SAVE TIME

ILLUMINATE

KNX

FEEL WELL

MI.SYSTEM

CHARTER CONTROLS
SIMPLIFYING IT FOR YOU

www.charter-controls.com
01424 850 660

▪hugomüller

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.
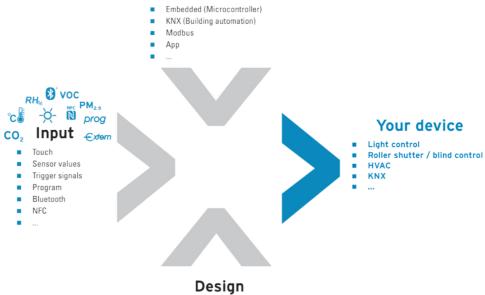
Hard- and software development, prototyping and serial production are carried-out in our premises. This allows us to advise and support you through the complete development process. Our experts in development and production are efficiently realizing your ideas according to relevant laws, standards and 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.

Software
- Embedded (Microcontroller)
- KNX (Building automation)
- Modbus
- App
- ...

Input
- Touch
- Sensor values
- Trigger signals
- Program
- Bluetooth
- NFC
- ...

Your device
- Light control
- Roller shutter / blind control
- HVAC
- KNX
- ...

Design
- Individual printing (glass, plastic)
- Inhouse injection moulding shop
- ...

■ hugomüller

Save time

■ hugomüller

switching controlling counting

Digital week

Digital week

Digital time switches week for DIN-rail mounting

week^prog

week^prog

- Daily and weekly program
- Minimum interval 1 min.
- Permanent by date
- Manual permanent mode
- Manual override
- Variable block programming
- Automatic daylight saving time (Europe, USA, Australia or none)
- Elapsed time and pulse counter
- Pulse function
- Security by PIN-Code
- Text based menu
- Data security through E²PROM
- Programmable with PC or Smartphone (see accessories)

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with PP 50.00 pro

- DIN-rail mounting 17.5 mm
- 1 channel / 46 memory locations
- Switching capacity 16 A
- 6 years battery-reserve
- Removable programming module

■ müller	■ paladin by müller	Channels
▼ SC 08.11 pro	▼ 172 110 pro	1
▼ Housing colour		

A
1 2 3   N L
            ~ ~
            - +

17,8   44   45   90   58   63

NFC
N

easy

- DIN-rail mounting 35 mm
- 1-2 channels / 56 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Ideal for modern lamps (LED)
- Simple yearly program
- Illuminated display / Display of the switching program

■ müller	■ paladin by müller	Channels
▼ SC 18.10 easy	▼ 170 410 easy	1
▼ SC 18.20 easy	▼ 170 420 easy	2
▼ Housing colour		

1 channel

A
1 2 3   L N
            + -

2 channels

A   B
1 2 3…8 9 10… L N
                    + -

35,8   44   45   90   58   63

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pro4

- DIN-rail mounting 35 mm
- 1-2 channels / 100 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- 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	■ paladin by müller	Channels
▼ SC 28.11 pro4	▼ 172 411 pro4	1
▼ SC 28.21 pro4	▼ 172 421 pro4	2
▼ Housing colour		

1 channel

A
1 2 3   L N
            + -

2 channels

A   B
1 2 3…8 9 10… L N
                    + -

35,8   44   45   90   58   63

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pro4

- DIN-rail mounting 70 mm
- 1-4 channels / 300 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Ideal for modern lamps (LED)
- Zero-cross switching (up to 600 W LED load)
- Simple yearly program / Astro program
- Random function / Cycle function / External input
- DCF / GPS function
- Illuminated display / Display of the switching program

■ müller	■ paladin by müller	Channels
▼ SC 88.10 pro4	▼ 179 410 pro4	1
▼ SC 88.20 pro4	▼ 179 420 pro4	2
▼ SC 88.30 pro4	▼ 179 430 pro4	3
▼ SC 88.40 pro4	▼ 179 440 pro4	4
▼ Housing colour		
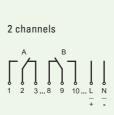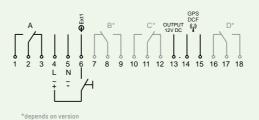
Available from July 2020

A   Ext1   B*   C*   OUTPUT GPS D*
                                    12V DC DCF
1 2 3 4 5 6   7 8 9 10 11 12 13 14 15 16 17 18
         L N
         + ~ -

*depends on version

71,5   44   45   90   58   63
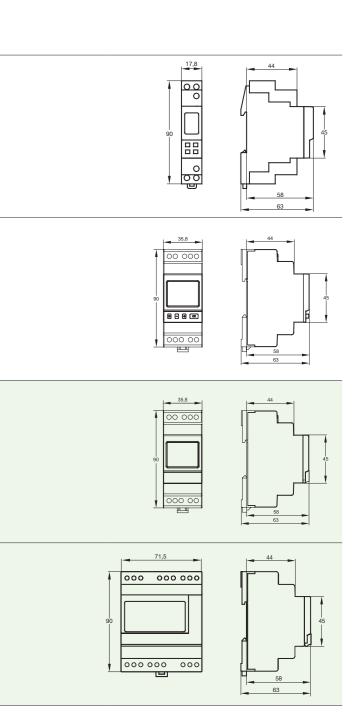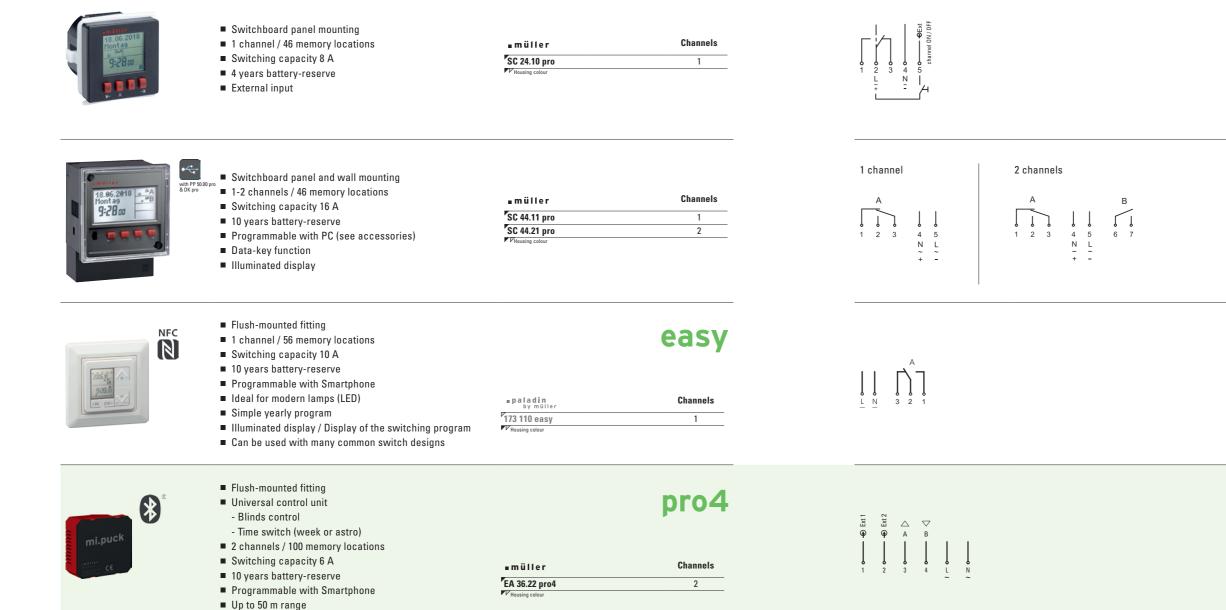
Digital time switches week – further housing designs

week^{prog}

week^{prog}

- Daily and weekly program
- Minimum interval 1 min.
- Permanent by date / holiday function
- Manual permanent mode
- Manual override
- Variable block programming

- Automatic daylight saving time (Europe, USA, Australia or none)
- 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
- Switching capacity 8 A
- 4 years battery-reserve
- External input

■ müller	Channels
▪SC 24.10 pro	1
▪▪Housing colour	

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with PP 50.00 pro & DK pro

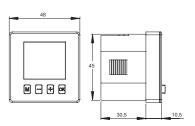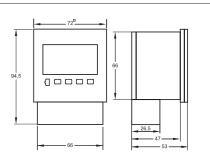- Switchboard panel and wall mounting
- 1-2 channels / 46 memory locations
- Switching capacity 16 A
- 10 years battery-reserve
- Programmable with PC (see accessories)
- Data-key function
- Illuminated display

■ müller	Channels
▪SC 44.11 pro	1
▪SC 44.21 pro	2
▪▪Housing colour	

1 channel

2 channels

NFC

- Flush-mounted fitting
- 1 channel / 56 memory locations
- Switching capacity 10 A
- 10 years battery-reserve
- Programmable with Smartphone
- Ideal for modern lamps (LED)
- Simple yearly program
- Illuminated display / Display of the switching program
- Can be used with many common switch designs

easy

■ paladin by müller	Channels
▪173 110 easy	1
▪▪Housing colour	

- Flush-mounted fitting
- Universal control unit
  - Blinds control
  - Time switch (week or astro)
- 2 channels / 100 memory locations
- Switching capacity 6 A
- 10 years battery-reserve
- Programmable with Smartphone
- Up to 50 m range

pro4

mi.puck

■ müller	Channels
▪EA 36.22 pro4	2
▪▪Housing colour	

hugomüller

Save time

hugomüller

switching controlling counting

Digital astro

Digital astro

Digital time switches astro

astro prog

- Astro program: Automatic switching according to the position of the sun
- Economical night program
- Minimum interval 1 min.
- Manual permanent mode
- Manual override
- Automatic sorting of switching times

- Automatic daylight saving time (Europe, USA, Australia or none)
- Security by PIN-Code
- Ideal for modern lamps (LED, CFL, etc.)
- Data security through E²PROM
- Programmable with PC or Smartphone (see accessories)

astro prog

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with PP 50.00 pro

- 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
- Removable programming module
- Extra switching times (weekly time function)

müller	paladin by müller	Channels
SC 08.13 pro	172 113 pro	1
Housing colour		

NFC

easy

- 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
- Illuminated display
- Display of the switching program

müller	paladin by müller	Channels
SC 18.13 easy	170 413 easy	1
Housing colour		

NFC

easy

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

müller	paladin by müller	Channels
SC 18.14 easy	170 414 easy	1
SC 18.24 easy	170 424 easy	2
Housing colour		

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pro4

- 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
- Zero-cross switching (up to 600 W LED load)
- Extra switching times (weekly timer function)
- Illuminated display / Display of the switching program

müller	paladin by müller	Channels
SC 28.13 pro4	172 413 pro4	1
SC 28.23 pro4	172 423 pro4	2
Housing colour		

NFC

easy

- Digital time switch astro with weekly program
- Flush-mounted fitting
- 1 channel / 56 memory locations
- Switching capacity 10 A
- 10 years battery-reserve
- Extra switching times (weekly timer function)
- Illuminated display / Display of the switching program
- Can be used with many common switch designs

paladin by müller	Channels
173 113 easy	1
Housing colour	

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1 channel | 2 channels

1 channel | 2 channels

Digital time switches year

year^{prog}

- 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 / Man. permanent mode
- Manual override
- Variable block programming
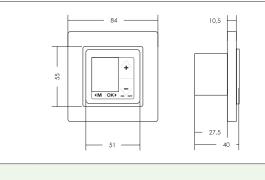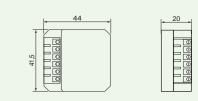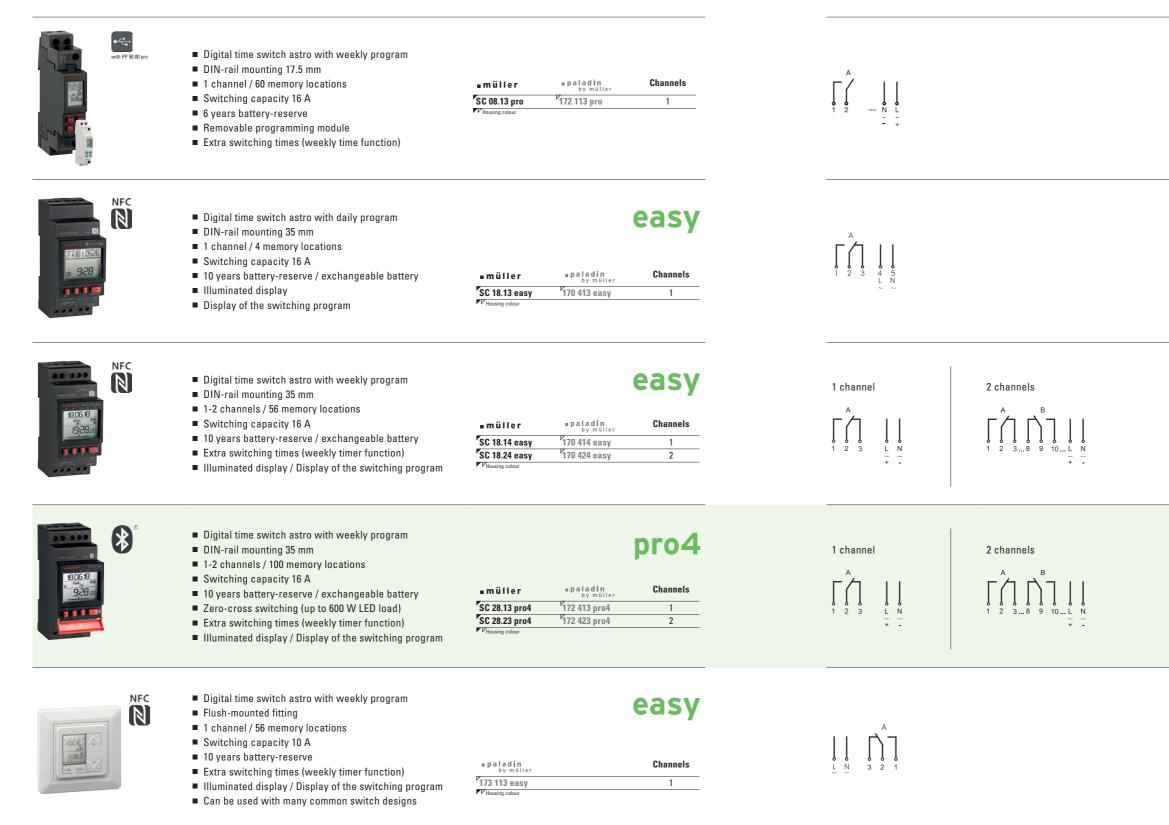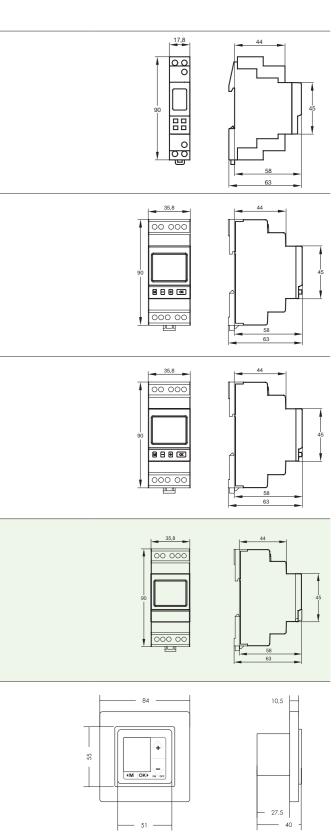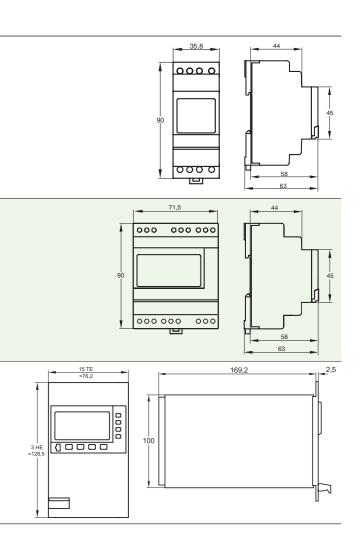- Automatic daylight saving time (Europe, USA, Australia or none)

- Elapsed time and pulse counter
- Pulse function
- Security by PIN-Code
- Text based menu
- Illuminated display
- Data security through E²PROM
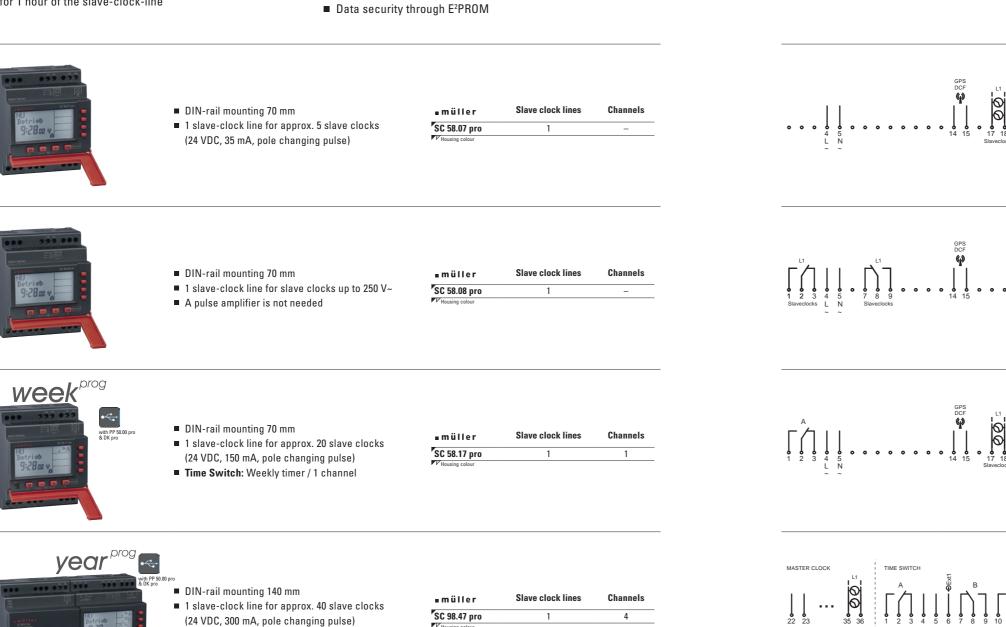- Programmable with PC or Smartphone (see accessories)

- DIN-rail mounting 35 mm
- 1 channel / 300 memory locations
- Switching capacity 16 A
- 10 years battery-reserve
- Data-key function
- Cycle function
- DCF / GPS function
- Up to 300 permanent switchings by date

with PP 50.00 pro & DK pro

▪ **müller**	▪ **paladin** by müller	Channels
SC 28.19 pro	172 419 pro	1

▪Housing colour

- DIN-rail mounting 70 mm
- 1-4 channels / 300 memory locations
- Switching capacity 16 A
- 10 years battery-reserve / exchangeable battery
- Ideal for modern lamps (LED)
- Zero-cross switching (up to 600 W LED load)
- Century program / Astro program
- Random function / Cycle function / External input
- DCF / GPS function
- Illuminated display / Display of the switching program

pro4

▪ **müller**	▪ **paladin** by müller	Channels
SC 98.10 pro4	179 610 pro4	1
SC 98.20 pro4	179 620 pro4	2
SC 98.30 pro4	179 630 pro4	3
SC 98.40 pro4	179 640 pro4	4

▪Housing colour

Available from July 2020

*depends on version

- 19"-housing
- 2 or 4 channels / 300 memory locations
- Switching capacity 5 A
- 10 years battery-reserve
- Data-key function
- Cycle function
- DCF / GPS function
- Up to 300 permanent switchings by date

with PP 50.00 pro & DK pro

▪ **müller**		Channels
SC 93.20 pro		2
SC 93.40 pro		4

▪Housing colour

*depends on version

:hugomüller

Masterclocks

Save time

:hugomüller

switching controlling counting

Masterclcoks

Masterclocks for DIN-rail mounting

masterclocks

■ 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 (Europe, USA, Australia or none) with 60 additional pulses or pulse suppression for 1 hour of the slave-clock-line
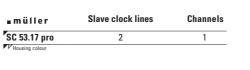
■ Monitoring of slave-clock-line and malfunction indicator in display
■ Security by PIN-Code
■ Illuminated display
■ DCF / GPS function
■ 10 years battery-reserve (time switch)
■ Data security through E²PROM

masterclocks

■ DIN-rail mounting 70 mm
■ 1 slave-clock line for approx. 5 slave clocks (24 VDC, 35 mA, pole changing pulse)

■ müller	Slave clock lines	Channels
SC 58.07 pro	1	–
Housing colour		

■ DIN-rail mounting 70 mm
■ 1 slave-clock line for slave clocks up to 250 V~
■ A pulse amplifier is not needed

■ müller	Slave clock lines	Channels
SC 58.08 pro	1	–
Housing colour		

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week^prog

with PP 50.00 pro & DK pro

■ 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

■ müller	Slave clock lines	Channels
SC 58.17 pro	1	1
Housing colour		

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year^prog

with PP 50.00 pro & DK pro

■ DIN-rail mounting 140 mm
■ 1 slave-clock line for approx. 40 slave clocks (24 VDC, 300 mA, pole changing pulse)
■ **Time Switch:** Yearly timer / 4 channels

■ müller	Slave clock lines	Channels
SC 98.47 pro	1	4
Housing colour		

hugomüller

hugomüller

Save time

switching controlling counting

Masterclocks

Masterclocks

Masterclocks pluggable into 19"-housing

masterclocks

- 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 (Europe, USA, Australia or none) 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

masterclocks

week prog

with PP 50.00 pro & DK pro

- 15 TE / 3 HE [128.5 x 76.2 mm]
- 2 slave-clock output-lines for approx. 200 slave clocks (24 VDC, 1,5 A, pole changing pulse)
- Output-line 2 adjustable to a pulse repetition rate of one per sec.
- Ext. 24 VDC power supply unit required / power supply unit for slave clocks not included
- **Time Switch:** Weekly timer / 1 channel

müller	Slave clock lines	Channels
SC 53.17 pro	2	1
⬛ Housing colour		

year prog

with PP 50.00 pro & DK pro
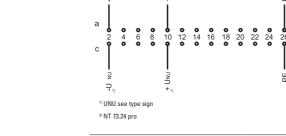
- 15 TE / 3 HE [128.5 x 76.2 mm]
- 1 slave-clock output-line for approx. 200 slave clocks (24 VDC, 1,5 A, pole changing pulse)
- Ext. 24 VDC power supply unit required / power supply unit for slave clocks not included
- **Time Switch:** Yearly timer / 4 channels

müller	Slave clock lines	Channels
SC 93.47 pro	1	4
⬛ Housing colour		

- 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
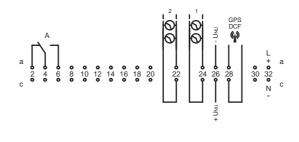
müller	Output voltage
NT 73.24 pro	24 V DC
⬛ Housing colour	

year prog
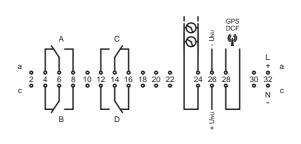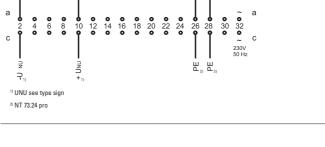
with PP 50.00 pro & DK pro

- 84 TE / 2 HE [483 x 86 x 203 mm]
- 1 slave-clock output-line for approx. 200 slave clocks (24 VDC, 1,5 A, pole changing pulse)
- No extra power supply unit needed / integrated 24 VDC power supply unit
- Frontswitch (potential-free) can be used to control an arbitrary application
- **Time Switch:** Yearly timer / 4 channels

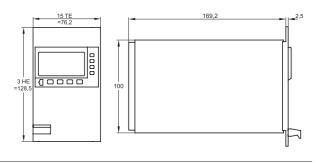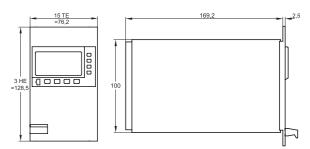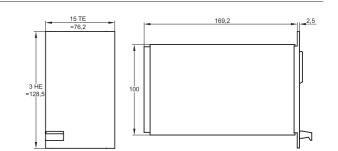| müller	Slave clock output lines	Channels
SC 95.47 pro	1	4
⬛ Housing colour		
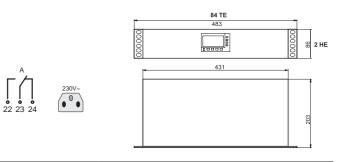
Analogue time switches

analogue

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

analogue

- DIN-rail mounting 17.5 mm
- Daily program
- Switching capacity 16 A
- Minimum switching interval 15 min.

paladin by müller	müller	Version
111 120	VS 10.18	Day without reserve
114 120	VS 14.18	Day with reserve
Housing colour	Setting key colour	

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

paladin by müller	müller	Version
151 220	VS 20.18	Day without reserve
154 220	VS 24.18	Day with reserve
Housing colour	Setting key colour	

- 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 by müller	müller	Version
131 120	VS 30.18	Day without reserve
134 120	VS 34.18	Day with reserve
131 420	VS 30.38	Week without reserve
134 420	VS 34.38	Week with reserve
Housing colour	Setting key colour	

- 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]

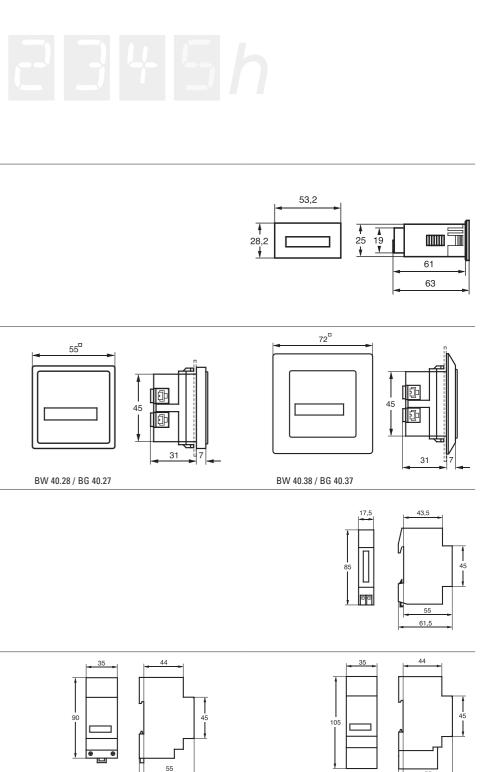| paladin by müller	müller	Version
161 120	FS 60.18	Day without reserve
164 120	FS 64.18	Day with reserve
161 420	FS 60.38	Week without reserve
164 420	FS 64.38	Week with reserve
Housing colour	Setting key colour	

Hour counters

2345h

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)
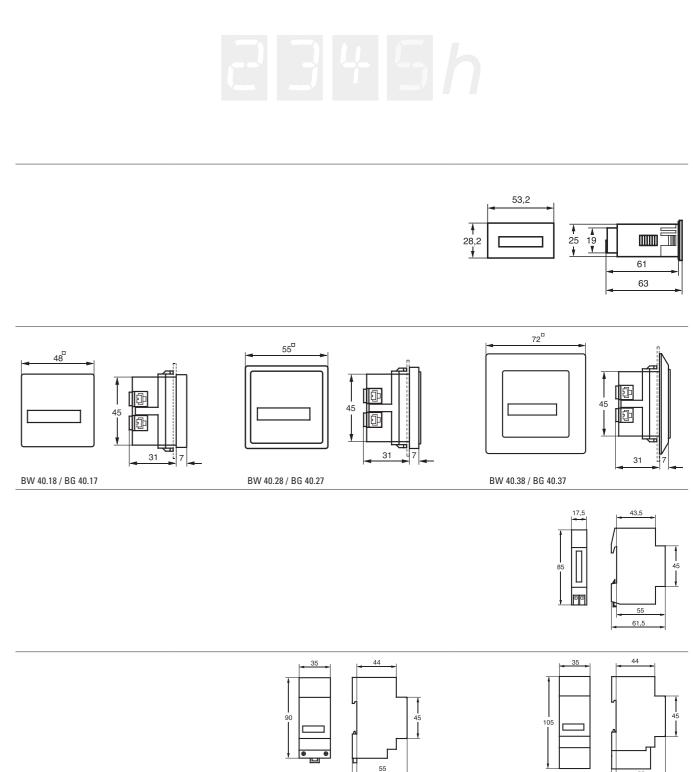- Touch proof connections according to VBG 4

- Panel mounting
- Integral locking spring
- Mounting aperture: 50x25 mm
- Counter capacity 99,999 h.
- With operation indicator
- Type of protection front IP 65

.müller	Version
BW 30.18	Alternating current
BG 30.18	Direct current
↗Housing colour	

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with trim 55x55 mm

with mask 72x72 mm

- Panel mounting
- Retaining Clip in delivery included
- Mounting aperture square: 45x45 mm
- Mounting aperture circle: ø 50,5 mm
- Counter capacity BW 99,999 h.
- Counter capacity BG 999,999 h.
- With operation indicator
- Type of protection front IP 50
  (with ring seal 100.003: IP 54)

.müller	Version
BG 40.17	Direct current
BW 40.18	Alternating current
BG 40.27	Direct current, with trim 55x55 mm
BW 40.28	Alternating current, with trim 55x55 mm
BG 40.37	Direct current, with mask 72x72 mm
BW 40.38	Alternating current, with mask 72x72 mm
↗Housing colour	

- DIN-rail mounting 17,5 mm
- Flush mount dimensions 45x17,5 mm
- Slim format
- No terminal cover
- Counter capacity 99,999 h.
- With operation indicator
- Type of protection IP 50

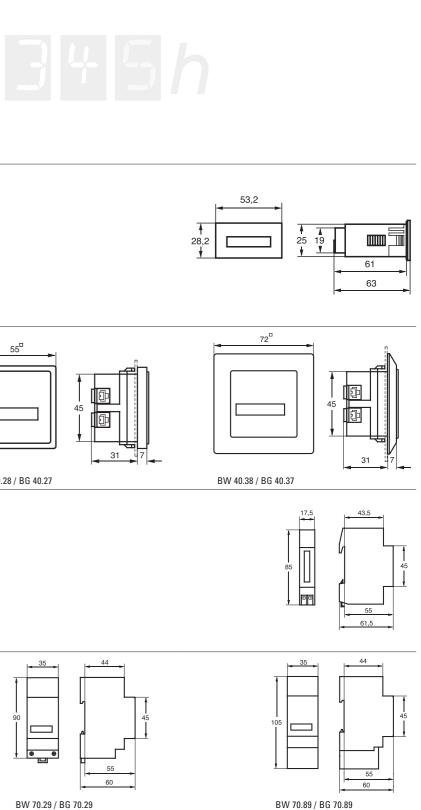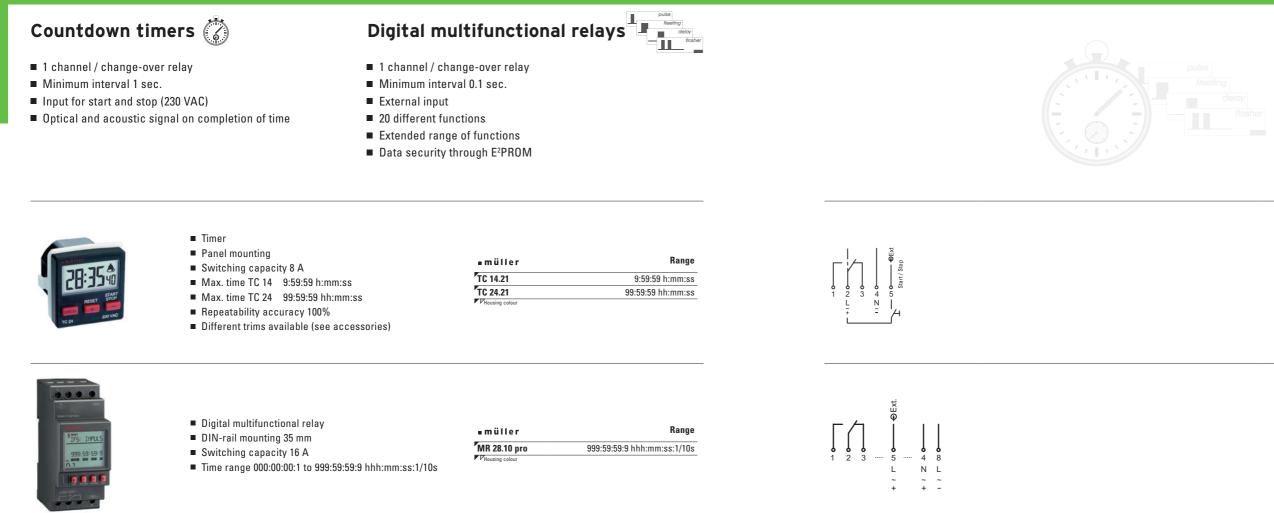| .müller	.paladin by müller	Version
BW 70.18	↗311 170	Alternating current
BG 70.18	↗312 170	Direct current
↗Housing colour		

- DIN-rail mounting 35 mm
- Flush mount dimensions 45x35 mm
- Bx 70.29: without terminal cover
- Bx 70.89: with terminal cover
- One Version for 50 and 60 Hz
- Counter capacity 99,999 h.
- With operation indicator (flashing LED)
- Type of protection IP 50

.müller	.paladin by müller	Version
BW 70.29	↗311 270	Alternating current
BG 70.29	↗312 270	Direct current
BW 70.89*	↗311 280*	Alternating current
BG 70.89*	↗312 280*	Direct current
↗Housing colour		* with terminal cover

53,2   28,2   25   19   61   63

48   45   31   7   55   45   31   7   72   45   31   7

BW 40.18 / BG 40.17   BW 40.28 / BG 40.27   BW 40.38 / BG 40.37

17,5   43,5   85   45   55   61,5

35   44   90   45   55   60   35   44   105   45   55   60

BW 70.29 / BG 70.29   BW 70.89 / BG 70.89

:hugo**müller**

:hugo**müller**

Save time

switching controlling counting

Timer

Timer

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

Digital multifunctional relays

- 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
- Max. time TC 14   9:59:59 h:mm:ss
- Max. time TC 24   99:59:59 hh:mm:ss
- Repeatability accuracy 100%
- Different trims available (see accessories)

▪ müller	Range
TC 14.21	9:59:59 h:mm:ss
TC 24.21	99:59:59 hh:mm:ss
Housing colour	

- Digital multifunctional relay
- DIN-rail mounting 35 mm
- Switching capacity 16 A
- Time range 000:00:00:1 to 999:59:59:9 hhh:mm:ss:1/10s

▪ müller	Range
MR 28.10 pro	999:59:59:9 hhh:mm:ss:1/10s
Housing colour	

Staircase lighting timers

- Manual override for timed or permanent lighting
- 3- or 4-conductor cabling
- Resettable
- Time delay: 284 210: 30 sec. to 20 min.
                 284 250: 1 min. to 12 min.

- Glow lamp load: up to 100 mA
- 284 250: Advanced warning function included
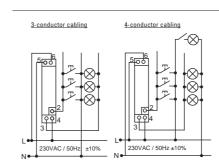- Zero-cross switching for relay-saving switching

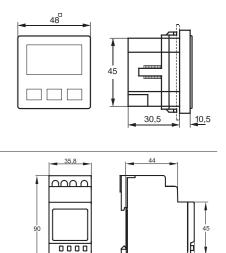- Staircase lighting timer
- Electronic
- DIN-rail mounting 17.5 mm
- Switching capacity 16 A
- Zero-cross switching

▪ paladin by müller	Special function	Time delay
284 210		30 sec. to 20 min.
284 250	Advance warning	1 min. to 12 min.
Housing colour		

3-conductor cabling   4-conductor cabling

230VAC / 50Hz ±10%   230VAC / 50Hz ±10%

Twilight switches
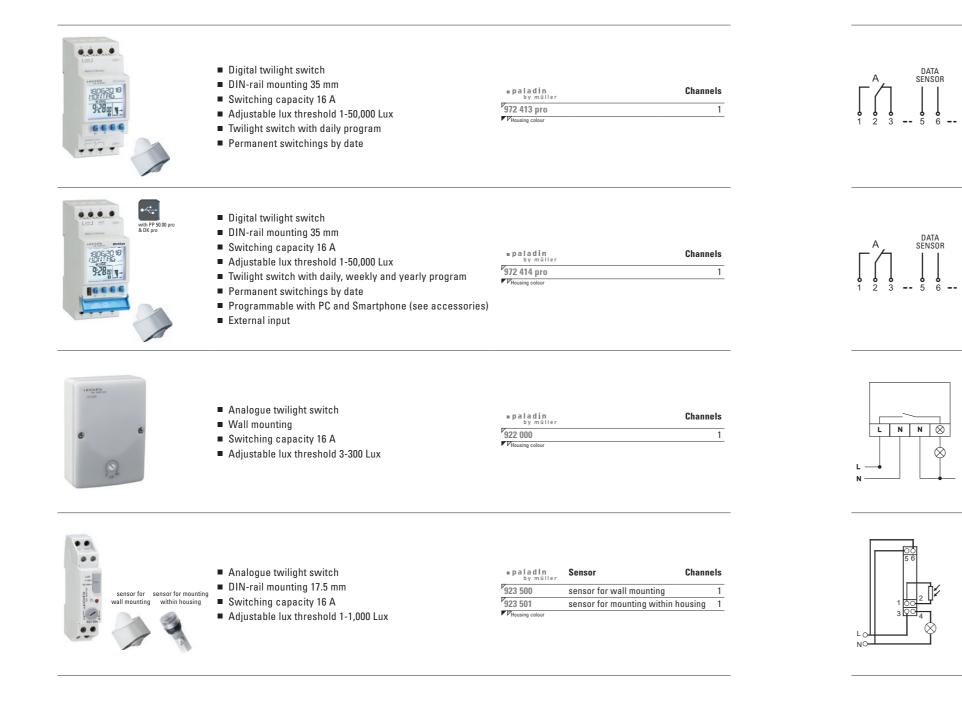
lux

lux

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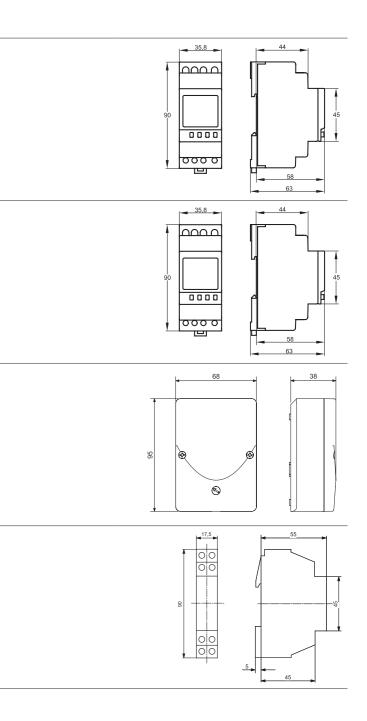- With weekly timer function (e.g. for energy saving)

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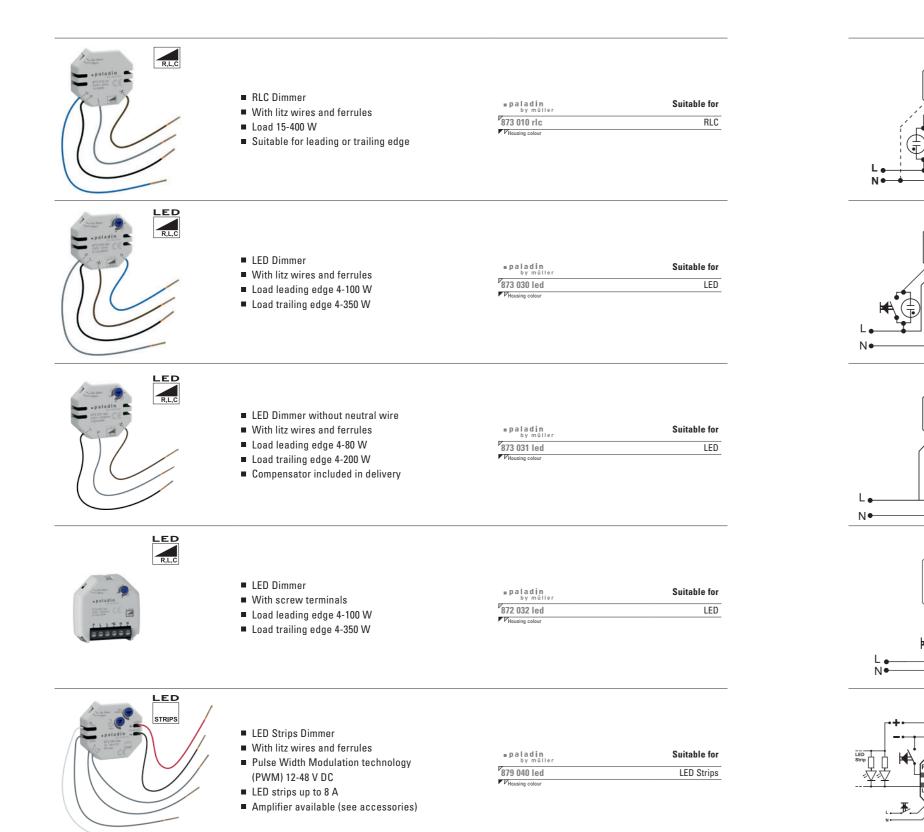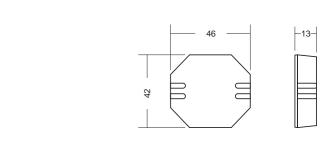- Adjustable lux threshold
- Data security through E²PROM

- Digital twilight switch
- DIN-rail mounting 35 mm
- Switching capacity 16 A
- Adjustable lux threshold 1-50,000 Lux
- Twilight switch with daily program
- Permanent switchings by date

paladin by müller	**Channels**
972 413 pro	1
Housing colour	

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with PP 50.00 pro & DK pro

- 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
- Permanent switchings by date
- Programmable with PC and Smartphone (see accessories)
- External input

paladin by müller	**Channels**
972 414 pro	1
Housing colour	

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

paladin by müller	**Channels**
922 000	1
Housing colour	

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sensor for wall mounting   sensor for mounting within housing

- Analogue twilight switch
- DIN-rail mounting 17.5 mm
- Switching capacity 16 A
- Adjustable lux threshold 1-1,000 Lux

paladin by müller	**Sensor**	**Channels**
923 500	sensor for wall mounting	1
923 501	sensor for mounting within housing	1
Housing colour		

Dimmers for flush-mounted fitting
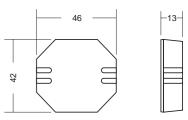
dim

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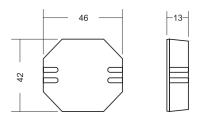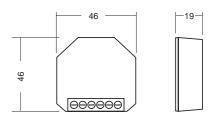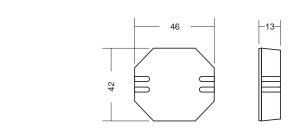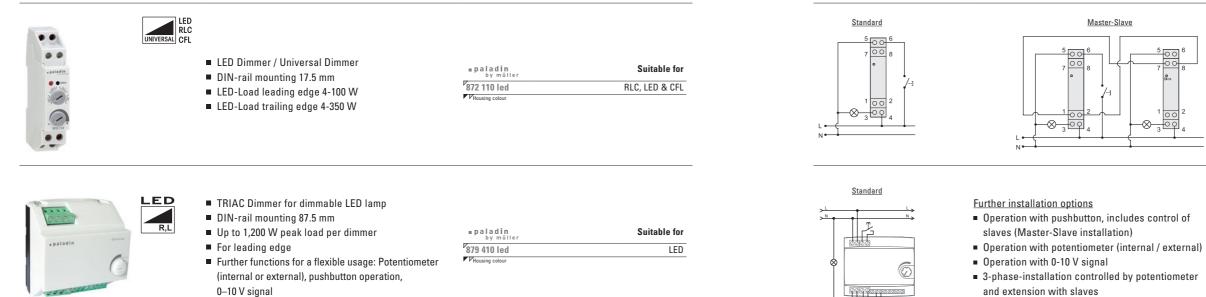- Protection against overload, short circuit and overheat

dim

R,L,C

- RLC Dimmer
- With litz wires and ferrules
- Load 15-400 W
- Suitable for leading or trailing edge

paladin by müller	Suitable for
873 010 rlc	RLC
Housing colour	

LED R,L,C

- LED Dimmer
- With litz wires and ferrules
- Load leading edge 4-100 W
- Load trailing edge 4-350 W

paladin by müller	Suitable for
873 030 led	LED
Housing colour	

LED R,L,C

- LED Dimmer without neutral wire
- With litz wires and ferrules
- Load leading edge 4-80 W
- Load trailing edge 4-200 W
- Compensator included in delivery

paladin by müller	Suitable for
873 031 led	LED
Housing colour	

LED R,L,C

- LED Dimmer
- With screw terminals
- Load leading edge 4-100 W
- Load trailing edge 4-350 W

paladin by müller	Suitable for
872 032 led	LED
Housing colour	

LED STRIPS

- LED Strips Dimmer
- With litz wires and ferrules
- Pulse Width Modulation technology (PWM) 12-48 V DC
- LED strips up to 8 A
- Amplifier available (see accessories)

paladin by müller	Suitable for
879 040 led	LED Strips
Housing colour	

Dimmers for DIN-rail mounting

dim

- 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
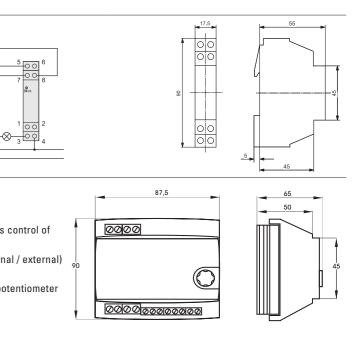- Protection against overload, short circuit and overheat

LED
RLC
CFL
UNIVERSAL

- LED Dimmer / Universal Dimmer
- DIN-rail mounting 17.5 mm
- LED-Load leading edge 4-100 W
- LED-Load trailing edge 4-350 W

paladin by müller	Suitable for
872 110 led	RLC, LED & CFL
Housing colour	

LED
R,L

- TRIAC Dimmer for dimmable LED lamp
- DIN-rail mounting 87.5 mm
- Up to 1,200 W peak load per dimmer
- For leading edge
- Further functions for a flexible usage: Potentiometer (internal or external), pushbutton operation, 0–10 V signal

paladin by müller	Suitable for
879 410 led	LED
Housing colour	

Standard   Master-Slave

Standard

Further installation options
- Operation with pushbutton, includes control of slaves (Master-Slave installation)
- Operation with potentiometer (internal / external)
- Operation with 0-10 V signal
- 3-phase-installation controlled by potentiometer and extension with slaves

:hugomüller

:hugomüller

KNX

switching controlling counting

KNX-TP

KNX-TP

KNX 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

- 3 configurable inputs
- 2 binary outputs (LED drivers / open-collector)
- Integrated room temperature control
- External temperature sensor available (see accessories)
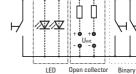
müller	Inputs	Outputs
EA 36.32 knx	3	2
Housing colour		

Following functions and data available via KNX bus:
- Binary and analog inputs / push-button interface (switching, dimming, temperature probe/-limiter, etc.)
- Binary outputs
- Temperature control

KNX 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 / GPS function
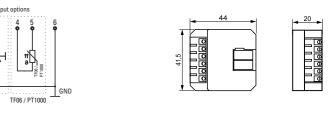
with PP 50.00 pro & DK pro
- Digital time switch year
- DIN-rail mounting 70 mm
- 4 channels / 300 memory locations
- Daily, weekly and yearly program
- Programmable with PC (see accessories)
- Data-key function (see accessories)

müller	Channels
SC 98.40 knx	4
Housing colour	

Following functions and data available via KNX bus:
- Time dependent switching (switching, valuator, scene control, HVAC,…)
- Logic gates
- Time standard
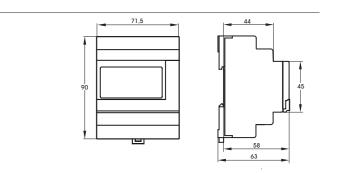
KNX Actuators for wall mounting

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

- Buzzer
- Up to 3 configurable input objects
- Adjustable volume level (quite, medium, loud)
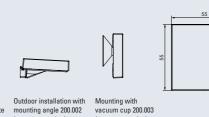- Adjustable sequence

müller	Version
AS 10.00 knx	Buzzer
Housing colour	

Wall mounting (without accessory)

Integrated in switch design 55 x 55 mm with mounting plate 200.001 (see accessories)

Outdoor installation with mounting angle 200.002 (see accessories)

Mounting with vacuum cup 200.003 (see accessories)

55

55

12
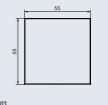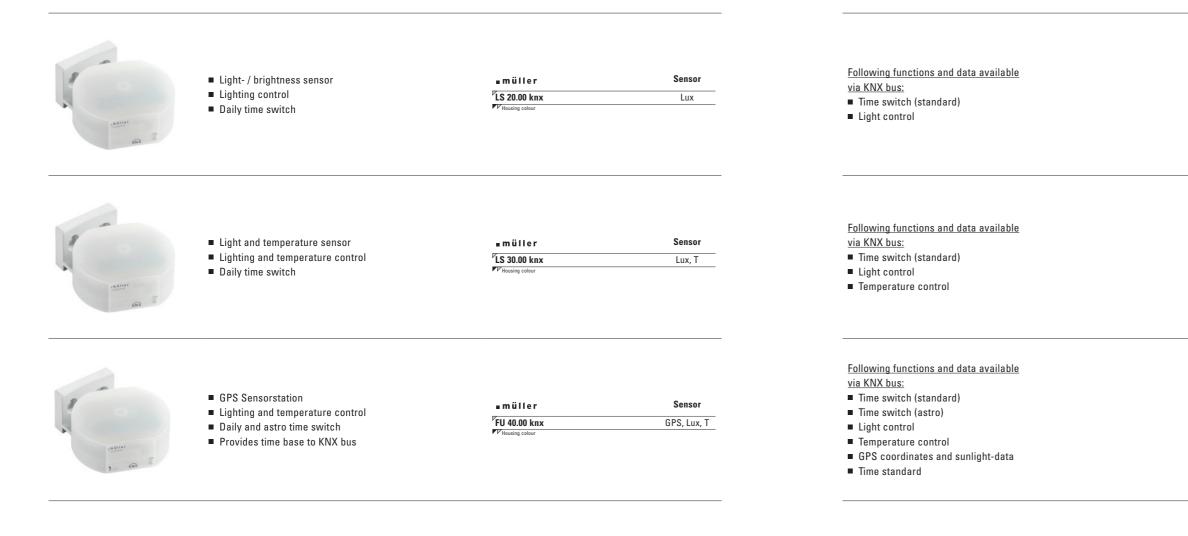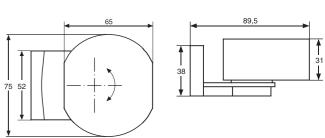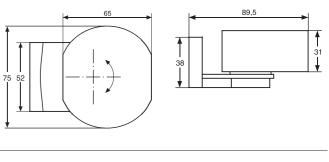
KNX Outdoor sensors for wall mounting

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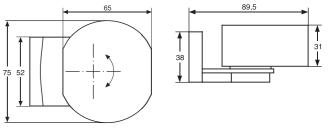
- Sensors suitable for outdoor use (IP 54)
- Ideal for use as twilight switches
- Wall mounting

müller	Sensor
LS 20.00 knx	Lux
Housing colour	

- Light- / brightness sensor
- Lighting control
- Daily time switch

Following functions and data available via KNX bus:
- Time switch (standard)
- Light control

65   89,5
75 52   38   31

müller	Sensor
LS 30.00 knx	Lux, T
Housing colour	

- Light and temperature sensor
- Lighting and temperature control
- Daily time switch

Following functions and data available via KNX bus:
- Time switch (standard)
- Light control
- Temperature control

65   89,5
75 52   38   31

müller	Sensor
FU 40.00 knx	GPS, Lux, T
Housing colour	

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

65   89,5
75 52   38   31

hugomüller

hugomüller

KNX

switching controlling counting

KNX-TP

KNX-TP

KNX Room temperature-/room climate controls mini

- Products for KNX installations
- Room temperature- and room climate controls (air quality sensors) for indoor use
- Compact housing

- Various functions and options - configurable via ETS (depending on model):
  - Threshholds for temperature, humidity, VOC-concentration
  - PI- and 2-point control

- Temperature control
- Sensor for temperature

müller	Sensor
TS 10.00 knx	T
Housing colour	

Following functions and data available via KNX bus:
- Temperature control

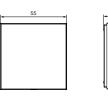Wall mounting (without accessory) | Integrated in switch design 55 x 55 mm with mounting plate 200.001 (see accessories) | Outdoor installation with mounting angle 200.002 (see accessories) | Mounting with vacuum cup 200.003 (see accessories)
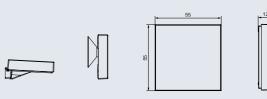
55 | 55 | 12

- Temperature control and hygrostat
- Sensors for temperature, humidity and atmospheric pressure

müller	Sensor
GS 10.00 knx	RH, T
Housing colour	

Following functions and data available via KNX bus:
- Temperature control
- Rel. humidity control
- Dewpoint
- Air pressure
- VAV control

Wall mounting (without accessory) | Integrated in switch design 55 x 55 mm with mounting plate 200.001 (see accessories) | Outdoor installation with mounting angle 200.002 (see accessories) | Mounting with vacuum cup 200.003 (see accessories)

55 | 55 | 12

- Climate control
- Sensors for VOC, temperature, humidity and atmospheric pressure

müller	Sensor
GS 20.00 knx	VOC, RH, T
Housing colour	

Following functions and data available via KNX bus:
- Temperature control
- Rel. humidity control
- VOC control
- Dewpoint
- Air pressure
- VAV control

Wall mounting (without accessory) | Integrated in switch design 55 x 55 mm with mounting plate 200.001 (see accessories) | Outdoor installation with mounting angle 200.002 (see accessories) | Mounting with vacuum cup 200.003 (see accessories)

55 | 55 | 12

KNX Room temperature-/room climate controls for wall mounting KNX

- Products for KNX installations
- Room temperature- and room climate controls (air quality sensors) for indoor use
- Modern and planar design

- Various functions and options - configurable via ETS (depending on model):
  - Threshholds for temperature, humidity, CO_2-concentration, VOC-concentration and particulate matter concentration $PM_{2.5 \, \mu m}$
    - PI- and 2-point control
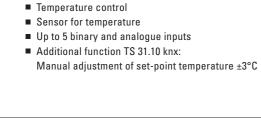
TS 31.10 knx

- Temperature control
- Sensor for temperature
- Up to 5 binary and analogue inputs
- Additional function TS 31.10 knx: Manual adjustment of set-point temperature ±3°C

müller	Version	Sensor
TS 30.10 knx		T
TS 31.10 knx	T manual ±3°	T
Housing colour		

Following functions and data available via KNX bus:
- Temperature control
- Binary and analogue inputs

GS 31.10 knx

- Temperature control and hygrostat
- Sensors for temperature, humidity and atmospheric pressure
- Up to 5 binary and analogue inputs
- Additional function GS 31.10 knx: Manual adjustment of set-point temperature ±3°C

müller	Version	Sensor
GS 30.10 knx		RH, T
GS 31.10 knx	T manual ±3°	RH, T
Housing colour		

Following functions and data available via KNX bus:
- Temperature control
- Rel. humidity control
- Binary and analogue inputs
- Dewpoint
- Air pressure
- VAV control

GS 41.00 knx

- Air quality sensor / air quality control
- Sensors for CO_2, temperature, humidity and atmospheric pressure
- Additional function GS 41.00 knx: Manual adjustment of set-point temperature ±3°C

müller	Version	Sensor
GS 40.00 knx		CO_2, RH, T
GS 41.00 knx	T manual ±3°	CO_2, RH, T
Housing colour		

Following functions and data available via KNX bus:
- Temperature control
- Rel. humidity control
- CO_2 control
- Dewpoint
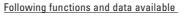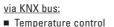- Air pressure
- VAV control

GS 41.10 knx

- Air quality sensor & control
- Sensors for CO_2, temperature, humidity and atmospheric pressure
- Up to 5 binary and analogue inputs
- Additional function GS 41.10 knx: Manual adjustment of set-point temperature ±3°C

müller	Version	Sensor
GS 40.10 knx		CO_2, RH, T
GS 41.10 knx	T manual ±3°	CO_2, RH, T
Housing colour		

Following functions and data available via KNX bus:
- Temperature control
- Rel. humidity control
- CO_2 control
- Binary and analogue inputs
- Dewpoint
- Air pressure
- VAV control

GS 70.00 knx
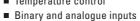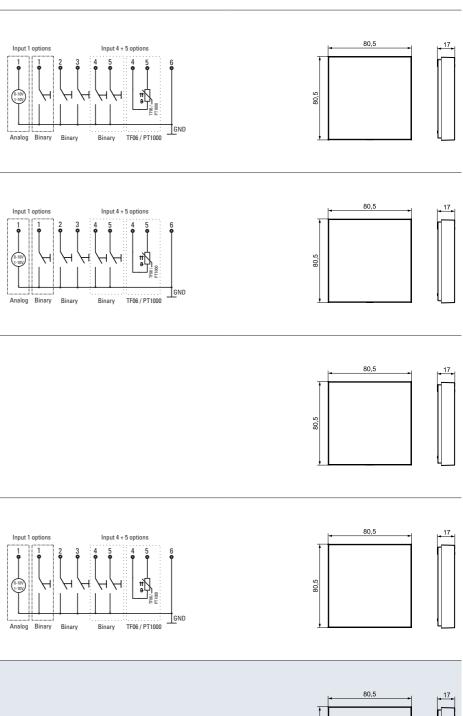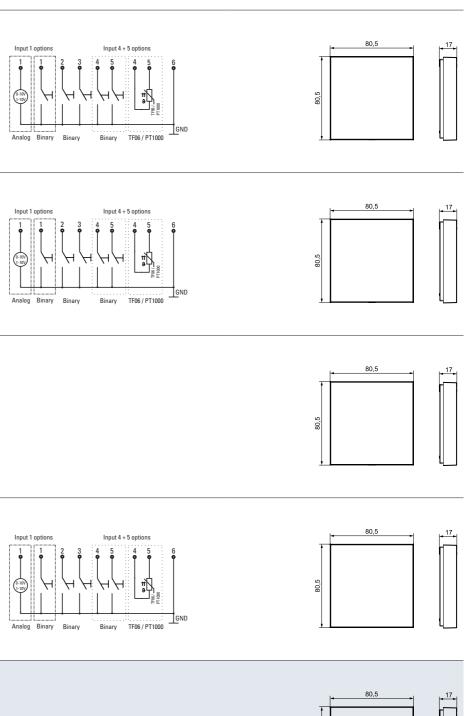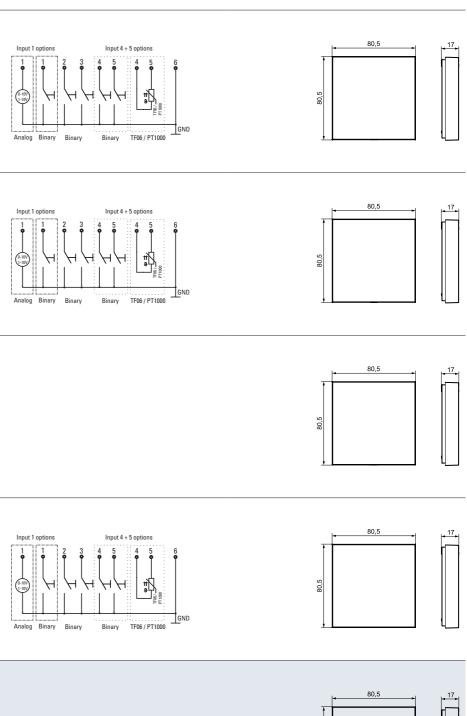
- Sensor for particulate matter / Air quality sensor
- Room climate control
- Sensors for particulate matter, VOC, temperature, humidity and atmospheric pressure

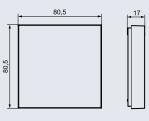| müller	Sensor
GS 70.00 knx	$PM_{2.5}$, VOC, RH, T
Housing colour	

Following functions and data available via KNX bus:
- Temperature control
- Rel. humidity control
- Particulate matter control
- VOC control
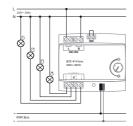- Dewpoint
- Air pressure
- VAV control

KNX-TP

KNX Dimmers for DIN-rail mounting

- Products for KNX installations
- Panic funktion
- Memory function
- Protection against overload, short circuit and overheat

- Scene control
- Control knob for dimming function test
  - even without KNX-bus connected
- DIN-rail mounting 87,5 mm

- Dimming actuator for RLC and LED
- 4 channels with up to 300 W per channel
- Load leading edge 4-120 W
- Load trailing edge 4-250 W
- Up to 1200 W total load
- Channels are independantly controllable / dimmable

paladin by müller	Suitable for
879 414 knx	RLC & LED
Housing colour	

- Dimming actuator for dimmable RGBW LED strips
- 4 channels with up to 10 A per channel
- Pulse width modulation (PWM) 12 - 48 V DC
- Configurable as 4 single colored LED strips dimmer
- RGB + W or RGBW LED strips
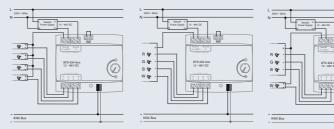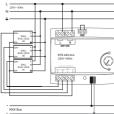
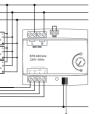| paladin by müller	Suitable for
879 424 knx	LED Strips
Housing colour	

- Dimming actuator / DALI gateway for DALI drivers and ballasts (ECG's)
- 3 channels up to 64 ballasts per channel
- Max. 128 devices in total
- 1 group per channel
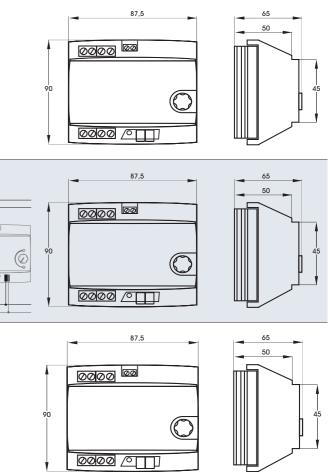- Broadcast communication

paladin by müller	Suitable for
879 443 knx	DALI
Housing colour	

hugomüller

KNX

hugomüller

switching controlling counting

KNX-RFS

KNX-RFS
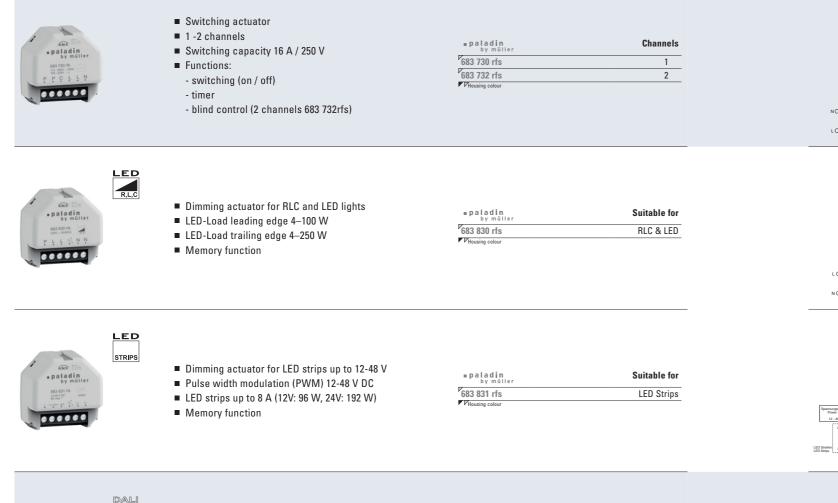
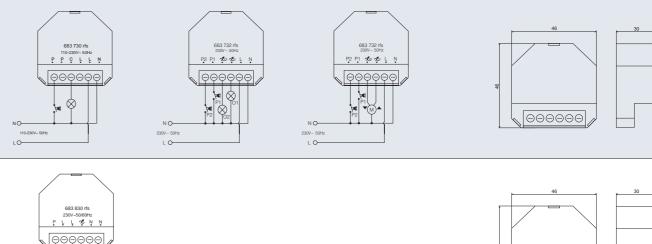# KNX-RF S-mode products for flush-mounted fitting

- Products for KNX installations
- KNX-RF 1.R S-mode
- Input for wired push-buttons
- Protection against overload, short circuit and overheat
- RF-repeater function
- Scene control
- Staircase lighting timer function
- Cycle function

KNX rf

- Switching actuator
- 1 -2 channels
- Switching capacity 16 A / 250 V
- Functions:
  - switching (on / off)
  - timer
  - blind control (2 channels 683 732rfs)

paladin by müller	Channels
683 730 rfs	1
683 732 rfs	2
Housing colour	

- Dimming actuator for RLC and LED lights
- LED-Load leading edge 4–100 W
- LED-Load trailing edge 4–250 W
- Memory function

paladin by müller	Suitable for
683 830 rfs	RLC & LED
Housing colour	

- Dimming actuator for LED strips up to 12-48 V
- Pulse width modulation (PWM) 12-48 V DC
- LED strips up to 8 A (12V: 96 W, 24V: 192 W)
- Memory function

paladin by müller	Suitable for
683 831 rfs	LED Strips
Housing colour	

- Dimming actuator for DALI ballasts
- Broadcast communication
- Memory function

paladin by müller	Suitable for
683 834 rfs	DALI
Housing colour	

hugomüller

hugomüller

KNX

switching controlling counting

KNX-RFS

KNX-RFS

KNX-RF S-mode senders and sensors

- Products for KNX installations
- KNX-RF 1.R S-mode
- Test mode for quick status request
- Battery operated (lifetime approx. 8 years)

KNX®

rf
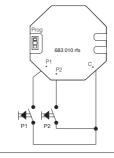
- Pushbutton interface / sender
- 2 binary inputs (configurable)
- Sensor for temperature
- Adjustable alarm conditions
- Input for up to 2 wired push buttons for RF transmission
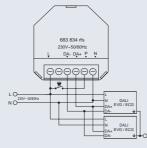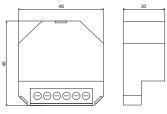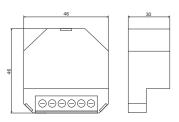
paladin by müller	**Version**
683 010 rfs	2 inputs
Housing colour	

- Sensor for temperature, light and humidity
- Adjustable alarm conditions

paladin by müller	**Sensor**
686 312 rfs	Lux, RH, T
Housing colour	

Folllowing functions and data available via KNX bus:
- Brightness control
- Temperature control
- Rel. humidity control
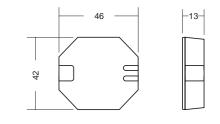
- Door- / window contact sensor
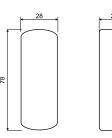
paladin by müller	**Sensor**
686 410 rfs	Door- / window contact
Housing colour	

Folllowing functions and data available via KNX bus:
- Change of status (open / closed)
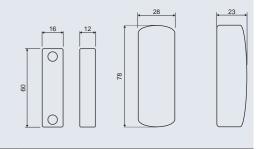
Room climate controls Modbus & Analogue

climate
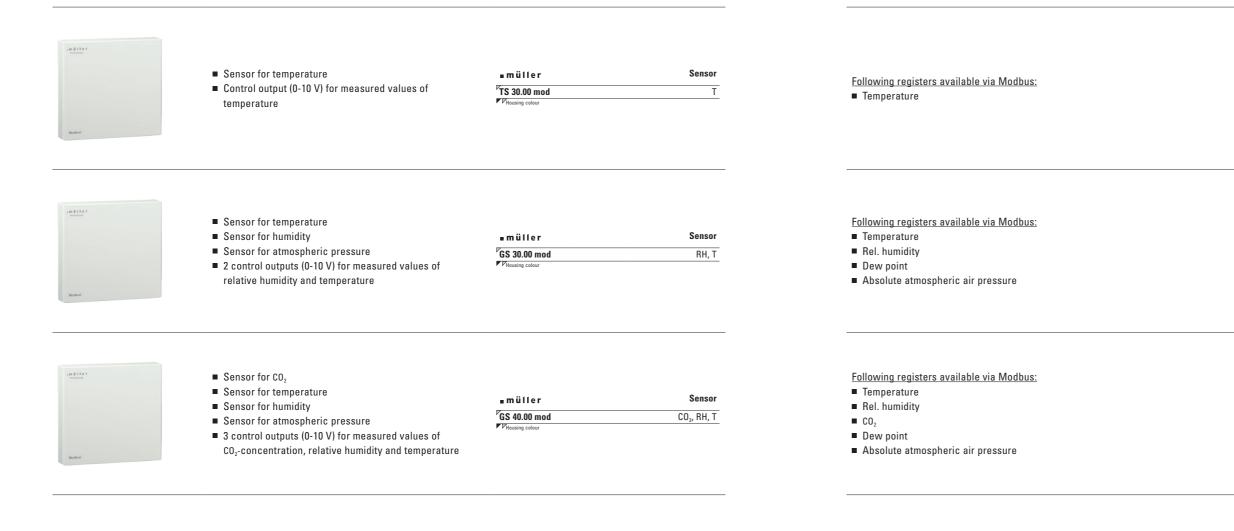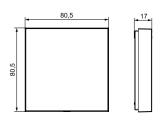
- Sensors for indoor use (IP 20)
- Modbus-Modes (ASCII / RTU) configurable
- Compact housing (wall-mounting)
- Adjustable baud rate
- Adjustable parities

climate

- Sensor for temperature
- Control output (0-10 V) for measured values of temperature

▪ müller	Sensor
TS 30.00 mod	T
⬚ Housing colour	

Following registers available via Modbus:
- Temperature

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- Sensor for temperature
- Sensor for humidity
- Sensor for atmospheric pressure
- 2 control outputs (0-10 V) for measured values of relative humidity and temperature

▪ müller	Sensor
GS 30.00 mod	RH, T
⬚ Housing colour	

Following registers available via Modbus:
- Temperature
- Rel. humidity
- Dew point
- Absolute atmospheric air pressure

- Sensor for CO_2
- Sensor for temperature
- Sensor for humidity
- Sensor for atmospheric pressure
- 3 control outputs (0-10 V) for measured values of CO_2-concentration, relative humidity and temperature

▪ müller	Sensor
GS 40.00 mod	CO_2, RH, T
⬚ Housing colour	

Following registers available via Modbus:
- Temperature
- Rel. humidity
- CO_2
- Dew point
- Absolute atmospheric air pressure

Bluetooth system

mi.system

- Multifunctional devices (remote control) for flush mounting
- Directly programmable with Smartphone (Bluetooth)
- Range of 75 m

mi.system

- Universal control unit
  - Blinds control
  - Time switch (week or astro)
- Clock thermostat (with LS 20.00 pro4)
- Hygrostat (with LS 20.00 pro4)
- 2 channels / 100 memory locations
- Switching capacity 6 A
- 10 years battery reserve

∎ müller	Channels
EA 46.22 pro4	2
Housing colour	

- LED Strips Dimmer with time program
- Pulse Width Modulation technology (PWM) 12-24 V DC
- LED strips up to 8 A
- 10 years battery reserve

∎ müller	Suitable for
EA 56.42 pro4	LED Strips
Housing colour	

mi.sensor

mi.sensor

Bluetooth System

mi.system

- Sensor as accessory for mi.puck system EA 46.22 pro4
- Range of 75 m

- Sensor for light / brightness
- Sensor for temperature
- Sensor for humidity
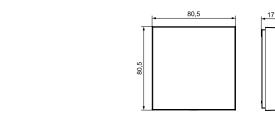- Exchangeable battery (included) / battery operated (lifetime approx. 6 years)
- To be used with mi.puck system (EA 46.22 pro4)

∎ müller	Sensor
LS 20.00 pro4	Lux, RH, T
Housing colour	

Following datas available via mi.puck system:
- Brightness value
- Temperature value
- Rel. humidity value

Wall mounting (without accessory)

Integrated in switch design 55 x 55 mm with mounting plate 200.001 (see accessories)

Outdoor installation with mounting angle 200.002 (see accessories)

Mounting with vacuum cup 200.003 (included)

Accessories

Accessoriesl

Save'n carry App

- Free app for programming easy and pro4 time switches
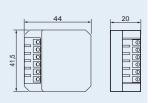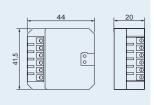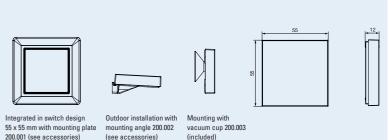- Remote control for mi.system products
- Pro4 products can be programmed directly with Smartphone via Bluetooth
- Easy products can be programmed directly with Smartphone via NFC

- Easy and fast programming via Smartphone or tablet
- Reading and writing to the time switch without additional accessories
- Intuitive user interface
- Send programs directly via WhatsApp, e-mail, iMessage, etc.
- Save and send programs as pdf-document

. müller

Save'n carry App

GET IT ON
Google Play

Download on the
App Store

Accessories

Accessories

Bx 40 / TC x4 / SC 24.10 pro

Trim 55 x 55
for Bx 40 / TC x4 / SC 24.10 pro
Order number 190.003
Housing colour

Mask 72 x 72
for Bx 40 / TC x4 / SC 24.10 pro
Order number 190.004
Housing colour

Mask ø 72 (mounting-ø 60)
for Bx 40 / TC x4 / SC 24.10 pro
Order number 190.008
Housing colour

Self-adhesive seal (anti-twist protection)
for Bx 40 / TC x4 / SC 24.10 pro
Order number 101.001
Housing colour

IP54-Seal
for Bx 40 / TC x4 / SC 24.10 pro
Order number 101.003
Housing colour

Retaining clip for Bx 40 / TC x4
Order number 715.003
Housing colour

Bx 30 / Bx 70.29

Mounting accessories for LS 20.00 pro4, KNX mini housings

Retaining clip for Bx 30
Order number 715.005
Housing colour

Mounting plate for wall box
Order number 200.001
Housing colour

Mounting angle for outdoor installation
Order number 200.002
Housing colour

Terminal cover for Bx 70.29
Order number 003.008
Order number 003.010
Housing colour

Vacuum cup
Order number 200.003
Housing colour

Accessories

- 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 at your PC or Smartphone (Android, only PP 60.00 pro)

PP 60.00 pro

.**müller**	Interface
PP 50.00 pro	USB
PP 60.00 pro	USB, Bluetooth
⌐Housing colour	

- Radio receiver DCF-Time
- Accessory for devices of the pro- / pro4-series and SC 98.40 knx
- Wall mounting
- Connection wire specifications: 2-wire, no shield, variable core cross-section
- Reception and output of the DCF 77 telegram

.**müller**	
FU 20.00 pro	
⌐Housing colour	

- Radio receiver GPS-Time
- Accessory for devices of the pro- / pro4-series and SC 98.40 knx
- Wall mounting
- Connection wire specifications: 3-wire, no shield, variable core cross-section
- Reception and processing of GPS time signal

.**müller**	Version
FU 30.00 pro	without power supply
FU 35.00 pro	power supply for DIN-rail included
⌐Housing colour	

- Amplifier for LED strips
- Flush-mounted fitting
- LED strips up to 8 A
- Combinable with dimmer paladin 873 040 led, 673 831 rf and 674 830 rf

.**paladin** by müller	suitable for
873 041 amp	LED strips
⌐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
- Measuring range: -15...+70°C
- Sensor NTC 10 kOhm, nominal length 28 mm, diameter 7,7 mm
- Cable: 4 m PVC/PVC black (H03 VV-F)
- Type of protection: IP 65

.**müller**	Version
TF 06	External temperature sensor / probe
⌐Housing colour	

Easy to use
Compact size

WIN   ADAPTER

* only PP 60.00 pro "Bluetooth"

FU 20 pro

Schaltuhr / Time switch   Schaltuhr / Time switch   Schaltuhr / Time switch

max. 10 Schaltuhren
max. 10 time switches

SELV

12-30V DATA
DC FU
+ -
1 2 3

EXT. POWER SUPPLY
EXT. SPANNUNGSVERSORGUNG
12 - 30V DC

Schaltuhr / time switch 35 mm
GPS DCF INPUT
5 6

Schaltuhr / time switch 70 mm
GPS DCF INPUT
14 15

Schaltuhr / time switch 19"-Modul
GPS DCF INPUT
28c 28a

max. 10 Geräte / devices

$I_{max} = 8A$

LED Strip   LED Strip

LED-   LED-
OUT   IN
LED+   LED+
12-24V DC

Power 12-24V DC

■ müller

2020 | 2021

also at:
www.hugo-mueller.com

:hugomüller

switching controlling counting

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Compact catalogue