KNX Smart Metering / KNX Switches / KNX Standard Products

Building automation.
simple. smart.

KNX
ISO/IEC 14543

FacilityWeb

KNX
SMART GREEN
0294394
METERING

Lingg & Janke

eco+

electronic manual operation

The eco+ product range by Lingg & Janke is convincing through its outstanding price-performance ratio. eco+ offers a wide range of KNX standard products like switching actuators, blind / shutter actuators and binary inputs.

The advantages and the high quality of Lingg & Janke products remain unchanged. For example the switching actuators are still ideally suited for switching capacitive loads with high switching currents (C-load) and the relays of the blind / shutter actuators are plunged, so they can be exchanged in case of malfunction.

The latest version of the switching and shutter actuators now include an electronic manual operation feature for easier commissioning.

KNX quick

Smart Metering

From now on most of the smart metering products are equipped with the new KNX quick technology. Thus, for the operator commissioning of electricity, gas, heat and water meters becomes as easy as never before.

Each meter obtains a group number (1...F) and a channel number (1...9). This results in a maximum amount of usable meters of 135. If you set all the coding switches of a quick device to 0, you may program the device via the ETS, as with all other KNX components. In quick mode all meters are sending their meter readings, and, depending on the type of the meter, instantaneous values like power, flow rate or temperature. Meter readings are transmitted to the KNX bus every 5 minutes, instantaneous values are sent cyclically every 15 to 30 seconds. FaciliyWeb functions remain untouched and may still be used.

Content

GWF water meteres

exact metering

The well-established GWFcoder®-system reads the absolute mechanical register value precisely and reliably and provides the data through standardized interfaces. The number wheels with three various long, asymmetrically arranged slots are being scanned through light pipes which are connected to five light emitting diodes (LED). Thus, the exact position of each number wheel can be detected and the encoded absolute register read can be transmitted. This functioning principle is patented by GWF. The GWFcoder®- interface provides an incomparably higher level of information compared to meters with pulse output.

GWF enhanced the reliable technology in its 2nd generation, so that 8 instead of 5 number wheels are being scanned and therefore a resolution of 1 liter is possible.

KNX standard devices

2. generation switching actuators and push button interfaces

The switching actuators of the eibSOLO and eibDUO professional series obtained a complete new ETS application, which offers a complete new range of use. In the new application 32 scenes per channel are programmable, an hour meter was added to each channel, and the time-, report- and lock-functions were totally revised. The well-known advantages and the high quality remain untouched, for example they are still ideally suited for switching capacitive loads with high inrush currents (C-load).

In addition of the improvements of the standard products, we also created some new devices. As of the 2nd quarter of 2016 the binary inputs get extended by 3 push button interfaces. These interfaces are ready-made with separate wire connectors, so they can easily be adapted to push buttons of other manufacturers.

All energy costs at a glance
simple. smart.

Electronic energy consultant

The visualization of all energy consumption data is of great importance for the acceptance of potential energy saving measures and changes in consumer behavior.

With KNX FacilityWeb by Lingg & Janke, all electricity, gas, oil, water and heat consumption data can be read out and visualized at any time. The Energy Analyzer from Lingg & Janke displays the data in the form of daily, weekly, monthly and annual evaluations. The consumer, house owner or real estate manager now has the possibility to analyze energy consumption continuously, introduce adequate energy saving measures or shift energy usage to off-peak periods. You can also use FacilityWeb to easily visualize and monitor the self-consumption or in-feed of renewable energy.

The Energy Analyzer NK-FW graphic

Transparency for the energy types electricity, gas, oil, water and heat
• Up to 8 meters per network coupler
• Storage of hourly values over a 10-year period

Graphical representation of daily, hourly, monthly and annual values
• MWh, kWh, m³ and liters
• Current day, week, month or year
  (and reference periods)

Presentation of costs (Euro)
• Multiplier per unit

Visualization of 72 additional values
• 1-Bit, 1-Byte, 2-Byte and 4-Byte values

Easy KNX communication

The NK-FW network couplers establish the interface to FacilityWeb devices. Via this interface, the data from the bus couplers of the KNX devices can be visualized directly with a web browser or made available for download using FacilityWeb technology. Transmission is based on the certified FTP over KNX protocol.
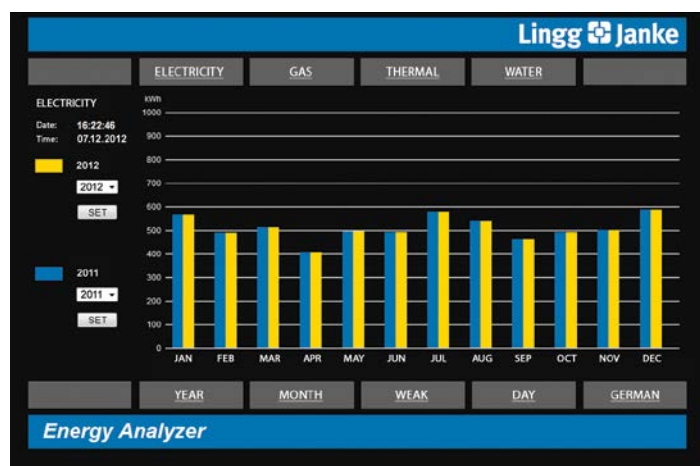
Connectivity

The NK-FW network coupler from Lingg & Janke connects the KNX installation bus to the Intranet/Internet. Communication with KNX bus devices can then be established with any standard web browser based on TCP/IP/FTP. The data may be transmitted over UMTS, GPRS, GSM, ISDN, LAN, WLAN, PLC or KOAX networks. It is therefore possible to read out the consumption data collected by electronic meters as well as switching states and sensor values. Due to the bidirectional communication capability of FacilityWeb, you can operate switches directly from the user interface of your web browser.

With FacilityWeb, you can initiate a variety of service and control tasks from any location - all you need is a PC with network connection and a web browser.

Connectivity
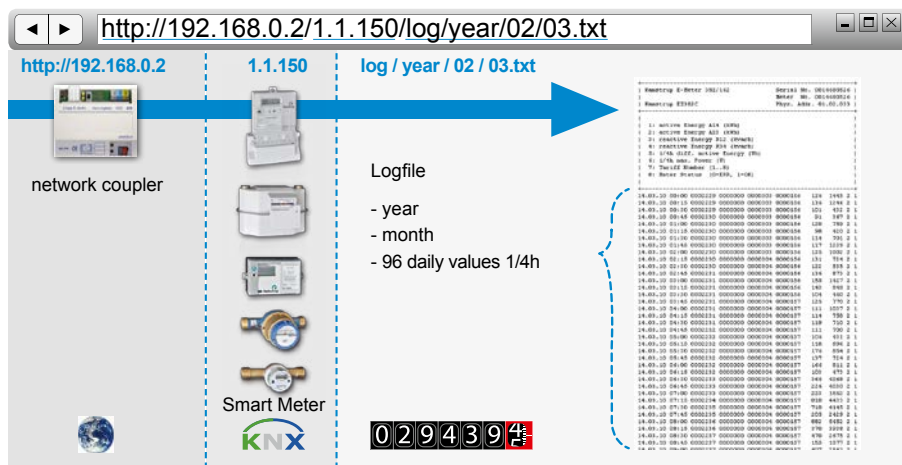
Via the FacilityWeb interface a multiplicity of meters can be connected to KNX, divisional and cross-vendor

Inhouse Smart Metering Web Portal

Smart meters provide consumption data for further processing. This information provides more transparency to the end user in his consumption behavior and supports the efficient use of energy.

For example, the current consumption data as well as the development of consumption are illustrated in a clear and user-friendly way via a web portal.

KNX Smart Metering from Lingg & Janke fulfills the requirements of data protection already today. Based on the worldwide standards, all consumption values can be displayed internally without detours via web browser and energy analyzer on a PC, SmartPhone, or tablet computer. The customer always retains control over his data and has all the current consumption data at a glance. Here, he can decide which data will be transmitted to external systems.
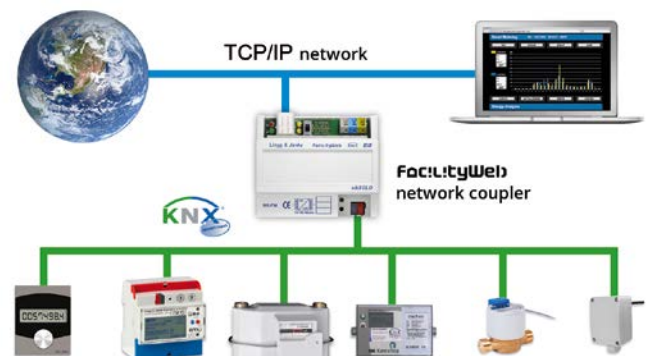
quick
KNX quite simply

The quick principle

The use of coding switches allow installations in small and medium-sized buildings even without the use of programming software.

The only tool you need is a screwdriver!

KNX parameterisation is already included in the devices and is selected through the coding switches.
The quick system is a wired KNX system. The wiring of the installation is carried out according to a standard KNX system. As with any KNX bus system, a power supply that supplies power to the devices connected to the bus is required.

Programming is done using the coding switches located on each bus device. They are used to establish a connection between sensor and actuator by means of the same connection numbers. Actuators have multiple outputs to control the connected users (channels 1 to 9). That is why the connection number is composed of a channel number (CH) and a group number (GR).

All actuators have a second coding switch for a further group (GR Y). With this second group, all channels of the actuator – or individual channels – can be activated by a second sensor with a different group number.

In addition, there is a coding switch on the sensors that provides them with information on the type of actuators to be activated.

The number of groups is limited to 15 per actuator type (switching, blinds/ shutters, dimmer). An actuator can have up to 9 channels. This results in a maximum number of usable channels of 135 for switching, 90 for blind control, and 60 for dimming. The capability of the power supply used should always be considered.

The quick system allows a lot of comfort without programming effort. But if you wish, all quick products may be programmed with ETS. In doing so you may decide whether all devices are programmed or just a few, because quick is 100 % KNX.
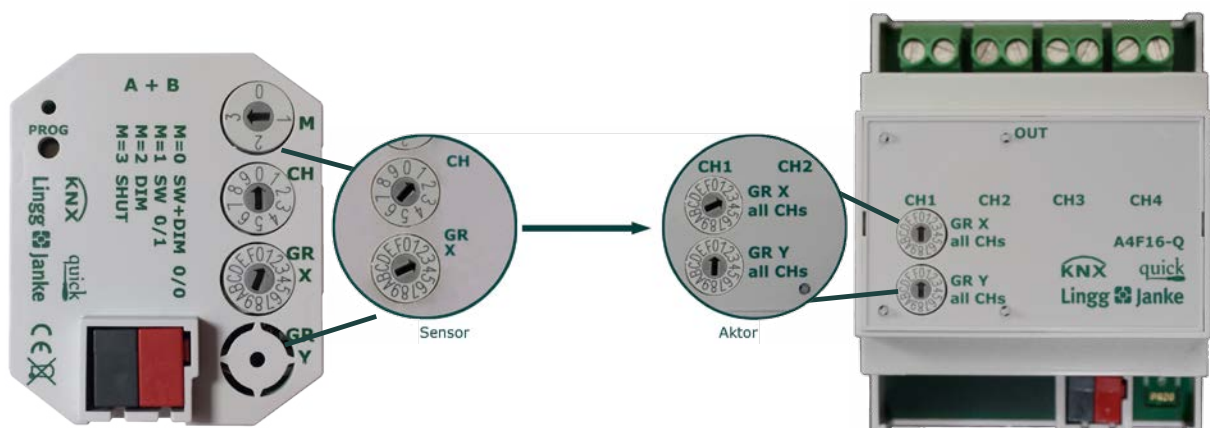
Operating modes of the push button interfaces and binary inputs

The variety of push button interfaces and binary inputs offers a maximum of fexibility, depending on the functions and programming effort you require.

push button interface with single button operation

switching	0	switching and dimming 0 (central off)
	1	rising edge switch 0
	2	rising edge switch 1
	3	rising edge switch 0-1
	4	rising edge switch 0, rising edge switch 1
	5	rising edge switch 1, rising edge switch 0
dimming	6	short push switch off, long push dim down
	7	short push shwitch on, long push dim up
	8	short push switch on / off, long push dim up / down
sutter / blinds	9	short push lamella down / long push blind/shutter down
	A	short push lamella up / long push blind/shutter up
	B	short push lamella up / down long push blind/shutter up / down
	C	blind/shutter down
	D	blind/shutter up
heating	E	rising edge valve close rising edge valve open
	F	rising edge valve open rising edge valve close

binary input

switching	0	rising edge switch 0
	1	rising edge switch 1
	2	rising edge switch 0, falling edge switch 1
	3	rising edge switch 1, falling edge switch 0
dimming	4	short push switch off, long push dim down
	5	short push switch on, long push dim up
sutter / blinds	6	short push lamella down / long push blind/shutter down
	7	short push lamella up / long push blind/shutter up
	8	blind/shutter down
	9	blind/shutter up

push button interface with rocker function

0	switching and dimming 0 (central off)
1	switching on / off
2	dimming
3	shutter / blinds

quick Smart Metering

In addition to standard functions like switching, dimming and sun shading devices, smart metering solutions are available with KNX quick. Measuring of consumption never had been this easy. The meters just need to be built in and the coding switches need to be set, literally like „plug and play".

Each meter receives a group number (1...F) and a channel number (1...9). This results in a maximum amount of usable meters of 135. If you set all the coding switches of a quick device to 0, you may program the device via the ETS, as with all other KNX components. In quick mode all meters are sending their meter readings, and, depending on the type of the meter instantaneous values like power, flow rate or temperature. The meter readings are transmitted to the KNX bus every 5 minutes, instantaneous values are sent cyclically every 15 to 30 seconds. Faciliy Web functions remain untouched and may still be used.

To display measured results, various software packages may be used, for example Callidomus, ELVIS, IP Symcon or many others. In these packages group numbers are already preset and may be used easily. Additionally the network coupler is available in a "quick" version. It offers a fast and easy way to show meter readings.
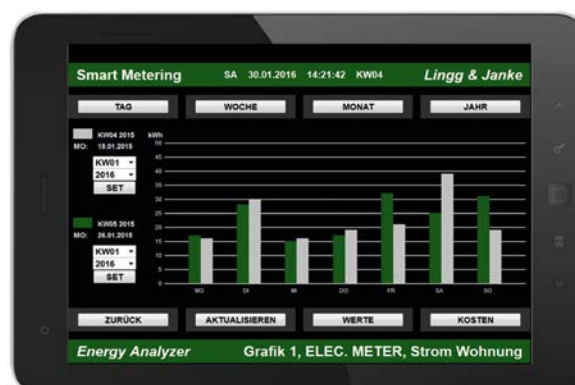
KNX FacilityWeb System devices

FacilityWeb is a registered trademark of Lingg & Janke. FacilityWeb KNX devices additionally operate with the protocol „FTP over KNX". Every KNX bus device has its own website. The user can look into the bus devices using a web browser and directly download data from the bus device. Due to the bidirectional communication capability of FacilityWeb, you can operate switches and set values directly from the user interface of your web browser.

Per KNX system only one network coupler FW is necessary to connect the KNX bus to an IP network.

The advantages:
• low power consumption of only 150 mW per bus coupler
• low-cost bus coupler
• Functions almost like „big" web servers
• low start-up costs, since all functions ready
• little planning effort
• each bus device has its own website
• no additional software required for the end user
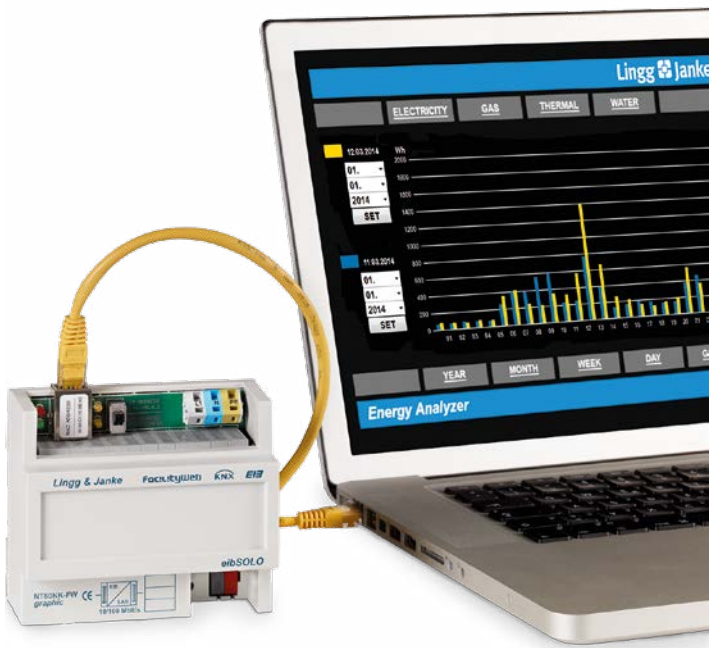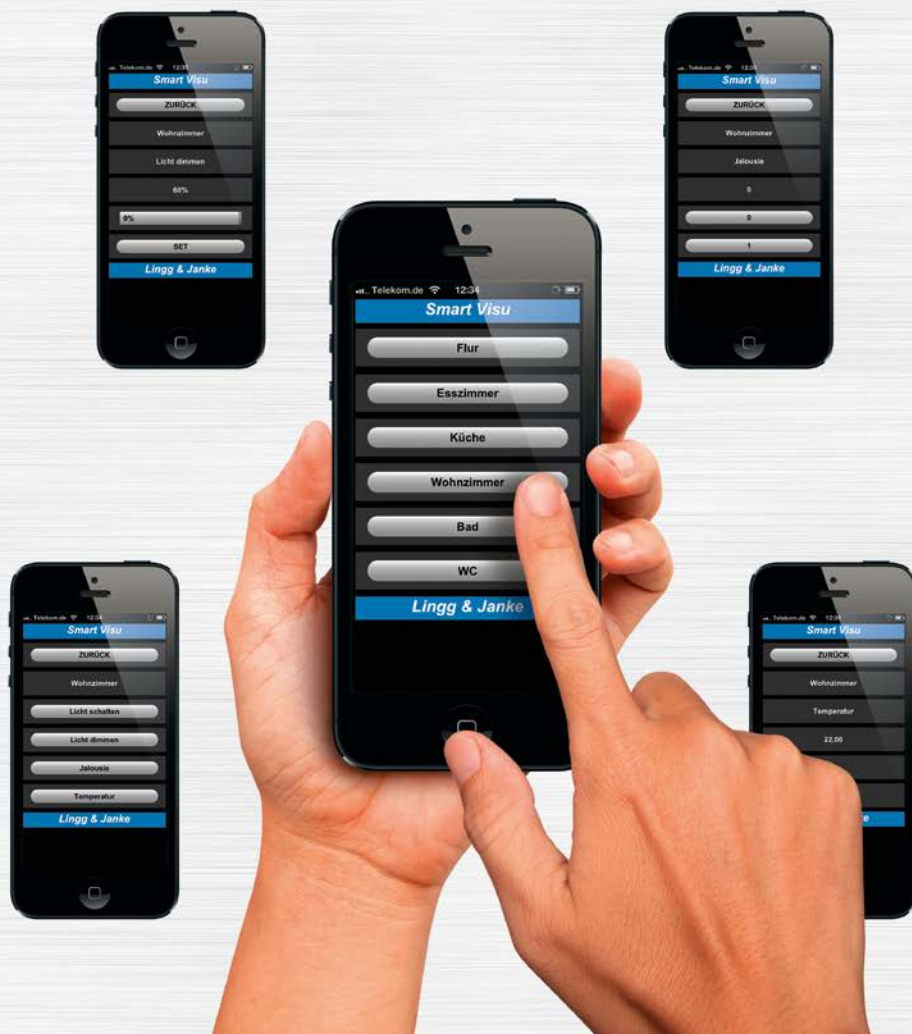
Apple mobile Web App „Smart Visu"

Remote operation of building services equipment – comfortably from your iPhone or iPad. The KNX network coupler NK-FW graphic now offers a variety of additional possibilities using the „Smart Visu" Apple mobile Web App. „Smart Visu" allows you to control and visualize functions and states from virtually any location.

The Web App. is included in the NK-FW graphic and is directly installed from this device.

FacilityWeb network coupler

- provides all FacilityWeb functions like TCP/IP access, FTP access for KNX bus devices.
- integrated websurface for displaying of up to 20 metering data
- graphical presentation of up to 8 meters is a bar diagram
  - bar diagram for day/ week/ month and year
  - comparison / summary of 2 days / weeks / months / years
  - display of consumption data / feed-in and cost / earnings, today / yesterday, this week / last week, this year / last year
- recordes up to 8 meter readings hourly for 10 years
- interface for the websurfaces of the FacilityWeb devices
- also available with integrated power supply with 80 mA (small KNX arrangement, max. 5 devices)
- REG devices with 6 division units
- quick-Version: handles meters in group 1, channels 1 to 8.

	type	order-no.
FacilityWeb network coupler	NK-FW-graphic	87350
FacilityWeb network coupler with integrated power supply 80mA	NT80NK-FW-graphic	87351
FacilityWeb network coupler - quick	NK-FW-graphic-quick	Q87350
FacilityWeb network coupler - quick with integrated power supply 80mA	NT80NK-FW-graphic-quick	Q87351

KNX FacilityWeb electrical energy meters
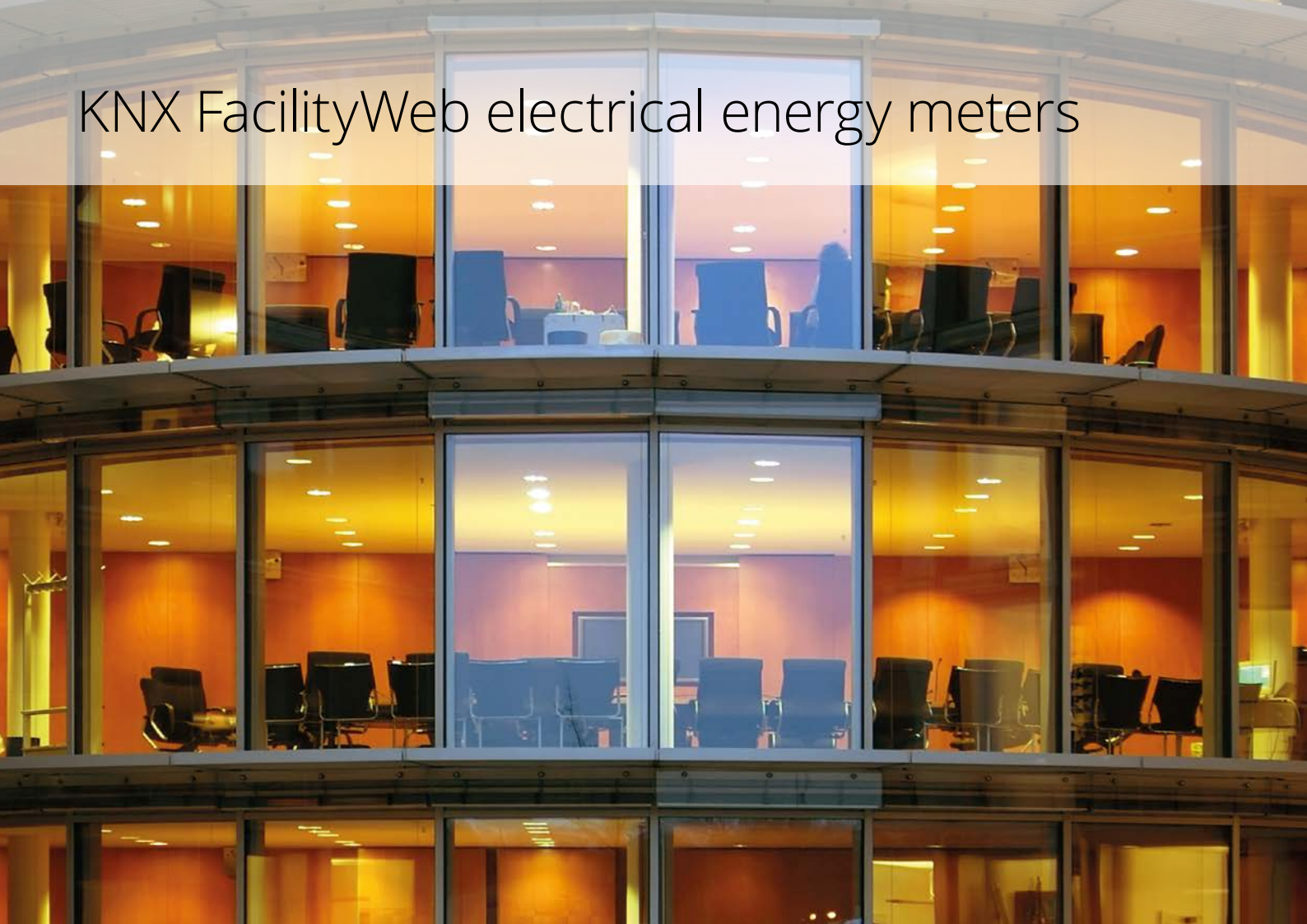
Lingg & Janke's electricity meters are direct connected or current transformer single phase or three phase meters for up to four quadrant measurement and one or two directions.

The meters' display shows the respective values (meter reading, instantaneous power, etc.).

The KNX/EIB module stores the measured data every 15 minutes over a period of one year and provides full FacilityWeb capability.

Every meter has its own home page. The meter readings can be read out directly via a network coupler using a standard internet browser, or read out for further processing and billing purposes using TCP/IP. Consistent communication based on the TCP/IP and KNX protocol is the key to fast and costeffective acquisition of operating and energy consumption data.

• complete FacilityWeb functionality in connection with NK-FW
• integrated data logging for 1 year
• TCP/IP-Protocol, dedicated homepage
• MID conformity approved

Overview

type		meter status / serial number	meter reading active energy A+	meter reading active energy A-	meter reading reactive energy R+	meter reading active energy R-	15 min. / 60 min. differences	relative forward and reverse counter	due date	current tariff (1-4)	active power P+	active power P+ single-phase L1 L2 L3	active power P-	active power P- single-phase L1 L2 L3	limit monitoring P+	limit monitoring P+, L1 L2 L3	limit monitoring P-	limit monitoring P-, L1 L2 L3	reactive power Q+	reactive power Q-	voltage U	current I	power factor LF	switching outputs	Facility Web (integrated data logger / web access) via NK-FW-xx	product
type 1 single-phase meter (1-phase A+)	A	x	x				x	x	x	x	x		x		x		x		x	x	x	x	x		x	Finder 87763
	B	x	x				x	x	x	x	x		x		x		x				x	x	x		x	
	C	x	x				x	x	x	x	x		x		x		x								x	
	D	x	x				x	x	x	x															x	
type 2 single-phase meter bidirectional (1-phase A+/A-)	A	x	x	x			x	x	x	x	x		x		x		x		x	x	x	x	x		x	
	B	x	x	x			x	x	x	x	x		x		x		x				x	x	x		x	
	C	x	x	x			x	x	x	x	x		x		x		x								x	
	D	x	x	x			x	x	x	x															x	
type 3 single-phase meter bidirectional (1-phase A+/A-/R+/R-)	A	x	x	x	x	x	x	x	x	x	x		x		x		x		x	x	x	x	x		x	
	B	x	x	x	x	x	x	x	x	x	x		x		x		x				x	x	x		x	
	C	x	x	x	x	x	x	x	x	x	x		x		x		x								x	
	D	x	x	x	x	x	x	x	x	x															x	
type 4 three-phase meter import (3-phase A+)	A	x	x				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	EHZ KNX interface 87798 (according to meter)
	B	x	x				x	x	x	x	x	x	x	x	x	x	x	x			x	x	x		x	EHZ KNX interface 87798 (according to meter)
	C	x	x				x	x	x	x	x	x	x	x	x	x	x	x							x	EHZ KNX interface 87798 (according to meter)
	D	x	x				x	x	x	x															x	EHZ KNX interface 87798 (according to meter)
type 5 three-phase meter export (3-phase A-)	A	x		x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	
	B	x		x			x	x	x	x	x	x	x	x	x	x	x	x			x	x	x		x	
	C	x		x			x	x	x	x	x	x	x	x	x	x	x	x							x	
	D	x		x			x	x	x	x															x	
type 6 three-phase meter bidirectional (3-phase A+/A-)	A	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	EHZ KNX interface 87798 (according to meter)
	B	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x			x	x	x		x	EHZ KNX interface 87798 (according to meter)
	C	x	x	x			x	x	x	x	x	x	x	x	x	x	x	x							x	EHZ KNX interface 87798 (according to meter)
	D	x	x	x			x	x	x	x															x	EHZ KNX interface 87798 (according to meter)
type 7 three-phase meter bidirectional (3-phase A+/A-/R+/R-)	A	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	
	B	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x		x	
	C	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x							x	
	D	x	x	x	x	x	x	x	x	x															x	
type 8 three-phase meter (3-phase A+)	A	x	x				x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x		x	
	B	x	x				x	x	x	x	x	x	x	x	x	x	x	x			x	x	x		x	EMU Standard 87765/ 87773
	C	x	x				x	x	x	x	x	x	x	x	x	x	x	x							x	
	D	x	x				x	x	x	x															x	
type 9 three-phase meter bidirectional (3-phase A+/A-/R+/R-)	A	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	EMU Superior 87766/ 87774
	B	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x			x	x	x		x	
	C	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x							x	
	D	x	x	x	x	x	x	x	x	x															x	

Technical products subject to continuous development. The specifications in this document are depending on the current production status of the devices. Subject to modifications and amendments.

Direct connected / measuring energy meters

EMU Standard KNX DIN RAIL meters, direct connected

- Standard: accumulating unidirectional 3-phase meter for active energy, active power, voltage, current and power factor, 4 tariffs, one direction, max. 75A
- Superior: accumulating bidirectional 3-phase meter for active and reactive energy, active and reactive power, voltage, current and power factor, 4 tariffs, two directions, max. 75A, in addition 4 switching outputs
- integrated KNX BCU with FacilityWeb
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee

	type	RU	order-no.
Standard direct measuring (3-ph), 0,25-5(75)	EZ-EMU-DSTD-D-REG-FW	5	87765
Superior direct measuring (3-ph.), 0,25-5(75)	EZ-EMU-DSUP-D-REG-FW	5	87766

Finder KNX DIN RAIL energy meters, direct measuring

- single-phase or 3-phase-unidirectional meter
- including separate KNX BCU (2TE) with FacilityWeb
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee

	type	RU	order-no.
single-phase (1-Ph.), 5(32) A	EZ7E23-C1-REG-FW	1+2	87763

Kamstrup energy meter, direct measuring

- three-phase 4-quadrant/ direct measuring
- integrated KNX BCU with FacilityWeb
- with FacilityWeb functionality
- Prices including calibration fee

	type	voltage	power	order-no.
three-phase meter A+/A-	EZ-OMNI-C2-FW	3x230/400V	5(100A)	87735

KNX interfaces (without meters)

- complete Facility Web functionality (via NK-FW)
- TCP/IP protocol, dedicated Homepage
- integrated data logging for 1-year
- functionality to be guaranteed only for meters delivered by Lingg & Janke

type	order-no.
Kamstrup energy meter EZ162/382/351 Omnipower	87799

Transformer meters

EMU Standard / Superior KNX DIN RAIL meters, for current transformers

- Standard: accumulating unidirectional 3-phase meter for active energy, active power, voltage, current and power factor, 4 tariffs, one direction, current transformer ratio can be set for 1A and 5A
- Superior: accumulating bidirectional 3-phase meter for active and reactive energy, active and reactive power, voltage, current and power factor, 4 tariffs, two directions, current transformer ratio can be set for 1A and 5A, in addition 4 switching outputs
- integrated KNX BCU with FacilityWeb
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee

	type	RU	order-no.
Standard transformer measurement 1/5(6) A	EZ-EMU-WSTD-D-REG-FW	5	87773
Superior transformer measurement 1/5 (6) A	EZ-EMU-WSUP-D-REG-FW	5	87774

eHZ KNX interface and
direct reading KNX interface

The EHZ KNX interface consists of an optical reading head with RS232 connector and a 3 RU DIN RAIL unit containing the KNX bus coupler. The various protocols of the EHZ manufacturers are read via the optical customer interface on the front side of the meter.

Depending on the protocol provided by the manufacturer, meter readings such as T1/T2 values, A+ / A- values and power, voltage and current values can be read out.

The KNX/EIB module stores the measured data at 15-minute intervals over a period of one year and provides full FacilityWeb capability.

Every meter has its own web page. Via a network coupler it is possible to read out meter readings with a standard web browser.

eHZ KNX interface (also for 3.HZ energy meters)

• complete Facility Web functionality (via NK-FW)
• low energy consumption
• integrated data logger with storage capacity for one year's consumption data, ETS configurable
• HTTP protocol
• adds **quick**-ability as of the 2. quarter 2016

type		RU	order-no.
BCU-EZ-EHZ-RJ10-OPT1-D-REG-FW	incl. opt. reading head	3	87798
BCU-EZ-KAM-OPT1-REG-FW	incl. opt. reading head for Kamstrup energy meter	3	87797

Overview eHZ and 3.HZ

The following counters are recognized by eHZ KNX module:

manufacturer	type	manufacturer	type
ABN	EHZ-01DZA	Hager	EHZ361ZA
EMH	eHZ-HW..	Hager	EHZ361D5E
EMH	eHZ-IW...	Hager	EHZ362Z5
EMH	3.HZ ED100L, ED300L, ED300S	Hager	EHZ363ZA
EasyMeter	Q3DA1004	Itron	HZ1-C20D-R1-Z
EasyMeter	Q3DA1024	ISKRA	MT681-D4A51-K0p
EasyMeter	T3CC1081		
EasyMeter	Q3BA1000		
EasyMeter	Q3CB1241		

Current overview see: www.lingg-janke.de

eHZ KNX interface / accessories

type		order-no.
optical reading head round	optical reading head round, magnetic with RJ10 connector	87221
optical reading head plain	optical reading head plain, magnetic with RJ10 connector, suitable for EasyMeter Adapter no. 87210	87220
Adapter EasyMeter	adapter for installation of the optical reading head plain no. 87220 for EasyMeter Counter	87210
Datacable RJ10	for meters with connector socket RJ10	87222
EZ-EHZ-RJ10-D-REG-FW	eHZ KNX interface without optical reading head adds **quick**-ability as of the 2. quarter 2016	87796

KNX interfacen eHZ and direct reading KNX interface

Direct reading KNX interface for meters with mechanical counters

• optical sensor unit with LED-lighting for the identification of counting devices up to 50mm width, min. figure height 5mm
• max. 8 digits, one decimal place, display push-button operated
• KNX interface in DIN rail mounting device (2 RU) and KNX bus connector
• integrated data logger stores the measured data over a period of one year
• TCP/IP protocol (via KN-FW)
• full FacilityWeb functionality
• low energy consumption

type	version		order-no.
electricity meter	white letters / black ground	EZ-FFD-CAMW-D-FW	87940
oil meter	white letters / black ground	OZ-FFD-CAMW-D-FW	87942
water meter	white letters / black ground	WZ-FFD-CAMW-D-FW	87944
gas meter	white letters / black ground	GZ-FFD-CAMW-D-FW	87946
electricity meter	black letters / white ground	EZ-FFD-CAMS-D-FW	87941
oil meter	black letters / white ground	OZ-FFD-CAMS-D-FW	87943
water meter	black letters / white ground	WZ-FFD-CAMS-D-FW	87945
gas meter	black letters / white ground	GZ-FFD-CAMS-D-FW	87947

Mounting adapter for optical sensor for meters with mechanical counters

counter type	order-no.
Mounting adapter for optical sensor for Braun oil meter HZ 3 R / RR	87955
Mounting adapter for optical sensor for gas meter	87956
Mounting adapter for optical sensor for water meter	87957
Mounting adapter for optical sensor for 2 tariff meter	87958

Notice

KNX FacilityWeb heat meters

KNX heat meters from Lingg & Janke are characterised by high accuracy and long term stability. An electronic display allows the read out of meter readings and instantaneous values on site.

The integrated KNX data logger stores the data at 15 minute intervals over a period of one year. The data can be read out directly via a NK-FW network coupler using a standard internet browser.

• complete Facility Web functionality via NK-FW
• integrated data logging for 1-year
• TCP/IP-protocol
• MID conformity approved

Overview

	type 5				type 6	
	Hydrometer Sharky Heat	Engelmann Sensostar 2	Engelmann Sensostar 2C	Zenner Zelsius C5	Kamstrup Multical 602	Kamstrup cooling meter 602
serial number	x	x	x	x	x	x
meter number	x	x	x	x	x	x
meter status	x	x	x	x	x	x
meter reading monitoring	x	x	x	x	x	x
meter reading (MWh)	x	x	x	x	x	x
meter reading with high resolution (kWh)	x	x	x	x	x	x
15 min. / 60 min. differences (kWh)	x	x	x	x	x	x
relative forward counter (m³)	x	x	x	x	x	x
relative forward counter reset	x	x	x	x	x	x
relative reverse counter (m³)	x	x	x	x	x	x
relative reverse counter setting	x	x	x	x	x	x
relative reverse counter null	x	x	x	x	x	x
due date counter reading (m³)	x	x	x	x	x	x
due date	x	x	x	x	x	x
due date setting	x	x	x	x	x	x
volume (m³)	x	x	x	x	x	x
volume (l)	x	x	x	x	x	x
power (W)	x	x	x	x	x	x
upper switchpoint power	x	x	x	x	x	x
lower switchpoint power	x	x	x	x	x	x
flow rate (m³/h)	x	x	x	x	x	x
upper switchpoint flow rate	x	x	x	x	x	x
lower switchpoint flow rate	x	x	x	x	x	x
flow temperature (°C)	x	x	x	x	x	x
upper switchpoint flow temperature	x	x	x	x	x	x
lower switchpoint flow temperature	x	x	x	x	x	x
return temperature (°C)	x	x	x	x	x	x
upper switchpoint return temperature	x	x	x	x	x	x
lower switchpoint return temperature	x	x	x	x	x	x
temperature difference (K)	x	x	x	x	x	x
upper switchpoint temperature difference	x	x	x	x	x	x
lower switchpoint temperature difference	x	x	x	x	x	x
meter reading heat (MWh)					x	
meter reading heat with high resolution (kWh)					x	
meter reading cooling (MWh)					x	x
meter reading cooling with high resolution (kWh)					x	x
FacilityWeb via NK-FW	x	x	x	x	x	x
quick-ability	x	x	x	x	x	x

Technical products subject to continuous development. The specifications in this document are depending on the current production status of the devices. Subject to modifications and amendments.

KNX FacilityWeb heat meters

Hydrometer Sharky Heat

- heat meter with multi-jet flow sensor
- including KNX-interface in separate, wall mounted box, with FacilityWeb
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee

nominal flow	DN	length	thread	mount.	temp.	order-no.
Qn= 0,6 m³/h	DN15	110 mm	G3/4	s. manuf.	5-130°C	84001
Qn= 1,5 m³/h	DN15	110 mm	G3/4	s. manuf.	5-130°C	84002
Qn= 2,5 m³/h	DN20	130 mm	G1	s. manuf.	5-130°C	84003
KNX interface für Sharky Heat						87967

Engelmann Sensostar 2

- heat meter with multi-jet flow sensor
- including KNX-interface in separate, wall mounted box, with FacilityWeb
- update cycle time 5 minutes
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	temp.	order-no.
Qn= 0,6 m³/h	DN15	110 mm	G3/4	s. manuf.	15-90°C	84301
Qn= 1,5 m³/h	DN15	110 mm	G3/4	s. manuf.	15-90°C	84302
Qn= 2,5 m³/h	DN20	130 mm	G1	s. manuf.	15-90°C	84303
BCU-WMZ-ENG-SST2-C-FW	KNX interface for Engelmann SensoStar2					87964

Engelmann Sensostar 2C

- heat meter with multi-jet flow sensor
- including KNX-interface in separate, wall mounted box, with FacilityWeb
- update cycle time 5 minutes
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	temp.	order-no.
Qn= 0,6 m³/h	DN15	110 mm	G3/4	s. manuf.	15-90°C	84304
Qn= 1,5 m³/h	DN15	110 mm	G3/4	s. manuf.	15-90°C	84305
Qn= 2,5 m³/h	DN20	130 mm	G1	s. manuf.	15-90°C	84306
BCU-WMZ-ENG-SST2-C-FW	KNX interface for Engelmann SensoStar2C					87965

Kamstrup heat meter or all-purpose meters (heat + cooling)

- heat meter with ultrasonic flow sensor
- as well as all-purpose meters (heat meter with incl. cooling register)
- 2 direct temperature sensors PT500 with 1,5m cable
- 230V main supply
- including integrated KNX-interface
- with FacilityWeb functionality
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	temp.	order-no. heat	order-no. all-purpose
Qn= 0,6 m³/h	DN15	110 mm	G3/4	any	15-130°C	85921	84901
Qn= 1,5 m³/h	DN15	110 mm	G3/4	any	15-130°C	85922	84902
Qn= 1,5 m³/h	DN15	165 mm	G3/4	any	15-130°C	85923	84903
Qn= 0,6 m³/h	DN20	130 mm	G1	any	15-130°C	85924	84904
Qn= 1,5 m³/h	DN20	130 mm	G1	any	15-130°C	85925	84905
Qn= 1,5 m³/h	DN20	165 mm	G1	any	15-130°C	85926	84906
Qn= 0,6 m³/h	DN20	190 mm	G1	any	15-130°C	85927	84907
Qn= 1,5 m³/h	DN20	190 mm	G1	any	15-130°C	85928	84908
Qn= 2,5 m³/h	DN20	190 mm	G1	any	15-130°C	85929	84909
Qn= 3,5 m³/h	DN25	260 mm	G5/4B	any	15-130°C	85930	84910
Qn= 6,0 m³/h	DN25	260 mm	G5/4B	any	15-130°C	85931	84911
Qn= 10 m³/h	DN40	300 mm	G2B	any	15-130°C	85932	84912
Qn= 15 m³/h	DN50	270 mm	Flansch	any	15-130°C	85933	84913
Qn= 25 m³/h	DN65	300 mm	Flansch	any	15-130°C	85934	84914
Qn= 40 m³/h	DN80	300 mm	Flansch	any	15-130°C	85935	84915
Qn= 60 m³/h	DN100	360 mm	Flansch	any	15-130°C	85936	84916
Qn= 100 m³/h	DN100	360 mm	Flansch	any	15-130°C	85937	84917

BCU-WMZ-KAM-MC602-C-FW	KNX interface for Multical 602	87969

Kamstrup Multical 602 solar

- Kamstrup Multical 602 is an energy calculator for heat together with a SOLAR impulse unit, suitable for glycol
- correction value is not adjustable, 230V main supply, incl. integrated KNX interface with FacilityWeb
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	temp.	order-no.
Qn= 0,6 m³/h	DN15	110 mm	G3/4	any	0-120°C	84401
Qn= 1,5 m³/h	DN15	110 mm	G3/4	any	0-120°C	84402
Qn= 2,5 m³/h	DN20	130 mm	G1	any	0-120°C	84403
Qn= 3,5 m³/h	DN25	260 mm	G5/4B	any	0-120°C	84404
Qn= 6 m³/h	DN25	260 mm	G5/4B	any	0-120°C	84405

BCU-WMZ-KAM-MC602-C-FW	KNX interface for Multical 602	87969

KNX FacilityWeb heat meters

Kamstrup cooling meter

- cold meter with ultrasonic flow sensor
- 2 direct temperature sensors with 1,5m cable
- 230 V main supply
- including integrated KNX-interface
- with FacilityWeb
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	temp.	order-no.
Qn= 0,6 m³/h	DN15	110 mm	G3/4	any	1-50°C	84931
Qn= 1,5 m³/h	DN15	110 mm	G3/4	any	1-50°C	84932
Qn= 1,5 m³/h	DN15	165 mm	G3/4	any	1-50°C	84933
Qn= 0,6 m³/h	DN20	130 mm	G1	any	1-50°C	84934
Qn= 1,5 m³/h	DN20	130 mm	G1	any	1-50°C	84935
Qn= 1,5 m³/h	DN20	165 mm	G1	any	1-50°C	84936
Qn= 0,6 m³/h	DN20	190 mm	G1	any	1-50°C	84937
Qn= 1,5 m³/h	DN20	190 mm	G1	any	1-50°C	84938
Qn= 2,5 m³/h	DN20	190 mm	G1	any	1-50°C	84939
Qn= 3,5 m³/h	DN25	260 mm	G5/4B	any	1-50°C	84940
Qn= 6,0 m³/h	DN25	260 mm	G5/4B	any	1-50°C	84941
Qn= 10 m³/h	DN40	300 mm	G2B	any	1-50°C	84942
Qn= 15 m³/h	DN50	270 mm	Flansch	any	1-50°C	84943
Qn= 25 m³/h	DN65	300 mm	Flansch	any	1-50°C	84944
Qn= 40 m³/h	DN80	300 mm	Flansch	any	1-50°C	84945
Qn= 60 m³/h	DN100	360 mm	Flansch	any	1-50°C	84946
Qn= 100 m³/h	DN100	360 mm	Flansch	any	1-50°C	84947

BCU-WMZ-KAM-MC602-C-FW	KNX interface single for Multical 602	87969

Zenner Zelsius C5 heat meters

- heat meter with ultrasonic flow meter
- available as compact version for coaxial measuring capsule meter
- including KNX-interface in separate, wall mounted box, with FacilityWeb
- with FacilityWeb functionality
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee

nominal flow	DN	length	thread	mount.	temp.	order-no.
Qn= 0,6 m³/h	DN15	110 mm	G3/4B	any	10-90°C	85951-1
Qn= 1,5 m³/h	DN15	110 mm	G3/4B	any	10-90°C	85952-1
Qn= 2,5 m³/h	DN20	130 mm	G1B	any	10-90°C	85953-1
Qn= 0,6 m³/h	DN15		EA S/EAT I STA respectively 2" base		10-90°C	84954
Qn= 1,5 m³/h	DN15		EA S/EAT I STA respectively 2" base		10-90°C	84955
Qn= 2,5 m³/h	DN20		EA S/EAT I STA respectively 2" base		10-90°C	84956

BCU-WMZ-ZEN-ZELC5-C-FW	interface only in separate wall mounted box for Zenner Zelsius C5	87971

KNX interfaces (without meters)

• complete Facility Web functionality (via NK-FW)
• TCP/IP protocol, dedicated Homepage
• integrated data logging for 1-year
• functionality to be guaranteed only for meters delivered by Lingg & Janke
• adds **quick**-ability as of the 2. quarter 2016

type		order-no.
BCU-WMZ-HYD-SHAR-C-FW	KNX interface for Sharky Heat	87967
BCU-WMZ-ENG-SST2-C-FW	KNX interface for Engelmann SensoStar2	87964
BCU-WMZ-ENG-SST2-C-FW	KNX interface for Engelmann SensoStar2C	87965
BCU-WMZ-ZEN-ZELC5-C-FW	interface only in separate wall mounted box for Zenner Zelsius C5	87971
BCU-WMZ-KAM-MC602-C-FW	KNX interface single for Multical 602	87969

If necessary please check MikroMaster for m-bus parametrization on page 61.

Mounting nut for Kamstrup heat meter sensor

connection	sensor diameter	order-no.
AG 1/2	5,0xM10	85917

Ball valve with sensor contact M10

• for direct reading sensors M10 DS 5,0....5,2 mm

connection	length	sensor diameter	order-no.
IG 1/2	48 mm	5,0...5,2 mm x M10	85997
IG 3/4	53 mm	5,0...5,2 mm x M10	85998
IG 1	66 mm	5,0...5,2 mm x M10	85999

Mounting set for heat meters

• 3 Ball valve (1x direct reading M10), fittings and meter adapter

connection pipe side	nominal flow	DN	connection meter side	length	order-no.
3/4	0,6 – 1,5 m³/h	15	3/4	110 mm	85980
1	1,5 – 2,5 m³/h	20	1	130 mm	85981
1	2,5 m³/h	20	1	190 mm	85982
5/4	3,5 – 6 m³/h	25	5/4	260 mm	85983

KNX FacilityWeb water meters

Lingg & Janke cold / hot water metering solutions are based on water meters of the manufacturers Andrae, Hydrometer, Kamstrup, Engelmann and Sensus for which we provide the appropriate KNX FacilityWeb interfaces.

All KNX water meters offer:
• full FacilityWeb functionality in connection with NK-FW
• integrated data logging for 1-year
• TCP/IP protocol
• MID conformity approved

Overview

	type 2						type 3		type 5		
	Andrae cold-/ hot water meter	GWF water meter	Allmess domestic water meter	Allmess general water meter	Sensus cold water meter	Sensus HRI-B1/12	Kamstrup Multical 62	Engelmann WaterStar	Hydrometer Flypper CoronaE	Hydrometer Hydrus	Sensus Residia M BCU
serial number	x		x	x	x	x	x	x	x	x	x
meter number	x		x	x	x	x	x	x	x	x	x
meter status	x		x	x	x	x	x	x	x	x	x
meter reading monitoring	x		x	x	x	x	x	x	x	x	x
meter reading (m³)	x		x	x	x	x	x	x	x	x	x
meter reading with high resolution (l)	x		x	x	x	x	x	x	x	x	x
relative forward counter (m³)	x		x	x	x	x	x	x	x	x	x
relative forward counter reset	x		x	x	x	x	x	x	x	x	x
relative reverse counter (m³)	x		x	x	x	x	x	x	x	x	x
relative reverse counter setting	x		x	x	x	x	x	x	x	x	x
relative reverse counter null	x		x	x	x	x	x	x	x	x	x
due date meter reading (m³)	x		x	x	x	x	x	x	x	x	x
due date	x		x	x	x	x	x	x	x	x	x
due date setting	x		x	x	x	x	x	x	x	x	x
15 min/60 min (l) differences	x		x	x	x	x	x	x	x	x	x
flow rate (m³/h)							x	x	x	x	x
upper switchpoint flow rate							x	x	x	x	x
lower switchpoint flow rate							x	x	x	x	x
volume forward (m³)									x	x	x
volume backward (m³)									x	x	x
FacilityWeb via NK-FW	x	x	x	x	x	x	x	x	x	x	x
quick-ability	x	x	x	x	x	x	x	x	x	x	x

Technical products subject to continuous development. The specifications in this document are depending on the current production status of the devices. Subject to modifications and amendments.

KNX FacilityWeb water meters

Andrae cold and warm water meters - household water meters

- single-jet dry runner water meter
- including KNX-interface in separate, wall mounted box, with FacilityWeb
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	max.temp.	order-no.
Qn= 1,5 m³/h	DN15	80 mm	G3/4	any	40°C	85101
Qn= 1,5 m³/h	DN15	110 mm	G3/4	any	40°C	85102
Qn= 2,5 m³/h	DN20	130 mm	G1	any	40°C	85103
Qn= 1,5 m³/h	DN15	80 mm	G3/4	any	90°C	85111
Qn= 1,5 m³/h	DN15	110 mm	G3/4	any	90°C	85112
Qn= 2,5 m³/h	DN20	130 mm	G1	any	90°C	85113
BCU-KWZ-AND-WZGM-C-FW		KNX interface for Andrae M-Bus				87925

Andrae cold and warm water meters - MTK-HWX

- multi-jet water meter
- including KNX-interface in separate, wall mounted box, with FacilityWeb
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	max.temp.	order-no.
Qn= 2,5 m³/h	DN20	190 mm	G1	horizontal	40°C	85140
Qn= 6,0 m³/h	DN25	260 mm	G 5/4	horizontal	40°C	85141
Qn= 10 m³/h	DN40	300 mm	G2	horizontal	40°C	85142
Qn= 2,5 m³/h	DN20	190 mm	G1	horizontal	90°C	85150
Qn= 6,0 m³/h	DN25	260 mm	G 5/4	horizontal	90°C	85151
Qn= 10 m³/h	DN40	300 mm	G2	horizontal	90°C	85152
BCU-KWZ-AND-WZGM-C-FW			KNX interface for Andrae M-Bus			87925

Allmess general water meter

- multi-jet dry running water meter
- including communication module and KNX-interface in wall mounted box
- with FacilityWeb functionality
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	max.temp.	order-no.
Qn= 2,5 m³/h	DN20	190 mm	G1B	any	bis 30°C	85430
Qn= 2,5 m³/h	DN20	190 mm	G1B	any	bis 90°C	85431
BCU-GZ-ITR-RF1c-C-FW		KNX interface single for Allmess Cyble module V 1.4				87981
Cyble Modul V1.4		Cyble Modul V1.4 for water meter with cyble counter				85830

Allmess domestic water meter

- universal wall mounted water meter
- for horizontal and vertical mounting
- including communication module and KNX-interface in wall mounted box
- with FacilityWeb functionality
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	max.temp.	order-no.
Qn= 1,5 m³/h	DN15	80 mm	G3/4	any	bis 30°C	85410
Qn= 1,5 m³/h	DN15	80 mm	G3/4	any	bis 90°C	85411
Qn= 1,5 m³/h	DN15	110 mm	G3/4	any	bis 30°C	85412
Qn= 1,5 m³/h	DN15	110 mm	G3/4	any	bis 90°C	85413
Qn= 1,5 m³/h	DN15	130 mm	G3/4	any	bis 30°C	85414
Qn= 1,5 m³/h	DN15	130 mm	G3/4	any	bis 90°C	85415
Qn= 2,5 m³/h	DN20	130 mm	G1B	any	bis 30°C	85416
Qn= 2,5 m³/h	DN20	130 mm	G1B	any	bis 90°C	85417

BCU-KWZ-All-BM-C-FW	KNX interface single for Allmess BM Modul	87926
Allmess BM Modul	communication module single for Allmess modular counter	85218

Engelmann cold water meters - household water meter WaterStar

- electronic impeller scanning
- including KNX-interface in separate, wall mounted box, with FacilityWeb
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	max.temp.	order-no.
Qn= 1,6 m³/h	DN15	80 mm	G3/4	any	30°C	85301
Qn= 1,6 m³/h	DN15	80 mm	G3/4	any	90°C	85302
Qn= 1,6 m³/h	DN15	110 mm	G3/4	any	30°C	85303
Qn= 1,6 m³/h	DN15	110 mm	G3/4	any	90°C	85304
Qn= 2,5 m³/h	DN20	130 mm	G1	any	30°C	85315
Qn= 2,5 m³/h	DN20	130 mm	G1	any	90°C	85316
Qn= 2,5 m³/h	DN20	190 mm	G1	any	30°C	85317
Qn= 2,5 m³/h	DN20	190 mm	G1	any	90°C	85318
Qn= 2,5 m³/h	DN20	105 mm	G1	any	30°C	85319
Qn= 2,5 m³/h	DN20	105 mm	G1	any	90°C	85320

KNX interface for Engelmann WaterStar M-Bus	87927

KNX FacilityWeb water meters

GWF single-jet water meter UNICOcoder MP

- single-jet dry runner water meter for cold or hot water
- including communication module and KNX-interface in wall mounted box
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee

nominal flow	DN	length	thread	mount.	max.temp.	order-no.
Qn= 1,5 m³/h	DN15	110mm	G1/2	any	30°C	85500
Qn= 1,5 m³/h	DN15	130mm	G3/4	any	30°C	85501
Qn= 2,5 m³/h	DN20	130mm	G3/4	any	30°C	85502
Qn= 1,5 m³/h	DN15	110mm	G1/2	any	90°C	85503
Qn= 1,5 m³/h	DN15	130mm	G3/4	any	90°C	85504
Qn= 2,5 m³/h	DN20	130mm	G3/4	any	90°C	85505
BCU-KWZ-GWF-MBUS-C-FW	KNX interface für GWF water meters					87929

GWF rotary piston meter PODIXcoder MP 30°C

- Super dry dial
- including communication module and KNX-interface in wall mounted box
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee

nominal flow	DN	length	thread	mount.	max.temp.	order-no.
Qn= 1,5 m³/h	DN15	110mm	G1/2	horizontal	30°C	85510
Qn= 2,5 m³/h	DN20	130mm	G3/4	horizontal	30°C	85511
Qn= 3,5 m³/h	DN25	130mm	G3/4	horizontal	30°C	85512
Qn= 6 m³/h	DN32	110mm	G1/2	horizontal	30°C	85513
Qn= 10 m³/h	DN40	130mm	G3/4	horizontal	30°C	85514
Qn= 1,5 m³/h	DN15	concentric		horizontal	30°C	85515
BCU-KWZ-GWF-MBUS-C-FW	KNX interface for GWF water meter					87929

GWF Multijet water meter for cold water MTKcoder MP 30°C

- Super dry dial
- including communication module and KNX-interface in wall mounted box
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee

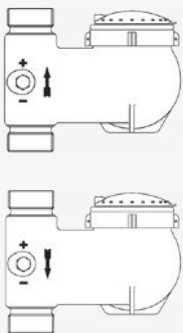| nominal flow	DN	length	thread	mount.	max.temp.	
Qn= 1,5 m³/h	DN15	165mm	G1/2	horizontal	30°C	85520
Qn= 2,5 m³/h	DN20	190mm	G3/4	horizontal	30°C	85521
Qn= 2,5 m³/h	DN20	220mm	G3/4	horizontal	30°C	85522
Qn= 3,5 m³/h	DN25	260mm	G1	horizontal	30°C	85523
Qn= 6 m³/h	DN25	260mm	G1	horizontal	30°C	85524
Qn= 6 m³/h	DN32	260mm	G5/4	horizontal	30°C	85525
Qn= 10 m³/h	DN40	300mm	G3/2	horizontal	30°C	85526
Qn= 15 m³/h	DN50	300mm	G2	horizontal	30°C	85527
Qn= 10 m³/h	DN40	300mm	Flansch	horizontal	30°C	85528
Qn= 15 m³/h	DN50	300mm	Flansch	horizontal	30°C	85529
Qn= 15 m³/h	DN50	270mm	Flansch	horizontal	30°C	85530
BCU-KWZ-GWF-MBUS-C-FW	KNX interface for GWF water meter					87929

GWF Multijet water meter for warm water MTWcoder MP 90°C

- Super dry dial with magnetic coupling
- For measuring warm water house consumption
- including communication module and KNX-interface in wall mounted box
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee

nominal flow	DN	length	thread	mount.	max.temp.	order-no.
Qn= 1,5 m³/h	DN15	165mm	G1/2	horizontal	90°C	85540
Qn= 2,5 m³/h	DN20	190mm	G3/4	horizontal	90°C	85541
Qn= 2,5 m³/h	DN20	220mm	G3/4	horizontal	90°C	85542
Qn= 3,5 m³/h	DN25	260mm	G1	horizontal	90°C	85543
Qn= 6 m³/h	DN25	260mm	G1	horizontal	90°C	85544
Qn= 6 m³/h	DN32	260mm	G5/4	horizontal	90°C	85545
Qn= 10 m³/h	DN40	300mm	G1-1/2	horizontal	90°C	85546
Qn= 15 m³/h	DN50	300mm	G2	horizontal	90°C	85547
Qn= 2,5 m³/h	DN20	190mm	Flansch	horizontal	90°C	85548
Qn= 3,5 m³/h	DN25	260mm	Flansch	horizontal	90°C	85549
Qn= 6 m³/h	DN32	260mm	Flansch	horizontal	90°C	85550
Qn= 10 m³/h	DN40	300mm	Flansch	horizontal	90°C	85551
Qn= 15 m³/h	DN50	300mm	Flansch	horizontal	90°C	85552
Qn= 15 m³/h	DN50	270mm	Flansch	horizontal	90°C	85553
BCU-KWZ-GWF-MBUS-C-FW		KNX interface for GWF water meter				87929

GWF Multijet water meter for cold water MTKcoder MP-V 30°C

- Super dry dial
- including communication module and KNX-interface in wall mounted box
- adds **quick**-ability as of the 2. quarter 2016
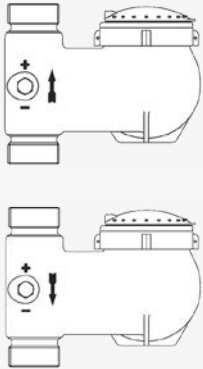- Prices including calibration fee

	nominal flow	DN	length	thread	mount.	max.temp.	order-no.
inlet below	Qn= 1,5 m³/h	DN15	105mm	G3/4	vertical	30°C	85560
	Qn= 2,5 m³/h	DN20	105mm	G3/4	vertical	30°C	85561
	Qn= 3,5 m³/h	DN25	150mm	G1	vertical	30°C	85562
	Qn= 6 m³/h	DN32	150mm	G5/4	vertical	30°C	85563
	Qn= 10 m³/h	DN40	200mm	G1-1/2	vertical	30°C	85564
inlet above	Qn= 1,5 m³/h	DN15	105mm	G3/4	vertical	30°C	85565
	Qn= 2,5 m³/h	DN20	105mm	G3/4	vertical	30°C	85566
	Qn= 3,5 m³/h	DN25	150mm	G1	vertical	30°C	85567
	Qn= 6 m³/h	DN32	150mm	G5/4	vertical	30°C	85568
	Qn= 10 m³/h	DN40	200mm	G1-1/2	vertical	30°C	85569
	BCU-KWZ-GWF-MBUS-C-FW		KNX interface for GWF water meter				87929

KNX FacilityWeb water meters

GWF Multijet water meter for warm water MTWcoder MP-V 90°C

- Super dry dial with magnetic coupling
- For measuring warm water house consumption
- including communication module and KNX-interface in wall mounted box
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee

	nominal flow	DN	length	thread	mount.	max.temp.	order-no.
inlet below	Qn= 2,5 m³/h	DN20	105mm	G3/4	vertical	90°C	85580
	Qn= 3,5 m³/h	DN25	150mm	G1	vertical	90°C	85581
	Qn= 6 m³/h	DN32	150mm	G5/4	vertical	90°C	85582
	Qn= 10 m³/h	DN40	200mm	G3/2	vertical	90°C	85583
inlet above	Qn= 2,5 m³/h	DN20	105mm	G3/4	vertical	90°C	85584
	Qn= 3,5 m³/h	DN25	150mm	G1	vertical	90°C	85585
	Qn= 6 m³/h	DN32	150mm	G5/4	vertical	90°C	85586
	Qn= 10 m³/h	DN40	200mm	G1-1/2	vertical	90°C	85587

BCU-KWZ-GWF-MBUS-C-FW	KNX interface for GWF water meter		87929

Hydrometer cold and warm water meters Corona E

- fully electronic water meter with impeller
- including KNX-interface in separate, wall mounted box, with FacilityWeb
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	max.temp.	order-no.
Qn= 1,5 m³/h	DN15	110 mm	G3/4	horizontal	30°C	85010
Qn= 1,5 m³/h	DN15	110 mm	G3/4	horizontal	90°C	85011
Qn= 2,5 m³/h	DN20	130 mm	G1	horizontal	30°C	85030
Qn= 2,5 m³/h	DN20	130 mm	G1	horizontal	90°C	85031
Qn= 2,5 m³/h	DN20	190 mm	G1	horizontal	30°C	85040
Qn= 2,5 m³/h	DN20	190 mm	G1	horizontal	90°C	85041
Qn= 2,5 m³/h	DN20	105 mm	G1	riser	30°C	85050
Qn= 2,5 m³/h	DN20	105 mm	G1	riser	90°C	85051

BCU-KWZ-HYD-HYD-C-FW	KNX interface single for Hydrometer Corona E	87922

Hydrometer Hydrus

- low energy consumption
- adds **quick**-ability as of the 2. quarter 2016
- Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	order-no.
Qn= 2,5 m³/h	DN20	130 mm	G1	s. manuf.	85001
Qn= 2,5 m³/h	DN20	190 mm	G1	s. manuf.	85002

BCU-KWZ-HYD-HYD-C-FW	KNX interface for Hydrometer Hydrus	87986

Kamstrup cold water meters - Multical 62

• 230V main supply
• including integrated KNX-interface with FacilityWeb
• adds **quick**-ability as of the 2. quarter 2016
• Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	max.temp.	order-no.
Qn= 1,6 m³/h	DN15	110 mm	G3/4	any	1-30°C	85941
Qn= 1,6 m³/h	DN20	110 mm	G1	any	1-30°C	85942
Qn= 1,6 m³/h	DN20	190 mm	G1	any	1-30°C	85943
Qn= 2,5 m³/h	DN20	190 mm	G1	any	1-30°C	85944
Qn= 4,0 m³/h	DN25	260 mm	G5/4	any	1-30°C	85945
Qn= 6,3 m³/h	DN25	260 mm	G5/4	any	1-30°C	85946
Qn= 10,0 m³/h	DN40	260 mm	G2B	any	1-30°C	85947

BCU-KWZ-KAM-MC62-C-FW	KNX interface for Kamstrup Multical 62	87984

Kamstrup hot water meter - Multical 62

• hot water meter with ultrasonic flow sensor
• 230V main supply
• including integrated KNX-interface with FacilityWeb
• adds **quick**-ability as of the 2. quarter 2016
• Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	max.temp.	order-no.
Qn= 1,6 m³/h	DN15	110 mm	G3/4B	any	1-90°C	85971
Qn= 1,6 m³/h	DN20	110 mm	G1B	any	1-90°C	85972
Qn= 1,6 m³/h	DN20	190 mm	G1B	any	1-90°C	85973
Qn= 2,5 m³/h	DN20	190 mm	G1B	any	1-90°C	85974
Qn= 4,0 m³/h	DN25	260 mm	G5/4B	any	1-90°C	85975
Qn= 6,3 m³/h	DN25	260 mm	G5/4B	any	1-90°C	85976
Qn= 10 m³/h	DN40	300 mm	G2B	any	1-90°C	85977

BCU-KWZ-KAM-MC62-C-FW	KNX interface for Kamstrup Multical 62	87984

KNX FacilityWeb water meters

Sensus cold water meters - household water meters

• single-jet dry runner, with shielded magnetic coupling
• including KNX-interface in separate, wall mounted box, with FacilityWeb
• adds **quick**-ability as of the 2. quarter 2016
• Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	max.temp.	order-no.
Qn= 1,5 m³/h	DN15	110 mm	G3/4	any	30°C	85220
Qn= 1,5 m³/h	DN15	110 mm	G3/4	any	90°C	85221
Qn= 2,5 m³/h	DN20	130 mm	G1	any	30°C	85230
Qn= 2,5 m³/h	DN20	130 mm	G1	any	90°C	85231
BCU-KWZ-Sen-RES/HRI/Mei-C-FW		KNX interface for Sensus AMR Module				87985

Sensus rotary piston water meter HRI B1/12

• dry runner, with shielded magnetic coupling
• including KNX-interface in separate, wall mounted box, with FacilityWeb
• adds **quick**-ability as of the 2. quarter 2016
• Prices including calibration fee / other dimensions on request

nominal flow	DN	length	thread	mount.	max.temp.	order-no.
Qn= 2,5 m³/h	DN20	190 mm	G1	s. manuf.	40°C	85201
BCU-KWZ-Sen-RES/HRI/Mei-C-FW		KNX interface for Sensus AMR Module				87985

Sensus water meter

• AMR retrofit module HRI / MEI ResidiaM
• for communication with KNX an AMR module and a KNX interface is needed.
• with FacilityWeb functionality
• adds **quick**-ability as of the 2. quarter 2016

type	order-no.
HRI-Data B1 / D1 / S8	85212
HRI-Mei / Modus B4	85213
ResidiaM 2.2	85210
BCU-KWZ-Sen-RES/HRI/Mei-C-FW KNX interface for Sensus AMR Module	87985

KNX interfaces (without meters)

- complete Facility Web functionality (via NK-FW)
- TCP/IP protocol, dedicated Homepage
- integrated data logging for 1-year
- functionality to be guaranteed only for meters delivered by Lingg & Janke
- adds **quick**-ability as of the 2. quarter 2016

type		order-no.
BCU-KWZ-AND-WZGM-C-FW	KNX interface for Andrae M-Bus	87925
BCU-KWZ-All-BM-C-FW	KNX interface single for Allmess BM Modul	87926
BCU-GZ-ITR-RF1c-C-FW	KNX interface single for Allmess Cyble Modul V1.4	87981
BCU-KWZ-ENG-WSTM-C-FW	KNX interface for Engelmann WaterStar M-Bus	87927
BCU-KWZ-HYD-CORM-C-FW	KNX interface for Hydrometer Corona E	87922
BCU-KWZ-HYD-HYD-C-FW	KNX interface for Hydrometer Hydrus	87986
BCU-KWZ-KAM-MC62-C-FW	KNX interface for Kamstrup Multical 62	87984
BCU-KWZ-Sen-RES/HRI/Mei-C-FW	KNX interface for Sensus water meter AMR Module	87985
BCU-KWZ-MAN-MODM-C-FW	KNX interface for Manthey water meter MODM	87920
BCU-KWZ-NZR-MBUS-C-FW	KNX interface for NZR water meter MODM	87921
BCU-KWZ-GWF-MBUS-C-FW	KNX interface for GWF water meter	87929

If necessary please check MikroMaster for m-bus parametrization on page 61.

KNX FacilityWeb Gas meters

KNX diaphragm gas meters distributed by Lingg & Janke have as a basis the counters of the manufacturers Elster and Itron. The appropriate KNX interface is produced by Lingg & Janke.

All KNX gas meters offer:
• full FacilityWeb functionality in connection with NK-FW
• integrated data logging for 1-year
• TCP/IP protocol
• MID conformity approved

Overview

	type 2			
	Elster BK-GxA/ AE2/AE3	**Elster Encoder S1**	**Itron Gas meter RF1c**	**GMT Absolut ENCODER AE3**
serial number	x	x	x	x
meter number	x	x	x	x
meter status	x	x	x	x
meter reading monitoring	x	x	x	x
meter reading (m³)	x	x	x	x
meter reading with high resolution (l)	x	x	x	x
relative forward counter (m³)	x	x	x	x
relative forward counter reset	x	x	x	x
relative reverse counter (m³)	x	x	x	x
relative reverse counter setting	x	x	x	x
relative reverse counter null	x	x	x	x
due date counter reading (m³)	x	x	x	x
due date	x	x	x	x
due date setting	x	x	x	x
15 min/60 min (l) differences	x	x	x	x
FacilityWeb via NK-FW	x	x	x	x
quick-ability	x	x	x	x

Technical products subject to continuous development. The specifications in this document are depending on the current production status of the devices. Subject to modifications and amendments.

KNX FacilityWeb gas meter

Elster gas meter - BK-GxA

• diaphragm gas meter
• including integrated KNX-interface
• with FacilityWeb functionality
• adds **quick**-ability as of the 2. quarter 2016
• Prices including calibration fee / other dimensions on request

version	type	DN	measuring range	order-no.
single adapter	BK-G4T	DN25	0,04 - 6 m³/h	85802
double adapter	BK-G4A	DN25	0,04 - 6 m³/h	85801
	BK-G4A	DN20	0,04 - 6 m³/h	85805
	BK-G6A	DN32	0,06 - 10 m³/h	85808
	BK-G10A	DN40	0,10 - 16 m³/h	85807
	BK-G16A	DN40	0,16 - 25 m³/h	85804
	BK-G25A	DN50	0,25 - 40 m³/h	85809
BCU-GZ-ELS-GXA-C-FW	KNX interface single for Elster gas meter with encoder counter AE2 /AE3 (log AE02:02:01:01:01/ AE03:05:01:01:01)			87980

KNX interface Elster-Encoder S1

• KNX interface for double adapter diaphragm gas meter Elster Encoder S1
• adds **quick**-ability as of the 2. quarter 2016
• Prices including calibration fee

version	type	order-no.
-	KNX interface for Elster- Encoder S1	87982

Itron diaphragm gas meter Rf1c

• diaphragm gas meter with cyble counter
• including KNX-interface in separate, wall mounted box
• including cyble module
• with FacilityWeb functionality
• adds **quick**-ability as of the 2. quarter 2016
• Prices including calibration fee / other dimensions on request

version	type	DN	measuring range	order-no.
single adapter	RF1c	G4 DN25	0,04 - 6 m³/h	85812
	RF1c	G6 DN25	0,06 - 10 m³/h	85814
	ACD (C) c	G10 DN40	0,10 - 16 m³/h	85816
	ACD (C) c	G16 DN40	0,16 - 25 m³/h	85818
double adapter	RF1c	G4 DN25	0,4 - 6 m³/h	85811
	RF1c	G6 DN25	0,06 - 10 m³/h	85813
	ACD (C) c	G10 DN40	0,10 - 16 m³/h	85815
	ACD (C) c	G16 DN40	0,16 - 25 m³/h	85817
BCU-GZ-ITR-RF1c-C-FW	KNX interface single for Itron gas meter with Cyble Modul V1.4			87981
Cyble Modul V1.4	Cyble Modul V1.4 for Itron gas meter with cyble counter			85830

KNX interface (without meter)

- complete FacilityWeb functionality (via NK-FW)
- TCP/IP protocol, dedicated Homepage
- integrated data logging for 1-year
- functionality to be guaranteed only for meters delivered by Lingg & Janke
- adds **quick**-ability as of the 2. quarter 2016

type		order-no.
BCU-GZ-ELS-GXA-C-FW	Elster gas meter Gx AE2/AE3	87980
BCU-GZ-ELS-ES1-C-FW	Elster Encoder S1	87982
BCU-GZ-ITR-RF1c-C-FW	Itron gas meter Gx RF1c	87981
BCU-GZ-ELS-GXA-C-FW	GMT Absolut ENCODER AE3	87980

If necessary please check MikroMaster for m-bus parametrization on page 61.

KNX FacilityWeb Oil meters

The oil meter are characterised by high measurement accurancy and long-term stability. The KNX module stores the measured data at 15-minute intervals over a period of one year and provides full FacilityWeb capability. The data can be read out directly via a NK-FW network coupler using a standard internet browser.

The KNX Braun oil meters offer:
• full FacilityWeb functionality in connection with NK-FW
• integrated data logging for 1-year
• TCP/IP protocol (via NK-FW)
• MID conformity approved
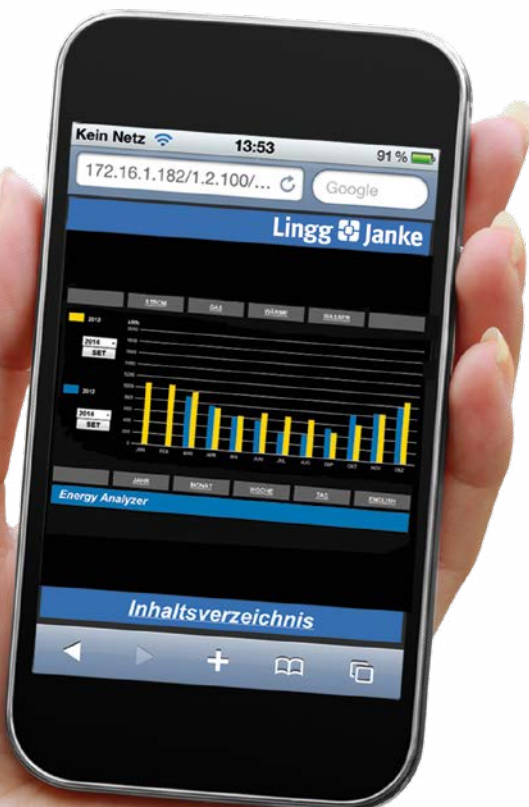
Braun oil meter HZ 3

• retrofitable in existing heating installation

type	nominal flow	thread	nom. pressure	order-no.
HZ 3 RR	0,18 - 12 l/h	DIN 3852-X-G 1/4"	6 bar	85855
add-on kit HZ3RR 8 mm	for integration in 8 mm suction line (single chord system) 2x bolting G1/8x8mm, 1x single chord system dirt filter			85856
add-on kit HZ3RR 10 mm	for integration in 10 mm suction line (single chord system) 2x bolting G1/8x8mm, 1x single chord system dirt filter			85857
add-on kit HZ3RR 12 mm	for integration in 12 mm suction line (single chord system) 2x bolting G1/8x8mm, 1x single chord system dirt filter			85858

Direct reading KNX interface for meters with mechanical counters

• optical sensor unit with LED-lighting for the identification of counting devices up to 50mm width, min. figure height 5mm
• max. 8 digits, one decimal place, display push-button operated
• KNX interface in DIN rail mounting device (2 RU) and KNX bus connector
• integrated data logger stores the measured data over a period of one year
• TCP/IP protocol (via KN-FW)
• full FacilityWeb functionality
• low energy consumption

type	version		order-no.
oil meter	white letters / black ground	OZ-FFD-CAMW-D-FW	87942
oil meter	black letters / white ground	OZ-FFD-CAMS-D-FW	87943

Mounting adapter for optical sensor for **Braun oil meter HZ 3 R / RR**	87955

KNX FacilityWeb temperature sensors

The DIGITEMP series of temperature sensors are capable of measuring temperature and humidity (RTFF10-FW only) in different environments. Four thresholds are provided for further data processing on the KNX bus.

The KNX temperature sensors have:
- complete Facility Web functionality (via NK-FW)
- integrated data logger with storage capacity for one year
- TCP/IP protocol

DIGITEMP temperature sensor

• complete FacilityWeb functionality (via NK-FW)
• including integrated KNX bus coupler
• integrated data logger for temperature thresholds, status
• thresholds / adjustable setpoints via browser
• temperature range -55 … +125°C
• 4 independent thresholds
• TCP/IP-protocol, dedicated homepage (via NK-FW)
• adds **quick**-ability as of the 2. quarter 2016
• immersion sleeve and mounting accessories on request

ANF

	type		order-no.
pipe mounting sensor	ANF99-FW		87130

KTF

	type		order-no.
duct sensor	KTF99-135-FW	135 mm	87101
duct sensor	KTF99-240-FW	240 mm	87102
duct sensor	KTF99-392-FW	392 mm	87103

LTF

	type	order-no.
cable sensor	LTF02-1m-FW	87104
cable sensor	LTF02-3m-FW	87105

FRF

	type	order-no.
damp environment sensor	FRF99-FW	87120
indoor sensor	RTF99-FW	87140

Indoor temperature and humidity sensor

• complete FacilityWeb functionality (via NK-FW)
• including integrated KNX bus coupler
• integrated data logger for temperature thresholds, status
• temperature range -40 … +120°C
• TCP/IP-protocol, dedicated homepage (via NK-FW)

	type	order-no.
indoor temp. and humidity sensor	RTFF10-FW	87150

KNX Switches

KNX-Bus   **wall**

main modul   **2nd extension modul**

connecting cable

1st extension modul   **3rd extension modul**
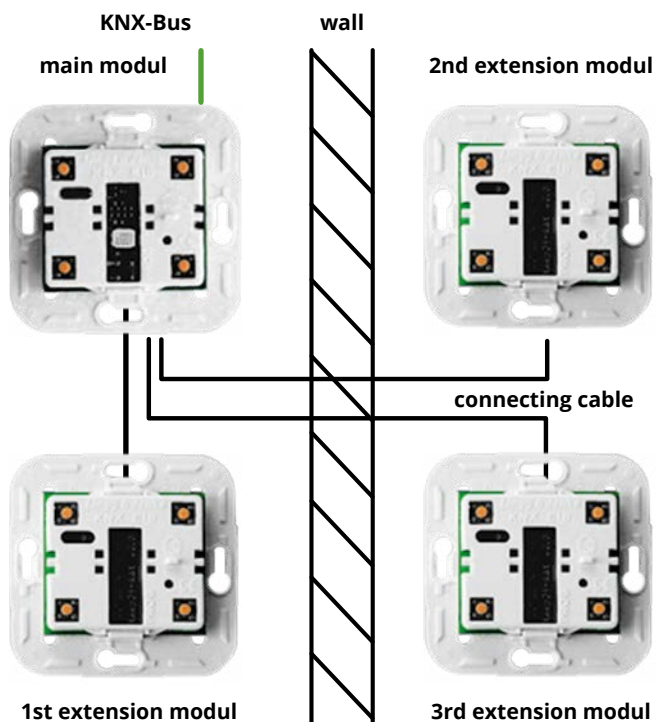
KNX switches by Lingg & Janke comprise a main module with KNX bus coupling unit. Up to three extension modules, connected by prefabricated cables, open out the functional range of the KNX switch main module. As many as 16 switching functions can thus be implemented without great expense, using just one bus coupling unit.

Both, main and extension modules, can accommodate single or double rocker switches. The rockers are designed as push buttons with neutral position so that they can provide different switching functions, such as ON/OFF, dimmer or blinds control.

In the ETS application software, you always go through the same steps when setting the module parameters, be it the main module or the extension module. For every module you decide whether the switch function is to be implemented by a rocker switch action or a single-key push button action. The switch action itself can be an ON/OFF or dimmer operation, lower blinds or scenario control, or a value setting function.

KNX main modul

• 4-button main modul with integrated bus coupling unit for connecting up to 3 extension modules

type	order-no.
TAKP2f-BCU-FW	87800

KNX extension modul

• 4 button extension modul without bus coupling unit including connecting cable
• including connecting cable: 20 cm > 2-gang switch box, 27 cm > 3-gang switch box,
  35 cm > 4-gang switch box, 50 cm > for opposite wall mounting
• replacement connecting cables

type	order-no.
TAKP2f-SAT-20	87801
TAKP2f-SAT-27	87802
TAKP2f-SAT-35	87803
TAKP2f-SAT-50	87804

Connecting cables

type	order-no.
VBK-20cm	87805
VBK-27cm	87806
VBK-35cm	87807
VBK-50cm	87808

Rocker units

rocker units

rockers for shutters

rockers for light

• Colour: pure white RAL 9010
• all modules can accommodate single or double rocker units
• all modules may have rocker switch action or single-key pushbutton action
• all rocker units are available with or without laser-engraved labelling.
• KNX IP-Switches are compatible with Exclusiv 55

type - single rocker units	order-no.
FL-1	87820
FL-1-L	87821
FL-1-J	87822

type - double rocker units	order-no.
FL-2	87823
FL-2-L	87824
FL-2-J	87825
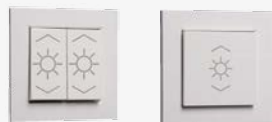
Temperature and humidity sensor

• Colour: alike pure white RAL 9010
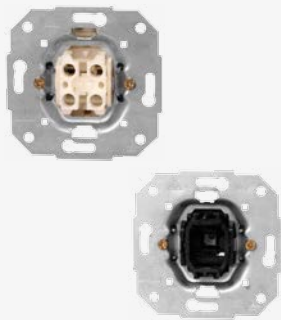• temperature range - 40 ... +120 °C
• suitable for all Exclusiv 55 frames

	type	order-no.
temperature and humidity sensor	RTFFUP	87160

KNX Switches

Standard module inserts 10A, 250V~

	order-no.
rocker switch change over	86006
rocker push button (NO)	86031
rocker switch series	86005

Exclusiv 55 rocker switches and covers

• Colour: alike pure white RAL 9010

	order-no.
single rocker unit	86200
double rocker units	86202
antenna terminal cover 2 gaps	86205
antenna terminal cover 3 gaps	86206
Blind cover	86204
telephone wall jack cover	86207
cover 1 gap with labeling field for all UAE, CAT5/6, ISDN	86218
cover 2 gaps with labeling field for all UAE, CAT5/6, ISDN	86208
intermediate frame from 50 x 50 to 55 x 55	86219

Exclusiv 55 socket outlets

• Colour: alike pure white RAL 9010

	order-no.
Schuko outlet	86210
Schuko outlet with child protection	86211
Hinged cover Schuko outlet	86212
Schuko outlet in giant-size pack, 100 pce. Schuko outlets and covers seperately	86220
CAT6 DD45°, AMJ45, with cover, Class D/E,ISO IEC11801,1000MHz.- Connection available top, down, left, right	86217

Exclusiv 55 international socket outlets

• Colour: alike pure white RAL 9010
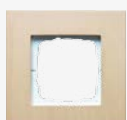
	order-no.
socket outlet terminals to Swiss Standard, screwed connection	86215
socket outlet for CZ, BENELUX, FR	86216

Exclusiv 55 frames

	order-no.
Frame pure white RAL 9010, 1 gang	86221
Frame pure white RAL 9010, 2 gang	86222
Frame pure white RAL 9010, 3 gang	86223
Frame pure white RAL 9010, 4 gang	86224
Frame pure white RAL 9010, 5 gang	86225
Frame white glass, 1 gang	86321
Frame white glass, 2 gang	86322
Frame white glass, 3 gang	86323
Frame white glass, 4 gang	86324
Frame white glass, 5 gang	86325
Frame mint glass, 1 gang	86331
Frame mint glass, 2 gang	86332
Frame mint glass, 3 gang	86333
Frame mint glass, 4 gang	86334
Frame mint glass, 5 gang	86335
Frame black glass, 1 gang	86341
Frame black glass, 2 gang	86342
Frame black glass, 3 gang	86343
Frame black glass, 4 gang	86344
Frame black glass, 5 gang	86345
Frame umbra glass, 1 gang	86351
Frame umbra glass, 2 gang	86352
Frame umbra glass, 3 gang	86353
Frame umbra glass, 4 gang	86354
Frame umbra glass, 5 gang	86355
Frame oak tree, 1 gang	86361
Frame oak tree, 2 gang	86362
Frame oak tree, 3 gang	86363
Frame oak tree, 4 gang	86364
Frame oak tree, 5 gang	86365
Frame wenge, 1 gang	86371
Frame wenge, 2 gang	86372
Frame wenge, 3 gang	86373
Frame wenge, 4 gang	86374
Frame wenge, 5 gang	86375
Frame beech tree, 1 gang	86381
Frame beech tree, 2 gang	86382
Frame beech tree, 3 gang	86383
Frame beech tree, 4 gang	86384
Frame beech tree, 5 gang	86385

KNX quick
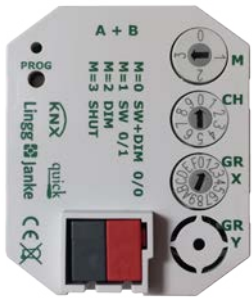
Lingg & Janke's quick system lives up to its name:

The use of coding switches allows installations in small and medium-sized buildings even without the use of programming software.

The only tool you need is a screwdriver!

KNX parametrisation is already included in the devices and is selected through the coding switch.

quick's technology is based on the internationally recognised KNX standard, which, if desired, can open up a wide range of programming and combination possibilities.

push button sensor module with system connector

- 4-button-module without bus coupling unit
- requires push button interface
- including pre-fabricated connection cable to connect to push button interface

	required interface	type	order-no.
push button interface without LEDs	TS2F-1-QW / TS4F-1-QW	TAKP2F-SAT	Q77898

design switch with system connector

- including pre-fabricated connection cable to connect to push button interface
- All switches are available in further colours and design variation.
- requires push button interface

	required interface	order-no.
Lola Carre with 2 buttons, with LED coulor: Aluminium natural	TS2FL-1-QW	Q6100211
Lola Carre with 4 buttons, with LED coulor: Aluminium natural	TS4FL-1-QW	Q6100411
Lara Carre with 2/4 buttons, with LED coulor: Aluminium natural	TS2F-1-QW / TS4F-1-QW / TS2FL-1-QW / TS4FL-1-QW	Q6400211
Zita Carre with 2 buttons, with LED coulor: Aluminium natural	TS2FL-1-QW	Q6300211
Zita Carre with 4 buttons, with LED coulor: Aluminium natural	TS4FL-1-QW	Q6300411
Mona Carre with 2 buttons, with LED coulor: Aluminium natural	TS2FL-1-QW	Q6200211
Mona Carre with 4 buttons, with LED coulor: Aluminium natural	TS4FL-1-QW	Q6200411
Lola Carre with 2 buttons, without LED coulor: Aluminium natural	TS2F-1-QW	Q6100211
Lola Carre with 4 buttons, without LED coulor: Aluminium natural	TS4F-1-QW	Q6100411
Zita Carre with 2 buttons, without LED coulor: Aluminium natural	TS2F-1-QW	Q6300211
Zita Carre with 4 buttons, without LED coulor: Aluminium natural	TS4F-1-QW	Q6300411
Mona Carre with 2 buttons, without LED coulor: Aluminium natural	TS2F-1-QW	Q6200211
Mona Carre with 4 buttons, without LED coulor: Aluminium natural	TS4F-1-QW	Q6200411

push button interface with rocker function

- with system connector suitable for design switches or push button sensor module
- cf. page 7 for function overview

	type	order-no.
push button interface for single rocker	TS2F-1-QW	Q77890
push button interface for double rocker	TS4F-1-QW	Q77891
push button interface for 2x double rocker	TS8F-1-QW	Q77894

push button interface with rocker function and LED

- with system connector suitable for design switches or push button sensor module with LED
- LED is listening to central control commands (via GR Y)
- cf. page 7 for function overview

	type	order-no.
push button interface for single rocker and LED	TS2FL-1-QW	Q77892
push button interface for double rocker and LED	TS4FL-1-QW	Q77893

push button interface for single button operation

• with seperate single connectors
• rocker function or single switching points are programmable
• cf. page 7 for function overview

	type	order-no.
push button interface for 4 single buttons	TS4F-2-QU	Q77880
push button interface for 4 single buttons and LED	TS4FL-2-QU	Q77881
push button interface for 8 single buttons	TS8F-2-QU	Q77882

push button interface for rocker funktion and single conductor

• with seperate single connectors
• rocker function is programmable
• cf. page 7 for function overview

	type	order-no.
push button interface for double rocker	TS4F-2-QW	Q77895
push button interface for double rocker and LED	TS4FL-2-QW	Q77896

binary input 4-gang

• variations:
    • for switches with potential free contacts - max. cable length 100 m
    • 230 V, signal voltage per input 230V AC/DC
• 4 independent inputs
• cf. page 7 for function overview

	type	RU	order-no.
binary input for switches	BE4FK-Q	4	Q79531
binary input 230 V	BE4F230-Q	4	Q79532

binary in-/output 4-gang

without picture

• variations:
    • for switches with potential free contacts - max. cable length 100 m
    • 230 V, signal voltage per input 230V AC/DC
• switching capacity 16 A at 250 V AC
• suitable for C-load

		type	RU	order-no.
available as of 2nd quarter 2016	binary in-/ output for switches 4-gang	BEA4FK16-Q	6	Q79243
available as of 2nd quarter 2016	binary in-/ output 230 V 4-gang	BEA4F230-Q	6	Q79244

binary in-/output 8-gang

• variations:
    • for switches with potential free contacts - max. cable length 100 m
    • 230 V, signal voltage per input 230V AC/DC
• switching capacity 16 A at 250 V AC
• suitable for C-load

		type	RU	order-no.
	binary in-/ output for switches 8-gang	BEA8FK16-Q	9	Q79241
available as of 2nd quarter 2016	binary in-/ output 230 V 8-gang	BEA8F230-Q	9	Q79242

Universal dimming actuator 4 x 2,5A / 570W

- 4 channels
- 100% short-circuit proof
- for all dimmable light sources
- can be used for dimmable LED retrofit lamps
- can be used for dimmable energy saving lamps
- flicker-free dimming range 0-100%

type	TE	order-no.
DIM4FU-2-FW-Q	12	Q77601

switching actuator 2-gang

- 2 channels
- 3 rail units
- switching capacity 16 A at 250 V AC
- suitable for C-load

type	TE	order-no.
A2F16-Q	3	Q79231

switching actuator 4-gang

- 4 channels
- 4 rail units
- switching capacity 16 A at 250 V AC
- suitable for C-load

type	TE	order-no.
A4F16-Q	4	Q79232

switching actuator 6-gang

- 6 channels
- 6 rail units
- switching capacity 16 A at 250 V AC
- suitable for C-load

type	TE	order-no.
A6F16-Q	6	Q79234

switching actuator 9-gang

- 9 channels
- 9 rail units
- switching capacity 16 A at 250 V AC
- suitable for C-load

type	TE	order-no.
A9F16-Q	9	Q79235

switching actuator 4-gang with staircase function

• 4 channels with selectable switch off times
  period: from 5 seconds up to 20 minutes
• 4 rail units
• switching capacity 16 A at 250 V AC
• suitable for C-load

type	RU	order-no.
A4F16-Q	4	Q79233

Blind / shutter actuator 2-gang

• 2 independent drives
• switching capacity 6 A at 250 V AC

type	RU	order-no.
J2F6-Q	3	Q79431

Blind / shutter actuator 4-gang

• 4 independent drives
• switching capacity 6 A at 250 V AC

type	RU	order-no.
J4F6-Q	4	Q79432

Blind / shutter actuator 6-gang

• 6 independent drives
• switching capacity 6 A at 250 V AC

type	RU	order-no.
J6F6-Q	6	Q79434

Blind / shutter actuator 4-gang with individual channel control

• blind or shutter mode is individually selectable for each of the 4 channels, provides maximum
  flexibility in your installation
• switching capacity 6 A at 250 V AC

type	RU	order-no.
J4F6-QA	4	Q79433

Wind sensor

• including external KNX quick evaluation unit

type	order-no.
comming soon	Q78902

quick demo case - net price offer

contains:
• Blind / shutter actuator 4-gang / type: J4F6-QA
• switching actuator 4-gang with staircase lighting
function/ Typ: A4F16-QT
• switching actuator 2-gang / type: A2F16-Q
• Universal dimming actuator 4-gang / type: DIM4FU-2-FW-Q
• Power supply unit / type: NT160-42
• 4 push button interfaces
• 3 push button sensors Exclusiv 55 incl. rocker and frame
• 1 design switch
• ready for use

	order-no.
	Q799031

KNX Actuators

The Lingg & Janke KNX 4-gang universal dimmer can be used for all common dimmable light sources, including energy saving and LED retrofit lamps. It offers the operating modes universal, leading-edge and trailing-edge control.

All four channels are 100 percent short-circuit proof. In addition, each channel has its own integrated energy consumption meter that can read out active energy, active power, voltage (Vrms) and current (Irms) values. The data format is the same as for the Lingg & Janke energy meters. The dimmer provides full FacilityWeb capability and has its own homepage.

The switching actuators of the eibSOLO and eibDUO professional series obtained a complete new ETS application, which offers a complete new range of use. In the new application 32 scenes per channel are programmable, an hour meter was added to each channel, and the time-, report- and lock-functions were totally revised. The well-known advantages and the high quality remain untouched, for example they are still ideally suited for switching capacitive loads with high inrush currents (C-load).

Universal dimming actuator 4 x 2,5A

• 100% short-circuit proof
• for all dimmable light sources
• can be used for dimmable LED retrofit lamps
• can be used for dimmable energy saving lamps
• flicker-free dimming range 0-100%
• each channel has its own integrated energy consumption meter
• can read out active energy, active power, voltage (Vrms) and current (Irms) values for each channel
• 32 scenes per channel
• energy, power, voltage and current logging
• complete FacilityWeb functionality

type	RU	order-no.
DIM4FU-2-FW	12	87601

Universal dimming actuator 2-gang 570W / VA

• 2/4 independent dimmer switches with 570W / VA for each channel
• automatic load detection (R,L,C)
• robust metal case to dissipate heat

	type	RU	order-no.
discontinued	DIM2FU-IP-OH	6	89607

Dimmer supplementary modul

• Simple parallel connection to the load (neutral conductor N and dimming phase LD can be connected either way, reverse connection impossible)
• Suitable for 230 VAC
• Operation independent of the load quantity
• Maximum power dissipation during dimming 1.7W, no stand-by losses
• Snap-on DIN rail housing with practical double terminals (ZSL-REG only)
• Range: from minimum load to maximum dimmer current

type	RU	order-no.
ZSL-REG	1	87610
ZSL-UP	-/-	87611
ZSL-12V	-/-	87612

KNX Actuators

Double switching actuator eibDUO (2x6-gang) 10A or 16A

• manual operation of the switches without bus power
• suitable for C-load
• new comfort-version (type -2) with complete new ETS application
    • 32 scenes per channel
    • hour meter to each channel
    • time-, report- and lock-functions totally revised

	type	RU	order-no.
	A2X6F16H (16A)	12	89200
discontinued	A2X6F10H (10A)	12	89202
new	A2X6F16H-2 (16A)	12	89204

switching actuator eibSOLO (6-gang) 10A or 16A

• manual operation of the switches without bus power
• suitable for C-load
• new comfort-version (type -2) with complete new ETS application
    • 32 scenes per channel
    • hour meter to each channel
    • time-, report- and lock-functions totally revised

	type	RU	order-no.
	A6F16H (16A)	6	89201
discontinued	A6F10H (10A)	6	89203
new	A6F16H-2 (16A)	6	89205

Actuator eibDUO (6-gang) 16A with PSU + USB

• KNX power supply unit 640 mA with choke
• manual operation of the switches without bus power
• suitable for C-load
• USB interface
• new comfort-version (type -2) with complete new ETS application
    • 32 scenes per channel
    • hour meter to each channel
    • time-, report- and lock-functions totally revised

	type	RU	order-no.
	NTA6F16H+USB	12	89221
new	NTA6F16H+USB-2	12	89222

Actuator eibDUO (6-gang) 16A with PSU

• KNX power supply unit 640 or 320 mA with choke
• manual operation of the switches without bus power
• suitable for C-load
• new comfort-version (type -2) with complete new ETS application
    • 32 scenes per channel
    • hour meter to each channel
    • time-, report- and lock-functions totally revised

	type	RU	order-no.
	NTA6F16H	12	89210
new	NTA6F16H-2	12	89212

Blind / shutter actuator (4/6-gang) 6A

• manual operation of the drives without bus power
• 4/6 independent drives
• 2 positions for each drive available

type		RU	order-no.
J4F6H	4 independent drives	6	89400
J6F6H	6 independent drives	6	89401

Blind / shutter actuator comfort (4/6-gang) 6A

• manual operation of the drives without bus power
• 4 / 6 independent drives
• direct positioning of shutter / blind and lamella
• 3 steps security for each drive
• 8 scenes for each drive

type		RU	order-no.
J4F6H-2	4 independent drives	6	89420
J6F6H-2	6 independent drives	6	89421

eco+

The eco+ product range by Lingg & Janke is convincing through its outstanding price-performance ratio. eco+ offers a wide range of KNX standard products like switching actuators, blind / shutter actuators and binary inputs.

The advantages and the high quality of Lingg & Janke products remain unchanged. For example the switching actuators are still ideally suited for switching capacitive loads with high switching currents (C-load) and the relays of the blind / shutter actuators are plunged, so they can be exchanged in case of malfunction.

The latest version of the switching and shutter actuators now include an electronic manual operation feature for easier commissioning.

Switching actuator

- 2, 4, 6 oder 9 chanels
- electronic manual operation
- switching capacity 16 A with 250 V AC
- suitable for C-load

	type	RU	order-no.
switching actuator 2-gang	A2F16-E	3	79231
switching actuator 4-gang	A4F16-E	4	79232
switching actuator 6-gang	A6F16-E	6	79234
switching actuator 9-gang	A9F16-E	9	79235

Blind / shutter actuator

- 2, 4, oder 6 independent drives
- electronic manual operation
- switching capacity 6 A at 250 V AC

	type	RU	order-no.
blind / shutter actuator 2-gang	J2F6-E	3	79431
blind / shutter actuator 4-gang	J4F6-E	4	79432
blind / shutter actuator 6-gang	J6F6-E	6	79434

Binary in-/output 4-gang

without picture

- Variations:
  - for switches with potential free contacts - max. cable length 100 m
  - 230 V, signal voltage for each channel 230 V AC/DC
- switching capacity 16 A with 250 V AC
- suitable for C-load

|		type	RU	order-no.
available as of 2nd quarter 2016	binary in-/output for switches, 4-gang	BEA4FK16-E	6	79243
available as of 2nd quarter 2016	binary in-/output 230 V, 4-gang	BEA4F230-E	6	79244

Binary in-/output 8-gang

- Variations:
  - for switches with potential free contacts - max. cable length 100 m
  - 230 V, signal voltage for each channel 230 V AC/DC
- switching capacity 16 A with 250 V AC
- suitable for C-load

		type	RU	order-no.
	binary in-/output for switches, 8-gang	BEA8FK16-E	9	79241
available as of 2nd quarter 2016	binary in-/output 230 V, 8-gang	BEA8F230-E	9	79242

Binary input 4-gang

- Variations:
  - for switches with potential free contacts - max. cable length 100 m
  - 230 V, signal voltage for each channel 230 V AC/DC
- 4 channels

	type	RU	order-no.
binary input for switches	BE4FK-E	4	79531
binary input 230 V	BE4F230-E	4	79532

KNX binary inputs, system devices, accessories
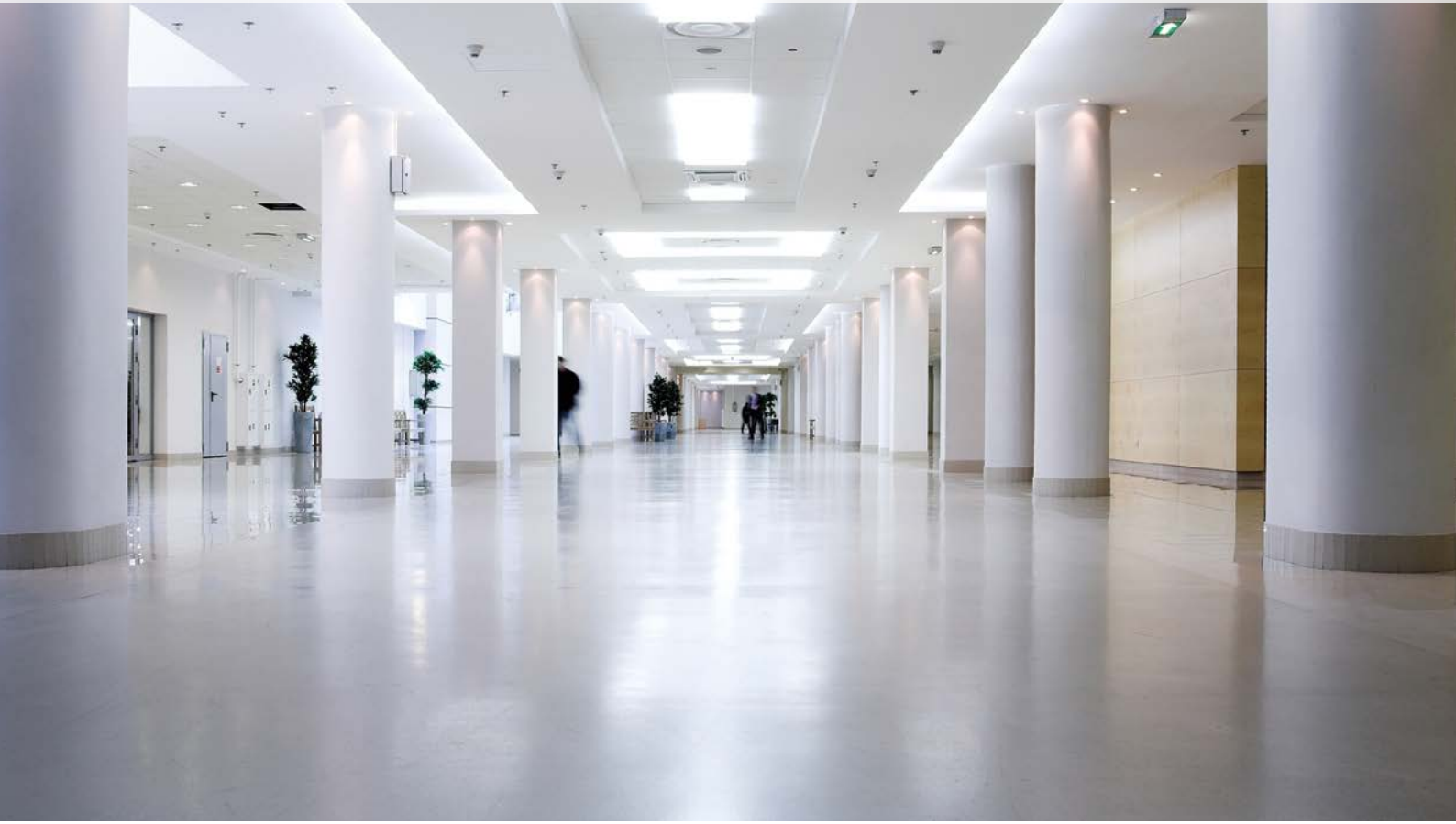
The KNX binary inputs (BE9F24/BE9F230) can generate bus telegrams on 9 independent channels.
For each channel, an LED indicates the state of the signal, even without bus voltage.
Comprehensive application software allows each channel to be parametrized individually. A counting feature complements the switching, dimming, shutter control and value feature of the binary input. The switching feature can generate two separate telegrams.
Each channel is connected to a screwless terminal.

The power supply unit provides the system power necessary for the bus system. The integrated choke prevents the data telegrams from short-circuiting on the bus line.

The connection to the bus line is established by clicking the device onto the DIN-RAIL (installed data-rail) or by using the bus connection terminal (red-black) on the front side.

Binary input (9-gang)

- 9 independent inputs
- the signal voltage for each channel may be between 8V...48V and 180V...250V AC or DC
- for each channel, an LED indicates the state of the signal
- the switching feature can generate two separate telegrams

type		RU	order-no.
BE9F230	signal voltage 230V AC/DC	6	89505
BE9F24	signal voltage 230V AC/DC	6	89506

Binary input (9-gang) for switches

- 9 independent inputs
- potential free - max. cable length 100 m

type	RU	order-no.
BE9FK	6	89501

Universal push button interface

- with separate wire connectors
- rocker function or single buttons points are programmable
- available in 3 variations:
    - 4 single buttons with or without LEDs or 8 single buttons

		type	order-no.
available as of 2nd quarter 2016	push button interface for 4 single buttons	TS4F-2-U	79880
available as of 2nd quarter 2016	push button interface for 4 single buttons and LED	TS4FL-2-U	79881
available as of 2nd quarter 2016	push button interface for 8 single buttons	TS8F-2-U	79882

system devices / accessories

Power supply unit 640, 320, 160 mA

• KNX power supply unit with choke
• bus voltage output via bus connectors
• seperate voltage output - decoupled

type		RU	order-no.
NT640-62	640 mA	6	88405
NT320-42	320 mA	4	88406
NT160-42	160 mA	4	88407
NT640-4	connection with data rail and bus connector	4	88401

Line coupler / backbone coupler

• for connection of independent bus lines
• connection with bus connectors only

type	RU	order-no.
LK2-2	2	88502

KNX USB – interface

• Power supply via KNX
• DIN rail mounting device (1 RU)

type	RU	order-no.
COMUSB-REG-1	1	89340

KNX IP – interface

type	RU	order-no.
COMIP-REG-2	2	87340

KNX energy consultant case

• Case with ready-to-use equipment for the acquisition of energy data via the optical EHZ interface
• Graphical processing of the data for presentation in a Web browser
• Storage of hourly values over a 10-year period
• integrated WLAN router
Case contents EHZ optical: Network coupler NK-FW graphic / WLAN router / EHZ interface / optical reading head EDL21
Case contents Kamstrup optical: Similar to contents for EHZ optical, but with protocol for Kamstrup electricity meters

type	order-no.
energy consultant case Optical EHZ	99009
energy consultant case Optical Kamstrup	99024

M-Bus parametrization

• parametrization tool for M-Bus installation
• capacity for 10 end device
• power supply over laptop via USB

type	order-no.
MikroMaster USB	87999

Time transmitter-DCF77

• can be used with and without DCF77 antenna
• time (EIS3), date (EIS4)

type	RU	order-no.
discontinued ZS-DCF	2	88900

Antenna DCF77

type	order-no.
discontinued DCF-ANT	88901

Bus connectors

• to connect devices to the KNX bus
• colours : red / black or yellow / white
• unit: 50 pcs.

type	order-no.
AK-1 (rt-sw)	88322
AK-2 (ge-ws)	88323

Design Wall-mounting frame

The wall-mounting frames of the smart-frame series allow easy installation of tablets / smartphones on the wall. In consequence of the magnetic coupling of the frame no holes or fasteners such as screws are visible.
The frames are made of colored acrylic glass with a gloss finish and matte sides. Due to the reduced revolving edge the frame looks very flat.
For the supply of the devices an optional adapter for installation in a 55 mm flush-mounting box is available.

For the iPod Touch a switch box is sufficient for assembly, no further drilling is required. An appropriate support ring is included.
For the larger frames (for iPad, Samsung Tablets etc.) 4 wall-mounting holes are required. A template for this purpose and the necessary mounting hardware is included.
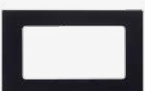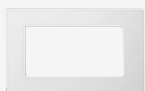
Design wall frame Apple

- fits into built-in-boxes
- magnetic mounting on 4 wall screws
- vertical or horizontal mounting

type	colour	order-no.
Apple iPad 2 / 3 / 4	white	88011
Apple iPad 2 / 3 / 4	black	88012
Apple iPad 1	white	88021
Apple iPad 1	black	88022
Apple iPad Air 1 / 2	white	88071
Apple iPad Air 1 / 2	black	88072
Apple iPad Mini 1 / 2 / 3	white	88031
Apple iPad Mini 1 / 2 / 3	black	88032
Apple iPad Mini 4	white	88033
Apple iPad Mini 4	black	88034
Apple iPod Touch 4.Generation	white	88041
Apple iPod Touch 4.Generation	black	88042
Apple iPhone 3	white	88051
Apple iPhone 3	black	88052
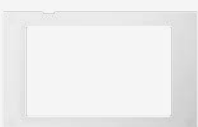
Design wall frame Samsung GalaxyTab

- fits into built-in-boxes
- magnetic mounting on 4 wall screws
- vertical or horizontal mounting

type	colour	order-no.
GalaxyTab3 10.1 (GT-P5200)	white	88081
GalaxyTab3 10.1 (GT-P5200)	black	88082

Power supply

- fits into built-in-boxes
- power supply with USB connection, cable for device connection is not included in the delivery
- max. output current 1A

type	order-no.
power supply with USB connection	88003

Control with FacilityWeb

The availability of load-varying tariff or time-of-use rates in the future will be an incentive for customers to reduce the peak energy consumption of their consumers and maximize energy-saving potential. With FacilityWeb, household appliances such as water heaters, washing machines, dish washers or freezers can be linked with the electronic meter.

Consumers and building equipment can be switched on/off according to the temperature information, window position and current performance data provided through the KNX network - both from a central point or from any location at any time via web browser or Smartphone.

FacilityWeb is a registered trademark of Lingg & Janke. It provides highly effective functions for measuring, visualizing and controlling the consumption of different energy sources via Intranet or Internet. Commissioning engineers, house owners or real estate managers are now able to obtain operational information or meter readings of the devices from any location via Intranet/Internet and implement energy saving measures while the individual systems are operating.

KNX Smart Metering Lingg & Janke KNX Smart Metering is distinguished by the low energy consumption of the employed KNX bus couplers. With a power consumption of 0.2 Watt only, FacilityWeb offers a high degree of energy efficiency for smart metering applications. Facility-Web products put minimal strain on the environment.

Based on the open standard „FTP over KNX", efficient smart meter solutions for consumption measurement and analysis can be easily implemented to monitor energy usage and control energy costs.

Lingg & Janke supplies innovative products and system solutions for more efficiency, security and installation flexibility in both residential and commercial buildings. Lingg & Janke KNX Smart Metering comprises branch and manufacturer independent universal solutions for the integration of a wide variety of meter types.

- complete FacilityWeb functionality
- low energy consumption
- Data logger with storage capacity for one year's consumption data
- TCP/IP protocol

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Subject to technical modification / errors excepted   03/2016

KNX Smart Metering from Lingg & Janke - branch and manufacturer independent