

## Innovative solutions for industrial controls and power distribution

Reliable components and systems are essential in ensuring smooth power distribution in buildings and industrial plants.

With SIRIUS, SENTRON, SIVACON and ALPHA, we offer an innovative portfolio for standard-compliant and demand-oriented applications.

Efficient engineering tools and innovative cloud-based solutions can be flexibly tailored to individual requirements.


We are there when you need us
Your personal contact can be found at www.siemens.com/lowvoltage/contact

## Catalog LV $10 \cdot 04 / 2023$

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## $\frac{\text { \#En }}{\frac{\text { घNet }}{10}}$

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Technical specifications
The technical specifications are for general information purposes only. Always heed the operating instructions and notices on individual products during assembly, operation and maintenance.

All illustrations are not binding.
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## Low-Voltage Power Distribution and Electrical Installation Technology

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## Electrical switching on the safe side

Control and automatic functions always employ electrical switching.

Remote control switches for pulse controls, switching relays, or Insta contactors switch electrical loads.

Our low-voltage circuit protection technology
 offers a wide variety of contact versions and rated currents for the different requirements of these devices.

Safety, convenience and energy savings - these characterize automatic switching.

## Switching Devices

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## Information + ordering

## All the important things at a glance

For information about switching devices, please visit our website www.siemens.com/switching-devices

## Your product in detail

The relevant tender specifications can be found at www.siemens.com/lowvoltage/tenderspecifications
Use our conversion tool for quick and easy conversion to Siemens products www.siemens.com/conversion-tool

## Everything you need for your order

You will find an overview of your products at

- Switching devices sie.ag/2m4eG5M

Direct forwarding to the individual products in the Industry Mall by clicking on the article number in the catalog or entering this web address incl. article number www.siemens.com/product_catalog_SIEP?Article No.

## Contact persons in your region

Competent expert advice on technical questions with a wide range of demand-optimized services for all our products and systems.
Assistance with technical queries is provided at www.siemens.com/support-request

## ... can be found in our online services

## Commissioning + operation

## (i) Your product in detail

Detailed technical information is available to you at www.siemens.com/lowvoltage/product-support

- Operating instructions
- Certificates

Comprehensive mobile support via the Siemens Industry Online Support app available for download from the App Store and Play Store

Provision of 3D data (step and u3d data formats)

- Siemens Industry Mall www.siemens.com/lowvoltage/mall
- Image database
www.siemens.com/lowvoltage/picturedb
Engineering data for CAD or CAE systems are available in the CAx Download Manager at
www.siemens.com/cax


## 目目 Manuals

Manuals are available for downloading at www.siemens.com/lowvoltage/manuals

- Configuration Manual
- Switching devices (45315361)


## Face-to-face or online training

Our training courses can be found at
www.siemens.com/sitrain-lowvoltage

- Basic principles of electrical engineering (WT-LVBGET)



## The fast way to get you to our online services

This page provides you with comprehensive information and links on switching devices www.siemens.com/lowvoltage/product-support (109769083)

## System overview

Basic units and accessories

Installation switching devices


## 

Holders

## Note:

You will find a detailed range of accessories with the basic units.

## 5TE8 control switches



Further technical specifications
5TE8

| Standards |  |  |
| :---: | :---: | :---: |
| Standards |  | IECIEN 60947-3 (VDE 0660-107), IECIEN 60669-1 (VDE 0632-1) |
| Approvals |  | IECIEN 60947-3 (VDE 0660-107), GB14048.3-2008 CCC |
| Supply |  |  |
| Rated power dissipation $P_{v}$ | Per pole | 0.7 VA |
| Contacts |  |  |
| Minimum contact load |  | $10 \mathrm{~V} ; 300 \mathrm{~mA}$ |
| Rated making/rated breaking capacity | At p.f. $=0.65$ | $60 \mathrm{~A} / 60 \mathrm{~A}$ |
| Rated short-time withstand current $I_{\text {cw }}$ per conducting path at p.f. $=0.7$ | Up to 0.2 s | 650 A |
|  | Up to 0.5 s | 400 A |
|  | Up to 1 s | 290 A |
|  | Up to 3 s | 170 A |
| Thermal rated current $t_{\text {th }}$ |  | 20 A |
| Electrical endurance/mechanical service life | Actuations | 10000/25000 |
| Safety |  |  |
| Clearances | Open contacts | $2 x>2 \mathrm{~mm}$ |
|  | Between the poles | $>7 \mathrm{~mm}$ |
| Creepage distances |  | >7 mm |
| Sealable switch position |  | Yes |
| Separate handle locking device |  | Yes |
| Rated short-circuit making capacity $I_{\text {cm }}$ |  | 10 kA |
| Rated impulse voltage $U_{\text {imp }}$ |  | $>5 \mathrm{kV}$ |
| Connections |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ1 |
|  | Max. tightening torque | 0.8 ... 1.0 Nm |
| Ambient conditions |  |  |
| Permissible ambient temperature |  | $-5 \ldots+40^{\circ} \mathrm{C}$ |
| Resistance to climate at 95\% relative humidity | Acc. to DIN 50015 | $45^{\circ} \mathrm{C}$ |

## Accessories



## 5TE48 pushbuttons

## With/without LED

| Contacts | $U_{\mathrm{e}} \mathrm{AC}$ | Mounting width |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 NO | 230 V | 1 MW |  | - |  | - | $1 \times$ red | 5 TE4821 |
|  |  |  |  | - |  | - |  | - |
| 2x1 NO | 400 V | 1 MW | $1 \times$ green, $1 \times$ blue | 5TE4804 |  | - |  | - |
| 2 NO | 400 V | 1 MW |  | - | $1 \times$ gray | 5TE4811 | $1 \times$ red | 5 TE4823 |
| $1 \mathrm{NO}+1 \mathrm{NC}$ | 400 V | 1 MW | $1 \times$ gray | 5TE4800 | $1 \times$ gray | 5 TE4810 |  | - |
|  |  |  | $1 \times$ red | 5TE4805 |  | - | $1 \times$ red | 5 TE4820 |
|  |  |  | $1 \times$ green | 5TE4806 |  | - |  | - |
|  |  |  | $1 \times$ yellow | 5 TE4807 |  | - |  | - |
|  |  |  | $1 \times$ blue | 5TE4808 |  | - |  | - |
| 2 x (1 NO + 1 NC ) | 400 V | 1 MW |  | - |  | - |  | - |
| $2 \mathrm{NO}+2 \mathrm{NC}$ | 400 V | 1 MW | $1 \times$ gray | 5TE4801-2 | $1 \times$ gray | 5TE4811-2 |  | - |
| $3 \mathrm{NO}+1 \mathrm{NC}$ | 400 V | 1 MW | $1 \times$ gray | 5TE4802 | $1 \times$ gray | 5TE4812-1 |  | - |
| $3 \mathrm{NO}+\mathrm{N}$ | 400 V | 1 MW |  | - | $1 \times$ gray | 5 TE4812 |  | - |
| 2 NC | 400 V | 1 MW |  | - |  | - | $1 \times$ red | 5TE4824 |
| 4 NC | 400 V | 1 MW |  | - | $1 \times$ gray | 5 TE4813 |  | - |
| 2 CO | 400 V | 1 MW |  | - | $1 \times$ gray | 5TE4814 |  | - |

Further technical specifications
5TE48

| Standards |  |  |
| :---: | :---: | :---: |
| Standards |  | IECIEN 60947-3 (VDE 0660-107), IECIEN 60669-1 (VDE 0632-1) |
| Approvals |  | IECIEN 60947-3 (VDE 0660-107) |
| Supply |  |  |
| Rated power dissipation $P_{v}$ | Per pole | 0.6 VA |
| Contacts |  |  |
| Minimum contact load |  | $10 \mathrm{~V} ; 300 \mathrm{~mA}$ |
| Rated making/rated breaking capacity | At p.f. $=0.65$ | 60 A/60 A |
| Rated short-time withstand current $I_{\text {cw }}$ per conducting path at p.f. $=0.7$ | Up to 0.2 s | 650 A |
|  | Up to 0.5 s | 400 A |
|  | Up to 1 s | 290 A |
|  | Up to 3 s | 170 A |
| Thermal rated current $I_{\text {th }}$ |  | 20 A |
| Mechanical service life | Actuations | 25000 |
| Safety |  |  |
| Clearances | Open contacts | $2 x>2 \mathrm{~mm}$ |
|  | Between the poles | $>7 \mathrm{~mm}$ |
| Creepage distances |  | $>7 \mathrm{~mm}$ |
| Rated impulse voltage $U_{\text {imp }}$ |  | $>5 \mathrm{kV}$ |
| Connections |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ1 |
|  | Max. tightening torque | 0.8 ... 1.0 Nm |
| Ambient conditions |  |  |
| Permissible ambient temperature |  | $-5 \ldots+40^{\circ} \mathrm{C}$ |
| Resistance to climate at 95\% relative humidity | Acc. to DIN 50015 | $45^{\circ} \mathrm{C}$ |


|  |  | Double pushbuttons with maintained-contact function <br> and/or momentary-contact function |  |
| :--- | :--- | :--- | :--- |
| With LED |  | Without LED | With LED |

## Accessories

| LEDs for manual spare part |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $I_{\text {e }}$ | $U_{\text {e }}$ | Color | Article No. |
|  | 0.4 A | $12 . . .60 \mathrm{~V}$ ACIDC | White | 5TG8056-0 |
|  |  |  | Red | 5TG8056-1 |
|  |  |  | Yellow | 5TG8056-2 |
|  |  |  | Green | 5TG8056-3 |
|  |  |  | Blue | 5TG8056-4 |
|  |  | 115 V AC/DC | White | 5TG8057-0 |
|  |  |  | Red | 5TG8057-1 |
|  |  |  | Yellow | 5TG8057-2 |
|  |  |  | Green | 5TG8057-3 |
|  |  |  | Blue | 5TG8057-4 |
|  |  | 230 V AC | White | 5TG8058-0 |
|  |  |  | Red | 5TG8058-1 |
|  |  |  | Yellow | 5TG8058-2 |
|  |  |  | Green | 5TG8058-3 |
|  |  |  | Blue | 5TG8058-4 |
| Cap sets |  |  |  |  |
|  | - For manual changing of colored caps with or without lamps <br> - 1 set $=5$ units |  |  |  |
|  | Color |  |  | Article No. |
| 5 | Red, transparent |  |  | 5TG8061 |
| - | Green, transparent |  |  | 5 TG8062 |
|  | Yellow, transparent |  |  | 5 TG8063 |
| $-73$ | Blue, transparent |  |  | 5TG8064 |
|  | Black, non-transparent |  |  | 5TG8065 |
|  | White, transparent |  |  | 5 5G8066 |
|  | Gray, non-transparent |  |  | 5TG8060 |
| Sets of mixed caps |  |  |  |  |
|  | - For manual changing of colored caps with or without lamps |  |  |  |
| - | Color |  |  | Article No. |
|  | $10 \times$ each of red/green + $5 \times$ each of yellow/blue/white |  |  | 5TG8067 |
|  | $1 \times$ each of red/green/yellow |  |  | 5TG8070 |

## Color coding according to IEC 60073

| Color | Safety of people/ <br> environment | Process state | System state |
| :--- | :--- | :--- | :--- |
| Red | Danger | Emergency | Faulty |
| Green | Safety | Normal | Normal |
| Yellow | Warning/Caution | Abnormal | Abnormal |
| Blue | Stipulation |  |  |
| Black, white, <br> gray | No special significance <br> assigned |  |  |

## 5TE58 light indicators

With LED

5TE58 light indicators
Rigid conductor cross-section
Flexible conductor cross-section, with end sleeve
$1 \ldots 6 \mathrm{~mm}^{2}$
$1.5 \ldots 6 \mathrm{~mm}^{2}$

Max. cable length Standard
250 m


| $U_{\mathrm{e}} \mathrm{AC}$ | Mounting width |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $230 \text { V }$ | 1 MW | $1 \times \mathrm{red}$ | 5TE5800 | $1 \times \mathrm{red}$ | 5TE5804 |
|  |  | $1 \times$ green, $1 \times$ red | 5 TE5801 |  | - |
|  |  | $3 \times$ green | 5TE5802 |  | - |
|  |  | $1 \times$ red, $1 \times$ yellow, $1 \times$ green | 5 TE5803 |  | - |
| $12 . . .60 \mathrm{~V}$ | 1 MW | $1 \times$ red | 5TE5810 |  | - |
|  |  | $1 \times$ green | 5TE5810-1 |  | - |
|  |  | $1 \times$ green, $1 \times$ red | 5 TE5811 |  | - |
|  |  | $3 \times$ green | 5 TE5812 |  | - |
|  |  | $1 \times$ red, $1 \times$ yellow, $1 \times$ green | 5TE5812-1 |  | - |

Further technical specifications

| Standards |  | DIN VDE 62094-1/A11 |
| :--- | :--- | :--- |
| Standards | LED | 0.4 VA |
| Supply | Between the terminals | $>7 \mathrm{~mm}$ |
| Rated power dissipation $P_{v}$ |  | $\mathrm{PZ1}$ |
| Safety | $\pm$ Screw (Pozidriv) | $0.8 \ldots 1.0 \mathrm{Nm}$ |
| Clearances | Max. tightening torque | $-5 \ldots+40^{\circ} \mathrm{C}$ |
| Connections |  | $45^{\circ} \mathrm{C}$ |
| Terminals |  |  |
| Ambient conditions | Acc. to DIN 50015 |  |
| Permissible ambient temperature |  |  |
| Resistance to climate at $95 \%$ relative humidity |  |  |

## Accessories

| LEDs for manual spare part |  |  |
| :--- | :--- | :--- | :--- | :--- |

Color coding according to IEC 60073

| Color | Safety of people/ <br> environment | Process state | System state |
| :--- | :--- | :--- | :--- |
| Red | Danger | Emergency | Faulty |
| Green | Safety | Normal | Normal |
| Yellow | Warning/Caution | Abnormal | Abnormal |
| Blue | Stipulation |  |  |
| Black, white, <br> gray | No special significance <br> assigned |  |  |

## 5TE81/82 On/Off switches

| Contacts | $U_{\text {e }} \mathrm{AC}$ | Mounting width | Auxiliary switches |  |  | Auxiliary switches |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Can be retrofitted | Cannot be retrofitted | Mounted | Can be retrofitted | Cannot be retrofitted | Mounted |
| 1 NO | 230 V | 1 MW | 5 TE8111 | - | - | 5 TE8211 | - | - |
| 2 NO | 400 V | 1 MW | 5 TE8112 | - | - | 5 TE8212 | - | - |
| 3 NO | 400 V | 1 MW | 5 TE8113 | - | - | 5 TE8213 | - | - |
| $3 \mathrm{NO}+\mathrm{N}$ | 400 V | 1 MW | - | 5TE8114 | - | - | 5TE8214 | - |
|  |  | 1.5 MW | - | - | 5TE8118 | - | - | 5 TE8218 |

Further technical specifications
5TE81
5TE82
$\left.\begin{array}{l|l|l|l}\hline \text { Standards } & & \\ \hline \text { Standards } & & \text { IEC/EN 60947-3 (VDE 0660-107), } \\ \text { IEC/EN 60669-1 }\end{array}\right)$

## Accessories



## 5TL1 On/Off switches



| Further technical specifications |  | 5TL1.32 | 5TL1.40 | 5TL1.63 | 5TL1.80 | 5TL1.91 | 5TL1.92 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Standards |  |  |  |  |  |  |  |
| Standards |  | IECIEN 60947-3 (VDE 0660-107) |  |  |  |  |  |
| Approvals |  | IEC/EN 60947-3 (VDE 0660-107) |  |  |  |  |  |
| Supply |  |  |  |  |  |  |  |
| Rated power dissipation $P_{v}$ | Per pole, max. | 0.7 VA | 0.9 VA | 2.2 VA | 3.5 VA | 5.5 VA | 8.6 VA |
| Contacts |  |  |  |  |  |  |  |
| Minimum contact load |  | 24 V ; 300 mA |  |  |  |  |  |
| Rated making/rated breaking capacity AC-22A | At p.f. $=0.65$ | $\begin{aligned} & 96 \mathrm{Al} \\ & 96 \mathrm{~A} \end{aligned}$ | $\begin{aligned} & 120 \mathrm{Al} \\ & 120 \mathrm{~A} \end{aligned}$ | $\begin{aligned} & 196 \mathrm{Al} \\ & 196 \mathrm{~A} \end{aligned}$ | $\begin{aligned} & 240 \mathrm{Al} \\ & 240 \mathrm{~A} \end{aligned}$ | $\begin{aligned} & 300 \mathrm{Al} \\ & 300 \mathrm{~A} \end{aligned}$ | $\begin{aligned} & 375 \mathrm{Al} \\ & 375 \mathrm{~A} \end{aligned}$ |
| Rated short-time withstand current $I_{\text {cw }}$ per conducting path at p.f. $=0.7^{1 \text { ) }}$ | Up to 0.2 s | 760 A | 950 A | 1500 A | 2700 A | 3400 A |  |
|  | Up to 0.5 s | 500 A | 630 A | 1000 A | 1650 A | 2100 A |  |
|  | Up to 1 s | 400 A | 500 A | 800 A | 1350 A | 1700 A |  |
|  | Up to 3 s | 280 A | 350 A | 560 A | 800 A | 1000 A |  |
| Thermal rated current $t_{\text {th }}$ |  | 32 A | 40 A | 63 A | 80 A | 100 A | 125 A |
| Electrical endurance/mechanical service life | Switching cycles | $\begin{aligned} & 10000 / \\ & 20000 \end{aligned}$ | 10000 | 5000 | 2000 |  |  |
| Rated power for the switching of resistive load including moderate overload AC-21 | 1-pole | 5 kW | 6.5 kW | 10 kW | 13 kW | 16 kW |  |
|  | 2-pole | 9 kW | 11 kW | 18 kW | 22 kW | 28 kW |  |
|  | 3/4-pole | 15 kW |  | 30 kW | 39 kW | 48 kW |  |
| Safety |  |  |  |  |  |  |  |
| Creepage distances |  | $>7 \mathrm{~mm}$ |  |  |  |  |  |
| Clearances | Open contacts | $>7 \mathrm{~mm}$ |  |  |  |  |  |
|  | Between the poles | $>7 \mathrm{~mm}$ |  |  |  |  |  |
| Rated short-circuit making capacity $I_{\mathrm{cm}}$ (in conjunction with fuse of the same rated operational current EN $60269 \mathrm{gL} / \mathrm{gG}$ ) |  | 10 kA |  |  |  |  |  |
| Rated impulse voltage $U_{\text {imp }}$ |  | 6 kV |  |  |  |  |  |
| Connections |  |  |  |  |  |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ2 |  |  |  |  |  |
|  | Max. tightening torque | 3.5 Nm |  |  |  |  |  |
| Ambient conditions |  |  |  |  |  |  |  |
| Permissible ambient temperature |  | $-5 \ldots+40^{\circ} \mathrm{C}$ |  |  |  |  |  |
| Resistance to climate at 95\% relative humidity | Acc. to DIN 50015 | $45^{\circ} \mathrm{C}$ |  |  |  |  |  |



Accessories


## 5TE DC isolator

Can be used as switch disconnectors according to EN 60947-3


## Further technical specifications

| Standards |  |  |
| :---: | :---: | :---: |
| Standards |  | IECIEN 60947-3; GB14048.3-2008 CCC |
| Supply |  |  |
| Rated operational voltage $U_{e}$ | For 4 poles in series | 880 V DC |
| Rated power dissipation $P_{v}$ | Per pole, max. | 4.4 W |
| Contacts |  |  |
| Minimum contact load |  | 24 V ; 300 mA |
| Rated short-time withstand current $I_{\text {cw }}$ | 1000 V DC, 4-pole | 760 A |
| Electrical endurance/mechanical service life | Actuations | 5000/10000 |
| Safety |  |  |
| Rated short-circuit making capacity $I_{\text {cm }}$ | 1000 V DC, 4-pole | 500 A |
| Rated impulse voltage $U_{\text {imp }}$ |  | $>5 \mathrm{kV}$ |
| Overvoltage category | At $\mathrm{U}=440 \ldots 880 \mathrm{~V}$ | II |
|  | At $U=1000 \mathrm{~V}$ | I |
| Utilization category |  | DC-21B |
| Connections |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ2 |
|  | Max. tightening torque | $2.5 \ldots 3 \mathrm{Nm}$ |
| Ambient conditions |  |  |
| Permissible ambient temperature |  | $-25 \ldots+40^{\circ} \mathrm{C}$ |
| Resistance to climate at 95\% relative humidity | Acc. to DIN 50015 | $45^{\circ} \mathrm{C}$ |

## Accessories

| Auxiliary switches (AS) |  |  |  |
| :---: | :---: | :---: | :---: |
|  | - For right-hand-side retrofitting with factory-fitted brackets |  |  |
|  | Contacts | Type | Article No. |
|  | $1 \mathrm{NO}+1 \mathrm{NC}$ | Standard | 5 ST3010 |
|  |  | For low power | 5 ST3013 |
|  |  | For low power (with diode) | 5ST3013-0XX01 |
|  | 2 NO | Standard | 5 ST3011 |
|  |  | For low power | 5 ST3014 |
|  | 2 NC | Standard | 5 ST3012 |
|  |  | For low power | 5 ST3015 |
|  | 1 CO | Standard | 5ST3016 |
| Shunt trips (ST) |  |  |  |
|  | Rated operational voltage $U_{\text {e }}$ |  | Article No. |
|  | 110 ... 415 V AC, 110 ... 220 V DC |  | 5 ST3030 |
|  | $24 . . .48 \mathrm{~V}$ ACIDC |  | 5 ST3031 |
|  | 12 V ACIDC |  | 5ST3031-0XX01 |
| Undervoltage releases (UR) |  |  |  |
|  | Type | Rated operational voltage $U_{\text {e }}$ | Article No. |
|  | With integrated auxiliary switch | 230 V AC | 5 ST3040 |
|  |  | 110 V DC | 5 ST3041 |
|  |  | 24 V DC | 5 ST3042 |
|  | Without integrated auxiliary switch | 230 V AC | 5 ST3043 |
|  |  | 110 V DC | 5 ST3044 |
|  |  | 24 V DC | 5 ST3045 |

## 5TE busbars

## For modular installation devices



## 5TT41 remote control switches

## Rated current 16 A

| Contacts | $U_{\text {e }}$ | $U_{\mathrm{c}} \mathrm{AC}$ | $U_{c}$ DC | Mounting width |  | Auxiliary switches can be retrofitted |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 1 MW | 2 MW |  |
| 1 NO | 250 V | 230 V | - | ■ | - | 5TT4101-0 |
|  |  | 115 V | - | ■ | - | 5TT4101-1 |
|  |  | 24 V | - | $\square$ | - | 5TT4101-2 |
|  |  | 12 V | - | ■ | - | 5TT4101-3 |
|  |  | 8 V | - | ■ | - | 5TT4101-4 |
|  |  | - | 110 V | ■ | - | 5TT4111-1 |
|  |  |  | 24 V | ■ | - | 5TT4111-2 |
|  |  |  | 12 V | ■ | - | 5TT4111-3 |
| $1 \mathrm{NO}+1 \mathrm{NC}$ | 250 V | 230 V | - | $\square$ | - | 5TT4105-0 |
|  |  | 115 V | - | ■ | - | 5TT4105-1 |
|  |  | 24 V | - | $\square$ | - | 5TT4105-2 |
|  |  | 12 V | - | $\square$ | - | 5TT4105-3 |
|  |  | 8 V | - | ■ | - | 5TT4105-4 |
|  |  | - | 110 V | $\square$ | - | 5TT4115-1 |
|  |  |  | 24 V | ■ | - | 5TT4115-2 |
|  |  |  | 12 V | ■ | - | 5TT4115-3 |
| 2 NO | 400 V | 230 V | - | ■ | - | 5TT4102-0 |
|  |  | 115 V | - | ■ | - | 5TT4102-1 |
|  |  | 24 V | - | $\square$ | - | 5TT4102-2 |
|  |  | 12 V | - | ■ | - | 5TT4102-3 |
|  |  | 8 V | - | $\square$ | - | 5TT4102-4 |
|  |  | - | 110 V | ■ | - | 5TT4112-1 |
|  |  |  | 24 V | $\square$ | - | 5TT4112-2 |
|  |  |  | 12 V | $\square$ | - | 5TT4112-3 |
| 3 NO | 400 V | 230 V | - | - | $\square$ | 5TT4103-0 |
|  |  | 24 V | - | - | $\square$ | 5TT4103-2 |
| 4 NO | 400 V | 230 V | - | - | $\square$ | 5TT4104-0 |
|  |  | 24 V | - | - | ■ | 5TT4104-2 |
|  |  | - | 110 V | - | $\square$ | 5TT4114-1 |
|  |  |  | 24 V | - | ■ | 5TT4114-2 |


| Further technical specifications |  | 5TT4101 <br> 5 TT4102 <br> 5 TT4105 | 5 TT4111 <br> 5 TT4112 <br> 5 TT4115 | 5 TT4103 <br> 5TT4104 <br> 5 TT4114 |
| :---: | :---: | :---: | :---: | :---: |
| Standards |  |  |  |  |
| Standards |  | $\begin{aligned} & \text { EN 60669-1 } \\ & \text { EN 60669-2 } \end{aligned}$ | DE 0632-1 (VDE 0632 | $\begin{aligned} & \text { 60669-1/A1/A2 } \\ & \text { )/EN 60669-2-2 } \end{aligned}$ |
| Approvals |  | VDE |  |  |
| Supply |  |  |  |  |
| Rated operational current $I_{\text {e }}$ | At p.f. $=0.6 \ldots 1(\mathrm{AC}-15)$ | 16 A |  |  |
| Primary operating range |  | $0.8 \ldots 1.1 \times$ |  |  |
| Rated frequency $f_{c}$ |  | 50 Hz |  |  |
| Rated power dissipation $P_{\mathrm{v}}$ | Magnet coil, only pulse | 4.5 WI7 VA |  | 9 W/13 VA |
|  | Per pole, max. | 1.2 W |  |  |
| Contacts |  |  |  |  |
| Contact gap |  | $>1.2 \mathrm{~mm}$ |  |  |
| Minimum contact load |  | $10 \mathrm{~V} ; 100 \mathrm{~mA}$ |  |  |
| Electrical endurance at $I_{e} I U_{e}$, p.f. $=0.6$, incandescent lamp load 600 W | Operating cycles | 50000 |  |  |
| Incandescent lamp load (switching of incandescent lamps for 15000 switching cycles) | At AC-5b (230 V) | 1200 W |  |  |
| Glow lamp load at 230 V |  | 5 mA |  |  |
|  | With 15 TT4920 compensator | 25 mA |  |  |
|  | With 25 TT4920 compensators | 45 mA |  |  |
| Minimum pulse duration |  | 50 ms |  |  |
| Safety |  |  |  |  |
| Different phases between magnet coil and contact |  | Permissible |  |  |
| Clearances | Between magnet coil and contact | $>6 \mathrm{~mm}$ |  |  |
| Creepage distances | Between magnet coil and contact | $>6 \mathrm{~mm}$ |  |  |
| Rated impulse voltage $U_{\text {imp }}$ |  | 4 kV |  |  |
| Function |  |  |  |  |
| Manual operation |  | Yes |  |  |
| Switching position indication |  | Yes |  |  |
| Connections |  |  |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ1 |  |  |
|  | Max. tightening torque | $0.8 \ldots 1 \mathrm{Nm}$ |  |  |
| Ambient conditions |  |  |  |  |
| Permissible ambient temperature |  | $-10 \ldots+40^{\circ} \mathrm{C}$ |  |  |
| Resistance to climate at 95\% relative humidity | Acc. to DIN 50015 | $35^{\circ} \mathrm{C}$ |  |  |
| Degree of protection | Acc. to EN 60529 | IP20, with co | nected cond | ors |

## Accessories

Auxiliary switches


- One device per remote control switch can be retrofitted

| Contacts | Type | $I_{e}$ | $U_{e}$ | Mounting width | Article No. |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1 CO | Standard | 5 A | 250 V AC | 0.5 MW | 5 TT4900 |
|  | For low power | 0.1 A | 30 V ACIDC | 0.5 MW | 5 TT4901 |

## Compensator



- For increasing the glow lamp load by 20 mA
$U_{\text {e }} \quad$ Mounting width $\quad$ Article No.
250 V AC 1 MW $\quad 5$ 5T4920


## 5TT41 remote control switches

For special applications, rated current 16 A

| Contacts | $U_{\text {e }}$ | $U_{c} \mathrm{AC}$ | Mounting width | Auxiliary switches cannot be retrofitted | Auxiliary switches cannot be retrofitted |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 NO | 250 V | 230 V | 1.5 MW | 5TT4121-0 | 5TT4151-0 |
|  |  | 24 V | 1.5 MW | 5TT4121-2 | 5TT4151-2 |
| 2 NO | 400 V | 230 V | 1.5 MW | 5TT4122-0 | 5TT4152-0 |
|  |  | 24 V | 1.5 MW | 5TT4122-2 | 5TT4152-2 |
| 3 NO | 400 V | 230 V | 2.5 MW | 5TT4123-0 | - |
| $1 \mathrm{NO}+1 \mathrm{NC}$ | 250 V | 115 V | 1.5 MW | 5TT4125-0 | - |


|  |  |  |  | Series remote control switch contact sequence 1-2-1+2-0 | Shutter/blind remote control switch contact sequence 1-0-2-0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Rigid conductor cross-section |  |  |  | $1 \ldots 6 \mathrm{~mm}^{2}$ | $1 . . .6 \mathrm{~mm}^{2}$ |
| Flexible conductor cross-section, with end sleeve |  |  |  | $1 . . .6 \mathrm{~mm}^{2}$ | $1 . . .6 \mathrm{~mm}^{2}$ |
|  |  |  |  |  |  |
| Contacts | $U_{\text {e }}$ | $U_{\text {c }}$ AC | Mounting width | Auxiliary switches cannot be retrofitted | Auxiliary switches cannot be retrofitted |
| 2 NO | 250 V | 230 V | 1 MW | 5TT4132-0 | 5TT4142-0 |
|  |  | 24 V | 1 MW | - | 5TT4142-2 |
|  |  | 12 V | 1 MW | 5TT4132-3 | 5TT4142-3 |


| Further technical specifications |  | 5 TT412 <br> 5 TT415 | 5 TT413 <br> 5 TT414 |
| :---: | :---: | :---: | :---: |
| Standards |  |  |  |
| Standards |  | EN 60669-1 (VDE 0632-1)/EN 60669-1/A1/A2 <br> EN 60669-2-2 (VDE 0632-2-2)/EN 60669-2-2 |  |
| Approvals |  | VDE |  |
| Supply |  |  |  |
| Rated operational current $I_{\text {e }}$ | At p.f. $=0.6 \ldots 1$ (AC-15) | 16 A |  |
| Primary operating range |  | $0.8 \ldots 1.1 \times U_{c}$ |  |
| Rated frequency $f_{c}$ |  | 50 Hz |  |
| Rated power dissipation $P_{\mathrm{v}}$ | Magnet coil, only pulse | 4.5 WI7 VA |  |
|  | Per pole, max. | 1.2 W |  |
| Contacts |  |  |  |
| Contact gap |  | $>1.2 \mathrm{~mm}$ |  |
| Minimum contact load |  | $10 \mathrm{~V} ; 100 \mathrm{~mA}$ |  |
| Electrical endurance at $I_{e} I U_{e}$, p.f. $=0.6$, incandescent lamp load 600 W |  | 50000 |  |
| Incandescent lamp load(switching of incandescent lamps for 15000 switching cycles) At AC-5b (230 V) |  | 1200 W |  |
| Glow lamp load at 230 V |  | 5 mA |  |
|  | With 15 TT4920 compensator | 25 mA |  |
|  | With 25 TT4920 compensators | 45 mA |  |
| Minimum pulse duration |  | 50 ms |  |
| Safety |  |  |  |
| Different phases between magnet coil and contact |  | Permissible |  |
| Clearances | Between magnet coil and contact | $>6 \mathrm{~mm}$ |  |
| Creepage distances | Between magnet coil and contact | $>6 \mathrm{~mm}$ |  |
| Rated impulse voltage $U_{\text {imp }}$ |  | 4 kV |  |
| Function |  |  |  |
| Manual operation |  | Yes |  |
| Switching position indication |  | Yes | - |
| Connections |  |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ1 |  |
|  | Max. tightening torque | $0.8 \ldots 1 \mathrm{Nm}$ |  |
| Ambient conditions |  |  |  |
| Permissible ambient temperature |  | $-10 \ldots+40^{\circ} \mathrm{C}$ |  |
| Resistance to climate at 95\% relative humidity | Acc. to DIN 50015 | $35^{\circ} \mathrm{C}$ |  |
| Degree of protection | Acc. to EN 60529 | IP20, with con | ors |

## Accessories

## Auxiliary switches

|  | - One device per remote control switch can be retrofitted |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Contacts | Type | $I_{\text {e }}$ | $U_{\text {e }}$ | Mounting width | Article No. |
|  | 1 CO | Standard | 5 A | 250 V AC | 0.5 MW | $5 \mathrm{TT4900}$ |
|  |  | For low power | 0.1 A | 30 V ACIDC | 0.5 MW | 5 TT4901 |
| Compensator |  |  |  |  |  |  |
| - | - For increasing the glow lamp load by 20 mA |  |  |  |  |  |
| -0 | $U_{\text {e }}$ | Mounting wid |  |  |  | Article No. |
| - | 250 V AC | 1 MW |  |  |  | 5 TT4920 |

## 5TT44 remote control switches

## Rated current 20 A - 63 A



| Contacts | $U_{\text {e }}$ | $U_{c}$ AC | $U_{c}$ DC | Mount width |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| For AC applications - auxiliary switches can be retrofitted |  |  |  |  |  |  |  |  |  |
| $1 \mathrm{NO}+1 \mathrm{NC}$ | 440 V | 230 V | - | 1 MW | 5TT4405-0 | 5TT4425-0 | 5TT4455-0 | - | - |
|  |  |  |  | 2 MW | - | - | - | 5TT4465-0 | 5TT4475-0 |
|  |  | 24 V | - | 1 MW | 5TT4405-2 | 5TT4425-2 | 5TT4455-2 | - | - |
|  |  |  |  | 2 MW | - | - | - | 5TT4465-2 | 5TT4475-2 |
| 1 CO | 250 V | 230 V | - | 1 MW | 5TT4407-0 | - | - | - | - |
|  |  | 24 V | - | 1 MW | 5TT4407-2 | - | - | - | - |
| 2 NO | 440 V | 230 V | - | 1 MW | 5TT4402-0 | 5TT4422-0 | 5TT4452-0 | - | - |
|  |  |  |  | 2 MW | - | - | - | 5TT4462-0 | 5TT4472-0 |
|  |  | 24 V | - | 1 MW | 5TT4402-2 | 5TT4422-2 | 5TT4452-2 | - | - |
|  |  |  |  | 2 MW | - | - | - | 5TT4462-2 | 5TT4472-2 |
| 2 CO | 440 V | 230 V | - | 2 MW | - | 5TT4428-0 | 5TT4458-0 | 5TT4468-0 | 5TT4478-0 |
|  |  | 24 V | - | 2 MW | - | 5TT4428-2 | 5TT4458-2 | 5TT4468-2 | 5TT4478-2 |
| 4 NO | 440 V | 230 V | - | 2 MW | - | 5TT4424-0 | 5TT4454-0 | - | - |
|  |  |  |  | 4 MW | - | - | - | 5TT4464-0 | 5TT4474-0 |
|  |  | 24 V | - | 2 MW | - | 5TT4424-2 | 5TT4454-2 | - | - |
|  |  |  |  | 4 MW | - | - | - | 5TT4464-2 | 5TT4474-2 |
| $2 \mathrm{NO}+2 \mathrm{NC}$ | 440 V | 230 V | - | 2 MW | - | 5TT4426-0 | 5TT4456-0 | - | - |
|  |  |  |  | 4 MW | - | - | - | 5TT4466-0 | 5TT4476-0 |
|  |  | 24 V | - | 2 MW | - | 5TT4426-2 | 5TT4456-2 | - | - |
|  |  |  |  | 4 MW | - | - | - | 5TT4466-2 | 5TT4476-2 |
| For DC applications |  |  |  |  |  |  |  |  |  |
| 1 NO | 250 V | - | 24 V | 1 MW | 5TT4411-5 | 5TT4431-5 | 5TT4451-5 | - | - |
| 2 NO | 440 V | - | 24 V | 1 MW | 5TT4412-5 | 5TT4432-5 | 5TT4452-5 | - | - |
| $1 \mathrm{NO}+1 \mathrm{NC}$ | 440 V | - | 24 V | 1 MW | 5TT4415-5 | 5TT4435-5 | 5TT4455-5 | - | - |
| 1 CO | 250 V | - | 24 V | 1 MW | 5TT4417-5 | 5TT4437-5 | 5TT4457-5 | - | - |


| Further technical specifications |  | 5 TT440 | 5 TT 442 | 5 TT 445 | 5 TT446 | 5 TT447 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Standards |  |  |  |  |  |  |
| Standards |  | IEC 60669-2-2 |  |  | EN 60669-1 (VDE 0632-1)/EN 60669-1/A1/A2 EN 60669-2-2 (VDE 0632-2-2)/EN 60669-2-2 |  |
| Approvals |  | CE |  |  |  |  |
| Supply |  |  |  |  |  |  |
| Rated operational current $I_{\text {e }}$ | At p.f. $=0.6 \ldots 1$ (AC-15) | 20 A | 25 A | 32 A | 40 A | 63 A |
| Rated frequency $f_{c}$ |  | $50 / 60 \mathrm{~Hz}$ |  |  |  |  |
| Rated power dissipation $P_{\mathrm{v}}$ | Magnet coil, "On" pulse | $13 \mathrm{~W} / 18 \mathrm{VA}$ |  |  | 12 W/26 VA |  |
|  | Per pole, max. | 1.5 W | 2 W | 3 W |  | 3.5 W |
| Rated operational power (AC-3) | 1-phase, at 230 V | 0.5 kW | 0.75 kW | 1.1 kW | 2.2 kW | 4 kW |
|  | 3 -phase, at 230 V | 1.5 kW | 2.2 kW | 3 kW | 5.5 kW | 11 kW |
|  | 3 -phase, at 400 V | 3 kW | 4 kW | 5.5 kW | 11 kW | 18.5 kW |
| Contacts |  |  |  |  |  |  |
| Contact gap |  | $>3 \mathrm{~mm}$ |  |  |  |  |
| Minimum contact load AC |  | $10 \mathrm{~V} ; 100 \mathrm{~mA}$ |  |  |  |  |
| Electrical endurance at $I_{\mathrm{e}} / U_{\mathrm{e}}$, p. f. $=0.6$, incandescent lamp load 600 W |  | 50000 |  |  |  |  |
| Incandescent lamp load(switching of incandescent lampsfor 15000 switching cycles) |  | 4400 W | 5500 W | 7000 W | 8800 W | 13800 W |
| Safety |  | $600 h^{-1} \quad 450 h^{-1}$ |  |  |  |  |
|  |  |  |  |  | $360 \mathrm{~h}^{-1}$ |  |
| Different phases between magnet coil and contact |  | Permissible |  |  |  |  |
| Rated impulse voltage $U_{\text {imp }}$ |  | 3 kV |  |  |  |  |
| Function |  |  |  |  |  |  |
| Manual operation |  | Yes |  |  |  |  |
| Switching position indication |  | Yes |  |  |  |  |
| Connections Coil |  |  |  |  |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | Coil: PZ1, contact: PZ2 |  |  |  |  |
|  | Max. tightening torque | Coil: 0.6 Nm, contact: 1.2 Nm |  |  | Coil: 0.6 Nm , contact: 2 Nm |  |
| Coil conductor cross-sections |  | $1 . . .4 \mathrm{~mm}^{2}$ |  |  |  |  |
| Ambient conditions |  |  |  |  |  |  |
| Permissible ambient temperature For operation/for storage <br> Resistance to climate at $95 \%$ relative <br> humidity Acc. to DIN 50015 |  | $-25 \ldots+55^{\circ} \mathrm{C} /-30 \ldots+80^{\circ} \mathrm{C}$ |  |  |  |  |
|  |  | $55^{\circ} \mathrm{C}$ |  |  |  |  |
| Degree of protection | Acc. to EN 60529 | IP20 ${ }^{\text {Any (not upside down) }}$ |  |  |  |  |
| Mounting position |  |  |  |  |  |  |

## Accessories

| Auxiliary switch |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - | Contacts | $U_{\text {e }}$ | $I_{\text {e }}$ | Mounting width | Article No. |
| - | $1 \mathrm{NO}+1 \mathrm{NC}$ | 250 V AC | 16 A | 0.5 MW | 5 TT4930 |
| ! |  |  |  |  |  |
| Auxiliary switches, central with diode |  |  |  |  |  |
|  | - For central function (no auxiliary switch) |  |  |  |  |
|  | $U_{\text {e }}$ | Mounting width |  |  | Article No. |
|  | 250 V AC | 0.5 MW |  |  | 5 TT4931 |
| Auxiliary switches, group with several diodes |  |  |  |  |  |
|  | - For group function (no auxiliary switch) |  |  |  |  |
| 5. | $U_{\text {e }}$ | Mounting width |  |  | Article No. |
| $\square$ | 250 V AC | 0.5 MW |  |  | 5 TT4932 |

## 5TT4 auxiliary switches

## For 5TT4 remote control switches

|  |  |  | Auxiliary switches for 5TT41 | Auxiliary switches for 5TT44 |
| :---: | :---: | :---: | :---: | :---: |
|  | Rigid con | ctor cross-section | $0.5 \ldots 2.5 \mathrm{~mm}^{2}$ | $1 \ldots 4 \mathrm{~mm}^{2}$ |
| Flexible con | or cross-sec | , with end sleeve | $0.5 \ldots 2.5 \mathrm{~mm}^{2}$ | $1 . .4 \mathrm{~mm}^{2}$ |
|  |  |  |  |  |
| $I_{\text {e }}$ | $U_{\text {e }}$ | Mounting width |  |  |
| 16 A | 250 V AC | 0.5 MW | - | 5TT4930 |
| 5 A | 250 V AC | 0.5 MW | 5TT4900 | - |
| 0.1 A | 30 V ACIDC | 0.5 MW | 5TT4901 | - |
| de for central |  |  |  |  |
|  | 250 V AC | 0.5 MW | - | 5TT4931 |
| eral diodes for | function |  |  |  |
|  | 250 V AC | 0.5 MW | - | 5TT4932 |


| Further technical specifications | Auxiliary switches for 5TT41 | Auxiliary switches for 5TT44 |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { 5TT4900 } \\ & \text { 5TT4901 } \end{aligned}$ | 5TT4930 | 5TT4931 | 5 TT4932 |
| Standards |  |  |  |  |
| Standards | EN 60947-1 (VDE 0660 Part 100) EN 60947-5-1 (VDE 0660 Part 200) | IECIEN 60947-5-1 |  |  |
| Approvals | - | CE, EAC |  |  |
| Supply |  |  |  |  |
| Rated operational current $l_{e} \quad$ At p.f. $=0.6 \ldots 1(A C-15)$ | 16 A | 4 A | - |  |
| Rated frequency $f_{c}$ | - | $50 / 60 \mathrm{~Hz}$ |  |  |
| Rated power dissipation $P_{v} \quad$ Per pole, max. | - | 0.3 W |  |  |
| Contacts |  |  |  |  |
| Contact gap | $<1.2 \mathrm{~mm}$ | >3 mm |  |  |
| Minimum contact load | $5 \mathrm{~V} ; 1 \mathrm{~mA}$ | $12 \mathrm{~V} ; 5 \mathrm{~mA}$ |  |  |
| Electrical endurance at $I_{\mathrm{e}} / U_{\mathrm{e}}$, <br> Operating cycles <br> p.f. $=0.6$, <br> incandescent lamp load 600 W | - | 100000 | - |  |


| Safety |  |  |  |
| :---: | :---: | :---: | :---: |
| Clearances | Between magnet coil and contact | $>6 \mathrm{~mm}$ | - |
| Creepage distances | Between magnet coil and contact | $>6 \mathrm{~mm}$ | - |
| Rated impulse voltage $U_{\text {imp }}$ |  | 1 kV | 1 kV |
| Pushbutton malfunction protected against continuous voltage, safe due to design |  | Yes | - |
| Function |  |  |  |
| Manual operation |  | - | No |
| Switching position indication |  | - | No |
| Connections |  |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ1 | PZ1 |
|  | Max. tightening torque | 0.5 Nm | 0.8 Nm |
| Ambient conditions |  |  |  |
| Permissible ambient temperature | For operation/for storage | $-10 \ldots+40^{\circ} \mathrm{Cl}-10 \ldots+40^{\circ} \mathrm{C}$ | $-25 \ldots+70^{\circ} \mathrm{CI}-30 \ldots+80^{\circ} \mathrm{C}$ |
| Resistance to climate at 95\% relative humidity | Acc. to DIN 50015 | $35^{\circ} \mathrm{C}$ | $55^{\circ} \mathrm{C}$ |
| Degree of protection | Acc. to EN 60529 | IP20, with connected conductors | IP20 |
| Mounting position |  | Any | Any (not upside down) |

## Accessories

Compensator

- For increasing the glow lamp load by 20 mA

| $U_{e}$ | Mounting width | Article No. |
| :--- | :--- | :--- |
| 250 V AC | 1 MW | 5 TT4920 |

## 5TT42 switching relays

## Rated current 16 A

|  |  |  | Rated operational current $l_{e}$ |
| :--- | :--- | :--- | :--- |
|  |  |  | Rigid conductor cross-section |


| Further technical specifications |  | 5TT4201-. | 5TT4202-. | 5TT4204-. | 5TT4205-. | 5TT4206-. | 5TT4207-. | 5TT4217-. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Standards |  |  |  |  |  |  |  |  |
| Standards |  | EN 60947-5-1, EN 60669-2-2 |  |  |  |  |  |  |
| Approvals |  | VDE, CCC |  |  |  |  |  |  |
| Supply |  |  |  |  |  |  |  |  |
| Rated operational current $I_{\text {e }}$ | At p.f. $=0.6 \ldots 1$ | 16 A |  |  |  |  |  |  |
| Primary operating range |  | $0.8 \ldots 1.1 \times U_{c}$ |  |  |  |  |  |  |
| Rated frequency $f_{\mathrm{c}}$ |  | 50 Hz |  |  |  |  |  |  |
| Rated power dissipation $P_{\mathrm{v}}$ | Magnet coil | $\begin{aligned} & \hline 2.4 \mathrm{~W} \\ & 3.0 \mathrm{VA} \end{aligned}$ |  | $\begin{aligned} & \text { 4.8 W } \\ & \text { 6.0 VA } \end{aligned}$ | $\begin{aligned} & \hline 2.4 \mathrm{~W} \\ & 3.0 \mathrm{VA} \end{aligned}$ |  |  | $\begin{aligned} & 1.7 \mathrm{~W} \\ & 1.7 \mathrm{VA} \end{aligned}$ |
|  | Per pole, max. | 1.0 W |  |  |  |  |  |  |
| Contacts |  |  |  |  |  |  |  |  |
| Contact gap |  | >1.2 mm |  |  |  |  |  |  |
| Minimum contact load |  | $10 \mathrm{VAC} ; 100 \mathrm{~mA}$ |  |  |  |  |  |  |
| Electrical endurance at $I_{\mathrm{e}} / U_{\mathrm{e}}$, <br> Operating cycles p.f. $=0.6$, <br> incandescent lamp load 600 W |  | 50000 |  |  |  |  |  |  |
| Safety |  |  |  |  |  |  |  |  |
| Different phases between magnet coil and contact |  | Permissible |  |  |  |  |  |  |
| Safe separation |  | $>6 \mathrm{~mm}$ |  |  |  |  |  |  |
| Rated impulse voltage $U_{\text {imp }}$ |  | 4 kV |  |  |  |  |  |  |
| Function |  |  |  |  |  |  |  |  |
| Manual operation |  | Yes |  |  |  |  |  |  |
| Connections |  |  |  |  |  |  |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ1 |  |  |  |  |  |  |
|  | Max. tightening torque | 0.8 ... 1 Nm |  |  |  |  |  |  |
| Ambient conditions |  |  |  |  |  |  |  |  |
| Permissible ambient temperature |  | $-10 \ldots+40^{\circ} \mathrm{C}$ |  |  |  |  |  |  |
| Resistance to climate at 95\% relative humidity | Acc. to DIN 50015 | $35^{\circ} \mathrm{C}$ |  |  |  |  |  |  |
| Degree of protection | Acc. to EN 60529 | IP20, with connected conductors |  |  |  |  |  |  |

## Accessories

- Contour for modular devices with a mounting depth of 70 mm
- Can be snapped onto either side of the busbar for convenient cable routing
- Spacer is recommended for better heat dissipation


## 5TT50 Insta contactors

## ACIDC technology - hum-free Insta contactors



| Contacts | $U_{\text {e }}$ | $U_{\mathrm{c}} \mathrm{AC}$ | $U_{\text {c }}$ DC | Mounting width |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Insta contactors with manual switch |  |  |  |  |  |  |  |  |
| 2 NO | 230 V | 230 V | 220 V | 1 MW | 5TT5000-0 | - | - | - |
|  |  | 24 V | 24 V | 1 MW | 5TT5000-2 | - | - | - |
| 4 NO | 400 V | 230 V | 220 V | 2 MW | - | 5TT5030-0 | - | - |
|  |  |  |  | 3 MW | - | - | 5TT5040-0 | 5TT5050-0 |
|  |  | 115 V | 110 V | 2 MW | - | 5TT5030-1 | - | - |
|  |  |  | 24 V | 2 MW | - | 5TT5030-2 | - | - |
|  |  |  |  | 3 MW | - | - | 5TT5040-2 | 5TT5050-2 |
| 2 NC | 230 V | 230 V | 220 V | 1 MW | 5TT5002-0 | - | - | - |
|  |  | 24 V | 24 V | 1 MW | 5TT5002-2 | - | - | - |
| 4 NC | 400 V | 230 V | 220 V | 2 MW | - | 5TT5033-0 | - | - |
|  |  |  |  | 3 MW | - | - | 5TT5043-0 | - |
|  |  | 24 V | 24 V | 2 MW | - | 5TT5033-2 | - | - |
|  |  |  |  | 3 MW | - | - | 5TT5043-2 | - |
| $1 \mathrm{NO}+1 \mathrm{NC}$ | 230 V | 230 V | 220 V | 1 MW | 5TT5001-0 | - | - | - |
|  |  | 24 V | 24 V | 1 MW | 5TT5001-2 | - | - | - |
| $2 \mathrm{NO}+2 \mathrm{NC}$ | 400 V | 230 V | 220 V | 2 MW | - | 5TT5032-0 | - | - |
|  |  |  |  | 3 MW | - | - | 5TT5042-0 | 5TT5052-0 |
|  |  | 24 V | 24 V | 2 MW | - | 5TT5032-2 | - | - |
|  |  |  |  | 3 MW | - | - | 5TT5042-2 | 5TT5052-2 |
| $3 N O+1$ NC | 400 V | 230 V | 220 V | 2 MW | - | 5TT5031-0 | - | - |
|  |  |  |  | 3 MW | - | - | 5TT5041-0 | 5TT5051-0 |
|  |  | 24 V | 24 V | 2 MW | - | 5TT5031-2 | - | - |
|  |  |  |  | 3 MW | - | - | 5TT5041-2 | 5TT5051-2 |
| Insta contactors with O/I/Automatic |  |  |  |  |  |  |  |  |
| 2 NO | 230 V | 230 V | 220 V | 1 MW | 5TT5000-6 | - | - | - |
|  |  | 24 V | 24 V | 1 MW | 5TT5000-8 | - | - | - |
| 4 NO | 400 V | 230 V | 220 V | 2 MW | - | 5TT5030-6 | - | - |
|  |  | 24 V | 24 V | 2 MW | - | 5TT5030-8 | - | - |
| $1 \mathrm{NO}+1 \mathrm{NC}$ | 230 V | 230 V | 220 V | 1 MW | 5TT5001-6 | - | - | - |
|  |  | 24 V | 24 V | 1 MW | 5TT5001-8 | - | - | - |
| $3 \mathrm{NO}+1 \mathrm{NC}$ | 400 V | 230 V | 220 V | 2 MW | - | 5TT5031-6 | - | - |
|  |  | 24 V | 24 V | 2 MW | - | 5TT5031-8 | - | - |

## Note:

Provision must be made for spacers to ensure heat dissipation.
See Configuration Manual - Switching devices www.siemens.com/lowvoltage/manuals (45315361).

## Accessories

[^0]| Further technical specification |  | 5 TT 500 | 5 TT503 | 5TT504 | 5 TT505 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Standards |  |  |  |  |  |
| Standards |  | EN 60947-4-1; EN 60947-5-1; EN 61095 |  |  |  |
| Approvals |  | UL 508; UL File No. E303328 |  |  |  |
| Supply |  |  |  |  |  |
| Rated operational current $I_{\mathrm{e}}$ | AC-1/AC-7a, NO contacts/NC contacts | $20 \mathrm{~A} / 20 \mathrm{~A}$ | 25 A/25 A | $40 \mathrm{~A} / 40 \mathrm{~A}$ | 63 A/63 A |
|  | AC-3/AC-7b, NO contacts/NC contacts | 9 Al 6 A | 8.5 A/8.5 A | 22 A/22 A | 30 A/30 A |
| Primary operating range |  | $0.85 \ldots 1.1 \times U_{\text {c }}$ |  |  |  |
| Rated frequency $f_{\mathrm{c}}$ at AC |  | $50 / 60 \mathrm{~Hz}$ |  |  |  |
| Rated power dissipation $P_{v}$ | Pick-up power (without manual switch or with manual switch in "I" position) | 2.1 VA/2.1 W | 2.6 VA/2.6 W | 5 VA/5 W |  |
|  | Pick-up power (with manual switch in "AUTO" position) | 2.1 VA/4.1 W | 2.6 VA/2.6 W | $5 \mathrm{VA} / 5 \mathrm{~W}$ |  |
|  | Holding power | 2.1 VA/2.1 W | 2.6 VA/2.6 W | 5 VA/5 W |  |
|  | Per contact AC-1/AC-7a | 1.7 VA | 2.2 VA | 4 VA | 8 VA |
| Contacts |  |  |  |  |  |
| Contact gap (NO contacts) | Min. | 3.6 mm |  |  |  |
| Minimum switching capacity | (= minimum contact load) | $\geq 17 \mathrm{~V}$; 50 mA |  |  |  |
| Electrical endurance at $I_{\mathrm{e}}$ and load | AC-1/AC-7a operating cycles | 200000 |  | 100000 |  |
|  | AC-3/AC-7b operating cycles | 300000 | 500000 |  | 150000 |
| Mechanical service life | Operating cycles | 3 million |  |  |  |
| Switching of resistive loads AC-1 for rated operational power $P_{s}$ | 1-phase (NO contacts) | 4 kW (230 V) | 5.4 kW (400 V) | 8.7 kW (400 V) | 13.3 kW (400 V) |
|  | 3 -phase (NO contacts) | - | 16 kW (400 V) | 26 kW (400 V) | 40 kW ( 400 V ) |
| Switching of three-phase asynchronous motors AC-3 for rated operational power $P_{s}$ | 1-phase (NO contacts) | 1.3 kW/0.75 kW | 1.3 kW/1.3 kW | 3.7 kWI3.7 kW | $5 / 5 \mathrm{~kW}$ |
|  | 3 -phase (NO contacts) | - | 4 kW | 11 kW | 15 kW |
| Maximum switching frequency at load | AC-1/AC-7a/AC-3/AC-7b | $600 \mathrm{~h}^{-1}$ |  |  |  |
| Safety |  |  |  |  |  |
| Rated impulse voltage $U_{\text {imp }}$ |  | $\leq 4 \mathrm{kV}$ |  |  |  |
| Short-circuit protection, according to coordination type 1 | Back-up fuse characteristic gL/gG | 20 A | 25 A | 63 A | 80 A |
| Overload withstand capability at 10 s | Per conducting path (NO contacts only) | 72 A | 68 A | 176 A | 240 A |
| Function |  |  |  |  |  |
| Switching times | Closing (NO contacts) | $15 . .45 \mathrm{~ms}$ |  | $15 . .20 \mathrm{~ms}$ |  |
|  | Opening (NO contacts) | $20 . .50 \mathrm{~ms}$ | $20 . .770 \mathrm{~ms}$ | $35 \ldots 45 \mathrm{~ms}$ |  |
| Connections |  |  |  |  |  |
| Coil/main connection terminals | $\pm$ Screw (Pozidriv) | PZ1/PZ1 PZ1/PZ2 |  |  |  |
| Coil connection conductor cross-section | Solid | 1.0 ... 2.5 mm ${ }^{2}$ |  |  |  |
|  | Stranded, with end sleeve | 1.0 ... $2.5 \mathrm{~mm}^{2}$ |  |  |  |
|  | AWG cables | 16... 10 |  |  |  |
| Main connection conductor cross-section | Solid | $1.0 \ldots 10 \mathrm{~mm}^{2}$ | $1.5 \ldots 25 \mathrm{~mm}^{2}$ |  |  |
|  | Stranded, with end sleeve | $1.0 \ldots 6 \mathrm{~mm}^{2}$ | $1.5 \ldots 16 \mathrm{~mm}^{2}$ |  |  |
|  | AWG cables | 16 ... 8 | $16 . .4$ |  |  |
| Tightening torque | Coil connection | $0.6 \mathrm{Nm} / 8 \mathrm{lbs} / \mathrm{in}$. |  |  |  |
|  | Main connection | 1.2 Nm/9 lbs/in. 3.5 Nm/20 lbs/in. |  |  |  |
| Ambient conditions |  |  |  |  |  |
| Permissible ambient temperature | For operation ${ }^{1 /} /$ For storage | $-15 \ldots+55^{\circ} \mathrm{Cl}-50 \ldots+80^{\circ} \mathrm{C}$ |  |  |  |
| Degree of protection | Acc. to EN 60529 | IP20, with connected conductors |  |  |  |
| Characteristics according to UL 508 |  |  |  |  |  |
| Rated operational current $I_{n}$ |  | 20 A | 25 A | 40 A | 63 A |
| UL 508 General Use 240 V/480 V | FLA | 20 A | 25 A | 40 A | 63 A |
| UL 508 AC discharge lamps |  | 20 A | 25 A | 30 A | 40 A |
| UL 508 motor load | Power 240 V/480 V | $1 \mathrm{hp/-}$ | $3 \mathrm{hp} / 5 \mathrm{hp}$ | $7.5 \mathrm{hp} / 15 \mathrm{hp}$ | $10 \mathrm{hp} / 20 \mathrm{hp}$ |
| UL 508 short-circuit at 480 V | K5 fuses | 20 A | 25 A | 60 A | 70 A |

${ }^{\text {1) }}$ Contactors can be operated at ambient temperatures of between $-25^{\circ} \mathrm{C}$ and $+70^{\circ} \mathrm{C}$, but only under special conditions.
For further information, please contact Siemens Support. For questions concerning heat dissipation, please refer to the instructions in the Configuration Manual „Switching devices".

## Accessories



## 5 TT58 Insta contactors

## AC technology

|  | Rated operational current $I_{\mathrm{e}}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 20 A | 25 A | 32 A | 40 A | 63 A |
| Main connection conductor cross-section, rigid | $1.0 \ldots 10 \mathrm{~mm}^{2}$ | $1.0 \ldots 10 \mathrm{~mm}^{2}$ | $1,0 \ldots 10 \mathrm{~mm}^{2}$ | $1 \ldots 25 \mathrm{~mm}^{2}$ | $1 . .25 \mathrm{~mm}^{2}$ |
| Main connection conductor cross-section, flexible with end sleeve | $1.0 \ldots 6 \mathrm{~mm}^{2}$ | $1.0 \ldots 6 \mathrm{~mm}^{2}$ | $1,0 \ldots 6 \mathrm{~mm}^{2}$ | $1 . . .16 \mathrm{~mm}^{2}$ | $1 \ldots 16 \mathrm{~mm}^{2}$ |
|  |  | O日 | $\ddot{\theta}^{\prime}$ | -0:00 | 0000 |
|  |  |  |  |  |  |
|  |  |  |  | $0.0 .00$ |  |


| Contacts | $U_{\text {e }}$ | $U_{c} \mathrm{AC}$ |  | Mounting width |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Insta contactors without manual switch |  |  |  |  |  |  |  |  |  |
| 2 NO | 230 V | 230 V |  | 1 MW | 5TT5800-0 | 5TT5810-0 | 5TT5860-0 | - | - |
|  |  | 24 V |  | 1 MW | 5TT5800-2 | - | - | - | - |
| 4 NO | 400 V | 230 V | Standard | 2 MW | - | 5TT5830-0 | - | - | - |
|  |  |  |  | 3 MW | - | - | - | 5TT5840-0 | 5TT5850-0 |
|  |  |  | Capacitive loads up to $150 \mu \mathrm{~F}$ | 2 MW | - | 5TT5820-0 | - | - | - |
|  |  | 115 V |  | 2 MW | - | 5TT5830-1 | - | - | - |
|  |  | 24 V |  | 2 MW | - | 5TT5830-2 | - | - | - |
|  |  |  |  | 3 MW | - | - | - | 5TT5840-2 | 5TT5850-2 |
| 2 NC | 230 V | 230 V |  | 1 MW | 5TT5802-0 | - | - | - | - |
|  |  | 24 V |  | 1 MW | 5TT5802-2 | - | - | - | - |
| 4 NC | 400 V | 230 V |  | 2 MW | - | 5TT5833-0 | - | - | - |
|  |  |  |  | 3 MW | - | - | - | 5TT5843-0 | 5TT5853-0 |
|  |  | 24 V |  | 2 MW | - | 5TT5833-2 | - | - | - |
|  |  |  |  | 3 MW | - | - | - | 5TT5843-2 | 5TT5853-2 |
| $1 \mathrm{NO}+1 \mathrm{NC}$ | 230 V | 230 V |  | 1 MW | 5TT5801-0 | - | - | - | - |
|  |  | 24 V |  | 1 MW | 5TT5801-2 | - | - | - | - |
| $2 \mathrm{NO}+2 \mathrm{NC}$ | 400 V | 230 V |  | 2 MW | - | 5TT5832-0 | - | - | - |
|  |  |  |  | 3 MW | - | - | - | 5TT5842-0 | 5TT5852-0 |
|  |  | 24 V |  | 2 MW | - | 5TT5832-2 | - | - | - |
|  |  |  |  | 3 MW | - | - | - | 5TT5842-2 | 5TT5852-2 |
| $3 \mathrm{NO}+1 \mathrm{NC}$ | 400 V | 230 V |  | 2 MW | - | 5TT5831-0 | - | - | - |
|  |  |  |  | 3 MW | - | - | - | 5TT5841-0 | 5TT5851-0 |
|  |  | 115 V |  | 2 MW | - | 5TT5831-1 | - | - | - |
|  |  | 24 V |  | 2 MW | - | 5TT5831-2 | - | - | - |
|  |  |  |  | 3 MW | - | - | - | 5TT5841-2 | 5TT5851-2 |
| Insta contactors with manual switch O/I/Automatic |  |  |  |  |  |  |  |  |  |
| 2 NO | 230 V | 230 V |  | 1 MW | 5TT5800-6 | - | - | - | - |
|  |  | 24 V |  | 1 MW | 5TT5800-8 | - | - | - | - |
| 4 NO | 400 V | 230 V |  | 2 MW | - | 5TT5830-6 | - | - | - |
|  |  |  |  | 3 MW | - | - | - | 5TT5840-6 | 5TT5850-6 |
|  |  | 24 V |  | 2 MW | - | 5TT5830-8 | - | - | - |
|  |  |  |  | 3 MW | - | - | - | 5TT5840-8 | - |
| $1 \mathrm{NO}+1 \mathrm{NC}$ | 230 V | 230 V |  | 1 MW | 5TT5801-6 | - | - | - | - |
|  |  | 24 V |  | 1 MW | 5TT5801-8 | - | - | - | - |
| $3 N O+1$ NC | 400 V | 230 V |  | 2 MW | - | 5TT5831-6 | - | - | - |
|  |  |  |  | 3 MW | - | - | - | 5TT5841-6 | - |
|  |  | 24 V |  | 2 MW | - | 5TT5831-8 | - | - | - |
|  |  |  | - | 3 MW | - | - | - | 5TT5841-8 | - |

## Note:

Provision must be made for spacers to ensure heat dissipation.
See Configuration Manual - Switching devices www.siemens.com/lowvoltage/manuals (45315361).


## 5TT5 auxiliary switches

## For 5TT5 Insta contactor

# Rigid conductor cross-section $1 \ldots 2.5 \mathrm{~mm}^{2}$ <br> Flexible conductor cross-section, with end sleeve $1 \ldots 2.5 \mathrm{~mm}^{2}$ 

Further technical specifications
5 TT5910

| Standards |  |  |
| :---: | :---: | :---: |
| Standards |  | IEC 60947-5-1 |
| Approvals |  | CCC |
| Supply |  |  |
| Number of poles |  | 2 |
| Rated operational current $I_{\mathrm{e}}$ | 230 V | 6 A |
|  | 400 V | 4 A |
| Rated frequency $f_{c}$ at $A C$ |  | $50 / 60 \mathrm{~Hz}$ |
| Contacts |  |  |
| Contact gap | Minimum | 4 mm |
| Minimum switching capacity | (= minimum contact load) | $\geq 12 \mathrm{~V} ; 5 \mathrm{~mA}$ |
| Mechanical service life | Operating cycles | 3 million |
| Maximum switching frequency at load |  | $600 \mathrm{~h}^{-1}$ |
| Safety |  |  |
| Rated insulation voltage $U_{i}$ |  | 500 V |
| Rated impulse voltage $U_{\text {imp }}$ |  | 4 kV |
| Short-circuit protection, according to coordination type 1 | Back-up fuse characteristic gL/gG | 6 A |
| Connections |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ1 |
| Conductor cross-section | Rigid | $1 . .2 .5 \mathrm{~mm}^{2}$ |
|  | Flexible, with end sleeve | $1 \ldots 2.5 \mathrm{~mm}^{2}$ |
| Tightening torque |  | 0.8 Nm |
| Ambient conditions |  |  |
| Permissible ambient temperature | For operation/for storage | $-5 \ldots+55^{\circ} \mathrm{Cl}-30 \ldots+80^{\circ} \mathrm{C}$ |
| Degree of protection | Acc. to EN 60529 | IP20, with connected condu |

## 5TT3 soft-starting devices

## For 2-phase motor control



Further technical specifications
5 TT3440


## 7LF4 digital time switches

Mini


- Weekly program
- 28 programs
- Automatic daylight-saving adjustment

| Contacts | $U_{c}$ | Channels | Mounting <br> width |  |
| :--- | :--- | :--- | :--- | :--- |
| 1 NO | 230 V AC | 1 | 1 MW | 7LF4501-5 |


| Further technical sp | ecifications | Mini |
| :---: | :---: | :---: |
| Standards |  |  |
| Standards |  | EN 60730-1, -2-7; VDE 0631-1, -2-7 |
| Supply |  |  |
| Primary operating range |  | $0.85 \ldots 1.1 \times U_{C}$ |
| Frequency range |  | $50 / 60 \mathrm{~Hz}$ |
| Rated power dissipation $P_{v}$ |  | 0.9 VA |
| Channels |  |  |
| Rated operational voltage $U_{\mathrm{e}}$ |  | 250 V AC |
| Rated operational current $I_{\text {e }}$ | At p.f. $=1$ | 16 A |
|  | At p.f. $=0.6$ | 10 A |
| Contacts |  |  |
| Minimum contact load |  | $12 \mathrm{~V} / 100 \mathrm{~mA}$ |
| Electrical operating cycles | At p.f. $=1$ | 6000 (20 A) |
| Mechanical operating cycles |  | >5 million |
| Incandescent lamp load |  | 5 A |
| Energy-saving lamp load |  | 300 W |
| Fluorescent lamp load | Parallel p.f. correction $70 \mu \mathrm{~F}$ | 60 VA |
|  | Uncorrected | 2500 VA |
| Safety |  |  |
| Different phases between operating mechanism and contact |  | Permissible |
| Rated impulse voltage $U_{\text {imp }}$ |  | 4 kV |
| Electrostatic discharge | Acc. to IEC 61000-4-2 | $>8.0 \mathrm{kV}$ |
| EMC: Burst | Acc. to IEC 61000-4-4 | $>4.4 \mathrm{kV}$ |
| EMC: Surge | Acc. to IEC 61000-4-5 | $>2.0 \mathrm{kV}$ |
| Overvoltage category | Acc. to EN 61010-1 | III |
| Function |  |  |
| Clock errors per day | Typical | $\pm 1$ s/day |
| Power reserve storage | Battery | 3 years |
| Make and break cycles |  | 1 min |
| Minimum switching sequences |  | 1 min |
| Control input | Terminal S | - |
| Programs ${ }^{1)}$ |  | 28 |
| Battery type |  | Li primary cell |
| Connections |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ1 |
| Conductor cross-sections of main conducting path | Rigid | 1.5 ... $4 \mathrm{~mm}^{2}$ |
|  | Flexible, with end sleeve | Max. $2.5 \mathrm{~mm}^{2}$ |
| Ambient conditions |  |  |
| Permissible ambient temperature | For operation/ for storage | $\begin{aligned} & -10 \ldots+55^{\circ} \mathrm{Cl} \\ & -20 \ldots+60^{\circ} \mathrm{C} \end{aligned}$ |
| Resistance to climate | Acc. to EN 60068-1 | 10/055/21 |
| Degree of protection | Acc. to EN 60529 | IP20, with connected conductors |
| Protection class | Acc. to EN 61140 | II |

[^1]

- Weekly program
- 28 programs
- Text-assisted programming concept - Language: English
- Manual daylight-saving adjustment

| Contacts | $U_{c}$ | Channels | Mounting <br> width |  |
| :--- | :--- | :--- | :--- | :--- |
| 1 CO | 230 VAC | 1 | 2 MW | 7LF4511-0 |
| 2 CO | 230 VAC | 2 | 2 MW | 7LF4512-0 |


| Further technical specifications |  | Top |
| :---: | :---: | :---: |
| Standards |  |  |
| Standards |  | EN 60730-1, -2-7; VDE 0631-1, -2-7 |
| Supply |  |  |
| Primary operating range |  | $0.85 \ldots 1.1 \times U_{C}$ |
| Frequency range |  | $50 / 60 \mathrm{~Hz}$ |
| Rated power dissipation $P_{v}$ |  | 2 VA |
| Channels |  |  |
| Rated operational voltage $U_{e}$ |  | 250 V AC |
| Rated operational current $I_{\mathrm{e}}$ | At p.f. $=1$ | 16 A |
|  | At p.f. $=0.6$ | 10 A |
| Contacts |  |  |
| Minimum contact load |  | $12 \mathrm{~V} / 100 \mathrm{~mA}$ |
| Electrical operating cycles | At p.f. $=1$ | 100000 |
| Mechanical operating cycles |  | 10 million |
| Incandescent lamp load |  | 8 A |
| Energy-saving lamp load |  | 60 VA |
| Fluorescent lamp load | Parallel p.f. correction $70 \mu \mathrm{~F}$ | 60 VA |
|  | Uncorrected | 2300 VA |
| Safety |  |  |
| Different phases between operating mechanism and contact |  | Permissible ${ }^{2)}$ |
| Rated impulse voltage $U_{\text {imp }}$ |  | 4 kV |
| Electrostatic discharge | Acc. to IEC 61000-4-2 | $>8.0 \mathrm{kV}$ |
| EMC: Burst | Acc. to IEC 61000-4-4 | $>4.4 \mathrm{kV}$ |
| EMC: Surge | Acc. to IEC 61000-4-5 | $>2.0 \mathrm{kV}$ |
| Overvoltage category | Acc. to EN 61010-1 | III |
| Function |  |  |
| Clock errors per day | Typical | $\pm 1.5$ s/day |
| Power reserve storage | Battery | 3 years |
| Make and break cycles |  | 1 min |
| Minimum switching sequences |  | 1 min |
| Control input | Terminal S | No |
| Programs ${ }^{1)}$ |  | 28 (14 per channel) |
| Program memory | Captive | No |
| Battery type |  | Li primary cell |
| Connections |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ1 |
| Conductor cross-sections of main conducting path | Rigid | $1.5 \ldots 4 \mathrm{~mm}^{2}$ |
|  | Flexible, with end sleeve | Max. $2.5 \mathrm{~mm}^{2}$ |
| Ambient conditions |  |  |
| Permissible ambient temperature | For operation/ for storage | $\begin{aligned} & -20 \ldots+55^{\circ} \mathrm{Cl} \\ & -20 \ldots+60^{\circ} \mathrm{C} \end{aligned}$ |
| Resistance to climate | Acc. to EN 60068-1 | 20/055/21 |
| Degree of protection | Acc. to EN 60529 | IP20, with connected conductors |
| Protection class | Acc. to EN 61140 | II |

[^2]
## 7LF4 digital time switches

## Profi



- Weekly program
- Vacation program
- Random program
- Expert mode
- Cycle function
- Text-assisted programming concept
- 15 languages
- Simple program creation on a PC using the supplied software, with 7LF4941-0 USB adapter
- Automatic daylight-saving adjustment
- Operating hours counter, counting range: 65535 h
- Accurate to the second hh:mm:ss
- Synchronization $50 / 60 \mathrm{~Hz}$

| Contacts | $U_{\text {c }}$ | Channels | Mounting width |  |
| :---: | :---: | :---: | :---: | :---: |
| 1 CO | 230 V AC | 1 | 2 MW | 7LF4521-0 |
|  | 24 V AC/DC | 1 | 2 MW | 7LF4521-2 |
| 2 CO | 230 V AC | 2 | 2 MW | 7LF4522-0 |
|  | 24 V ACIDC | 2 | 2 MW | 7LF4522-2 |


| Further technical specifications |  | Profi |
| :---: | :---: | :---: |
| Standards |  |  |
| Standards |  | $\begin{aligned} & \text { EN 60730-1, -2-7; } \\ & \text { VDE 0631-1, -2-7 } \end{aligned}$ |
| Approvals |  | UL File No. E301698 |
| Supply |  |  |
| Primary operating range | $U_{\mathrm{c}} 230 \mathrm{~V}$ | $0.85 \ldots 1.1 \times U_{\text {c }}$ |
|  | $U_{\mathrm{c}} 24 \mathrm{~V}$ | $0.9 \ldots 1.1 \times U_{c}$ |
| Frequency range | $U_{\mathrm{c}} 230 \mathrm{~V}$ | $50 / 60 \mathrm{~Hz}$ |
|  | $U_{\mathrm{c}} 24 \mathrm{~V}$ | $50 / 60 \mathrm{~Hz}$ |
| Rated power dissipation $P_{v}$ | $U_{\mathrm{c}} 230 \mathrm{~V}$ | 2 VA |
|  | $U_{c} 24 \mathrm{~V}$ | 2 VA |
| Channels |  |  |
| Rated operational voltage $U_{\text {e }}$ |  | 250 V AC |
| Rated operational current $I_{\text {e }}$ | At p.f. $=1$ | 16 A |
|  | At p.f. $=0.6$ | 10 A |
| Contacts |  |  |
| Minimum contact load |  | $12 \mathrm{~V} / 100 \mathrm{~mA}$ |
| Electrical operating cycles | At p.f. $=1$ | 100000 |
| Mechanical operating cycles |  | 10 million |
| Incandescent lamp load |  | 8 A |
| Energy-saving lamp load |  | 1000 W |
| Fluorescent lamp load | Parallel p.f. correction $70 \mu \mathrm{~F}$ | 600 VA |
|  | Uncorrected | 2000 VA |
| Safety |  |  |
| Different phases between operating mechanism and contact |  | Permissible ${ }^{\text {2) }}$ |
| Rated impulse voltage $U_{\text {imp }}$ |  | 4 kV |
| Electrostatic discharge | Acc. to IEC 61000-4-2 | $>8.0 \mathrm{kV}$ |
| EMC: Burst | Acc. to IEC 61000-4-4 | $>4.4 \mathrm{kV}$ |
| EMC: Surge | Acc. to IEC 61000-4-5 | $>2.0 \mathrm{kV}$ |
| Overvoltage category | Acc. to EN 61010-1 | III |
| Function |  |  |
| Clock errors per day | Typical | $\pm 0.1$ s/day |
| Power reserve storage | Battery | 5 years |
| Make and break cycles |  | 1 s |
| Minimum switching sequences |  | 1 s |
| Control input | Terminal S | No |
| Programs ${ }^{1)}$ |  | 28 |
| Program memory | Captive | Yes |
| Battery type |  | Li primary cell |
| Connections |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ1 |
| Conductor cross-sections of main conducting path | Rigid | 1.5 ... $4 \mathrm{~mm}^{2}$ |
|  | Flexible, with end sleeve | Max. $2.5 \mathrm{~mm}^{2}$ |
| Ambient conditions |  |  |
| Permissible ambient temperature | For operation/for storage | $\begin{aligned} & -20 \ldots+55^{\circ} \mathrm{Cl} \\ & -20 \ldots+60^{\circ} \mathrm{C} \end{aligned}$ |
| Resistance to climate | Acc. to EN 60068-1 | 20/055/21 |
| Degree of protection | Acc. to EN 60529 | IP20, with connected conductors |
| Protection class | Acc. to EN 61140 | II |

[^3]
## Astro



- Weekly program
- Vacation program
- Random program
- Expert mode
- Astro function
- Text-assisted programming concept
- 15 languages
- Simple program creation on a PC using the supplied software, with 7LF4941-0 USB adapter
- Automatic daylight-saving adjustment
- Operating hours counter, counting range: 65535 h
- Accurate to the second hh:mm:ss
- Synchronization $50 / 60 \mathrm{~Hz}$
- Input disable via PIN code
- Daylight-saving correction
- 1 h test

| Contacts | $U_{c}$ | Channels | Mounting <br> width |  |
| :--- | :--- | :--- | :--- | :--- |
| 1 CO | 230 V AC | 1 | 2 MW | 7LF4531-0 |
| 2 CO | 230 V AC | 2 | 2 MW | 7LF4532-0 |


| Further technical sp | ecifications | Astro |
| :---: | :---: | :---: |
| Standards |  |  |
| Standards |  | $\begin{aligned} & \text { EN 60730-1, -2-7; } \\ & \text { VDE 0631-1, -2-7 } \end{aligned}$ |
| Approvals |  | UL File No. E301698 |
| Supply |  |  |
| Primary operating range |  | $0.85 \ldots 1.1 \times U_{\text {c }}$ |
| Frequency range |  | $50 / 60 \mathrm{~Hz}$ |
| Rated power dissipation $P_{v}$ |  | 2 VA |
| Channels |  |  |
| Rated operational voltage $U_{e}$ |  | 250 V AC |
| Rated operational current $I_{\text {e }}$ | At p.f. $=1$ | 16 A |
|  | At p.f. $=0.6$ | 10 A |
| Contacts |  |  |
| Minimum contact load |  | $12 \mathrm{~V} / 100 \mathrm{~mA}$ |
| Electrical operating cycles | At p.f. $=1$ | 100000 |
| Mechanical operating cycles |  | 10 million |
| Incandescent lamp load |  | 8 A |
| Energy-saving lamp load |  | 1000 W |
| Fluorescent lamp load | Parallel p.f. correction $70 \mu \mathrm{~F}$ | 600 VA |
|  | Uncorrected | 2000 VA |
| Safety |  |  |
| Different phases between operating mechanism and contact |  | Permissible ${ }^{2)}$ |
| Rated impulse voltage $U_{\text {imp }}$ |  | 4 kV |
| Electrostatic discharge | Acc. to IEC 61000-4-2 | $>8.0 \mathrm{kV}$ |
| EMC: Burst | Acc. to IEC 61000-4-4 | $>4.4 \mathrm{kV}$ |
| EMC: Surge | Acc. to IEC 61000-4-5 | $>2.0 \mathrm{kV}$ |
| Overvoltage category | Acc. to EN 61010-1 | III |
| Function |  |  |
| Clock errors per day | Typical | $\pm 0.1$ s/day |
| Power reserve storage | Battery | 5 years |
| Make and break cycles |  | 1 s |
| Minimum switching sequences |  | 1 s |
| Control input | Terminal S | Yes (with 1 K clock) |
| Programs ${ }^{1)}$ |  | $56(2 \times 28)$ |
| Program memory | Captive | Yes |
| Battery type |  | Li primary cell |
| Connections |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ1 |
| Conductor cross-sections of main conducting path | Rigid | 1.5 ... 4 mm ${ }^{2}$ |
|  | Flexible, with end sleeve | Max. $2.5 \mathrm{~mm}^{2}$ |
| Ambient conditions |  |  |
| Permissible ambient temperature | For operation/ for storage | $\begin{aligned} & -20 \ldots+55^{\circ} \mathrm{Cl} \\ & -20 \ldots+60^{\circ} \mathrm{C} \end{aligned}$ |
| Resistance to climate | Acc. to EN 60068-1 | 20/055/21 |
| Degree of protection | Acc. to EN 60529 | IP20, with connected conductors |
| Protection class | Acc. to EN 61140 | II |

[^4]
## 7LF4 digital time switches

## Accessories

|  |  | Mini | Top | Profi | Astro |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Data keys |  |  |  |  |  |
| - For Profi and Astro digital time switches <br> - Programming at the PC (7LF4941-0 USB adapter and software required) <br> - Read-in of programs to the time switch <br> - Writing of programs from the time switch <br> - Transfer of programs <br> - From PC to time switch and vice versa <br> - From time switch to time switch |  |  |  |  |  |
|  | Article No. |  |  |  |  |
|  | 7LF4941-1 | - | - | ■ | ■ |
| USB adapter and software |  |  |  |  |  |
| - For Profi and Astro digital time switches <br> - For the reading and writing of data keys at the PC <br> - Including programming software <br> - Including 7LF4941-1 data key for Profi and Astro <br> - Compatible with 7LF4940-1 data key (predecessor model) and 7LF4940-2 data key <br> - Can be connected via USB interface <br> - System requirements: <br> - Windows 7, Windows Vista, Windows 2000, Windows ME, Windows XP or Windows 98 Second Edition <br> - USB connection <br> - 40 MB free disk space |  |  |  |  |  |
|  | Article No. |  |  |  |  |
|  | 7LF4941-0 | - | - | $\square$ | ■ |
| Holders for front panel installation |  |  |  |  |  |
| - Universal application for devices from 1 MW ... 6 MW <br> - Cutout dimensions: <br> - Height $45^{+0.5} \mathrm{~mm}$ <br> - Width $23 \mathrm{~mm}, 41 \mathrm{~mm}, 59 \mathrm{~mm}, 77 \mathrm{~mm}, 95 \mathrm{~mm}$ or 113 mm |  |  |  |  |  |
|  | Article No. |  |  |  |  |
|  | 7LF9006 | $\square$ | $\square$ | ■ | $\square$ |

## 7LF5 mechanical time switches

Time switches without power reserve

| For DIN rail | For wall mounting <br> (surface mounting) |
| :--- | :--- |
| 7LF5300-1 |  |
| - | 7LF5300-5 |
| - | - |


| Further technical specifications |  | 7LF5300-1 | 7LF5300-5 | 7LF5300-6 | 7LF5301-0 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Standards |  |  |  |  |  |
| Standards |  | EN 60730-1, -2-7, UL 917, UL 917, CSA C22.2 No. 14 and 177 |  |  |  |
| Approvals |  | VDE, UL file: E301698 |  |  |  |
| Supply |  |  |  |  |  |
| Rated control supply voltage $U_{c}$ |  | 230 VAC |  |  |  |
| Primary operating range | $\mathrm{U}_{\mathrm{c}} 230 \mathrm{VaC}$ | 0.85 ... $1.1 \times \mathrm{U}_{\text {c }}$ |  |  |  |
| Rated frequency |  | 50 Hz |  |  |  |
| Frequency range |  | 50 Hz |  |  |  |
| Rated power dissipation $P_{v}$ |  | 1 VA |  |  |  |
| Channels |  |  |  |  |  |
| Rated operational voltage $U_{\text {e }}$ |  | 250 V AC |  |  |  |
| Rated operational current $I_{\text {e }}$ | At p.f. $=1$ | 16 A |  |  |  |
|  | At p.f. $=0.6$ | 4 A |  |  |  |
| Contacts |  |  |  |  |  |
| Minimum contact load |  | $4 \mathrm{~V} / 1 \mathrm{~mA}$ |  |  |  |
| Electrical operating cycles At p.f. $=1$ |  | 100000 |  |  |  |
| Mechanical operating cycles |  | 20 million |  |  |  |
| Incandescent lamp load |  | 5 A |  |  |  |
| Fluorescent lamp load | Parallel p.f. correction $70 \mu \mathrm{~F}$ | 60 VA |  |  |  |
|  | Uncorrected | 1400 VA |  |  |  |
| Safety |  |  |  |  |  |
| Different phases between operating mechanism and contact |  | Permissible |  |  |  |
| Electrical isolation, creepage distances and clearances | Operating mechanism | 8 mm |  |  |  |
|  | Contact | 6 mm |  |  |  |
| Rated impulse voltage $U_{\text {imp }}$ |  | 4 kV |  |  |  |
| Electrostatic discharge Acc. to IEC 61000-4-2 |  | $>8.0 \mathrm{kV}$ |  |  |  |
| EMC: Burst | Acc. to IEC 61000-4-4 | $>4.4 \mathrm{kV}$ |  |  |  |
| EMC: Surge Acc. to IEC 61000-4-5 |  | $>2.0 \mathrm{kV}$ |  |  |  |
| Overvoltage category | Acc. to EN 61010-1 | III |  |  |  |
| Overvoltage categoryFunction |  |  |  |  |  |
| Switching accuracy |  | $\pm 5 \mathrm{~min}$ |  | $\pm 30 \mathrm{~min}$ | $\pm 5 \mathrm{~min}$ |
| Clock errors |  | System-synchronized |  |  |  |
| Make and break cycles |  | 15 min |  | 120 min | 10 min |
| Minimum switching sequences |  | 30 min |  | 240 min | 30 min |
| Connections |  |  |  |  |  |
| Terminals <br> Conductor cross-sections of main conducting path | $\pm$ Screw (Pozidriv) | PZ1 |  |  |  |
|  | Rigid | 1.5 ... 4 mm |  |  |  |
|  | Flexible, with end sleeve | Max. $2.5 \mathrm{~mm}^{2}$ |  |  |  |
|  | Flexible, without end sleeve | Max. 4 mm ${ }^{\text {2 }}$ |  |  |  |
| Ambient conditions |  |  |  |  |  |
| Permissible ambient temperature For operation/for storage |  | $-10 \ldots+55^{\circ} \mathrm{Cl}-10 \ldots+60^{\circ} \mathrm{C}$ |  |  |  |
| Resistance to climate | Acc. to EN 60068-1 | 10/055/21 |  |  |  |
| Degree of protection | Acc. to EN 60529 | IP20, with connected conductors |  |  |  |
| Protection class | Acc. to EN 61140 | 11 |  |  |  |

## Accessories

## Holders for front panel installation

- Universal application for devices from 1 MW ... 6 MW
- Cutout dimensions:
- Height $45^{+0.5} \mathrm{~mm}$
- Width $23 \mathrm{~mm}, 41 \mathrm{~mm}, 59 \mathrm{~mm}, 77 \mathrm{~mm}, 95 \mathrm{~mm}$ or 113 mm


## 7LF5 mechanical time switches

Time switches with power reserve

|  | For DIN rail |  |  | For wall mounting (surface mounting) |
| :---: | :---: | :---: | :---: | :---: |
| Time buffering in the event of a power failure | - | - | ■ | - |
| Automatic daylight-saving adjustment | - | - | $\square$ | - |
| Automatic time setting for Central European time zone during commissioning | - | - | ■ | - |
|  |  |  |  |  |
| Contacts Mounting width |  |  |  |  |
| With day disk |  |  |  |  |
| 1 NO 1 MW | 7LF5301-1 | - | - | - |
| 1 CO 3 MW | - | 7LF5301-6 | 7LF5301-4 | - |
| - | - | - | - | 7LF5305-0 |
| With week disk |  |  |  |  |
| 1 CO 3 MW | - | 7LF5301-7 | 7LF5301-5 | - |


| Further technical specificher | ications | 7LF5301-1 | 7LF5301-4 | 7LF5301-5 | 7LF5301-6 | 7LF5301-7 | 7LF5305-0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Standards |  |  |  |  |  |  |  |
| Standards |  | EN 60730-1, -2-7, UL 917, UL 917, CSA C22.2 No. 14 and 177 |  |  |  |  |  |
| Approvals |  | VDE, UL file: E301698 |  |  |  |  |  |
| Supply |  |  |  |  |  |  |  |
| Rated control supply voltage $U_{c}$ |  | 230 V AC |  |  |  |  |  |
| Primary operating range |  | $0.85 \ldots 1.1 \times U_{\text {c }}$ |  |  |  |  |  |
| Rated frequency |  | 50 Hz |  |  |  |  |  |
| Frequency range |  | $50 / 60 \mathrm{~Hz}$ |  |  |  |  |  |
| Rated power dissipation $P_{\mathrm{v}}$ |  | 1 VA | 0.2 VA |  | 1 VA |  |  |
| Channels |  |  |  |  |  |  |  |
| Rated operational voltage $U_{\text {e }}$ |  | 250 V AC |  |  |  |  |  |
| Rated operational current $I_{\mathrm{e}}$ | At p.f. $=1$ | 16 A |  |  |  |  |  |
|  | At p.f. $=0.6$ | 4 A |  |  |  |  |  |
| Contacts |  |  |  |  |  |  |  |
| Minimum contact load |  | $4 \mathrm{~V} / 1 \mathrm{~mA}$ |  |  |  |  |  |
| Electrical operating cycles | At p.f. $=1$ | 100000 |  |  |  |  |  |
| Mechanical operating cycles |  | 20 million |  |  |  |  |  |
| Incandescent lamp load |  | 5 A |  |  |  |  |  |
| Fluorescent lamp load | Parallel p.f. correction $70 \mu \mathrm{~F}$ | 60 VA |  |  |  |  |  |
|  | Uncorrected | 1400 VA |  |  |  |  |  |
| Safety |  |  |  |  |  |  |  |
| Different phases between operating mechanism and contact |  | Permissible |  |  |  |  |  |
| Electrical isolation, creepage distances and clearances | Operating mechanism | 8 mm |  |  |  |  |  |
|  | Contact | 6 mm |  |  |  |  |  |
| Rated impulse voltage $U_{\text {imp }}$ |  | 4 kV |  |  |  |  |  |
| Electrostatic discharge | Acc. to IEC 61000-4-2 | $>8.0 \mathrm{kV}$ |  |  |  |  |  |
| EMC: Burst | Acc. to IEC 61000-4-4 | $>4.4 \mathrm{kV}$ |  |  |  |  |  |
| EMC: Surge | Acc. to IEC 61000-4-5 | $>2.0 \mathrm{kV}$ |  |  |  |  |  |
| Overvoltage category | Acc. to EN 61010-1 | III |  |  |  |  |  |
| Function |  |  |  |  |  |  |  |
| Switching accuracy |  | $\pm 5 \mathrm{~min}$ |  | $\pm 30 \mathrm{~min}$ | $\pm 5 \mathrm{~min}$ | $\pm 30 \mathrm{~min}$ | $\pm 5 \mathrm{~min}$ |
| Clock errors |  | $\pm 2.5$ s/day | $\pm 0.2$ s/day | $\pm 60$ s/day | $\pm 2.5$ s/day |  |  |
| Power reserve storage |  | 100 h 6 years |  |  | 100 h |  |  |
| Make and break cycles |  | 15 min |  | 120 min | 15 min | 120 min | 15 min |
| Minimum switching sequences |  | 30 min |  | 240 min | 30 min | 240 min | 30 min |
| Battery type |  | NiMH cell | Li primary cell |  | NiMH cell |  |  |
| Minimum loading time |  | 48 h | - |  | 48 h |  |  |
| Service life of battery | At $20^{\circ} \mathrm{C}$ | 6 years | 10 years |  | 6 years |  |  |
|  | At $40^{\circ} \mathrm{C}$ | 5 years |  |  |  |  |  |
| Connections |  |  |  |  |  |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ1 |  |  |  |  |  |
| Conductor cross-sections of main conducting path | Rigid | 1.5 ... 4 mm ${ }^{2}$ |  |  |  |  |  |
|  | Flexible, with end sleeve | Max. $2.5 \mathrm{~mm}^{2}$ |  |  |  |  |  |
|  | Flexible, without end sleeve | Max. 4 mm² |  |  |  |  |  |
| Ambient conditions |  |  |  |  |  |  |  |
| Permissible ambient temperature Storage/operation |  | $-10 \ldots+60^{\circ} \mathrm{Cl}-10 \ldots+55^{\circ} \mathrm{C}$ |  |  |  |  |  |
| Resistance to climate | Acc. to EN 60068-1 | 10/055/21 |  |  |  |  |  |
| Degree of protection | Acc. to EN 60529 | IP20, with connected conductors |  |  |  |  |  |
| Protection class | Acc. to EN 61140 | II |  |  |  |  |  |

## Accessories

## Holders for front panel installation

- Universal application for devices from 1 MW ... 6 MW
- Cutout dimensions:
- Height $45^{+0.5} \mathrm{~mm}$
- Width $23 \mathrm{~mm}, 41 \mathrm{~mm}, 59 \mathrm{~mm}, 77 \mathrm{~mm}, 95 \mathrm{~mm}$ or 113 mm


## 7LF6 timers for buildings

|  |  |  | Stairwell lighting timers Standard | Multi |
| :---: | :---: | :---: | :---: | :---: |
|  |  | 3-wire circuit | $\square$ | ■ |
|  |  | 4-wire circuit | $\square$ | $\square$ |
|  |  | Zero crossing circuit | $\square$ | $\square$ |
|  |  | Operation | Resettable | Resettable |
|  |  |  |  |  |
| Contacts | Warning of impending switch-off | Mounting width |  |  |
| 1 NO | - | 1 MW | 7 LF 6310 | - |
|  | Flickering | 1 MW | - | 7LF6311 |


| Further technical specifications |  | 7LF6310 | 7LF6311 |
| :---: | :---: | :---: | :---: |
| Supply |  |  |  |
| Rated operational current $\mathrm{l}_{\mathrm{e}}$ | At p.f. $=1$ | 16 A |  |
| Rated operational voltage $U_{e}$ |  | 250 V AC |  |
| Rated control supply voltage $U_{c}$ |  | 230 VAC |  |
| Frequency range |  | $50 / 60 \mathrm{~Hz}$ |  |
| Rated power dissipation $P_{v}$ |  | 1 W |  |
| Rated impulse voltage $U_{\text {imp }}$ |  | 4 kV |  |
| Contacts |  |  |  |
| Channels |  | 1 |  |
| Max. glow lamp load |  | 25 mA | 50 mA |
| Separate multi-voltage input |  | - | 8... 230 V ACIDC |
| Switching capacity | Inductive p.f. $=0.6$ | 2000 VA |  |
| Incandescent lamp load | Max. | 3680 W |  |
| Fluorescent lamp load | Series p.f. correction | 2000 VA |  |
|  | Parallel p.f. correction at $70 \mu \mathrm{~F}$ | 1000 W |  |
| Compact fluorescent lamp load |  | 1000 W |  |
| LED |  | 1000 W |  |
| Electronic transformers |  | 2000 VA |  |
| Conventional transformers |  | 2000 VA |  |
| Function |  |  |  |
| Setting range |  | 0.5 ... 10 min | 0.5 ... 12 min |
| Manual switches |  | Yes |  |
| Programs |  | - | 71) |
| Ambient conditions |  |  |  |
| Permissible ambient temperature | For operation | $-20 \ldots+55^{\circ} \mathrm{C}$ |  |
|  | For storage | $-20 \ldots+60^{\circ} \mathrm{C}$ |  |
| Degree of protection | Installed | IP30 |  |
| Pollution degree |  | 2 |  |

[^5]
## 5TT3 timers for industrial applications

|  |  | Multifunction timers | Delay timers |
| :---: | :---: | :---: | :---: |
|  | Programmable for: | - Response delay <br> - Passing make contact function <br> - Pulse generator, delayed <br> - Clock generator, starting with impulse <br> - OFF-delay <br> - Pulse converter <br> - Passing break contact function <br> - Response delay/OFF-delay | - |
|  |  |  |  |
| Contacts Mounting width |  |  |  |
| 1 CO 1 MW |  | $5 \mathrm{TT3185}$ | 5 TT3181 |
| Further technical specifications |  | $5 \mathrm{TT3185}$ | $5 \mathrm{TT3181}$ |
| Standards |  |  |  |
| Standards |  | EN 60255; DIN VDE 0435-110 |  |
| Supply |  |  |  |
| Rated operational current $I_{\text {e }}$ |  | 4 A | 8 A |
| Rated operational voltage $U_{e}$ |  | 250 V AC |  |
| Rated control supply voltage $U_{c}$ |  | 12 ... 240 V AC | 220 ... 240 V AC |
|  |  | $12 \ldots 240 \mathrm{~V}$ DC | - |
| Primary operating range | $U_{c} 230 \mathrm{~V} \mathrm{AC}, 50 / 60 \mathrm{~Hz}$ | $0.8 \ldots 1.1 \times U_{C}$ |  |
| Rated frequency $f_{n}$ |  | $45 \ldots 400 \mathrm{~Hz}$ | $50 / 60 \mathrm{~Hz}$ |
| Rated power dissipation $P_{v}$ |  | Approx. 3 VA | Approx. 5 VA |
| Contacts |  |  |  |
| Contact gap |  | $\mu \mathrm{m}$ contact |  |
| Minimum contact load |  | $10 \mathrm{~V} / 300 \mathrm{~mA}$ |  |
| Electrical endurance | Switching cycles | $1.5 \times 10^{5}$ | - |
|  | At AC-15 | - | $1.5 \times 10^{5}$ |
| Safety |  |  |  |
| Rated impulse voltage $U_{\text {imp }}$ | Input/output | $>4 \mathrm{kV}$ |  |
| Function |  |  |  |
| Setting range |  | $1 \mathrm{~s} \ldots 300 \mathrm{~h}$ |  |
| Recovery time |  | $15 . .80 \mathrm{~ms}$ | Approx. 40 ms |
| Connections |  |  |  |
| Terminals | $\pm$ Screw (Pozidriv) | PZ2 |  |
| Conductor cross-sections of main conducting path | Rigid | Max. $2 \times 2.5 \mathrm{~mm}^{2}$ |  |
|  | Flexible, with end sleeve | Min. $2 \times 1.5 \mathrm{~mm}^{2}$ |  |
| Ambient conditions |  |  |  |
| Permissible ambient temperature |  | $-40 \ldots+60^{\circ} \mathrm{C}$ |  |
| Resistance to climate | Acc. to EN 60068-1 | 40/60/4 |  |



## Appendix



## Conditions of sale and delivery

## 1. General Provisions

By using this catalog you can purchase products (hardware, software and services) described therein from Siemens Aktiengesellschaft subject to the following Terms and Conditions of Sale and Delivery (hereinafter referred to as „T\&C"). Please note that the scope, the quality and the conditions for supplies and services, including software products, by any Siemens entity having a registered office outside Germany, shall be subject exclusively to the General Terms and Conditions of the respective Siemens entity. The following T\&C apply exclusively for orders placed with Siemens Aktiengesellschaft, Germany.

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For customers with a seat or registered office in European Union, the following terms and conditions apply subordinate to T\&C:

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for stand-alone software products and software products forming a part of a product or project, the „General License Conditions for Software Products for Automation and Drives for Customers with a Seat or registered Office in Germany ${ }^{\prime \prime 1}$ ) and/or
- for consulting services the "Allgemeine Geschäftsbedingungen für Beratungsleistungen der Division DF - Deutschland" (available only in German) and/or
- for other services, the „Supplementary Terms and Conditions for Services ("BL")") and/or
- for other supplies the „General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry ${ }^{\text {"1 }}$. In case such supplies should contain Open Source Software, the conditions of which shall prevail over the "General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry ${ }^{111}$, a notice will be contained in the scope of delivery in which the applicable conditions for Open Source Software are specified. This shall apply mutatis mutandis for notices referring to other third party software components.


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For customers with a seat or registered office outside European Union, the following terms and conditions apply subordinate to T\&C:

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for consulting services the „Standard Terms and Conditions for Consulting Services of the Division DF for Customers with a Seat or Registered Office Outside of Germany" ${ }^{\text {"1) }}$ ) and/or
- for other services the „International Terms \& Conditions for Services ${ }^{(1)}$ supplemented by "Software Licensing Conditions ${ }^{{ }^{\prime 1}}$ ) and/or
- for other supplies of hard- and software the "International Terms \& Conditions for Products ${ }^{\text {"1 }}$ ) supplemented by „Software Licensing Conditions ${ }^{111)}$


### 1.3 For customers with master or framework agreement

 To the extent our supplies and/or services offered are covered by an existing master or framework agreement, the terms and conditions of that agreement shall apply instead of T\&C.
## 2. Additional Terms and Conditions

The dimensions are in mm . In Germany, according to the German law on units in measuring technology, data in inches apply only to devices for export.

Illustrations are not binding.
Insofar as there are no remarks on the individual pages of this catalog - especially with regard to data, dimensions and weights given - these are subject to change without prior notice.

[^6]
## 3. Export Regulations

We shall not be obligated to fulfill any agreement if such fulfillment is prevented by any impediments arising out of national or international foreign trade or customs requirements or any embargoes and/or other sanctions.

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## Catalog LV 10

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## Catalogs and further information



LV 10
Low-Voltage Power Distribution and Electrical Installation Technology SENTRON • SIVACON • ALPHA

PDF (E86060-K8280-A101-B7-7600)


LV 13
3WA Air Circuit Breakers
SENTRON
PDF (E86060-K8280-B101-A1-7600)


LV 18
Air Circuit Breakers and Molded Case Circuit Breakers with UL Certification SENTRON

PDF (E86060-K8280-E347-A9-7600)


IC 10
Industrial Controls
SIRIUS
PDF (E86060-K1010-A101-B5-7600)


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Information and Ordering Platform on the Internet:
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## SITRAIN

Digital Industry Academy
www.siemens.com/sitrain


Siemens TIA Selection Tool
for the selection, configuration and ordering of TIA products and devices
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The catalogs listed above and additional catalogs are available in PDF format at www.siemens.com/lowvoltage/catalogs

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[^0]:    Spacer

    - Contour for modular devices with a mounting depth of 70 mm
    - Can be snapped onto either side of the busbar for convenient cable routing
    - Spacer is recommended for better heat dissipation

[^1]:    1) A program consists of an ON time, an OFF time and assigned ON and OFF days or day blocks
[^2]:    1) A program consists of an ON time, an OFF time and assigned ON and OFF days or day blocks.
    ${ }^{2)}$ The combination of line voltage ( 230 V ) and SELV is not permissible in conjunction with a 2-channel time switch. This requirement is, however, admissible in the case of 1-channel time switch.
[^3]:    ${ }^{1)}$ A program consists of an ON time, an OFF time and assigned ON and OFF days or day blocks.
    ${ }^{2)}$ The combination of line voltage ( 230 V ) and SELV is not permissible in conjunction with a 2 -channel time switch. This requirement is, however, admissible in the case of 1 -channel time switch.

[^4]:    1) A program consists of an ON time, an OFF time and assigned ON and OFF days or day blocks.
    ${ }^{2)}$ The combination of line voltage ( 230 V ) and SELV is not permissible in conjunction with a 2 -channel time switch. This requirement is, however, admissible in the case of 1 -channel time switch.
[^5]:    ${ }^{1)} 7$ functions, can be selected using selector switch on the device

[^6]:    1) The text of the Terms and Conditions of Siemens AG can be downloaded at
    https://mall.industry.siemens.com/legal/ww/en/terms_of_trade_en.pdf
