$ | 2-position, maintained, key removable right position |
| ESS32S1.V | $\$ 110.00$ | Black | $\underline{\text { PDF }}$ | 3- position, maintained, key removable left position |
| ESS32S123.V | $\$ 110.00$ | Black | $\underline{\text { PDF }}$ | 3- position, maintained, key removable left, right and center |
| position |  |  |  |  |

*Operator only. Purchase contact blocks separately.

| 30 mm P65 Selector Switches Soecifications |  |
| :---: | :---: |
| Toggle material | Aluminum |
| Front ring material | Aluminum |
| Front panel thickness | 1 to 6 mm |
| Mechanical operations | 300,000 |
| Mounting screws tightening torque | $0.6 \mathrm{~N} \cdot \mathrm{~m}[0.44 \mathrm{lb} \cdot \mathrm{ft}]$ |
| Ambient temperature | -25 to $+75^{\circ} \mathrm{C}\left[-13\right.$ to $\left.+167^{\circ} \mathrm{F}\right]$ |
| Shock resistance | $<50 \mathrm{~g}$ |
| Vibration resistance | 5 g |
| Ingress protection rating | IP65 |
| Standards * | IEC 60947-5-1; IEC 60947-1; UL File E57648 |

[^0]
## © 5CHmersfl Non-IIlluminated 30 mm IP65 Plastic Key Selector Switches

Key selector switches with 2-positions
ESS21.V


| Contact Blocks |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Mounting Position 1 |  | Mounting Position 3 |  | Mounting Position 2 |  |
| Left (0) | Right <br> (I) | N.C. Contact | N.O. Contact | N.C. Contact | N. O. Contact | N.C. Contact | N.O. Contact |
| X |  | 1 | 0 | 1 | 0 | 1 | 0 |
|  | X | 0 | 1 | 0 | 1 | 0 | 1 |

Key selector switches with 3-positions

## ESS32.V



| Contact Blocks |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Mounting Position 1 |  | Mounting Position 3 | Mounting Position 2 |  |
| Left (1) | Middle (0) | Right <br> (11) | N.C. Contact | N.O. Contact | Free | N.C. Contact | N. 0. Contact |
| X |  |  | 0 | 1 |  | 1 | 0 |
|  | X |  | 1 | 0 |  | 1 | 0 |
|  |  | X | 1 | 0 |  | 0 | 1 |

## (6) 5CHmER5RL Selector Switches

Important: The mounting flange can be mounted in 4 directions. Please have a look on the position of the mounting flange. Only in the two shown directions the truth table is right.

Note: Only on one side are the numbers for the mounting position of the contact blocks.


## 8) 5CHmER5RL <br> Contact Blocks and Light Terminal Blocks Overview

## Features

- A self-cleaning contact bridge system, known as Elan four-way system, which is particularly suitable for low voltage applications and has a lower switching capacity of $5 \mathrm{VDC} / 3.2 \mathrm{~mA}$ (max. $400 \mathrm{VAC} / 8 \mathrm{~A}$ ). It is designed in the form of a bent twin contact bridge, with parallel and also diagonal operation.
- Block mounting via snap-on stainless steel springs.
- Complete terminal designations visible at a glance in compliance with IEC 60 947-1 (VDE 0660, Part 100) with a complete function and sequence number (refer also to product ranges). The function number identifies the N.C. and N.O. contact. The sequence number specifies the number and the order of the contacts on the complete switching device.
- N.C. contacts with positive opening in compliance with IEC 60 947-5-1 (VDE 0660 Part 200).
- Galvanically isolated contact circuits in 2-pole blocks.
- High resistance to shock and vibrations.


| Technical Specifications |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Contact Blocks | Light Blocks (ELE) | Light Blocks (ELDE) |
| General description | Contact element | Light terminal block w/Ba9S base | Light terminal block w/LED |
| Enclosure material | Plastic, glass fiber reinforced | Plastic, glass fiber reinforced | Plastic, glass fiber reinforced |
| Contact material | Fine-silver, phosphor bronze or brass carrier | - | - |
| Utilization category | $\begin{aligned} & \mathrm{AC}-15: 250 \mathrm{~V} / 8 \mathrm{~A} \\ & \mathrm{DC}-13: 24 \mathrm{~V} / 5 \mathrm{~A} \end{aligned}$ | - | - |
| Suitability for low voltages | $\geq 5 \mathrm{VDC} / 3.2 \mathrm{~mA}$ | - | - |
| Rated insulation voltage Ui | 400 V | 440 V | 440 V |
| Rated impulse withstand voltage $U_{\text {imp }}$ | 4 kV | - | - |
| Thermal test current lthe | 10A | - | - |
| Max. fuse rating | 10A gG D-fuse slow blow | 10A gG T-slow blow | 10A gG T-slow blow |
| Wire size | $0.5 \mathrm{~mm}^{2}$ to $2.5 \mathrm{~mm}^{2}$ (20-14 AWG) |  |  |
| Tightening torque wire connection | Maximum $1 \mathrm{~N} \cdot \mathrm{~m}(0.74 \mathrm{lb} \cdot \mathrm{ft})$ |  |  |
| NEMA contact rating | A300 / P300 | - | - |
| Switching frequency | $1200 \mathrm{~s} / \mathrm{h}$ | - | - |
| Switching capacity | $5 \mathrm{VDC} / 3.2 \mathrm{~mA}(\mathrm{max} 400 \mathrm{VAC} / 8 \mathrm{~A})$ | - | - |
| Mechanical life | 10,000,000 operation | - | - |
| Resistance to shock | $110 \mathrm{~g} / 4 \mathrm{~ms}$ to $30 \mathrm{~g} / 18 \mathrm{~ms} \mathrm{no}$ bouncing | - | - |
| Resistance to vibration | $>20 \mathrm{~g} / 10 \mathrm{~ms} \mathrm{to} 200 \mathrm{~Hz}$ | - | - |
| Ambient temperature | -25 to $+80^{\circ} \mathrm{C}\left[-13\right.$ to $\left.+176^{\circ} \mathrm{F}\right]$ |  |  |
| Ingress protection rating | IP20 terminals / IP40 switching compartment | IP20 terminals | IP20 terminals |
| Standards | IEC 60947-5-1; IEC 60947-1; UL File E57648 |  |  |


| NEMA Contact Rating Designation |  |  |  |
| :---: | :---: | :---: | :---: |
|  | Thermal Current | Voltage | Volt amperes |
| A300 | 10 | 300 AC | N/A |
| P300 | 5 | 300 DC | 138 |

## (5 5chmershl Contact Blocks



EF03.2


EF220.2


EF303.2


| Mounting Flange |  |  |  |
| :--- | :---: | :---: | :---: |
| Part Number | Price | Description | Drawing Link |
| EFM | $\$ 5.00$ | Schmersal mounting flange, replacement. For use with E and N series pushbuttons. | PDF |

## S 5 5LHERERL Modullar Design Flexibility




[^0]:    * To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

