
# Tendering documents

Enertex Bayern GmbH

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# Control / Visualization

## Enertex® EibPC² inkl. Option NP

Order number: 1159-01


*Figure 1. Enertex® EibPC² inkl. Option NP (1159-01)*

Logic machine and Web-visualization for the KNX Bus

*Device properties:*

- integrated KNX TP interface
- KNX IP Interface to program other devices using ETS
- up to 65,000 objects
- Scenes, timers, schedules, logic, presence simulation
- long-term recording of telegrams
- export telegrams on FTP server
- OpenVPN server, send/receive TCP/UDP packets, send e-mails
- Modbus TCP Master, Slave
- functions for http(s) Web-APIs (REST)
- MQTT Broker, Client
- Control EV charger
- Online weather forecast
- OpenVPN server, TCP/UDP, e-mail and Telegram notifications

- Free configuration tool

*Housing:*

- DIN rail mount, 4 SU

*Power supply/connections:*

- bus-powered, no additional power supply required
- power consumption 1.8 W (typical workload)
- Ethernet switch, two RJ45 jacks

*Display and operation:*

- OLED display showing device parameters
- green power LED
- yellow info LED
- red alarm LED
- button to control display

# Enertex® EibPC² ohne Option NP

Order number: 1159-02


*Figure 2. Enertex® EibPC² ohne Option NP (1159-02)*

Logic machine for the KNX Bus

*Device properties:*

- integrated KNX TP interface
- KNX IP Interface to program other devices using ETS
- up to 65,000 objects
- Scenes, timers, schedules, logic, presence simulation
- long-term recording of telegrams
- Free configuration tool .Housing:
- DIN rail mount, 4 SU

*Power supply/connections:*

- bus-powered, no additional power supply required
- power consumption 1.8 W (typical workload)
- Ethernet switch, two RJ45 jacks .Display and operation:
- OLED display showing device parameters
- green power LED
- yellow info LED
- red alarm LED

- button to control display

# Enertex® ENA²

Order number: 1170


*Figure 3. Enertex® ENA² (1170)*

Secure remote access for your local network, works with any internet provider (IPv4, IPv6, DS-Lite) and telegram logger into internal database, graphical visualization and configuration error analysis

*Device properties:*

- end-to-end encrypted connection between device and end-user device
- optional data relay, no local router configuration required
- guided configuration on device
- easy-to-use user management
- integrated free DynDNS service
- OpenVPN server, free client software for common OS (Windows, Linux, MacOS, Android, iOS)
- control users access via KNX group telegrams
- protects internal network by integrated firewall , DHCP server and routing
- recent security standards and well-known and trusted VPN software
- KNX telegram logger for ~100.000.000 tel., depending on data type
- ETS project impoert for data types, topology and device addresses
- easy to read and analyze telegrams from database with integrated webserver
- graphical time-value-charts with configurable time intervals, e.g., hours, days
- configuration error analysis, e.g., read requests without response telegram

*Housing:*

- DIN rail mount, 4 SU

*Power supply/connections:*

- powered by integrated KNX TP bus interface
- power consumption 1.8 W (typical workload)
- two RJ45 Ethernet interfaces with internal switch or configured as firewall

*Display and operation:*

- OLED display showing device parameters and status
- green power LED
- yellow info LED
- red alarm LED
- button to control display

# Roomcontroller

## Enertex® MeTa² KNX Premium, Alu gebürstet

Order number: 1177-01-al

**Available from: Jul 15, 2024**


*Figure 4. Enertex® MeTa² KNX Premium, Alu gebürstet (1177-01-al)*

The KNX room controller is a touch sensor with mechanical rockers, whose electronic labeling field allows the display of the action to be performed.

*Device properties:*

- Four electronically labelable, mechanical rocker switches with max. 80 switching functions
- Separate menu button ("MeTa") for switching control menus
- Main display with 0.1mm resolution for large-scale display of time, date, temperatures, humidity, control mode, KNX text messages and symbols, as well as general text displays, solar consumption, weather data.
- TFT displays with 0.1mm resolution to display time, date, temperatures, humidity, control mode, KNX text messages, and symbols
- Room controller for two-stage room temperature control with setpoint specification for heating and cooling with integrated temperature and humidity sensor
- Built-in temperature and humidity sensor

- Built-in light sensor
- Built-in motion detection through radar-based motion detector with up to 3 m range and 3 zones
- Alarm function with six parameterizable alarms (acoustic and/or optical)
- Output of three different signal tones at two volume levels
- Support for up to eight logic functions
- Maximum of 32 channel functions, including switching, dimming, color light control, tunable white controls, blind control, value giver, scene call and general functionality e.g. for multimedia
- Approx. 310 different icons, free color choice for texts and icons
- Font sets for Western European and Eastern European languages, Cyrillic, Greek, Hebrew, Arabic for display integrated
- Two external binary inputs, optionally usable as input for a remote temperature sensor (e.g., Albrecht Jung Art.-No.: FF NTC)
- Integrated bus coupler for power supply via the KNX bus (no additional power supply required)

*Housing:*

- Anodized full aluminum front, back panel in plastic.
- Housing dimensions: 90 x 161 x 14,6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus

*Display and operation:*

- Main display in TFT/IPS technology
- Four electronically labelable, mechanical rocker switches with TFT screens in IPS technology
- Programming switch and red programming LED

# Enertex® MeTa²  KNX Premium, vergoldet

Order number: 1177-01-gl

**Available from: Jul 15, 2024**


*Figure 5. Enertex® MeTa²  KNX Premium, vergoldet (1177-01-gl)*

The KNX room controller is a touch sensor with mechanical rockers, whose electronic labeling field allows the display of the action to be performed.

*Device properties:*

- Four electronically labelable, mechanical rocker switches with max. 80 switching functions
- Separate menu button ("MeTa") for switching control menus
- Main display with 0.1mm resolution for large-scale display of time, date, temperatures, humidity, control mode, KNX text messages and symbols, as well as general text displays, solar consumption, weather data.
- TFT displays with 0.1mm resolution to display time, date, temperatures, humidity, control mode, KNX text messages, and symbols
- Room controller for two-stage room temperature control with setpoint specification for heating and cooling with integrated temperature and humidity sensor
- Built-in temperature and humidity sensor
- Built-in light sensor
- Built-in motion detection through radar-based motion detector with up to 3 m range and 3

zones

- Alarm function with six parameterizable alarms (acoustic and/or optical)
- Output of three different signal tones at two volume levels
- Support for up to eight logic functions
- Maximum of 32 channel functions, including switching, dimming, color light control, tunable white controls, blind control, value giver, scene call and general functionality e.g. for multimedia
- Approx. 310 different icons, free color choice for texts and icons
- Font sets for Western European and Eastern European languages, Cyrillic, Greek, Hebrew, Arabic for display integrated
- Two external binary inputs, optionally usable as input for a remote temperature sensor (e.g., Albrecht Jung Art.-No.: FF NTC)
- Integrated bus coupler for power supply via the KNX bus (no additional power supply required)

*Housing:*

- Anodized full aluminum front, back panel in plastic.
- Housing dimensions: 90 x 161 x 14,6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus

*Display and operation:*

- Main display in TFT/IPS technology
- Four electronically labelable, mechanical rocker switches with TFT screens in IPS technology
- Programming switch and red programming LED

# Enertex® MeTa²  KNX Premium, schwarz eloxiert

Order number: 1177-01-sw

**Available from: Jul 15, 2024**


*Figure 6. Enertex® MeTa²  KNX Premium, schwarz eloxiert (1177-01-sw)*

The KNX room controller is a touch sensor with mechanical rockers, whose electronic labeling field allows the display of the action to be performed.

*Device properties:*

- Four electronically labelable, mechanical rocker switches with max. 80 switching functions
- Separate menu button ("MeTa") for switching control menus
- Main display with 0.1mm resolution for large-scale display of time, date, temperatures, humidity, control mode, KNX text messages and symbols, as well as general text displays, solar consumption, weather data.
- TFT displays with 0.1mm resolution to display time, date, temperatures, humidity, control mode, KNX text messages, and symbols
- Room controller for two-stage room temperature control with setpoint specification for heating and cooling with integrated temperature and humidity sensor
- Built-in temperature and humidity sensor
- Built-in light sensor
- Built-in motion detection through radar-based motion detector with up to 3 m range and 3

zones

- Alarm function with six parameterizable alarms (acoustic and/or optical)
- Output of three different signal tones at two volume levels
- Support for up to eight logic functions
- Maximum of 32 channel functions, including switching, dimming, color light control, tunable white controls, blind control, value giver, scene call and general functionality e.g. for multimedia
- Approx. 310 different icons, free color choice for texts and icons
- Font sets for Western European and Eastern European languages, Cyrillic, Greek, Hebrew, Arabic for display integrated
- Two external binary inputs, optionally usable as input for a remote temperature sensor (e.g., Albrecht Jung Art.-No.: FF NTC)
- Integrated bus coupler for power supply via the KNX bus (no additional power supply required)

*Housing:*

- Anodized full aluminum front, back panel in plastic.
- Housing dimensions: 90 x 161 x 14,6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus

*Display and operation:*

- Main display in TFT/IPS technology
- Four electronically labelable, mechanical rocker switches with TFT screens in IPS technology
- Programming switch and red programming LED

# Enertex® MeTa² KNX Premium, weiß (RAL9010) pulverbeschichtet

Order number: 1177-01-ws

**Available from: Jul 15, 2024**


*Figure 7. Enertex® MeTa² KNX Premium, weiß (RAL9010) pulverbeschichtet (1177-01-ws)*

The KNX room controller is a touch sensor with mechanical rockers, whose electronic labeling field allows the display of the action to be performed.

*Device properties:*

- Four electronically labelable, mechanical rocker switches with max. 80 switching functions
- Separate menu button ("MeTa") for switching control menus
- Main display with 0.1mm resolution for large-scale display of time, date, temperatures, humidity, control mode, KNX text messages and symbols, as well as general text displays, solar consumption, weather data.
- TFT displays with 0.1mm resolution to display time, date, temperatures, humidity, control mode, KNX text messages, and symbols
- Room controller for two-stage room temperature control with setpoint specification for heating and cooling with integrated temperature and humidity sensor
- Built-in temperature and humidity sensor
- Built-in light sensor

- Built-in motion detection through radar-based motion detector with up to 3 m range and 3 zones
- Alarm function with six parameterizable alarms (acoustic and/or optical)
- Output of three different signal tones at two volume levels
- Support for up to eight logic functions
- Maximum of 32 channel functions, including switching, dimming, color light control, tunable white controls, blind control, value giver, scene call and general functionality e.g. for multimedia
- Approx. 310 different icons, free color choice for texts and icons
- Font sets for Western European and Eastern European languages, Cyrillic, Greek, Hebrew, Arabic for display integrated
- Two external binary inputs, optionally usable as input for a remote temperature sensor (e.g., Albrecht Jung Art.-No.: FF NTC)
- Integrated bus coupler for power supply via the KNX bus (no additional power supply required)

*Housing:*

- Anodized full aluminum front, back panel in plastic.
- Housing dimensions: 90 x 161 x 14,6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus

*Display and operation:*

- Main display in TFT/IPS technology
- Four electronically labelable, mechanical rocker switches with TFT screens in IPS technology
- Programming switch and red programming LED

# Enertex® MeTa² KNX Standard, Alu gebürstet

Order number: 1177-02-al

**Available from: Jul 15, 2024**


*Figure 8. Enertex® MeTa² KNX Standard, Alu gebürstet (1177-02-al)*

The KNX room controller is a touch sensor with mechanical rockers, whose electronic labeling field allows the display of the action to be performed.

*Device properties:*

- Two electronically labelable, mechanical rocker switches with max. 80 switching functions
- Separate menu button ("MeTa") for switching control menus
- Main display with 0.1mm resolution for large-scale display of time, date, temperatures, humidity, control mode, KNX text messages and symbols, as well as general text displays, solar consumption, weather data.
- TFT displays with 0.1mm resolution to display time, date, temperatures, humidity, control mode, KNX text messages, and symbols
- Room controller for two-stage room temperature control with setpoint specification for heating and cooling with integrated temperature and humidity sensor
- Built-in temperature and humidity sensor
- Built-in light sensor
- Built-in motion detection through radar-based motion detector with up to 3 m range and 3

zones

- Alarm function with six parameterizable alarms (acoustic and/or optical)
- Output of three different signal tones at two volume levels
- Support for up to eight logic functions
- Maximum of 32 channel functions, including switching, dimming, color light control, tunable white controls, blind control, value giver, scene call and general functionality e.g. for multimedia
- Approx. 310 different icons, free color choice for texts and icons
- Font sets for Western European and Eastern European languages, Cyrillic, Greek, Hebrew, Arabic for display integrated
- Two external binary inputs, optionally usable as input for a remote temperature sensor (e.g., Albrecht Jung Art.-No.: FF NTC)
- Integrated bus coupler for power supply via the KNX bus (no additional power supply required)

*Housing:*

- Anodized full aluminum front, back panel in plastic
- Housing dimensions: 90 x 90 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus

*Display and operation:*

- Main display in TFT/IPS technology
- Four electronically labelable, mechanical rocker switches with TFT screens in IPS technology
- Programming switch and red programming LED

# Enertex® MeTa² KNX Standard, gold

Order number: 1177-02-gl

**Available from: Jul 15, 2024**


*Figure 9. Enertex® MeTa² KNX Standard, gold (1177-02-gl)*

The KNX room controller is a touch sensor with mechanical rockers, whose electronic labeling field allows the display of the action to be performed.

*Device properties:*

- Two electronically labelable, mechanical rocker switches with max. 80 switching functions
- Separate menu button ("MeTa") for switching control menus
- Main display with 0.1mm resolution for large-scale display of time, date, temperatures, humidity, control mode, KNX text messages and symbols, as well as general text displays, solar consumption, weather data.
- TFT displays with 0.1mm resolution to display time, date, temperatures, humidity, control mode, KNX text messages, and symbols
- Room controller for two-stage room temperature control with setpoint specification for heating and cooling with integrated temperature and humidity sensor
- Built-in temperature and humidity sensor
- Built-in light sensor
- Built-in motion detection through radar-based motion detector with up to 3 m range and 3

zones

- Alarm function with six parameterizable alarms (acoustic and/or optical)
- Output of three different signal tones at two volume levels
- Support for up to eight logic functions
- Maximum of 32 channel functions, including switching, dimming, color light control, tunable white controls, blind control, value giver, scene call and general functionality e.g. for multimedia
- Approx. 310 different icons, free color choice for texts and icons
- Font sets for Western European and Eastern European languages, Cyrillic, Greek, Hebrew, Arabic for display integrated
- Two external binary inputs, optionally usable as input for a remote temperature sensor (e.g., Albrecht Jung Art.-No.: FF NTC)
- Integrated bus coupler for power supply via the KNX bus (no additional power supply required)

*Housing:*

- Anodized full aluminum front, back panel in plastic
- Housing dimensions: 90 x 90 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus

*Display and operation:*

- Main display in TFT/IPS technology
- Four electronically labelable, mechanical rocker switches with TFT screens in IPS technology
- Programming switch and red programming LED

# Enertex® MeTa² KNX Standard, schwarz eloxiert

Order number: 1177-02-sw

**Available from: Jul 15, 2024**


*Figure 10. Enertex® MeTa² KNX Standard, schwarz eloxiert (1177-02-sw)*

The KNX room controller is a touch sensor with mechanical rockers, whose electronic labeling field allows the display of the action to be performed.

*Device properties:*

- Two electronically labelable, mechanical rocker switches with max. 80 switching functions
- Separate menu button ("MeTa") for switching control menus
- Main display with 0.1mm resolution for large-scale display of time, date, temperatures, humidity, control mode, KNX text messages and symbols, as well as general text displays, solar consumption, weather data.
- TFT displays with 0.1mm resolution to display time, date, temperatures, humidity, control mode, KNX text messages, and symbols
- Room controller for two-stage room temperature control with setpoint specification for heating and cooling with integrated temperature and humidity sensor
- Built-in temperature and humidity sensor
- Built-in light sensor
- Built-in motion detection through radar-based motion detector with up to 3 m range and 3

zones

- Alarm function with six parameterizable alarms (acoustic and/or optical)
- Output of three different signal tones at two volume levels
- Support for up to eight logic functions
- Maximum of 32 channel functions, including switching, dimming, color light control, tunable white controls, blind control, value giver, scene call and general functionality e.g. for multimedia
- Approx. 310 different icons, free color choice for texts and icons
- Font sets for Western European and Eastern European languages, Cyrillic, Greek, Hebrew, Arabic for display integrated
- Two external binary inputs, optionally usable as input for a remote temperature sensor (e.g., Albrecht Jung Art.-No.: FF NTC)
- Integrated bus coupler for power supply via the KNX bus (no additional power supply required)

*Housing:*

- Anodized full aluminum front, back panel in plastic
- Housing dimensions: 90 x 90 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus

*Display and operation:*

- Main display in TFT/IPS technology
- Four electronically labelable, mechanical rocker switches with TFT screens in IPS technology
- Programming switch and red programming LED

# Enertex® MeTa² KNX Standard, weiß (RAL9010) pulverbeschichtet

Order number: 1177-02-ws

**Available from: Jul 15, 2024**


*Figure 11. Enertex® MeTa² KNX Standard, weiß (RAL9010) pulverbeschichtet (1177-02-ws)*

The KNX room controller is a touch sensor with mechanical rockers, whose electronic labeling field allows the display of the action to be performed.

*Device properties:*

- Two electronically labelable, mechanical rocker switches with max. 80 switching functions
- Separate menu button ("MeTa") for switching control menus
- Main display with 0.1mm resolution for large-scale display of time, date, temperatures, humidity, control mode, KNX text messages and symbols, as well as general text displays, solar consumption, weather data.
- TFT displays with 0.1mm resolution to display time, date, temperatures, humidity, control mode, KNX text messages, and symbols
- Room controller for two-stage room temperature control with setpoint specification for heating and cooling with integrated temperature and humidity sensor
- Built-in temperature and humidity sensor
- Built-in light sensor

- Built-in motion detection through radar-based motion detector with up to 3 m range and 3 zones
- Alarm function with six parameterizable alarms (acoustic and/or optical)
- Output of three different signal tones at two volume levels
- Support for up to eight logic functions
- Maximum of 32 channel functions, including switching, dimming, color light control, tunable white controls, blind control, value giver, scene call and general functionality e.g. for multimedia
- Approx. 310 different icons, free color choice for texts and icons
- Font sets for Western European and Eastern European languages, Cyrillic, Greek, Hebrew, Arabic for display integrated
- Two external binary inputs, optionally usable as input for a remote temperature sensor (e.g., Albrecht Jung Art.-No.: FF NTC)
- Integrated bus coupler for power supply via the KNX bus (no additional power supply required)

*Housing:*

- Anodized full aluminum front, back panel in plastic
- Housing dimensions: 90 x 90 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus

*Display and operation:*

- Main display in TFT/IPS technology
- Four electronically labelable, mechanical rocker switches with TFT screens in IPS technology
- Programming switch and red programming LED

# Enertex® MeTa® KNX Premium, Alu gebürstet

Order number: 1157-01-al


*Figure 12. Enertex® MeTa® KNX Premium, Alu gebürstet (1157-01-al)*

The room controller is a push-button sensor with mechanical rockers whose electronic labelling field allows the action to be displayed.

*Device properties:*

- Four electronically labeled, mechanical rocker switches with max. 32 switching functions Menu button ("MeTa")
- LCD display to show time, date, temperatures, humidity, controller mode, KNX text messages and symbols
- Room controller heating and cooling with integrated temperature and humidity sensor

- Each rocker can either be used as two individual push-buttons for different functions (e.g. left ON/OFF, right VALUE SETTING), or assigned to a function group (e.g. dimming) as a control rocker
- Each rocker can be assigned four times (switch-over by menu button at the bottom of the housing)
- Rocker labeling for each level can be parameterized separately and can also be written to via GA, which allows e.g. language switching
- Status indications (feedback values) on rocker display possible
- Display brightness can be regulated automatically via integrated RGBW sensor
- External binary contact allows e.g. coupling of a conventional switch to the KNX bus.

*Housing:*

- Anodized all-aluminium housing
- Housing dimensions: 90 x 161 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus using the supplied bus coupler

*Display and operation:*

- LCD Display (Premium only)
- Four (Premium) or two (Standard and Starter) electronically labelable, mechanical rocker switches
- Additional rocker switch for menu switching
- Magnetic switch for programming mode
- Programming LED

# Enertex® MeTa® KNX Premium, schwarz eloxiert

Order number: 1157-01-sw


*Figure 13. Enertex® MeTa® KNX Premium, schwarz eloxiert (1157-01-sw)*

The room controller is a push-button sensor with mechanical rockers whose electronic labelling field allows the action to be displayed.

*Device properties:*

- Four electronically labeled, mechanical rocker switches with max. 32 switching functions Menu button ("MeTa")
- LCD display to show time, date, temperatures, humidity, controller mode, KNX text messages and symbols
- Room controller heating and cooling with integrated temperature and humidity sensor
- Each rocker can either be used as two individual push-buttons for different functions (e.g. left ON/OFF, right VALUE SETTING), or assigned to a function group (e.g. dimming) as a control rocker
- Each rocker can be assigned four times (switch-over by menu button at the bottom of the housing)
- Rocker labeling for each level can be parameterized separately and can also be written to via GA, which allows e.g. language switching
- Status indications (feedback values) on rocker display possible
- Display brightness can be regulated automatically via integrated RGBW sensor

- External binary contact allows e.g. coupling of a conventional switch to the KNX bus.

*Housing:*

- Anodized all-aluminium housing
- Housing dimensions: 90 x 161 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus using the supplied bus coupler

*Display and operation:*

- LCD Display (Premium only)
- Four (Premium) or two (Standard and Starter) electronically labelable, mechanical rocker switches
- Additional rocker switch for menu switching
- Magnetic switch for programming mode
- Programming LED

# Enertex® MeTa® KNX Premium, weiß (RAL9010) pulverbeschichtet

Order number: 1157-01-ws


*Figure 14. Enertex® MeTa® KNX Premium, weiß (RAL9010) pulverbeschichtet (1157-01-ws)*

The room controller is a push-button sensor with mechanical rockers whose electronic labelling field allows the action to be displayed.

*Device properties:*

- Four electronically labeled, mechanical rocker switches with max. 32 switching functions Menu button ("MeTa")
- LCD display to show time, date, temperatures, humidity, controller mode, KNX text messages and symbols

- Room controller heating and cooling with integrated temperature and humidity sensor
- Each rocker can either be used as two individual push-buttons for different functions (e.g. left ON/OFF, right VALUE SETTING), or assigned to a function group (e.g. dimming) as a control rocker
- Each rocker can be assigned four times (switch-over by menu button at the bottom of the housing)
- Rocker labeling for each level can be parameterized separately and can also be written to via GA, which allows e.g. language switching
- Status indications (feedback values) on rocker display possible
- Display brightness can be regulated automatically via integrated RGBW sensor
- External binary contact allows e.g. coupling of a conventional switch to the KNX bus.

*Housing:*

- Anodized all-aluminium housing
- Housing dimensions: 90 x 161 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus using the supplied bus coupler

*Display and operation:*

- LCD Display (Premium only)
- Four (Premium) or two (Standard and Starter) electronically labelable, mechanical rocker switches
- Additional rocker switch for menu switching
- Magnetic switch for programming mode
- Programming LED

# Enertex® MeTa® KNX Premium, vergoldet

Order number: 1157-01-gl


*Figure 15. Enertex® MeTa® KNX Premium, vergoldet (1157-01-gl)*

The room controller is a push-button sensor with mechanical rockers whose electronic labelling field allows the action to be displayed.

*Device properties:*

- Four electronically labeled, mechanical rocker switches with max. 32 switching functions Menu button ("MeTa")
- LCD display to show time, date, temperatures, humidity, controller mode, KNX text messages and symbols
- Room controller heating and cooling with integrated temperature and humidity sensor
- Each rocker can either be used as two individual push-buttons for different functions (e.g. left ON/OFF, right VALUE SETTING), or assigned to a function group (e.g. dimming) as a control rocker
- Each rocker can be assigned four times (switch-over by menu button at the bottom of the housing)
- Rocker labeling for each level can be parameterized separately and can also be written to via GA, which allows e.g. language switching
- Status indications (feedback values) on rocker display possible
- Display brightness can be regulated automatically via integrated RGBW sensor

- External binary contact allows e.g. coupling of a conventional switch to the KNX bus.

*Housing:*

- Anodized all-aluminium housing
- Housing dimensions: 90 x 161 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus using the supplied bus coupler

*Display and operation:*

- LCD Display (Premium only)
- Four (Premium) or two (Standard and Starter) electronically labelable, mechanical rocker switches
- Additional rocker switch for menu switching
- Magnetic switch for programming mode
- Programming LED

# Enertex® MeTa® KNX Standard, Alu gebürstet

Order number: 1157-02-al


*Figure 16. Enertex® MeTa® KNX Standard, Alu gebürstet (1157-02-al)*

The room controller is a push-button sensor with mechanical rockers whose electronic labelling field allows the action to be displayed.

*Device properties:*

- Two electronically labeled, mechanical rocker switches with max. 16 switching functions
- Room controller heating and cooling with integrated temperature and humidity sensor
- Each rocker can either be used as two individual push-buttons for different functions (e.g. left ON/OFF, right VALUE SETTING), or assigned to a function group (e.g. dimming) as a control rocker
- Each rocker can be assigned four times (switch-over by menu button at the bottom of the housing)
- Rocker labeling for each level can be parameterized separately and can also be written to via GA, which allows e.g. language switching
- Status indications (feedback values) on rocker display possible
- Display brightness can be regulated automatically via integrated RGBW sensor
- External binary contact allows e.g. coupling of a conventional switch to the KNX bus.

*Housing:*

- Anodized all-aluminium housing
- Housing dimensions: 90 x 90 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus using the supplied bus coupler

*Display and operation:*

- LCD Display (Premium only)
- Four (Premium) or two (Standard and Starter) electronically labelable, mechanical rocker switches
- Additional rocker switch for menu switching
- Magnetic switch for programming mode
- Programming LED

# Enertex® MeTa® KNX Standard, schwarz eloxiert

Order number: 1157-02-sw


*Figure 17. Enertex® MeTa® KNX Standard, schwarz eloxiert (1157-02-sw)*

The room controller is a push-button sensor with mechanical rockers whose electronic labelling field allows the action to be displayed.

*Device properties:*

- Two electronically labeled, mechanical rocker switches with max. 16 switching functions
- Room controller heating and cooling with integrated temperature and humidity sensor
- Each rocker can either be used as two individual push-buttons for different functions (e.g. left ON/OFF, right VALUE SETTING), or assigned to a function group (e.g. dimming) as a control rocker
- Each rocker can be assigned four times (switch-over by menu button at the bottom of the housing)
- Rocker labeling for each level can be parameterized separately and can also be written to via GA, which allows e.g. language switching
- Status indications (feedback values) on rocker display possible
- Display brightness can be regulated automatically via integrated RGBW sensor
- External binary contact allows e.g. coupling of a conventional switch to the KNX bus.

*Housing:*

- Anodized all-aluminium housing
- Housing dimensions: 90 x 90 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus using the supplied bus coupler

*Display and operation:*

- LCD Display (Premium only)
- Four (Premium) or two (Standard and Starter) electronically labelable, mechanical rocker switches
- Additional rocker switch for menu switching
- Magnetic switch for programming mode
- Programming LED

# Enertex® MeTa® KNX Standard, weiß (RAL9010) pulverbeschichtet

Order number: 1157-02-ws


*Figure 18. Enertex® MeTa® KNX Standard, weiß (RAL9010) pulverbeschichtet (1157-02-ws)*

The room controller is a push-button sensor with mechanical rockers whose electronic labelling field allows the action to be displayed.

*Device properties:*

- Two electronically labeled, mechanical rocker switches with max. 16 switching functions
- Room controller heating and cooling with integrated temperature and humidity sensor
- Each rocker can either be used as two individual push-buttons for different functions (e.g. left ON/OFF, right VALUE SETTING), or assigned to a function group (e.g. dimming) as a control rocker
- Each rocker can be assigned four times (switch-over by menu button at the bottom of the housing)
- Rocker labeling for each level can be parameterized separately and can also be written to via GA, which allows e.g. language switching
- Status indications (feedback values) on rocker display possible
- Display brightness can be regulated automatically via integrated RGBW sensor

- External binary contact allows e.g. coupling of a conventional switch to the KNX bus.

*Housing:*

- Anodized all-aluminium housing
- Housing dimensions: 90 x 90 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus using the supplied bus coupler

*Display and operation:*

- LCD Display (Premium only)
- Four (Premium) or two (Standard and Starter) electronically labelable, mechanical rocker switches
- Additional rocker switch for menu switching
- Magnetic switch for programming mode
- Programming LED

# Enertex® MeTa® KNX Standard, vergoldet

Order number: 1157-02-gl


*Figure 19. Enertex® MeTa® KNX Standard, vergoldet (1157-02-gl)*

The room controller is a push-button sensor with mechanical rockers whose electronic labelling field allows the action to be displayed.

*Device properties:*

- Two electronically labeled, mechanical rocker switches with max. 16 switching functions
- Room controller heating and cooling with integrated temperature and humidity sensor
- Each rocker can either be used as two individual push-buttons for different functions (e.g. left ON/OFF, right VALUE SETTING), or assigned to a function group (e.g. dimming) as a control rocker
- Each rocker can be assigned four times (switch-over by menu button at the bottom of the housing)
- Rocker labeling for each level can be parameterized separately and can also be written to via GA, which allows e.g. language switching
- Status indications (feedback values) on rocker display possible
- Display brightness can be regulated automatically via integrated RGBW sensor
- External binary contact allows e.g. coupling of a conventional switch to the KNX bus.

*Housing:*

- Anodized all-aluminium housing
- Housing dimensions: 90 x 90 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus using the supplied bus coupler

*Display and operation:*

- LCD Display (Premium only)
- Four (Premium) or two (Standard and Starter) electronically labelable, mechanical rocker switches
- Additional rocker switch for menu switching
- Magnetic switch for programming mode
- Programming LED

# Enertex® MeTa® KNX Starter, Alu gebürstet

Order number: 1157-03-al

**Discontinued**


*Figure 20. Enertex® MeTa® KNX Starter, Alu gebürstet (1157-03-al)*

The room controller is a push-button sensor with mechanical rockers whose electronic labelling field allows the action to be displayed.

*Device properties:*

- Two electronically labeled, mechanical rocker switches with max. 16 switching functions
- Each rocker can either be used as two individual push-buttons for different functions (e.g. left ON/OFF, right VALUE SETTING), or assigned to a function group (e.g. dimming) as a control rocker
- Each rocker can be assigned four times (switch-over by menu button at the bottom of the housing)
- Rocker labeling for each level can be parameterized separately and can also be written to via GA, which allows e.g. language switching
- Status indications (feedback values) on rocker display possible
- Display brightness can be regulated automatically via integrated RGBW sensor
- External binary contact allows e.g. coupling of a conventional switch to the KNX bus.

*Housing:*

- Anodized all-aluminium housing
- Housing dimensions: 90 x 90 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus using the supplied bus coupler

*Display and operation:*

- LCD Display (Premium only)
- Four (Premium) or two (Standard and Starter) electronically labelable, mechanical rocker switches
- Additional rocker switch for menu switching
- Magnetic switch for programming mode
- Programming LED

# Enertex® MeTa® KNX Starter, schwarz eloxiert

Order number: 1157-03-sw

**Discontinued**


*Figure 21. Enertex® MeTa® KNX Starter, schwarz eloxiert (1157-03-sw)*

The room controller is a push-button sensor with mechanical rockers whose electronic labelling field allows the action to be displayed.

*Device properties:*

- Two electronically labeled, mechanical rocker switches with max. 16 switching functions
- Each rocker can either be used as two individual push-buttons for different functions (e.g. left ON/OFF, right VALUE SETTING), or assigned to a function group (e.g. dimming) as a control rocker
- Each rocker can be assigned four times (switch-over by menu button at the bottom of the housing)
- Rocker labeling for each level can be parameterized separately and can also be written to via GA, which allows e.g. language switching
- Status indications (feedback values) on rocker display possible
- Display brightness can be regulated automatically via integrated RGBW sensor
- External binary contact allows e.g. coupling of a conventional switch to the KNX bus.

*Housing:*

- Anodized all-aluminium housing
- Housing dimensions: 90 x 90 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus using the supplied bus coupler

*Display and operation:*

- LCD Display (Premium only)
- Four (Premium) or two (Standard and Starter) electronically labelable, mechanical rocker switches
- Additional rocker switch for menu switching
- Magnetic switch for programming mode
- Programming LED

# Enertex® MeTa® KNX Starter, weiß (RAL9010) pulverbeschichtet

Order number: 1157-03-ws

**Discontinued**


*Figure 22. Enertex® MeTa® KNX Starter, weiß (RAL9010) pulverbeschichtet (1157-03-ws)*

The room controller is a push-button sensor with mechanical rockers whose electronic labelling field allows the action to be displayed.

*Device properties:*

- Two electronically labeled, mechanical rocker switches with max. 16 switching functions
- Each rocker can either be used as two individual push-buttons for different functions (e.g. left ON/OFF, right VALUE SETTING), or assigned to a function group (e.g. dimming) as a control rocker
- Each rocker can be assigned four times (switch-over by menu button at the bottom of the housing)
- Rocker labeling for each level can be parameterized separately and can also be written to via GA, which allows e.g. language switching
- Status indications (feedback values) on rocker display possible
- Display brightness can be regulated automatically via integrated RGBW sensor

- External binary contact allows e.g. coupling of a conventional switch to the KNX bus.

*Housing:*

- Anodized all-aluminium housing
- Housing dimensions: 90 x 90 x 14.6 mm
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered exclusively by the KNX bus using the supplied bus coupler

*Display and operation:*

- LCD Display (Premium only)
- Four (Premium) or two (Standard and Starter) electronically labelable, mechanical rocker switches
- Additional rocker switch for menu switching
- Magnetic switch for programming mode
- Programming LED

# Enertex® Synohr MultiSense KNX Premium, Alu gebürstet

Order number: 1144-01-al

**Discontinued**


*Figure 23. Enertex® Synohr MultiSense KNX Premium, Alu gebürstet (1144-01-al)*

A room controller with integrated speech recognition. The room controller measures temperature, humidity and colour intensity.

*Device properties:*

- Room controller for heating and cooling
- Integrated sensors for temperature, humidity and RGBW brightness
- Dot matrix displays KNX-compliant 14-byte strings
- Speech recognizer with up to 40 freely configurable commands
- Speech recognizer with wildcard commands, e.g. DIMMER_PERCENT (Premium only)
- The vocabulary of speech recognition comprises approx. 250 words, does not have to be learned separately and can be parameterised via ETS.
- Playback of WAV files from SD card (only Premium and Standard)
- Monitoring of sound levels, e.g. for use as a " Babyfon" (Premium only)
- Master/slave operation, if several switching points are available in larger rooms (Enertex® EibPC required (only Premium)
- Display of 28 characters on dot matrix with Autoscrolling (Premium only)
- Built-in speaker outputs audio signals that are saved to the provided microSD card.

*Housing:*

- Anodized all-aluminum housing
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered directly from the KNX bus using the supplied bus couple

*Display and operation:*

- LCD display to show time, date, temperatures, humidity, controller mode, KNX text messages and symbols
- Two touch buttons and one push button
- Programming button

# Enertex® Synohr MultiSense KNX Premium, weiß (RAL 9010) pulverbeschichtet

Order number: 1144-01-ws

**Discontinued**


*Figure 24. Enertex® Synohr MultiSense KNX Premium, weiß (RAL 9010) pulverbeschichtet (1144-01-ws)*

A room controller with integrated speech recognition. The room controller measures temperature, humidity and colour intensity.

*Device properties:*

- Room controller for heating and cooling
- Integrated sensors for temperature, humidity and RGBW brightness
- Dot matrix displays KNX-compliant 14-byte strings
- Speech recognizer with up to 40 freely configurable commands
- Speech recognizer with wildcard commands, e.g. DIMMER_PERCENT (Premium only)
- The vocabulary of speech recognition comprises approx. 250 words, does not have to be learned separately and can be parameterised via ETS.
- Playback of WAV files from SD card (only Premium and Standard)
- Monitoring of sound levels, e.g. for use as a " Babyfon" (Premium only)
- Master/slave operation, if several switching points are available in larger rooms (Enertex® EibPC required (only Premium)
- Display of 28 characters on dot matrix with Autoscrolling (Premium only)
- Built-in speaker outputs audio signals that are saved to the provided microSD card.

*Housing:*

- Anodized all-aluminum housing
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered directly from the KNX bus using the supplied bus couple

*Display and operation:*

- LCD display to show time, date, temperatures, humidity, controller mode, KNX text messages and symbols
- Two touch buttons and one push button
- Programming button

# Enertex® Synohr MultiSense KNX Premium, schwarz eloxiert

Order number: 1144-01-sw

**Discontinued**


*Figure 25. Enertex® Synohr MultiSense KNX Premium, schwarz eloxiert (1144-01-sw)*

A room controller with integrated speech recognition. The room controller measures temperature, humidity and colour intensity.

*Device properties:*

- Room controller for heating and cooling
- Integrated sensors for temperature, humidity and RGBW brightness
- Dot matrix displays KNX-compliant 14-byte strings
- Speech recognizer with up to 40 freely configurable commands
- Speech recognizer with wildcard commands, e.g. DIMMER_PERCENT (Premium only)
- The vocabulary of speech recognition comprises approx. 250 words, does not have to be learned separately and can be parameterised via ETS.
- Playback of WAV files from SD card (only Premium and Standard)
- Monitoring of sound levels, e.g. for use as a " Babyfon" (Premium only)
- Master/slave operation, if several switching points are available in larger rooms (Enertex® EibPC required (only Premium)
- Display of 28 characters on dot matrix with Autoscrolling (Premium only)
- Built-in speaker outputs audio signals that are saved to the provided microSD card.

*Housing:*

- Anodized all-aluminum housing
- Suitable for standard flush-mounted box

*Power supply/connections:*

- Powered directly from the KNX bus using the supplied bus couple

*Display and operation:*

- LCD display to show time, date, temperatures, humidity, controller mode, KNX text messages and symbols
- Two touch buttons and one push button
- Programming button

# System Devices / Actuators

## Enertex® KNX IP Secure Router

Order number: 1164


*Figure 26. Enertex® KNX IP Secure Router (1164)*

The KNX IP Secure Router (2 TE) is the central component for KNX installations in order to couple them via the IP backbone.

*Device properties:*

- Use as repeater, line, area or world coupler
- Authentication and encryption of KNX and IP telegrams
- KNX IP Secure Routing, max. performance 49 telegrams per second
- KNX IP Secure Tunnelling, max. performance 49 telegrams per second
- Up to eight encrypted or unencrypted KNX UDP and TCP tunnel connections
- Integrated OLED display to show important device parameters
- Telegram rate limitation
- Support of telegram lengths up to 248 bytes (TP)
- Blocking of own programming via TP
- Support of UDP connections with long response time (1 to 8 s)

- Routing Counter 7: Switchable between new and old standard
- Temporary filter switch-off for commissioning diagnosis
- Topology error detection
- Up to 62 group address filters
- Buffered real-time clock and SNTP server
- Time server for the KNX bus with 36 hours power reserve
- Parameterization and diagnostic functions via Telnet
- Output of the bus voltage on the display and Telnet
- Bidirectional translation from unencrypted to encrypted communication objects

*Housing:*

- DIN-rail housing with 2 TE

*Power supply/connections:*

- Power supply via KNX bus
- Ethernet 10/100 Mbit

*Display and operation:*

- LEDs for operation, bus activity, programming mode, LAN link and LAN act
- Button for programming mode and display switching

# Enertex® KNX IP Secure Interface

Order number: 1168


*Figure 27. Enertex® KNX IP Secure Interface (1168)*

The KNX IP Secure Interface (2 TE) is the central component for KNX installations and provides up to eight encrypted or unencrypted tunnel connections.

*Device properties:*

- Authentication and encryption of KNX and IP telegrams
- KNX IP Secure Tunnelling, max. performance 49 telegrams per second
- Up to eight encrypted or unencrypted KNX UDP and TCP tunnel connections
- Integrated OLED display to show important device parameters
- Telegram rate limitation
- Support of telegram lengths up to 248 bytes (TP)
- Support of UDP connections with long response time (1 to 8 s)
- Buffered real-time clock and SNTP server
- Time server for the KNX bus with 36 hours power reserve
- Parameterization and diagnostic functions via Telnet
- Output of the bus voltage on the display and Telnet
- Bidirectional translation from unencrypted to encrypted communication objects

*Housing:*

- DIN-rail housing with 2 TE

*Power supply/connections:*

- Power supply via KNX bus
- Ethernet 10/100 Mbit

*Display and operation:*

- LEDs for operation, bus activity, programming mode, LAN link and LAN act
- Button for programming mode and display switching

# Enertex® KNX TP Secure Coupler

Order number: 1171


*Figure 28. Enertex® KNX TP Secure Coupler (1171)*

A KNX Secure Coupler (2 TE) for coupling standard and Secure TP lines via a TP backbone. The setup is done either via standard KNX data communication or secure commissioning via Data Secure.

*Device properties:*

- Telegram rate limitation, max. telegram lengths up to 248 bytes
- Bus performance up to 49 telegrams per second
- Topology error detection
- temporary filter deactivation

*Housing:*

- DIN top-hat rail housing with 2 TE

*Power supply/connections:*

- Typ. 7.5 mA current consumption from line (Sub), 1 mA from main line

*Display and operation:*

- OLED display for indication of device parameters and status
- red LED for programming

- green operation LED
- Yellow LED bus activity
- Programming key and display key (control of the display)

# Enertex® KNX LED Dimmsequenzer 20A/5x REG

Order number: 1174-REG


*Figure 29. Enertex® KNX LED Dimmsequenzer 20A/5x REG (1174-REG)*

A pulse width modulating dimmer for 5 - 48 V LED modules with 5 dimming channels. The device is suitable for any LED light source that is suitable for DC constant voltage and is available in two variants: For installation for ceiling mounting with double furniture marking (DK) or as a REG device (4TE).

*Device properties:*

- Five dimming channels, pulse-width modulated, max. 20 A per channel
- Max. Dimming power 480 W
- Variable voltage input and output: 5 - 48 V
- PWM frequency adjustable in steps between 211 and 1200 Hz
- Operating modes: cool white/warm white, RGB(CCT/W) or single channels
- RGB(CCT/W): Extended white balance by means of white channels (RGB-Extended) or extension of tunable white color temperatures by automatic admixture of R/G/B (TW-Extended)
- Control optionally via RGB or HSV color values
- Four different dimming characteristics to choose from with integrated soft dimming function
- Free definition of sequences or selection from predefined sequences
- Scenes, bit scenes and lock functions
- Time-controlled dimming / HCL and astro function
- Staircase lighting function

- Integrated protection functions that selectively switch off the connected LED modules and automatically switch them on again after removal: Overvoltage, undervoltage, overcurrent and overtemperature
- Diagnostics / indication of the protection functions via KNX group addresses
- Reverse polarity protection on the input side to prevent damage during commissioning
- Extended protection functions for lamps and LED power supply unit
- Measurement of current, voltage, power, temperature and telegram rate
- Energy and cost counter - Commissioning functions by means of display and pushbutton for quick testing of wiring
- Control of an external KNX switch contact for switching off the LED power supply unit
- KNX TP Secure

*Housing:*

- DIN rail housing with 4 SU

*Power supply/connections:*

- Power supply via KNX bus
- Connection LED power supply DC 5 - 48 V
- Connection LED lamps (5 channels)

*Display and operation:*

- LEDs for programming mode, LED power supply voltage and operation
- Button for programming mode and menu navigation

# Enertex® KNX LED Dimmsequenzer 20A/5x DK

Order number: 1174-DK


*Figure 30. Enertex® KNX LED Dimmsequenzer 20A/5x DK (1174-DK)*

A pulse width modulating dimmer for 5 - 48 V LED modules with 5 dimming channels. The device is suitable for any LED light source that is suitable for DC constant voltage and is available in two variants: For installation for ceiling mounting with double furniture marking (DK) or as a REG device (4TE).

*Device properties:*

- Five dimming channels, pulse-width modulated, max. 20 A per channel
- Max. Dimming power 480 W
- Variable voltage input and output: 5 - 48 V
- PWM frequency adjustable in steps between 211 and 1200 Hz
- Operating modes: cool white/warm white, RGB(CCT/W) or single channels
- RGB(CCT/W): Extended white balance by means of white channels (RGB-Extended) or extension of tunable white color temperatures by automatic admixture of R/G/B (TW-Extended)
- Control optionally via RGB or HSV color values
- Four different dimming characteristics to choose from with integrated soft dimming function
- Free definition of sequences or selection from predefined sequences
- Scenes, bit scenes and lock functions
- Time-controlled dimming / HCL and astro function
- Staircase lighting function
- Integrated protection functions that selectively switch off the connected LED modules and automatically switch them on again after removal: Overvoltage, undervoltage, overcurrent and overtemperature
- Diagnostics / indication of the protection functions via KNX group addresses
- Reverse polarity protection on the input side to prevent damage during commissioning
- Extended protection functions for lamps and LED power supply unit
- Measurement of current, voltage, power, temperature and telegram rate

- Energy and cost counter - Commissioning functions by means of display and pushbutton for quick testing of wiring
- Control of an external KNX switch contact for switching off the LED power supply unit
- KNX TP Secure

*Housing:*

- Electronics housing for ceiling installation 157.0 x 45.0 x 25.5 mm (L x W x H)

*Power supply/connections:*

- Power supply via KNX bus
- Connection LED power supply DC 5 - 48 V
- Connection LED lamps (5 channels)

*Display and operation:*

- LEDs for programming mode, LED power supply voltage and operation
- Button for programming mode and menu navigation

# Enertex® KNX HV Dimmer 2000W/8x

Order number: 1176-08

**Available from: Sep 15, 2024**


*Figure 31. Enertex® KNX HV Dimmer 2000W/8x (1176-08)*

A dimmer for dimmable 230V lamps with 8 dimming channels.

*Geräteeigenschaften:*

- 8 independant dimming channels, 230 VAC, 250 W per channel
- DIN rail mounted device with space-saving 6 SU installation width
- Support for leading edge and trailing edge phase control
- Parallel operation of up to 4 channels with 1000W total power
- Dimming method for smooth dimming transitions and additionally selectable dimming curves
- Dimming method for stable, flicker-free light at heavily dimmed brightness levels
- Low losses per channel: Standby <0.2 W, full load <2 W
- Energy and electricity cost meter per channel with accurate active power measurement in accordance with accuracy class A (2%)
- Commissioning and diagnostic functions via display and buttons on the device
- Automated commissioning with load detection and lamp measurement, as well as final self-diagnosis of the dimming capability of the lamp
- Overload, overvoltage, short-circuit, and temperature protection with alarm message
- Parameterizable lamp protection
- Functions of ETS application: Time-controlled dimming, sleep and wake-up light, staircase lighting function with switch-off warning, timers, scenes, bit scenes, blocking function, extensive logic functions

*Gehäuse:*

- DIN rail housing with 6 SU

*Stromversorgung/Anschlüsse:*

- Power supply via KNX bus
- One separate L and N connection per channel
- One output per channel for connecting the lamps

*Anzeigen und Bedienung:*

- LEDs for programming mode, alarm indication and operation
- Button for programming mode and menu navigation

# Enertex® KNX PowerSupply 960³

Order number: 1152-3


*Figure 32. Enertex® KNX PowerSupply 960³ (1152-3)*

A KNX power supply with one output for supplying a KNX line with 960 mA and two additional 30 V auxiliary voltage outputs with 320 mA each.

*Device properties:*

- Independent current limitation for each output to protect against overload and short circuit
- Integrated bus coupler with measurement and diagnostic functions
- Bus coupler with support of the KNX Data Secure protocol
- Triggering a bus reset via communication object on the bus
- Triggering a voltage reset for an auxiliary voltage output via communication object on the bus
- Integrated time switch

*Housing:*

- DIN-rail housing with 6 SU

*Power supply/connections:*

- Power supply: 230 - 240 VAC / 50 Hz, max. 680 mA
- KNX connection: 30 VDC / 960 mA
- Auxiliary voltage connection 1: 30 VDC / 320 mA (100% overload capacity)
- Auxiliary voltage connection 2: 30 VDC / 320 mA (100% overload capacity)

*Display and operation:*

- Display for indication of bus currents, bus voltages and device parameters
- LED for programming and reset

- Programming, reset and display buttons (display control)

# Enertex® KNX Dual PowerSupply 1280

Order number: 1173


*Figure 33. Enertex® KNX Dual PowerSupply 1280 (1173)*

A KNX power supply with a output to supply a KNX line with 1280 mA, another KNX line with 320 mA and an additional 30 V auxiliary power supply with 320 mA.

*Device properties:*

- Independent current limitation for each output to protect against overload and short circuit
- Integrated bus coupler with measurement and diagnostic functions
- Bus coupler with support of the KNX Data Secure protocol
- Triggering a bus reset via communication object on the bus
- Integrated timer

*Housing:*

- DIN-rail housing with 6 SU

*Power supply/connections:*

- Power supply: 230 - 240 VAC / 50 Hz, max. 750 mA
- KNX connection: 30 VDC / 1280 mA
- Additional KNX connection: 30 VDC / 320 mA
- Auxiliary voltage connection: 30 VDC / 320 mA (100% overload capacity)

*Display and operation:*

- Display for indication of bus currents, bus voltages and device parameters
- LED for programming and reset
- Programming, reset and display buttons (display control)

# Measure

## Enertex® KNX SmartMeter 85A

Order number: 1149-85


*Figure 34. Enertex® KNX SmartMeter 85A (1149-85)*

Bidirectional meter for measuring active and reactive energy or power, as well as for analysing the net quality. The measurement is carried out either in a three-phase system or in three independent single-phase systems with accuracy class 1 (1%)

*Device properties:*

- Plug-through current sensors for the measuring range from 2 mA to 85 A per phase and power between 0.5 W and 58 kW
- Energy meters of accuracy class 1 (1% for active and reactive energy)
- Use of high-precision current sensors (Rogowski coils), which are calibrated to the device in the factory
- Precise measurements of very low currents down to 0.002% of the nominal current (= 2 mA)
- Low-loss current measurement (< 2 mW loss)
- The supplied current sensors are suitable for push-through mounting and may be installed directly at the mains supply point
- Since it is supplied exclusively via the KNX bus, the device can measure currents and voltages even if there is no 230 V mains voltage at the voltage measurement inputs or if the voltage has been enabled
- The measuring range of the active power extends from 0.5 W to 19,550 W or 58,650 W (three-

phase)

- All measured values (current, voltage, active power, reactive power, active energy, reactive energy, power factor, THD-U, THD-I, network harmonics, unbalanced load, zero current, network frequency) are displayed on the KNX bus
- All meter values and measured variables are also recorded in text form (standard csv format) with timestamp on an SD card for further data processing In addition to specialized functions for performance-based load control, optimization of the own energy demand with PV systems, calculation of the user or feed-in tariff with tariff switching and for the avoidance of load peaks, the ETS application also provides various monitoring functions
- Condition monitoring: Exceeding of limit values, events such as voltage failures, high voltage peaks, high mains distortion, high reactive energy consumption, highly uneven load of the 3 phases (unbalanced load) or high neutral conductor load can be reported via KNX telegram
- Measurement of harmonics up to the 50th harmonic of current and voltage to assess the power quality
- Time-precise analysis of network-related failures, faults and damage to electrical equipment
- Special energy meters for monitoring PV systems (balance, generation and consumption meters)

*Housing:*

- DIN-rail housing with 4 TE

*Power supply/connections:*

- The SmartMeter is completly knx bus-powered

*Display and operation:*

- LEDs for energy measurement 1 to 3, Power/SD-Write and programming mode
- Programming button

# Enertex® KNX SmartMeter 85A RT

Order number: 1149-85-RT


*Figure 35. Enertex® KNX SmartMeter 85A RT (1149-85-RT)*

Bidirectional meter for measuring active and reactive energy or power, as well as for analysing the net quality. The measurement is carried out either in a three-phase system or in three independent single-phase systems with accuracy class 1 (1%). Due to a battery-buffered real-time clock, operation is also possible without KNX bus.

*Device properties:*

- Integrated battery-buffered real-time clock for operation without KNX bus
- Measured data are stored on SD card every minute
- Plug-through current sensors for the measuring range from 2 mA to 85 A per phase and power between 0.5 W and 58 kW
- Energy meters of accuracy class 1 (1% for active and reactive energy)
- Use of high-precision current sensors (Rogowski coils), which are calibrated to the device in the factory
- Precise measurements of very low currents down to 0.002% of the nominal current (= 2 mA)
- Low-loss current measurement (< 2 mW loss)
- The supplied current sensors are suitable for push-through mounting and may be installed directly at the mains supply point
- Since it is supplied exclusively via the KNX bus, the device can measure currents and voltages even if there is no 230 V mains voltage at the voltage measurement inputs or if the voltage has been enabled

- The measuring range of the active power extends from 0.5 W to 19,550 W or 58,650 W (three-phase)
- All measured values (current, voltage, active power, reactive power, active energy, reactive energy, power factor, THD-U, THD-I, network harmonics, unbalanced load, zero current, network frequency) are displayed on the KNX bus
- All meter values and measured variables are also recorded in text form (standard csv format) with timestamp on an SD card for further data processing
- In addition to specialized functions for performance-based load control, optimization of the own energy demand with PV systems, calculation of the user or feed-in tariff with tariff switching and for the avoidance of load peaks, the ETS application also provides various monitoring functions
- Condition monitoring: Exceeding of limit values, events such as voltage failures, high voltage peaks, high mains distortion, high reactive energy consumption, highly uneven load of the 3 phases (unbalanced load) or high neutral conductor load can be reported via KNX telegram
- Measurement of harmonics up to the 50th harmonic of current and voltage to assess the power quality
- Time-precise analysis of network-related failures, faults and damage to electrical equipment
- Special energy meters for monitoring PV systems (balance, generation and consumption meters)

*Housing:*

- DIN-rail housing with 4 TE

*Power supply/connections:*

- Supply via external 24V DC power supply unit .Display and operation:
- LEDs for energy measurement 1 to 3, Power/SD-Write and programming mode
- Programming button

# Enertex® KNX SmartMeter 630A (RT)

Order number: 1149-630


*Figure 36. Enertex® KNX SmartMeter 630A (RT) (1149-630)*

Bidirectional meter for measuring active and reactive energy or power, as well as for analysing the net quality. The measurement is carried out either in a three-phase system or in three independent single-phase systems with accuracy class 1 (1%). Due to a battery-buffered real-time clock, operation is also possible without KNX bus.

*Device properties:*

- Integrated battery-buffered real-time clock for operation without KNX bus
- Measured data are stored on SD card every minute
- Current sensors for a measurement range from 10 mA to 630 A per phase and power between 7.5 W and 293 kW
- Energy meters of accuracy class 1 (1% for active and reactive energy)
- Use of high-precision current sensors (Rogowski coils), which are calibrated to the device in the factory
- Precise measurements of very low currents down to 10 mA
- Low-loss current measurement (< 2 mW loss)
- The supplied current sensors are suitable for push-through mounting and may be installed directly at the mains supply point
- Since it is supplied exclusively via the KNX bus, the device can measure currents and voltages even if there is no 230 V mains voltage at the voltage measurement inputs or if the voltage has been enabled

- The measuring range of the active power extends from 7.5 W to 293 kW
- All measured values (current, voltage, active power, reactive power, active energy, reactive energy, power factor, THD-U, THD-I, network harmonics, unbalanced load, zero current, network frequency) are displayed on the KNX bus
- All meter values and measured variables are also recorded in text form (standard csv format) with timestamp on an SD card for further data processing
- In addition to specialized functions for performance-based load control, optimization of the own energy demand with PV systems, calculation of the user or feed-in tariff with tariff switching and for the avoidance of load peaks, the ETS application also provides various monitoring functions
- Condition monitoring: Exceeding of limit values, events such as voltage failures, high voltage peaks, high mains distortion, high reactive energy consumption, highly uneven load of the 3 phases (unbalanced load) or high neutral conductor load can be reported via KNX telegram
- Measurement of harmonics up to the 50th harmonic of current and voltage to assess the power quality
- Time-precise analysis of network-related failures, faults and damage to electrical equipment
- Special energy meters for monitoring PV systems (balance, generation and consumption meters) .Housing:
- DIN-rail housing with 4 TE

*Power supply/connections:*

- KNX bus-powered or external 24 VDC power supply

*Display and operation:*

- LEDs for energy measurement 1 to 3, Power/SD-Write and programming mode
- Programming button

# Switch

## Enertex® ProxyTouch  KNX

Order number: 1155

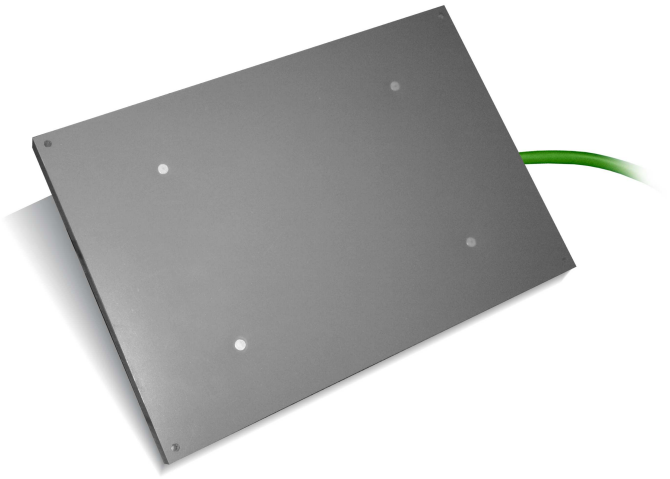

*Figure 37. Enertex® ProxyTouch  KNX (1155)*

Capacitive touch sensor which can be installed behind surfaces such as ceramic, wood and glass.

*Device properties:*

- 3 sensor fields (A, B and C)
- Sensors can be combined, addressed individually or by wiping gesture
- Additional double click parameterizable
- Acoustic feedback parameterizable, with different tone pitches for the three sensor fields
- In programming mode, a red LED lights up and a buzzer is emitted
- "Cleaning operation" can be triggered by group address, blocks the operation and can also be signalled by a continuous tone
- Blocking time adjustable via time switch
- Range through the surface material under which the device is installed is maximum 25 mm for ceramic or glass and maximum 20 mm for wood

*Housing:*

- Splash-proof plastic housing with the size 210 x 140 x11 mm

*Power supply/connections:*

- The ProxyTouch KNX is exclusively powered by the KNX bus

*Display and operation:*

- LEDs for activation and programming mode
- Magnetic switch for programming mode

# Cover Frame

## Enertex® AluRa – einfach, Alu gebürstet, natur eloxiert

Order number: 1178-01-al

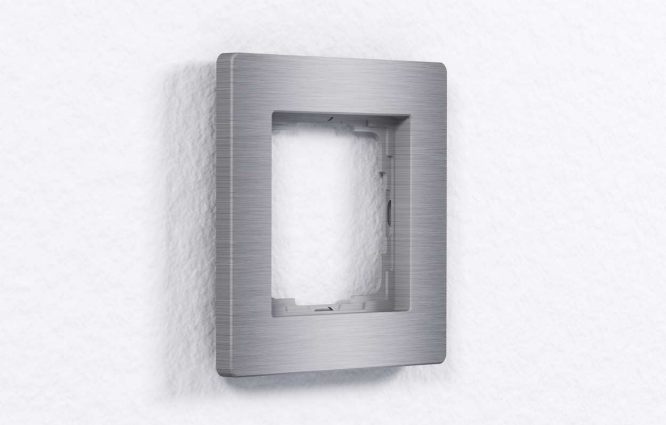

*Figure 38. Enertex® AluRa – einfach, Alu gebürstet, natur eloxiert (1178-01-al)*

The frame is a switch and socket frame milled from the solid. It is suitable for Jung Serie A and AS (incl. USB socket).

*Device properties:*

- High quality anodized aluminum frame
- Optimized shadow gap, fits with 55 mm inserts from Jung Serie A and AS (incl. USB socket)
- Anodized full aluminum (90X90X10)

# Enertex® AluRa – einfach, Alu gebürstet, schwarz eloxiert

Order number: 1178-01-sw

*Figure 39. Enertex® AluRa – einfach, Alu gebürstet, schwarz eloxiert (1178-01-sw)*

The frame is a switch and socket frame milled from the solid. It is suitable for Jung Serie A and AS (incl. USB socket).

*Device properties:*

- High quality anodized aluminum frame
- Optimized shadow gap, fits with 55 mm inserts from Jung Serie A and AS (incl. USB socket)
- Anodized full aluminum (90X90X10)

# Enertex® AluRa – einfach, weiß pulverbeschichtet

Order number: 1178-01-ws

*Figure 40. Enertex® AluRa – einfach, weiß pulverbeschichtet (1178-01-ws)*

The frame is a switch and socket frame milled from the solid. It is suitable for Jung Serie A and AS (incl. USB socket).

*Device properties:*

- High quality anodized aluminum frame
- Optimized shadow gap, fits with 55 mm inserts from Jung Serie A and AS (incl. USB socket)
- Anodized full aluminum (90X90X10)

# Enertex® AluRa – zweifach, Alu gebürstet, natur eloxiert

Order number: 1178-02-al

*Figure 41. Enertex® AluRa – zweifach, Alu gebürstet, natur eloxiert (1178-02-al)*

The frame is a switch and socket frame milled from the solid. It is suitable for Jung Serie A and AS (incl. USB socket).

*Device properties:*

- High quality anodized aluminum frame
- Optimized shadow gap, fits with 55 mm inserts from Jung Serie A and AS (incl. USB socket)
- Anodized full aluminum (161X90X10)

# Enertex® AluRa – zweifach, Alu gebürstet, schwarz eloxiert

Order number: 1178-02-sw

*Figure 42. Enertex® AluRa – zweifach, Alu gebürstet, schwarz eloxiert (1178-02-sw)*

The frame is a switch and socket frame milled from the solid. It is suitable for Jung Serie A and AS (incl. USB socket).

*Device properties:*

- High quality anodized aluminum frame
- Optimized shadow gap, fits with 55 mm inserts from Jung Serie A and AS (incl. USB socket)
- Anodized full aluminum (161X90X10)

# Enertex® AluRa – dreifach, Alu gebürstet, natur eloxiert

Order number: 1178-03-al

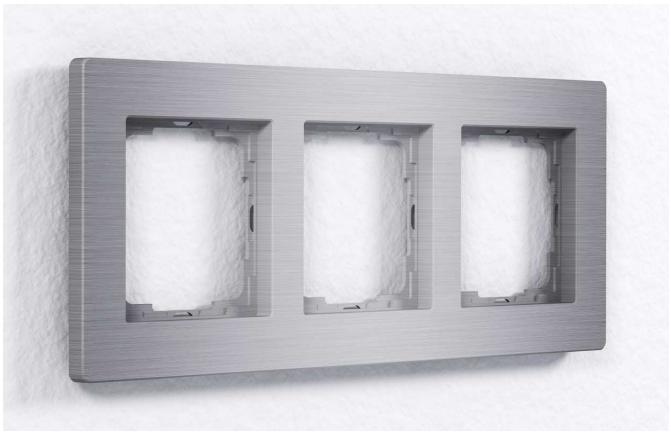

*Figure 43. Enertex® AluRa – dreifach, Alu gebürstet, natur eloxiert (1178-03-al)*

The frame is a switch and socket frame milled from the solid. It is suitable for Jung Serie A and AS (incl. USB socket).

*Device properties:*

- High quality anodized aluminum frame
- Optimized shadow gap, fits with 55 mm inserts from Jung Serie A and AS (incl. USB socket)
- Anodized full aluminum (232X90X10)

# Enertex® AluRa – dreifach, Alu gebürstet, schwarz eloxiert

Order number: 1178-03-sw

*Figure 44. Enertex® AluRa – dreifach, Alu gebürstet, schwarz eloxiert (1178-03-sw)*

The frame is a switch and socket frame milled from the solid. It is suitable for Jung Serie A and AS (incl. USB socket).

*Device properties:*

- High quality anodized aluminum frame
- Optimized shadow gap, fits with 55 mm inserts from Jung Serie A and AS (incl. USB socket)
- Anodized full aluminum (232X90X10)

# Enertex® AluRa – dreifach, weiß pulverbeschichtet

Order number: 1178-03-ws

*Figure 45. Enertex® AluRa – dreifach, weiß pulverbeschichtet (1178-03-ws)*

The frame is a switch and socket frame milled from the solid. It is suitable for Jung Serie A and AS (incl. USB socket).

*Device properties:*

- High quality anodized aluminum frame
- Optimized shadow gap, fits with 55 mm inserts from Jung Serie A and AS (incl. USB socket)
- Anodized full aluminum (232X90X10)

# Other Devices

## Enertex® LED PowerSupply 160-12

Order number: 1167-12

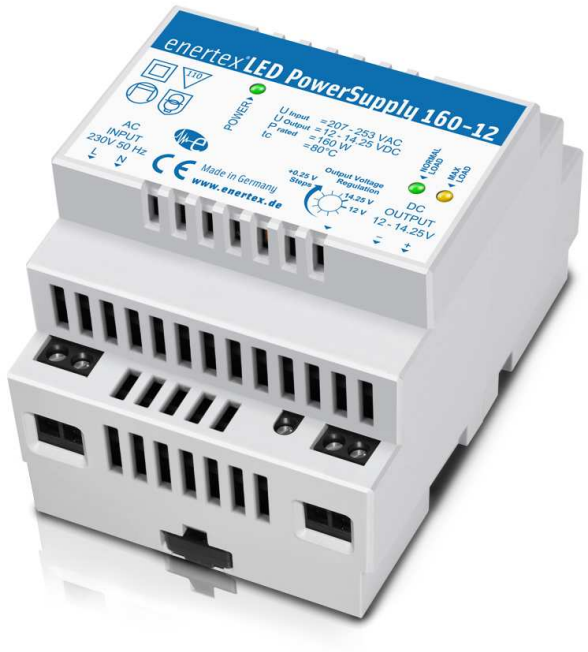


*Figure 46. Enertex® LED PowerSupply 160-12 (1167-12)*

The power supply unit in DIN rail housing (4 TE) supplies your LED illuminants with a DC voltage of 12 V DC and a nominal power of 160 W.

*Device properties:*

- Output voltage: Adjustable between 12 - 14.25 V (in 0.25 V steps) to compensate line losses
- Rated output power: 160 W
- Max. efficiency: 93 %; in all load cases > 25 % the efficiency exceeds 90 %
- Power consumption in standby typ. 0.1 W
- Active power factor correction (PFC)
- Parallel operation of up to three devices possible
- In parallel operation, the load is automatically distributed evenly among each other
- Protective functions: short circuit protection, overload protection, overtemperature protection
- All protective functions are self-healing, i.e. when the cause is eliminated, the power supply unit restarts and provides the output power
- Meets requirements for lamps and LED light sources according to EC 61347-1 and 61347-2-13

*Housing:*

- DIN-rail housing with 4 TE

*Power supply/connections:*

- Input: 230 V AC (50 HZ)
- Output: 12 - 14.25 V DC

*Display and operation:*

- LEDs for operation, normal load and full load
- Knob for setting the output voltage

# Enertex® LED PowerSupply 160-24

Order number: 1167-24


*Figure 47. Enertex® LED PowerSupply 160-24 (1167-24)*

The power supply unit in DIN rail housing (4 TE) supplies your LED illuminants with a DC voltage of 24 V DC and a nominal power of 160 W.

*Device properties:*

- Output voltage: Adjustable between 24 - 28.5 V (in 0.5 V steps) to compensate line losses
- Rated output power: 160 W
- Max. efficiency: 94.5 %; in all load cases > 25 % the efficiency exceeds 91 %
- Power consumption in standby typ. 0.1 W
- Active power factor correction (PFC)
- Parallel operation of up to three devices possible
- In parallel operation, the load is automatically distributed evenly among each other
- Protective functions: short circuit protection, overload protection, overtemperature protection
- All protective functions are self-healing, i.e. when the cause is eliminated, the power supply unit restarts and provides the output power
- Meets requirements for lamps and LED light sources according to EC 61347-1 and 61347-2-13

*Housing:*

- DIN-rail housing with 4 TE

*Power supply/connections:*

- Input: 230 V AC (50 HZ)
- Output: 24 - 28.5 V DC

*Display and operation:*

- LEDs for operation, normal load and full load
- Knob for setting the output voltage

# Enertex® LED PowerSupply 160-48

Order number: 1167-48


*Figure 48. Enertex® LED PowerSupply 160-48 (1167-48)*

The power supply unit in DIN rail housing (4 TE) supplies your LED illuminants with a DC voltage of 48 V DC and a nominal power of 160 W.

*Device properties:*

- Output voltage: Adjustable between 48 - 57 V (in 1 V steps) to compensate line losses
- Rated output power: 160 W
- Max. efficiency: 94.5 %; in all load cases > 25 % the efficiency exceeds 91 %
- Power consumption in standby typ. 0.3 W
- Active power factor correction (PFC)
- Parallel operation of up to three devices possible
- In parallel operation, the load is automatically distributed evenly among each other
- Protective functions: short circuit protection, overload protection, overtemperature protection
- All protective functions are self-healing, i.e. when the cause is eliminated, the power supply unit restarts and provides the output power
- Meets requirements for lamps and LED light sources according to EC 61347-1 and 61347-2-13

*Housing:*

- DIN-rail housing with 4 TE

*Power supply/connections:*

- Input: 230 V AC (50 HZ)
- Output: 48 – 57 V DC

*Display and operation:*

- LEDs for operation, normal load and full load
- Knob for setting the output voltage