## Safety switch

Series SHS3Z - ASI

## Description ASI SHS3Z SA R

## Operating diagram



Point of fixation is in range of $0^{\circ} \ldots 270^{\circ}$ free selectable.

$$
\begin{array}{ll}
\square & \begin{array}{l}
\text { Tolerances Switching angle (N.C.) }+/-1,5^{\circ} \\
\text { Tolerances Forced disconnect torque }+10 \% \\
\text { Tolerances Forced disconnect angle + } 2^{\circ}
\end{array}
\end{array}
$$

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Swivel range: $0^{\circ}$ bis $270^{\circ}$

Technical Data

| Electrical data |  |  |
| :---: | :---: | :---: |
| Operating voltage | U | 18 ... 31,6 V; via AS-interface, reverse-polarity proof |
| Operating current | I | $<40 \mathrm{~mA}$ |
| AS-i Specifications |  | Profile S-0.B <br> IO-Code: 0x0 ID-Code: $0 \times B$ <br> ID-Code1:0xF ID-Code2: 0xE |
| AS-i Inputs |  | Contact 1: Data bits D0/D1 = static 00 or dynamic code transmission <br> Contact 2: Data bits D2/D3 = static 00 or dynamic code transmission |
| Parameter bits |  | no function |
| AS-i Address |  | preset address: 0 |


| Mechanical data |  |
| :---: | :---: |
| Switch | PBT |
| Hinge | zinc die cast / nickel matt |
| Indication | LEDs for slave and bus state |
| Ambient air temperature | $-25^{\circ} \mathrm{C} . . .+70^{\circ} \mathrm{C}$ (no freezing over/ no condensation) |
| Contact type | 2 NC (slow-action, Zb) |
| Mechanical life | $10^{6}$ operating cycles |
| Switching frequency | Max. 300 operations/h |
| Mounting | $4 \times \mathrm{M} 6$ screws DIN EN ISO 7984 on flat and stiff ground |
| Connection | Plug connector M12 male |
| Plug connection | 1: AS-i + 2: free <br> 3: AS-i - 4: free |
| Weight | $\approx 0,65 \mathrm{~kg}$ |
| Mounting position | any |
| Protection type | IP67 acc. to EN 60529 |
| Switching angle | $\pm 3^{\circ}$ from fixation point for the N.C. contacts |
| Forced disconnect angle | $6^{\circ}+2^{\circ}$ from fixation point in both directions (for $0^{\circ}-3^{\circ}$ only in Plus-direction, for $267^{\circ}-270^{\circ}$ only in Minus-direction) |
| Forced disconnect torque | $1,5 \mathrm{Nm}$ |
| Mechanical load <br> (Forces see the illustration page 1) | $\begin{aligned} & \mathrm{F}_{\mathrm{R}_{1}}=\max .1200 \mathrm{~N} \\ & \mathrm{~F}_{\mathrm{R} 2}=\max .500 \mathrm{~N} \\ & \mathrm{~F}_{\mathrm{A}}=\max .1200 \mathrm{~N} \\ & \hline \end{aligned}$ |


| Standards |  |
| :--- | :--- |
|  |  |
| VDE 0660 T100, DIN EN 60947-1, IEC 60947-1 |  |
|  | VDE 0660 T200, DIN EN 60947-5-1, IEC 60947-5-1 |


| EU Conformity |
| :--- |
| acc. to directive EMC |


| ID for safety engineering |  |
| :--- | :--- |
| Electronics | MTTFd $>100$ years |
|  | PFH $1,05 \times 10^{-9} 1 / \mathrm{h}$ |
| Mechanics | B10d $2 \times 10^{6}$ cycles |

## Notes

The degrees of protection specified (IP code) applies only to a properly closed cover and the use of an equivalent connector.
The safety guard shall always be mounted using two SHS3Z at least! See max. load. If the risk assessment of the machine permits a single-channel monitoring a blank hinge can used as bearing element.
High forces, unfavourable force application as well as dynamic loads can shorten the service life.
The manufacturer / supplier of the machine / equipment is obliged to take the applicable standards for the calculation of the safety distances of separating safety guards to hazardous areas into account.
Especially these standards apply: EN 349, EN 953, EN 1088, DIN EN ISO 13857, ... .
The switch shall not be used as a mechanical stop.

