## : hugomüller

switching controlling counting



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## : hugom üller

## INNOVATIONAL SPIRIT FROM THE BLACK FOREST

1929 till this day ... and in the future.

The company was founded in 1929 by Hugo Müller. Within a very short time the innovative company had become well known in the locality as a manufacturer of high quality loudspeakers, headphones, radio assembly kits, radios and, some time later, radio time switches.

For Hugo Müller, the change to electronics occurred in 1978, when the first time switch capable of being programmed for a year was introduced to the market. Its success was also virtually pre-programmed - the new product was exceptionally well received.

Today, time switches continue to be an important element of the product range, albeit with features which are subject to continuous improvement. This characteristic reflects the company's objective for the future. The consistent optimization and expansion of the standard product range, including tailormade products to meet individual customers' specific needs.

Our product solution range includes timing devices such as analog and digital timers, master clocks, hour meters, count down timers and light control devices such as analog and digital twilight switches, astronomical time switches, staircase timers, dimmers and also devices for climate control and building automation (KNX).

OEM
Hugo Müller is your partner whenever you need a customized electro-technical product. We manage the transition from your wishes and vague specifications to well-designed and sellable products.

Hard- and software development, prototyping and serial production are carried-out in our premises. This allows us to advise and support you through the complete development process. Our experts in development and production are efficiently realizing your ideas according to relevant laws, standards and directives. The products are produced with latest technologies and tested with self-made inspection devices. The quality of your product has highest priority.

All products are manufactured in Schwenningen - we offer quality „Made in Germany".
Hugo Müller produces your control and switching devices for time, light, temperature or air quality applications.
For each single problem we'll find a solution. Please contact us, we're happy to talk to you.


## Save time

## Digital time switches week for DIN-rail mounting

- Daily and weekly program
- Minimum interval 1 min.
- Permanent by date
- Manual permanent mode
- Manual override
- Variable block programming
- Fully automatic daylight saving time
- Elapsed time and pulse counter
- Pulse function
- Security by PIN-Code
- Text based menu
- Data security through E2PROM

- DIN-rail mounting 17.5 mm
- 1 channel / 46 memory locations

- Switching capacity 16 A
- 6 years battery-reserve

SC 08.11 pro
172110 pro 1

- Programmable with PC and Smartphone (see accessories)
- Removable programming module

- DIN-rail mounting 35 mm
- 1-2 channels / 56 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Directly programmable with Smartphone (NFC)
- Ideal for modern lamps (LED)
- Simple yearly program

■ Illuminated display / Display of the switching program

| ■ müller | - paladin <br> by mülier | Channels |
| :--- | :---: | :---: |
| SC 18.10 easy | 170410 easy | 1 |
| SC 18.20 easy | 170420 easy | 2 |
| Housing colour |  |  |



- DIN-rail mounting 35 mm
- 1-2 channels / 100 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Directly programmable with Smartphone (Bluetooth)
- Ideal for modern lamps (LED)
- Zero-cross switching (up to 600 W LED load)
- Simple yearly program
- Random function / Cycle function
- Illuminated display / Display of the switching program

| -müller | naladin <br> by müler | Channels |
| :--- | :---: | :---: |
| SC 28.11 pro4 | $1 / 172411$ pro4 | 1 |
| SC 28.21 pro4 | 172421 pro4 | 2 |

- DIN-rail mounting 70 mm

- 1-4 channels / 300 memory locations
- Switching capacity 16 A
- 10 years battery-reserve
- Programmable with PC and Smartphone (see accessories)
- Data-key function
- External input / Cycle function
- DCF / GPS function

■ Up to 300 permanent switchings by date

- Illuminated display



## Save time

Digital time switches week - panel, wall and flush mounting

- Daily and weekly program
- Minimum interval 1 min.
- Permanent by date / holiday function
- Manual permanent mode
- Manual override
- Variable block programming
- Fully automatic daylight saving time
- Elapsed time and pulse counter
- Pulse function
- Security by PIN-Code
- Text based menu
- Data security through E2PROM

- Switchboard panel mounting
- 1 channel / 46 memory locations
-müller
Channels
- Switching capacity 8 A
- 4 years battery-reserve
- External input


## SC 24.10 pro <br> 1



- Switchboard panel and wall mounting
- 1-2 channels / 46 memory locations
- Switching capacity 16 A
- 10 years battery-reserve
- Programmable with PC and Smartphone (see accessories)

| - müller | Channels |
| :---: | :---: |
| SC 44.11 pro | 1 |
| SC 44.21 pro | 2 |

- Data-key function
- Illuminated display




## Save time

## Digital time switches astro

- Astro program: Automatic switching according to the position the sun
- Economical night program
- Minimum interval 1 min.
- Manual permanent mode
- Manual override
- Automatic sorting of switching times
- Fully automatic daylight saving time
- Security by PIN-Code
- Ideal for modern lamps (LED, CFL, etc.)
- Data security through E2PROM

- Digital time switch astro with weekly program
- DIN-rail mounting 17.5 mm
- 1 channel / 60 memory locations
- Switching capacity 16 A
- 6 years battery-reserve

| -müller | -paladin ${ }_{\text {by müler }}$ | Channels |
| :---: | :---: | :---: |
| SC 08.13 pro | $\nabla_{172} 113$ pro | 1 |

- Programmable with PC and Smartphone (see accessories)
- Removable programming module
- Extra switching times (weekly time function)

- Digital time switch astro with daily program
- DIN-rail mounting 35 mm
- 1 channel / 4 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Direct programmable with smartphone (NFC)
- Illuminated display

| -müller | - paladin <br> by müler | Channels |
| :---: | :---: | :---: |
| SC 18.13 easy | 170413 easy | 1 |

- Display of the switching program

- Digital time switch astro with weekly program
- DIN-rail mounting 35 mm
- 1-2 channels / 56 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Direct programmable with smartphone (NFC)
- Extra switching times (weekly timer function)
- Illuminated display / Display of the switching program

| - müller | п paladin |
| :---: | :---: | :---: |
| by müller |  |$\quad$ Channels



- Digital time switch astro with weekly program
- DIN-rail mounting 35 mm
- 1-2 channels / 100 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Directly programmable with Smartphone (Bluetooth)
- Zero-cross switching (up to 600 W LED load)

- Extra switching times (weekly timer function)
- Illuminated display / Display of the switching program

| ■ müller | - paladin <br> by mülier | Channels |
| :--- | :---: | :---: |
| SC 28.13 pro4 | 172413 pro4 | 1 |
| SC 28.23 pro4 | 172423 pro4 | 2 |
| Whousing colour |  |  |



- Digital time switch astro with weekly program
- Flush-mounted fitting
- 1 channel / 56 memory locations
- Switching capacity 10 A
- 10 years battery-reserve
- Directly programmable with Smartphone (NFC)
-paladin $\begin{gathered}\text { by müller }\end{gathered}$
- Extra switching times (weekly timer function)
- Illuminated display / Display of the switching program

173113 easy

- Can be used with many common switch programs

Housing colour


## Save time

## Digital time switches year

- Daily, weekly and yearly program
- Yearly program with Easter function, Weekday function and extra-switching time function
- Minimum interval 1 min.
- Permanent by date / holiday function
- Manual permanent mode
- Manual override
- Variable block programming
- Fully automatic daylight saving time
- Elapsed time and pulse counter
- Pulse function
- Security by PIN-Code
- Text based menu
- Illuminated display
- Data security through E2PROM


■ DIN-rail mounting 35 mm

- 1 channel / 300 memory locations
- Switching capacity 16 A
- 10 years battery-reserve
- Programmable with PC and Smartphone (see accessories)
- Data-key function

| ■müller | -paladin |
| :---: | :---: | :---: |
| by müller |  |$\quad$ Channels

- Cycle function
- DCF / GPS function
- Up to 300 permanent switchings by date

- DIN-rail mounting 70 mm
- 1-4 channels / 300 memory locations
- Switching capacity 16 A
- 10 years battery-reserve
- Programmable with PC and Smartphone (see accessories)
- Data-key function
- External input / Cycle function

| -müller | -paladin by müller | Channels |
| :---: | :---: | :---: |
| SC 98.10 pro | V179610 pro | 1 |
| SC 98.20 pro | 179620 pro | 2 |
| SC 98.30 pro | V179 630 pro | 3 |
| SC 98.40 pro | V179 640 pro | 4 |

- DCF / GPS function
- Up to 300 permanent switchings by date


■ 19"-housing

- 2 or 4 channels / 300 memory locations
- Switching capacity 5 A
- 10 years battery-reserve
- Programmable with PC and Smartphone (see accessories)
- Data-key function

| ■ müller | Channels |
| :---: | :---: |
| SC 93.20 pro | 2 |
| SC 93.40 pro | 4 |

- Cycle function
- DCF / GPS function

■ Up to 300 permanent switchings by date


## Save time

## Masterclocks for DIN-rail mounting

- Short-circuit proof slave-clock-line
- Automatic adjustment of slave clocks
- Automatic time correction of slave clocks after supply voltage interruption
- Automatic daylight saving time (European standard) with 60 additional pulses or pulse suppression for 1 hour of the slave-clock-line
- Monitoring of slave-clock-line and malfunction indicator in display
- Security by PIN-Code
- Illuminated display
- DCF/GPS function
- 10 years battery-reserve (time switch)
- Data security through E2PROM

- DIN-rail mounting 70 mm
- 1 slave-clock line
- For approx. 5 slave clocks

( 24 VDC, 35 mA , pole changing pulse)

- DIN-rail mounting 70 mm
- 1 slave-clock line
- Suitable for slave clocks up to $250 \mathrm{~V} \sim$
- A pulse amplifier is not needed

week ${ }^{\text {prog }}$

- DIN-rail mounting 70 mm
- 1 slave-clock line
- For approx. 20 slave clocks
(24 VDC, 150 mA , pole changing pulse)

- Time Switch: Weekly timer / 1 channel
[similar to SC 88.10 pro]

- DIN-rail mounting 140 mm
- 1 slave-clock line
- For approx. 40 slave clocks
( $24 \mathrm{VDC}, 300 \mathrm{~mA}$, pole changing pulse)

- Time Switch: Yearly timer / 4 channels
[similar to SC 98.40 pro]


## masterclocks



## Save time

## Masterclocks pluggable into 19""-housing

- Short-circuit proof slave-clock-line
- Automatic adjustment of slave clocks
- Automatic time correction of slave clocks after supply voltage interruption
- Automatic daylight saving time (European standard) with 60 additional pulses or pulse suppression for 1 hour of the slave clock-line
- Monitoring of the slave-clock-line and malfunction indicator in display
- Security by PIN-Code
- Illuminated display
- DCF / GPS function
- 10 years battery-reserve (time switch)
- Data security through E2PROM
- 15 TE / 3 HE [128.5 x 76.2 mm ]
- 2 slave-clock output-lines
- Output-line 2 adjustable to a pulse repetition rate of one per sec.

| -müller | Slave clock lines | Channels |
| :---: | :---: | :---: |
| SC 53.17 pro | 2 | 1 |
| Housing colour |  |  |

- For approx. 200 slave clocks (24 VDC, 1,5 A, pole changing pulse)
- Power supply unit for slave clocks not included
- Time Switch: Weekly timer / 1 channe
[Functions similar to SC 88.10 pro]


■ $15 \mathrm{TE} / 3$ HE [128.5 x 76.2 mm ]
■ 1 slave-clock output-line

- For approx. 200 slave clocks

| - müller | Slave clock lines | Channels |
| :--- | :---: | :---: |
| SC 93.47 pro | 1 | 4 |
| Housing colour |  |  |

- Power supply unit for slave clock not included
$V_{\text {Housing colour }}$
- Time Switch: Yearly timer / 4 channels [Functions similar to SC 98.40 pro]


15 TE / 3 HE [128.5 x 76.2 mm]

- Accessory for 19"master clocks
- Power supply 19 "-housing
- Power supply of slave clocks
- Output current 1.5 A




## Save time

## Analogue time switches

- Daily or weekly program
- Manual override switch [Permanent OFF / Automatic / Permanent ON]
- Timers with power back-up: Power reserve approx. 100 h
- Captive setting keys
- Easy to read switching program


■ DIN-rail mounting 17.5 mm

- Daily program
- Switching capacity 16 A
- Minimum switching interval 15 min.

| $\text { - paladin } \begin{aligned} & \text { by müller } \end{aligned}$ | ller | Version |
| :---: | :---: | :---: |
| ${ }^{111120}$ | ${ }^{4}$ VS 10.18 | Day without reserve |
| $\square_{114120}$ | ${ }^{4}$ VS 14.18 | Day with reserve |
| $\checkmark /$ Housing colour | 44 Setting key colo |  |



- DIN-rail mounting 35 mm and wall mounting
- Daily program
- Switching capacity 16 A
- Minimum switching interval 30 min .

- Minute pointer
lour $\quad$ Setting key colour Day with reserve

- DIN-rail mounting 52.5 mm and wall mounting
- Daily or weekly program
- Switching capacity 16 A
- Minimum switching interval day dial 30 min .
- Minimum switching interval week dial 2 h .
- Analogue display [with hands]
-paladin -müller Version

| ${ }^{4} 131120$ | ${ }^{4}$ VS 30.18 | Day without reserve |
| :---: | :---: | :---: |
| ${ }^{134120}$ | ${ }^{4}$ VS 34.18 | Day with reserve |
| ${ }^{4} 131420$ | ${ }^{14}$ VS 30.38 | Week without reserve |
| ${ }^{4134420}$ | ${ }^{4}$ VS 34.38 | Week with reserve |
| $\checkmark$ Housing col | 44 Setting |  |

- Switchboard panel and wall mounting
- Daily or weekly program
- Switching capacity 16 A
- Minimum switching interval day dial 15 min .
- Minimum switching interval week dial 1 h .
- Analogue display [with hands]

| - paladin by müller | - müller | Version |
| :---: | :---: | :---: |
| ${ }^{4} 161120$ | ${ }^{4}$ FS 60.18 | Day without reserve |
| ${ }^{464120}$ | ${ }^{4}$ FS 64.18 | Day with reserve |
| ${ }^{4} 161420$ | ${ }^{4}$ FS 60.38 | Week without reserve |
| ${ }^{4164420}$ | ${ }^{4}$ FS 64.38 | Week with reserve |
| $\checkmark$ Housing colour | 44 Setting key |  |



## Save time

## Hour counters for panel mounting

- Alternating Current or Direct Current versions
- With universal connections
- Touch proof connections according to VBG 4


## Hour counters for DIN-rail mounting

- Alternating Current or Direct Current versions
- Screw terminals (pull-up type)
- Touch proof connections according to VBG 4

Panel mounting
■ Integral locking spring -müller Version

- Mounting aperture: $50 \times 25 \mathrm{~mm}$
- Counter capacity $99,999 \mathrm{~h}$.
BW $30.18 \quad$ Alternating current
- With operation indicator
BG $30.18 \quad$ Direct current
- Type of protection front IP 65

Vhousing colour


- Panel mounting
- Retaining Clip in delivery included

■ Mounting aperture square: $45 \times 45 \mathrm{~mm}$
■ Mounting aperture circle: ø $50,5 \mathrm{~mm}$

- Counter capacity BW 99,999 h.
- Counter capacity BG 999,999 h.
- With operation indicator
- Type of protection front IP 50
-müller Version
(with ring seal 100.003: IP 54)

| -muller | Version |
| :--- | ---: |
| BG 40.17 Direct current <br> BW 40.18 Alternating current <br> BG 40.27 Direct current, with trim $55 \times 55 \mathrm{~mm}$ <br> BW 40.28 Alternating current, with trim $55 \times 55 \mathrm{~mm}$ <br> BG 40.37 Direct current, with trim $72 \times 72 \mathrm{~mm}$ <br> BW 40.38 Alternating current, with trim $72 \times 72 \mathrm{~mm}$ |  |
| Housing colour |  |



- DIN-rail mounting $17,5 \mathrm{~mm}$
- Flush mount dimensions $45 \times 17,5 \mathrm{~mm}$
- Slim format
- No terminal cover
- Counter capacity 99,999 h.

| ■müller | ■ paladin <br> by müller | Version |
| :--- | :---: | ---: |
| WW 70.18 | $V_{311170}$ | Alternating current |
| BG 70.18 | $V_{312170}$ | Direct current |
| Housing colour |  |  |

- With operation indicator
- Type of protection IP 50

- DIN-rail mounting 35 mm
- Flush mount dimensions $45 \times 35 \mathrm{~mm}$

■ Bx 70.29: without terminal cover

- Bx 70.89: with terminal cover
- With operation indicator (flashing LED)
- One Version for 50 and 60 Hz
- Counter capacity 99,999 h.
- Type of protection IP 50

| - müller | -paladin | Version |
| :---: | :---: | :---: |
| BW 70.29 | V11270 | Alternating current |
| BG 70.29 | /312270 | Direct current |
| BW 70.89* | 「311 280* | Alternating current |
| 'BG 70.89* | 「312 280* | Direct current |
| $\checkmark$ Housing colour |  | * with terminal cover |





BW 70.29 / BG 70.29


BW 70.89 / BG 70.89

## Save time

Countdown timers

1 channel / change-over relay

- Minimum interval 1 sec.
- Input for start and stop (230 VAC)
- Optical and acoustic signal on completion of time
- 1 channel / change-over relay
- Minimum interval 0.1 sec .
- External input
- 20 different functions

■ Extended range of functions

- Data security through E2PROM
- Timer
- Panel mounting
- Switching capacity 8 A

| - müller | Range |
| :--- | ---: |
| TC 14.21 | $9: 59: 59 \mathrm{~h}: \mathrm{mm}: \mathrm{ss}$ |
| TC 24.21 | 99:59:59 hh:mm:ss |

■ Max. time TC 14 9:59:59 h:mm:ss
Max. time TC 24 99:59:59 hh:mm:ss
$\sigma$ Housing colour

- Repeatability accuracy $100 \%$
- Different trims available (see accessories)

- Digital multifunctional relay
- DIN-rail mounting 35 mm
-müller
Range
- Switching capacity 16 A

MR 28.10 pro
999:59:59:9 hhh:mm:ss:1/10s
■ Time range 000:00:00:1 to 999:59:59:9 hhh:mm:ss:1/10s
Thousing colour -

## Illuminate

## Staircase lighting timers

- Manual override for timed or permanent lighting
- 3- or 4-conductor cabling
- Glow lamp load: up to 100 mA
- Resettable
- 284 250: Advanced warning function included
- Zero-cross switching for relay-saving switching
- Time delay: 284 210: 30 sec . to 10 min .

284 250: 1 min. to 12 min .


- Staircase lighting timer
- Electronic
- DIN-rail mounting 17.5 mm
- 3- or 4-conductor rising mains
- Switching capacity 16 A
-paladin
Special function
Time delay

| 284210 |  | 30 sec . to 10 min. |
| :--- | :--- | ---: |
| 284250 | Advance warning | 1 min . to 12 min. |
| Housing colour |  |  |

- Zero-cross switching
- Resettable




## Illuminate

## Twilight switches

## Digital twilight switches

- Suitable for modern lamps (LED, CFL, etc.)
- Adjustable lux threshold
- Adjustable delay times
- Adjustable light-hysteresis
- With weekly timer function (e.g. for energy saving)


## Analogue twilight switches

- Suitable for modern lamps (LED, CFL, etc.)
- Adjustable lux threshold
- Data security through E²PROM

- Digital twilight switch
- DIN-rail mounting 35 mm
- Switching capacity 16 A
- Adjustable lux threshold 1-50,000 Lux

- Twilight switch with daily and weekly program
- Permanent switchings by date

- Digital twilight switch
- DIN-rail mounting 35 mm
- Switching capacity 16 A
- Adjustable lux threshold 1-50,000 Lux
- Twilight switch with daily, weekly and yearly program

| Epaladin <br> by muller | Special function | Channels |
| :--- | :--- | ---: |
| 972414 pro | External input | 1 |
| 972424 pro |  | 2 |

- Permanent switchings by date
- Programmable with PC and Smartphone (see accessories)
- Advanced functionality (e.g. ext. input within 1 channel version)

- Analogue twilight switch
- Wall mounting
- Switching capacity 16 A
- Adjustable lux threshold 3-300 Lux

- Analogue twilight switch
- DIN-rail mounting 17.5 mm
- Switching capacity 16 A

| - paladin | Sensor Chann |  |
| :---: | :---: | :---: |
| 923500 | sensor for wall mounting | 1 |
| 923501 | sensor for mounting within housing | 1 |





## Illuminate

- For pushbuttons
- Installation in standard boxes behind a pushbutton possible
- Small design (13 mm)
- Easy to connect
- Memory function
- Protection against overload, short circuit and overheat

| -paladin <br> by müller | Suitable for |
| :---: | :---: |
| 873030 led | LED Loads |
| Housing colour |  |

- Load leading edge 4-100 W
$V_{\text {Housing colour }}$
Suitable for
873010 rlc
R, L, C Loads
- Load 15-400 W
- Suitable for leading or trailing edge
- LED Dimmer
- Flush-mounted fitting
- With litz wires and ferrules
- Load trailing edge 4-350 W

- LED Dimmer without neutral wire
- Flush-mounted fitting
- With litz wires and ferrules
- Load leading edge 4-80 W

> - paladin

873031 led
Suitable for
$\checkmark$ Housing colour
LED Loads
Load trailing edge 4-200 W

- Compensator included in delivery

LED


- LED Dimmer
- Flush-mounted fitting
- With screw terminals

| $\substack{\text { - paladin } \\ \text { by müller }}$ | Suitable for |
| :---: | ---: |
| 872 032 led | LED Loads |
| Housing colour |  |

- Load leading edge 4-100 W
- Load trailing edge 4-350 W

- LED Strips Dimmer

■ Flush-mounted fitting

- With litz wires and ferrules

- Pulse Width Modulation technology (PWM) 12-48 V DC
- LED strips up to 8 A
- Amplifier available (see accessories)



## Illuminate

## Dimmers for DIN-rail mounting

- Universal dimmer or TRIAC Dimmer
- Master-Slave-function: With the inclusion of further dimmers higher loads can be controlled with one single pushbutton connection (Master)
- Memory function
- Protection against overload, short circuit and overheat




## Connect

# KNX-TP Universal interfaces for flush-mounted fitting 

- ETS with many advantages:
- Simple programming and operation
- Various adjustment and control options
- Logical, simple and clearly structured software
- Compact housing



## Connect

## KNX-TP Time switches for DIN-rail mounting

- ETS with many advantages:
- Simple programming and operation
- Various adjustment and control options
- Logical, simple and clearly structured software

■ DCF reception via optional DCF receiver


- Digital time switch year
- DIN-rail mounting 70 mm
- 4 channels / 300 memory locations
- Daily, weekly and yearly program
- müller

Channels

■ Programmable with PC and Smartphone (see accessories)

- Data-key function (see accessories)

Following functions and data available via KNX bus:

- Binary inputs / push-button interface (switching, dimming, temperature probe/-limiter, etc.)
- Binary outputs
- Temperature sensor/controls

Terminal


Option 1 LED-driver outputs

Terminal


Option 2 Open-collector outputs


Following functions and data available via KNX bus:

- Time dependent switching (switching, valuator, scene control, HVAC,...)
- Logic gates
- Time standard



## Connect

KNX-TP Outdoor sensors for wall mounting

- Sensors suitable for outdoor use (IP 54)
- Ideal for use as twilight switches
- Wall mounting

- Light-/brightness sensor

| - müller | Sensor |
| :--- | :---: |
| LS 20.00 knx | Lux |
| $W$ Housing colour |  |

■ Lighting control

- Daily time switch

Light and temperature sensor

- Lighting and temperature control

| - müller | Sensor |
| :--- | :---: |
| LS 30.00 knx | Lux, T |
| $W$ Hosing colour |  |

- Daily time switch

Housing colour

| -müller | Sensor |
| :---: | :---: |
| FU 40.00 knx | GPS, Lux, T |
| $W$ Housing clolur |  |

- Lighting and temperature control
- Daily and astro time switch
- Provides time base to KNX bus

Following functions and data available via KNX bus:

- Time switch (standard)
- Light control


Following functions and data available via KNX bus:

- Time switch (standard)
- Light control
- Temperature control


Following functions and data available via KNX bus:

- Time switch (standard)
- Time switch (astro)
- Light control
- Temperature control
- GPS coordinates and sunlight-data
- Time standard



## Connect

- Products for KNX installations
- Room temperature- and room climate controls (air quality sensors) for indoor use
- Compact housing (wall-mounting)
- Various functions and options -
configurable via ETS (depending on model):
- Threshholds for temperature, humidity, $\mathrm{CO}_{2}$-concentration
- PI- and 2-point control


TS 31.10 knx
TS

Temperature control

- Sensor for temperature measurement
- Up to 5 binary and analogue inputs

■ Additional function TS 31.10 knx:
Manual adjustment of set-point temperature $\pm 3^{\circ} \mathrm{C}$

| müller | Version | Sensor |
| :--- | :--- | :---: |
| TS 30.10 knx |  | T |
| TS 31.10 knx | T manual $\pm 3^{\circ}$ | T |

manual $\pm 3^{\circ} \quad \mathrm{T}$


GS 31.10 knx

- Temperature control and hygrostat
- Sensors for temperature, humidity and atmospheric pressure measurement
- Up to 5 binary and analogue inputs
- Additional function GS 31.10 knx :

Manual adjustment of set-point temperature $\pm 3^{\circ} \mathrm{C}$

GS 41.00 knx


- Air quality sensor / air quality control
- Sensors for $\mathrm{CO}_{2}$, temperature, humidity and atmospheric pressure measurement
- Additional function GS 41.00 knx : Manual adjustment of set-point temperature $\pm 3^{\circ} \mathrm{C}$

| -müller | Version | Sensor |
| :--- | :--- | :---: |
| GS 30.10 knx |  | RH, T |
| GS $31.10 \mathbf{k n x}$ | T manual $\pm 3^{\circ}$ | RH, T |


| -müller | Version | Sensor |
| :--- | :--- | :---: |
| GS 40.00 knx |  | $\mathrm{CO}_{2}, \mathrm{RH}, \mathrm{T}$ |
| GS 41.00 knx | T manual $\pm 3^{\circ}$ | $\mathrm{CO}_{2}, \mathrm{RH}, \mathrm{T}$ |
| HHosing colour |  |  |



Following functions and data available
via KNX bus:

- Temperature control
- Binary and analogue inputs


Following functions and data available
via KNX bus:

- Temperature control
- Rel. humidity control
- Binary and analogue inputs
- Dewpoint
- Air pressure
- VAV control


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- Temperature control
- Rel. humidity control
- $\mathrm{CO}_{2}$ control
- Binary and analogue inputs
- Dewpoint
- Air pressure
- VAV control



## Connect

KNX-RF compatible switching actuators

- Products for the building automation
- Usable as stand-alone wireless (RF) solution
- Usable in combination with KNX-TP bus via optional gateway
- Easy connection of RF components via push-button linking process (Easy-Mode)
- Switching actuator 1-channel
- DIN-rail mounting $17,5 \mathrm{~mm}$
- Additional function: Timer (3 sec. - 10 min.)
- Additional input for wired push button

| -paladin <br> by mülier | Mounting |
| :---: | ---: |
| 672730 rf | DIN-rail |
| Housing colour |  |

- Included RF-Repeater function
- Switching capacity 16 A



## Connect

KNX-RF compatible wireless dimmers for flush-mounted fitting

- Products for the building automation
- Usable as stand-alone wireless (RF) solution
- Usable in combination with KNX-TP bus via optional gateway
- Easy connection of RF components via push-button linking process (Easy-Mode)
- Integrated RF-Repeater function
- Dimmer for LED and RLC lamps
- Load leading edge 4-100 W

| - paladin <br> by müller | suitable for |
| :--- | ---: |
| 673830 rf | RLC \& LED |
| housing colour |  |

- Load trailing edge 4-250 W

673830 rf
RLC \& LED

- Minimum dimming-value adjustable
- Additional input for wired push button
- Dimmer for LED strips

- Controls LED strips via pulse width modulation (PWM)

12-48 V DC


- LED strips up to 8 A
- Ideal in combination with transmitter paladin 673010 rf
- Additional input for wired push button
- Amplifier available (see accessories)
- Dimmer for 1-10 V light control
- Controls up to 100 drivers
- Ideal in combination with transmitter paladin 673010 rf
- Additional input for wired push button

| paladin <br> by müller | suitable for |
| :--- | ---: |
| 673833 rf | lamps with 1-10 V control input |
| housing colour |  |

673833 rf
7 housing colour
$\qquad$


- Dimmer for DALI lamps
- Controls up to 64 drivers
- Minimum dimming-value adjustable
-paladin $\begin{gathered}\text { by muller }\end{gathered}$
suitable for
673834 rf
Thousing colour
- Additional input for wired push button
- Dimmer for RGB LED Strips

- Controls LED STRIPS via pulse width modulation (PWM) 12-48 V DC
- LED STRIPS up to 5 A per channel
- Ideal in combination with transmitter paladin 673010 rf
- Amplifier available (see accessories)

| - paladin <br> by müller | suitable for |
| :--- | ---: |
| 674830 rf | RGB LED Strips |
| housing colour |  |

674830 rf RGB LED Strips
housing colour

DALI -


## Connect

KNX-RF compatible gateways for flush-mounted fitting

- Products for the building automation
- Easy connection of RF components via push-button linking process (Easy-Mode)
- Integrated RF-Repeater function
- Extensive ETS software
- Gateway / media coupler RF compatible products to

KNX-TP

- Connects KNX-TP installations with our KNX-RF compatible products
-paladin $\begin{gathered}\text { by müler }\end{gathered}$
Mounting
673520 rf
Thousing colour
- Power supply via KNX-Bus
- 16 independant RF-channels


## Connect

- Usable as stand-alone wireless (RF) solution

■ Easy connection of RF components via push-button linking process (Easy-Mode)

- Signal repeater RF
- Ideal to increase RF range





## Connect

KNX-RF compatible wireless sensors / transmitters

- Products for the building automation
- Usable as stand-alone wireless (RF) solution
- Usable in combination with KNX-TP bus via optional gateway
- Easy connection of RF components via push-button linking process (Easy-Mode)
- Wireless push button / transmitter 1-channel
- Wall mounting / compact housing

| $\substack{\text { - paladin } \\ \text { by müler }}$ | Version |
| :--- | ---: |
| 676010 rf | 1-channel |
| Thousing colour |  |

- Battery operated (included), battery lifetime $\sim 8$ years

676010 rf
1-channel
■ Ideal for universal dimmers 673830 rf, 673831 rf, 673833 rf, 673834 rf, 674830 rf

Thousing colour
五

- Wireless remote control / transmitter 5-channel
- Battery operated (included),

| -paladin <br> by müller | Version |
| :--- | ---: |
| 670010 rf | 5-channels |
| hhousing colour |  |

■ Ideal for universal dimmers 673830 rf, 673831 rf, 673833 rf, 673834 rf, 674830 rf

670010 I
5-channels
$\qquad$


- Binary interface / wireless transmitter 1-channel


Version

| -paladin <br> by müler | Version |
| :---: | :---: |
| 673310 rf | Temperature sensor <br> with external probe |
| housing colour |  |

- Flush-mounted fitting
- Measuring range $-20^{\circ} \mathrm{C} \ldots+55^{\circ} \mathrm{C}$
- Transmission intervall (temperature): $1 / \mathrm{min}$.
- Integrated RF-Repeater function
- Flush-mounted fitting
- Input for two wired push buttons
- Functions: Switching, dimming, blinds control, scene control (scene 1/2)
- Battery operated (included), battery lifetime $\sim 8$ years

| $\substack{\text { - paladin } \\ \text { by müler }}$ | Version |
| :---: | ---: |
| 673010 rf | 1 channel |
| hnousing colour | Input for two push buttons |



■ Motion detector / presence detector

- Flush-ceiling mounting
-paladin by müler
Version
- Two operating modes

674110 rf
rsion

- Coverage area 07 m at $2,5 \mathrm{~m}$ height
- Battery operated (included), battery lifetime $\sim 4$ years


## KNX compatible



## Connect

KNX-RF compatible wireless sensors / transmitters

- Products for the building automation
- Battery operated (included)
- Wall mounting

- Door-/ window contact sensor
- Transmission of open / close status change via RF
- Battery lifetime $\sim 12$ years
-paladin by müller
676410 rf
$\nabla$ housing colour
- Usable in combination with KNX-TP bus via optional gateway
- Easy connection of RF components via push-button linking process (Easy-Mode)
■ Usable as stand-alone wireless (RF) solution
- Brightness sensor
- For sun protection applications
- Compatible with blinds control 674730 rf
- Battery lifetime $\sim 8$ years

$=$

- Temperature sensor
- Transmission of temperature value via RF
- Battery lifetime ~ 8 years

| $\substack{\text { paladin } \\ \text { by müller }}$ | Version | Sensor |
| :--- | :--- | ---: |
| $\sigma 76310$ rf |  | T |
| 676311 rf | T manual | T |
| $\sigma_{\text {housing colour }}$ |  |  |



## Feel well

## Air quality sensors

- Detection of the air quality:
- $\mathrm{CO}_{2}$ sensor (atmospheric pressure compensated)
- Relative humidity sensor
- Temperature sensor

3 control outputs ( $0-10 \mathrm{~V}$ ) for measured values of $\mathrm{CO}_{2}$ concentration, rel. humidity and temperature

- Control of the $\mathrm{CO}_{2}$ concentration via 2 sensorcontrolled switching channels (potentialfree NO contacts)
- Control of the rel. humidity via 2 sensor controlled switching channels (potentialfree NO contacts)
- Status and warning indicator LED's
- Air quality sensor
- Wall mounting

| - müller | Sensor |
| :--- | ---: |
| GS 10.00 pro | $\mathrm{CO}_{2}, \mathrm{RH}, \mathrm{T}$ |
| $\square$ Housing colour |  |

- 4 sensor-controlled switching channels

GS 10.00 pro
$\mathrm{CO}_{2}$, RH, T

- Switching capacity 8 A
- $0-10 \mathrm{~V}$ control outputs


## for hour counters, countdown timers and digital time switches SC 24.10 pro



## climate




Retaining clip for Bx 40 / TC x4 Order number 715.003
$\nabla \nabla_{\text {Housing colour }}$


Retaining clip for Bx 30
Order number 715.005
$\nabla_{\text {Housing colour }}$


## Self-adhesive seal (anti-twist protection)

 for Bx 40 / TC x4 / SC 24.10 proOrder number 101.001
$\nabla \nabla_{\text {Housing colour }}$


[^0]$V_{\text {Housing colour }}$

## Accessories

$\qquad$


Data-key

- Accessory for devices of the pro-series and SC 98.40 knx
- Suitable for programming package Save'n carry PP 50.00 pro and PP 60.00 pro

| - müller | Description |
| :--- | ---: |
| DK pro | Data-key |
| Housing colour |  |



- Programming package Save'n carry
- Accessory for devices of the pro-series and SC 98.40 knx
- For easily programming of switching times -müller Interface
PP 50.00 pro USB at your PC or Smartphone (Android, only PP 60.00 pro)


## PP 50.00 pro

 USB, Bluetooth

- Radio receiver DCF-Time
- Accessory for devices of the pro-series and SC 98.40 knx
-müller
- Wall mounting

FU 20.00 pro

- Connection wire specifications: 2-wire, no shield, $\sigma$ Housing colour variable core cross-section
- Reception and output of the DCF 77 telegram

- Radio receiver GPS-Time
- Accessory for devices of the pro-series and SC 98.40 knx
- müller

Version

- Wall mounting
- Connection wire specifications: 3 -wire, no shield, variable core cross-section
- Reception and processing of GPS time signal
${ }^{7}$ FU 30.00 pro without power supply
FU 35.00 pro power supply for DIN-rail included

- Amplifier for LED strips
- Flush-mounted fitting
- LED strips up to 8 A
- Combinable with dimmer paladin 873040 led, 673831 rf und 674830 rf

| ■aladin <br> by müler | suitable for |
| :---: | :---: |
| 873041 amp | LED strips |
| $W$ Housing colour |  |

- External temperature sensor / probe TF06
- Connects to analogue input of:


GS 4x. 10 knx
GS 3x. 10 knx , TS 3x. 10 knx
EA 36.32 knx
-müller
Version
TF06 External temperature sensor / probe
Housing colour

- Sensor NTC 10 kOhm, nominal length 28 mm , diameter $7,7 \mathrm{~mm}$
- Cable: 4 m PVC/PVC black (H03 VV-F)
- Type of protection: IP 65




## : hugom üller

switching controlling counting

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info@hugo-mueller.de
www-hugo-mueller.com


[^0]:    IP54-Seal
    for Bx 40 / TC x4 / SC 24.10 pro
    Order number 101.003

