


## BRIEF INFORMATION Rocker switches

$\rightarrow$ Series 3100
$\rightarrow$ Series 4100
$\rightarrow$ Series 4570/7832

## PRODUCT FEATURES

Series 3100
$\rightarrow$ Waterproof and dustproof modular switch series for electrical systems (IP 68)
$\rightarrow$ Highly reliable in extreme conditions
$\rightarrow$ Lasered symbols are lit by integrated LEDs
$\rightarrow$ Individual application by means of abrasion-resistant lasered symbols

## Series 4100

$\rightarrow$ Modular switch series with self-cleaning microswitch suitable for electrical and electronic systems
$\rightarrow$ Reliable switching of small currents without soiling the contacts
$\rightarrow$ Long service life
$\rightarrow$ Timeless design
$\rightarrow$ Lasered symbols are lit by integrated LEDs
$\rightarrow$ Individual application by means of abrasion-resistant lasered symbols

Series 4570/7832
$\rightarrow$ Basic program for simple electrical systems, well-tried for more than 20 years
$\rightarrow$ Application for price-conscious consumers
$\rightarrow$ Symbol cards according to DIN standard or in the customer's choice of colors
$\rightarrow$ Pilot lighting realised by bulbs or LEDs (to be ordered separately)

## SWITCH SERIES 3100

The waterproof modular switch series for electrical systems meets the requirements of protection class IP 68. The lasered symbols are illuminated by integrated LEDs.

## The advantages of the product range:

$\rightarrow$ IP 68 according to test standard IEC EN 60529
$\rightarrow$ Highly reliable even under extreme conditions
$\rightarrow$ Ideal for use in agricultural and construction machinery
$\rightarrow$ Most diverse switch functions in $12 / 24 \mathrm{~V}$

- Normally open contact/ changeover contact
- Momentary-contact switch / maintained-contact switch
- Locking functions
- Hazard warning light switch
$\rightarrow$ Manifold standard and customer-specific laser symbols
$\rightarrow$ Specific symbol illumination by using one or two LEDs
$\rightarrow$ Easy to install, either directly in the mounting hole or using a modular mounting frame
$\rightarrow$ Indicator light in the same design for safety-related feedback

| Technical details |  |
| :---: | :---: |
| Mounting hole | $21.1 \mathrm{~mm} \times 37.0 \mathrm{~mm}$ |
| Rocker material | PC transparent, painted |
| Base plate material | PBT |
| Blade terminals | $6.3 \mathrm{~mm} \times 0.8 \mathrm{~mm}$ |
| Terminal material | CuZn silver-plated |
| Light source | Up to two LEDs, one pilot lighting, green $1 \times$ function lighting, red Indicator lights available in amber and green |
| Symbol type | lasered |
| Service life | 50,000 switching cycles at $20 \mathrm{~A} / 12 \mathrm{~V}$ ohmic <br> 50,000 switching cycles at $15 \mathrm{~A} / 24 \mathrm{~V}$ ohmic |
| IP-rating | Terminal side: IP66, Actuator side: IP68 |
| Operating temperature | $-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$ |
| Storage temperature | $-40^{\circ} \mathrm{C}$ to $+85^{\circ} \mathrm{C}$ |
| Dashboard thickness [mm] | For direct installation 1.6 ... 6.3 With installation frame 2.5 ... 6.5 |



## Accessories

Installation frame

| Modular |  |
| :--- | :--- |
| End piece, left, right | 9AR 169 209-102/-107 |
| Center piece | 9AR 169 208-102/-107 |
| Dummy cover | 9HB 172 229-101/-107 |
| Female connector housing | 8JD 010 076-102/-107 |
| Type I | 8JD 010 076-112/-117 |
| Type II | 8JD 010 076-122/-127 |
| Type III |  |
| Blade terminal female 6.3 mm | 8KW 744 882-003 |
| $0.5 \mathrm{~mm}^{2}-1 \mathrm{~mm}^{2}$ | 8KW 744 825-003 |
| $1.0 \mathrm{~mm}^{2}-2.5 \mathrm{~mm}^{2}$ | 8PE 197 631-001 |
| Disassembly |  |

## SWITCH SERIES 4100

The modular switch series with self-cleaning contacts is suitable for modern electrical and electronic systems. This also ensures reliable switching of small currents without contaminating the contacts. The series stands out from the crowd with its timeless design and with lasered symbols illuminated by integrated LEDs.

## The strength of this range:

$\rightarrow$ Modular switch construction
$\rightarrow$ Realisation of a wide range of 12 V and 24 V switching functions:

- N/O contact/changeover contact
- Momentary-contact / maintained-contact switches
- Locking function
- Hazard warning light switch
$\rightarrow$ Manifold standard and customer-specific symbols
$\rightarrow$ Specific and reliable long-life symbol illumination by using up to four LEDs
$\rightarrow$ Easy to install, either directly in the mounting hole or using a modular mounting frame
$\rightarrow$ Display lights in the same design for safety-related feedback


| Accessories |  |
| :--- | :--- |
| Installation frame | 9AR 168 396-002/-007 |
| one-way |  |
| Modular | 9AR 169 209-002/-007 |
| End piece, left | 9AR 169 210-002/-007 |
| End piece, right | 9AR 169 208-002/-007 |
| Center piece | 9HB 172 229-002/-007 |
| Dummy cover | 8JD 010 076-002/-007 |
| Female connector housing, 10-pole |  |
| Blade terminal female 2.8 mm | 8KW 863 934-003 |
| Junior Power Timer $0.5 \mathrm{~mm}^{2}-1 \mathrm{~mm}^{2}$ | 8KW 863 934-023/-024 |

## SWITCH SERIES 4570/7832

The basic program for simple electrical systems that has proved itself over more than 20 years. The symbol cards are available to DIN standard or in the customer's choice of colors. The symbols are lit by incandescent bulbs or LEDs, which can be ordered as accessories.

## The strength of the product range:

$\rightarrow$ Complete, automotive functional range (standard and specified functions)
$\rightarrow$ One-stage and two-stage switches
$\rightarrow$ Momentary-contact or maintained-contact switches
$\rightarrow$ Effective locking system
$\rightarrow 12 \mathrm{~V} / 24 \mathrm{~V}$ voltage
$\rightarrow$ LED and incandescent technology
$\rightarrow$ Manifold lock-in symbol cards
$\rightarrow$ Initial configuration and retrofitting due to standardised $41.1 \times 22.1 \mathrm{~mm}$ mounting hole and mounting frame

| Technical details |  |
| :---: | :---: |
| Mounting hole | 22.1 mm x 44.1 mm |
| Rocker material 4570 | PA6-GF30 / with red button: PA6 |
| Rocker material 7832 | PA6-GF30 / parts with button lock: PA6 |
| Base plate material | POM |
| Housing material | Plastic, black, grained |
| Blade terminals | 6.3 mm , DIN 46244 |
| Light source | $\begin{aligned} & \text { GL W5 / } 1.2 \\ & 12 \mathrm{~V} / 24 \mathrm{~V}, \mathrm{DIN} 72601 \\ & \text { LED } 12 \mathrm{~V}-32 \mathrm{~V} \end{aligned}$ |
| Symbol type | Replaceable symbol cards |
| Service life $13.5 \mathrm{~V}$ | 250,000 switching cycles at 6 A 150,000 switching cycles at 10 A 20,000 switching cycles at 16 A |
| Service life $27.5 \mathrm{~V}$ | 150,000 switching cycles at 3 A 100,000 switching cycles at 5 A 20,000 switching cycles at 8 A |
| IP-rating | Suitable for indoor use |
| Operating temperature | $-35^{\circ} \mathrm{C}$ to $+65^{\circ} \mathrm{C}$ |
| Storage temperature | $-40^{\circ} \mathrm{C}$ to $+90^{\circ} \mathrm{C}$ |
| Dashboard thickness [mm] | For direct installation and with installation frame 1 ... 2.5 |



| Accessories |  |
| :---: | :---: |
| Bulb-sockets |  |
| with 12 V bulb | 9FF 713 627-001 |
| with 24 V bulb | 9FF 713 627-011 |
| with $12 \mathrm{~V}-32 \mathrm{~V}$ LEDs, Ø 5 mm | 9FF 713 627-031 |
| Installation frame |  |
| three-way | 8HG 714 504-001 |
| six-way | 8HG 713 626-001 |
| Modular |  |
| End piece, left, right | 8HG 716 734-001/-007 |
| Center piece | 8HG 716 735-001/-007 |
| Dummy cover | 9HB 713 629-001/-007 |


| Female connector housing |  |
| :--- | :--- |
| 8-pole | 8JA 713 631-001 |
| 2-pole | 8JA 715 600-001 |

Warning lights for switch bank 004 570-...

| with 12 V bulb | 2AA $713628-001$ |
| :--- | :--- |
| with 24 V bulb | 2AA $713628-011$ |
| with 12 V and 24 V LEDs | 2AA 713 628-051 |

Warning lights for switch bank 007 832-...

| with 12 V bulb | 2AA 713 628-021 |
| :--- | :--- |
| with 24 V bulb | 2AA 713 628-031 |
| with 12 V and 24 V LEDs | 2AA 713 628-041 |

Blade terminal female 6.3 mm

| $0.5 \mathrm{~mm}^{2}-1 \mathrm{~mm}^{2}$ | 8 KW 744 819-003 |
| :--- | :--- |
| $1.5 \mathrm{~mm}^{2}-2.5 \mathrm{~mm}^{2}$ | $8 \mathrm{KW} \mathrm{701} \mathrm{235-033/-034}$ |

