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VS116B/230, VS116K, VS116U, VS308K, VS308U, VS316

## Power relays

## Characteristics

## Symbol

- Power relay used for switching larger load output, strengthen or "multiplying" contacts of the existing device.
- Relays VS316/24, VS316/230 enable connection to a 3-phase circuit
- In the design 1-MODULE, DIN rail mounting, output status indicated by high intensity LED with choice of LED color (red, green, yellow, blue or white LED*).
- VS116/B230 MINI, mounting in installation box or ceilings, enabling switching of lights, motors for blinds or awnings.
- For VS116/B230 status of output indicated by LED on front panel of device.


## Notes

Max. time of changeover of contact is 10 ms .
VS316/24 or VS316/230 enables switching of different phases or 3 phase voltage.
*Possibility to choose blue, white and yellow color of LED for power relays line VS in case of minimal order quantity 100 pcs .

VS116B/230


VS116K


VS116U


VS308K


VS308U, VS316/24, VS316/230


## Description

VS116K, VS116U

terminal A3 only for VS116K

VS308K, VS308U

terminal A3 only for VS308K

VS116B/230


1. Indication LED
2. Supply terminals
3. Output changeover contact
4. 2nd output changeover contact
5. 1st output changeover contact
6. 3rd output changeover contact
7. Output indication
8. Neutral wire
9. Phase wire

VS316/24, VS316/230


| Supply terminals: | L-N | A1-A2 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Voltage range: | $\begin{aligned} & \mathrm{AC} 230 \mathrm{~V} / \\ & 50-60 \mathrm{~Hz} \end{aligned}$ | $\begin{aligned} & \hline \mathrm{AC} 230 \mathrm{~V} / \\ & 50-60 \mathrm{~Hz} \end{aligned}$ | $\begin{gathered} \text { AC/DC } 12-240 \mathrm{~V} / \\ 50-60 \mathrm{~Hz} \end{gathered}$ | $\begin{aligned} & \mathrm{AC} 230 \mathrm{~V} / \\ & 50-60 \mathrm{~Hz} \end{aligned}$ | $\begin{gathered} \text { AC/DC } 12-240 \mathrm{~V} / \\ 50-60 \mathrm{~Hz} \end{gathered}$ | $\begin{gathered} \mathrm{AC} / \mathrm{DC} 24 \mathrm{~V} / \\ 50-60 \mathrm{~Hz} \end{gathered}$ | $\begin{aligned} & \mathrm{AC} 230 \mathrm{~V} / \\ & 50-60 \mathrm{~Hz} \end{aligned}$ |
| Burden: | $\begin{gathered} \text { AC max. } 7.5 \mathrm{VA} / \\ 1 \mathrm{~W} \\ \hline \end{gathered}$ | $\begin{gathered} \hline \mathrm{AC} \text { max. } 7.5 \mathrm{VA} / \\ 1 \mathrm{~W} \\ \hline \end{gathered}$ | $\begin{gathered} \hline \mathrm{AC} 0.7-3 \mathrm{VA} / \mathrm{DC} \\ 0.5-1.7 \mathrm{~W} \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { AC max. } 10.3 \mathrm{VA} / \\ 1.1 \mathrm{~W} \\ \hline \end{gathered}$ | $\begin{gathered} \mathrm{AC} 0.7-3 \mathrm{VA} / \mathrm{DC} \\ 0.5-1.7 \mathrm{~W} \\ \hline \end{gathered}$ | $\begin{gathered} \hline 1.6 \mathrm{VA} / \\ 1.2 \mathrm{~W} \end{gathered}$ | 2.5 VA |
| Supply terminals: | x | A1-A3 | x | A1-A3 |  | x |  |
| Voltage range: | x | $\begin{gathered} \text { AC/DC } 24 \mathrm{~V} \\ (50-60 \mathrm{~Hz}) \end{gathered}$ | $x$ | $\begin{gathered} \mathrm{AC} / \mathrm{DC} 24 \mathrm{~V} \\ (50-60 \mathrm{~Hz}) \end{gathered}$ |  | $x$ |  |
| Burden: | x | AC 1 VA/ DC 1W | x | AC 1 VA/ DC 1W |  | x |  |
| Supply voltage tolerance: | -15\%; +10\% |  |  |  |  |  |  |
| Max. dissipated power (Un + terminals): | 4 W |  |  | 3 W |  | 8 W | 6 W |

## Output

| Number of contacts: | $1 \times$ changeover/ SPDT ( $\mathrm{AgSnO}_{2}$ ) |  | $3 \times$ changeover/TPDT (AgNi / Silver Alloy) | $3 \times$ changeover/ TPDT ( $\mathrm{AgSnO}_{2}$ ) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Current rating: |  | $16 \mathrm{~A} / \mathrm{AC1}$ | $8 \mathrm{~A} / \mathrm{AC1}$ | 16A/ AC1 |  |
| Breaking capacity: | 4000VA/ AC1, 384W/ DC |  | 2000VA/ AC1, 192W/ DC | $4000 \mathrm{VA} / \mathrm{AC1}, 384 \mathrm{~W} / \mathrm{DC}$ |  |
| Inrush current: | $30 \mathrm{~A} /<3 \mathrm{~s}$ |  | $10 \mathrm{~A} /<3 \mathrm{~s}$ | $30 \mathrm{~A} /<3 \mathrm{~s}$ |  |
| Switching voltage: | $250 \mathrm{~V} \mathrm{AC1/24} \mathrm{~V} \mathrm{DC}$ |  |  |  |  |
| Output indication: | red LED high intensity of LED |  |  |  |  |
| Mechanical life: | $3 \times 10^{7}$ |  |  | $1 \times 10^{7}$ |  |
| Electrical life (AC1): | $0.7 \times 10^{5}$ |  |  | $1 \times 10^{5}$ |  |
| Time between switching: | min. 2 s |  |  | 20 ms | 50 ms |

## Other information

| Operating temperature: | $-20 . .+55^{\circ} \mathrm{C}$ |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Storage temperature: | $-30 . .+70^{\circ} \mathrm{C}$ |  |  |  |  |  |  |
| Electrical strength: | 4 kV (supply-output) |  |  |  |  |  |  |
| Operating position: | any |  |  |  |  |  |  |
| Mounting: | free at connecting wire | DIN rail EN 60715 |  |  |  |  |  |
| Protection degree: | IP30 IP40 from front panel / IP20 terminals |  |  |  |  |  |  |
| Overvoltage category: | III. |  |  |  |  |  |  |
| Pollution degree: | 2 |  |  |  |  |  |  |
| Max. cable size ( $\mathrm{mm}^{2}$ ): | $2 \times 0.75 \mathrm{~mm}^{2}$ (AWG 18), <br> $3 \times 2.5 \mathrm{~mm}^{2}$ (AWG 10) | max. $1 \times 2.5$ or $2 \times 1.5$ <br> max. $1 \times 2.5$ (AWG 12) |  |  |  |  |  |
| Dimensions: | $\begin{gathered} 49 \times 49 \times 21 \mathrm{~mm} \\ \left(2^{\prime \prime} \times 2^{\prime \prime} \times 0.8^{\prime \prime}\right) \\ \hline \end{gathered}$ | $90 \times 17.6 \times 64 \mathrm{~mm}$ (3.5" $\left.\times 0.7^{\prime \prime} \times 2.5^{\prime \prime}\right)$ |  |  |  |  |  |
| Weight: | 48 g (1.7 oz.) | 56 g (2 oz.) | 59 g (2.1 oz.) | 78 g (2.75 oz.) | 80 g (2.8 oz.) | 90 g (3.17 oz.) | 93 g (3.3 oz.) |
| Standards: | EN 61810-1, EN 61010-1 |  |  |  |  |  |  |

## Warning

Device is constructed for connection forf 1-phase main 230 V or AC 12-240 V and must be installed according to norms valid in the state of application. Connection according to the details in this direction. Installation, connection, setting and servicing should be installed by qualified electrician staff only, who has learnt these instruction and functions of the device. This device contains protection against overvoltage peaks and disturbancies in supply. For correct function of the protection of this device there must be suitable protections of higher degree ( $\mathrm{A}, \mathrm{B}, \mathrm{C}$ ) installed in front of them. According to standards elimination of disturbancies must be ensured. Before installation the main switch must be in position "OFF" and the device should be de-energized. Don't install the device to sources of excessive electro-magnetic interference. By correct installation ensure ideal air circulation so in case of permanent operation and higher ambient temperature the maximal operating temperature of the device is not exceeded. For installation and setting use screw-driver cca 2 mm . The device is fully-electronic -installation should be carried out according to this fact. Non-problematic function depends also on the way of transportation, storing and handling. In case of any signs of destruction, deformation, non-function or missing part, don't install and claim at your seller it is possible to dismount the device after its lifetime, recycle, or store in protective dump.

VS116K, VS116U, VS316

| Type of load | $\widetilde{\square}$ <br> AC1 |  |  | uncompensated |  | (M) | 3 AC6a | $m_{A C 7 b}^{m}$ | $\xrightarrow{\square}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mat. contacts $\mathrm{AgSnO}_{2^{\prime}}$ contact 16A | 250V / 16A | 250V / 5A | 250V / 3A | 230V / 3A (690VA) | $\begin{array}{\|c\|} 230 \mathrm{~V} / 3 \mathrm{~A}(690 \mathrm{VA}) \\ \text { to max. input C=14uF } \end{array}$ | 1000W | x | 250V / 3A | x |
| Type of load |  | $\bar{m}$ <br> AC14 |  |  |  |  | $\begin{aligned} & \square- \\ & \mathrm{DC12} \end{aligned}$ | $\bar{m}$ <br> DC13 | $\bar{m}$ <br> DC14 |
| Mat. contacts $\mathrm{AgSnO}_{2^{\prime}}$ contact 16A | x | 250V / 6A | 250V / 6A | 24V/10A | 24V/3A | 24V/2A | 24V/6A | 24V/2A | x |

VS308K, VS308U

| Type of load | $\widetilde{\square}$ <br> AC1 |  |  | $=1$ $\square$ <br> AC5a uncompensated | compensated |  | $3 \mid \xi$ | $m_{A C 7 b}^{m}$ | $\begin{aligned} & \square-12 \\ & \mathrm{AC1} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Mat. contacts AgNi , contact 8A | 250V/8A | 250V/3A | 250V/2A | 230V / 1.5A (345VA) | x | 300W | x | 250V/1A | 250V/1A |
| Type of load |  | $\bar{m}$ <br> AC14 | AC15 |  |  |  | $\begin{aligned} & \square-\square \\ & \mathrm{DC12} \\ & \hline \end{aligned}$ | $\bar{m}$ <br> DC13 | $\bar{m}$ <br> DC14 |
| Mat. contacts AgNi , contact 8A | x | 250V / 3A | 250V/3A | 24V/8A | 24V/3A | 24V/2A | 24V/8A | 24V/2A | x |

