

# Kamstrup 351 Combi

**Current transformer electricity meter**

**Active and (optional) reactive energy measuring**

**Primary (true) and secondary (calibrated) energy data is measured and displayed**

**Programable transformer ratio**

**Real time clock**

**Configurable logging interval (5, 15, 30 or 60 minutes)**

**Space for retrofitting plug-in modules for communications and other functions**

**Type approved according to IEC 61036, class 1  
IEC 61268, class 2**



## Application

Kamstrup 351 Combi meter is a three-phased current transformer electricity meter for registering active and reactive energy.

The meter is equipped with an easily-readable display showing the total consumption of both calibrated and true energy. Furthermore, the consumer can use the push-button to see peak power, transformer ratio and current power registers.

The terminal strip and fitting bracket are DIN standard which means that the electricity meter can easily replace other meters, either indoors or in a suitable meter cabinet.

Plug-in modules and configurable transformer ratio make this electricity meter extremely adaptable for different applications. All changes can be made without the need for reverification.

The functionality of the meter can be extended by adding an extra pulse output or input; serial communication or an internal module that manages up to 4 different tariff registers.

The value of the electricity meter counter and all logged data can be retrieved without having access to the meter. With plug-in modules for radio, PLC or GSM communications to remotely read data, simple and economical AMR is available.

The Kamstrup 351 Combi meter is fully electronic with no moving parts. Mechanical shock has no influence on the measured values.

The internal module option and low power consumption ensures that the meter operates cheaply and reliably – both now and in the future.

The secondary reading (calibrated energy counter) is of high resolution and also accurate and stable over time. Verification can be carried out quickly on all standard test benches.



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# Functions

## Display

The electricity meter has a liquid crystal display with 1+7 numerical digits plus 3 alphanumerical characters. During normal operation the total value for consumed electric energy is displayed with 7 digits and the corresponding measuring unit kWh/kvarh by the 3 alphanumerical characters.

When the push button on the front panel is activated, the data and functions selected during configuration will be displayed in sequence. The value in the display changes when the push button is released.

Two minutes after the push button has been pressed, the display will return automatically to the meter's primary reading, i.e. true energy.

In addition to the many different readings, information relating to normal operation will also be displayed:

Three small squares in the top left corner of the display indicate that energy is being consumed in each individual phase. No indication is displayed if a system is switched to output and input.

Three symbols (L1, L2, L3) at the bottom left of the display indicate if each individual phase is connected.

The symbols on the right side of the display – one for each tariff – indicate which tariff is active if the meter is configured for more than one tariff.

If the phase sequence L1, L2, L3 is reversed, the symbols L1, L2 and L3 flash in the display (only applies to 4-wire meters).

## Transformer ratio

The transformer ratio in the Kamstrup 351 Combi meter can be configured depending on which power transformer is installed with the meter.

The ratio can be configured from 5/5 A to 2000/5 A without reverifying the meter.

The true energy can be seen in the display, when entering the transformer ratio of the current transformer.

The calibrated energy reading always indicates the total consumption in kWh/kvarh.

The display readout of calibrated energy can never be deactivated.

The configuration can be changed without breaking the verification seal.

## Measuring technique

Energy is determined by simultaneously measuring voltage and current. The voltage is measured by means of voltage transformers, whereas the current is measured via current transformers. When both current and voltage transformers are used a complete galvanic separation is ensured between the individual current and voltage measuring circuits (also between the phases), and partly between the phases and the microprocessor circuit.

Each of the three galvanically separated measuring circuits has its own stabilized power supply. The individual measuring circuits ensure that the phase sequence does not affect the meter's accuracy. From the measuring circuits the currents are sent to a micro-processor, which converts these to pulses.

## Permanent memory

The Kamstrup 351 Combi electricity meter has a permanent memory which protects billing data and consumption records in the event of a power failure.

The values for the calibrated and true energies are stored in the EEPROM.

- a) **Logged data**  
Load profile log data is stored in EEPROM for a period of 35 days with a logging interval of 15 minutes.
- b) **Monthly data**  
The meter contains monthly values for 36 months. The day of the month on which these data should be saved can be configured as required. Data is always saved at 00.00.00. hrs.

It is also possible to configure the meter to store monthly data based on an external control unit.

Monthly values are: date, true energy active, tariff 1 active, tariff 2 active, tariff 3 active, tariff 4 active, true energy reactive, peak power active, peak power reactive, accumulated active peak power, total reactive peak power and pulse counter.

Peak power is reset every month, so that the heat consumption can be monitored month by month from an external heat meter.

A clock and calendar with battery back-up are an integral part of the meter. The internal battery has an estimated lifetime of 15 years at an operating temperature of maximum 35°C, and a back-up time of maximum 12 months.

The clock, which is updated during communication, has an accuracy that is better than 30 ppm.

## Communication

All configuration and data acquisition, in respect to the Kamstrup 351 Combi meter, occurs either serially with Kamstrup protocol or according to IEC 61107 mode A, by means of a standard PC.

- a) **Optical communication**  
An optical, infrared transmitter and receiver (IEC 61107), are placed on the left hand side of the meter's front panel. A standard optical readout head, e.g. Kamstrup type 6699-102 or similar is used.
- b) **Serial communication**  
Serial reading data is communicated via module and data plug or data cable, Kamstrup no. 6699-106.

Use Kamstrup's configuration software METERTOOL to configure Kamstrup 351 Combi.

To acquire data or similar Kamstrup's PcTarifBase program can be used to export data to the majority of standard billing systems and statistical programs.

# Functions

## S0 Outputs

The S0 output is a potential-free pulse output. 5,000 imp/kWh and 5,000 imp/kvarh are transmitted, both with an impulse length of 30 ms.

A yellow LED flashes with 10,000 imp/kWh.

Pulses from both the S0 output and the S0 diode (LED) are sent in relation to the primary side of the transformer, i.e. the pulses indicate primary energy.

## Module controlled pulse output (option)

In addition to the integral S0 output for active and reactive energy, it is possible to get an extra impulse output by using an optional data/pulse module. Pulses – given for active energy – can be weighed according to the primary (true) or secondary (verified) energy.

A weighting according to primary energy makes optional impulse constant from 1 imp/kWh to 100,000 imp/kWh.

If you weigh according to secondary energy the impulse constant is the same as that for the S0 output: 10,000 imp/kWh.

## Tariff control

Kamstrup 351 Combi can register the energy parallel to the main register in up to four different tariff registers. Which register is used for accumulating can be determined via software (called "communication control" or via the modular space as with a potential-free or 230 VAC switch, called "module control").

Tariff control is selected by means of the configuration software *METER TOOL for 351 Combi*.

Via plug-in modules tariff switches are controlled by a contact or voltage (230 V) applied on a operating input, and the control follows the binary principle. In the following schematic overview "1" means that the contact is switched off or that 230 V is applied on the operating input, and "0" indicates the opposite (open switch or no applied voltage).

With normal input, the active tariff will be controlled as follows:

Input 1	Input 2	Active tariff
0	0	1
1	0	2
0	1	3
1	1	4

If the input is inverted, the active tariff will be controlled as follows:

Input 1	Input 2	Active tariff
1	1	1
0	1	2
1	0	3
0	0	4

## Debiting logger

The debiting logger is used for recording selected counts at a fixed target date. This date can be selected on a daily or monthly basis.

On a daily basis the logging is made at 00:00:00 hrs. when shifting into one or more selected weekdays. On a monthly basis the logging is made at 00:00:00 hrs. when shifting to one or more selected months.

The depth of the debiting logger is a simple logging with following registers:

Date, primary active energy, primary reactive energy, primary active peak power and primary reactive peak power.

## Alarm and error functions

Kamstrup 351 Combi has continuous internal surveillance of micro processor and memory. If the meter detects an error an "E" will lit up in the left side of the display. The error type can be read in the info register or by means of Kamstrup software.

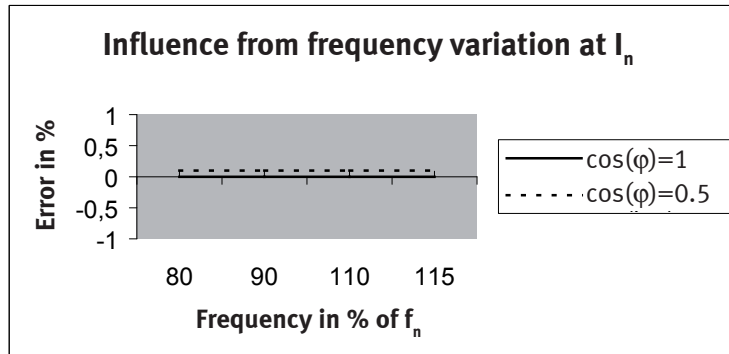
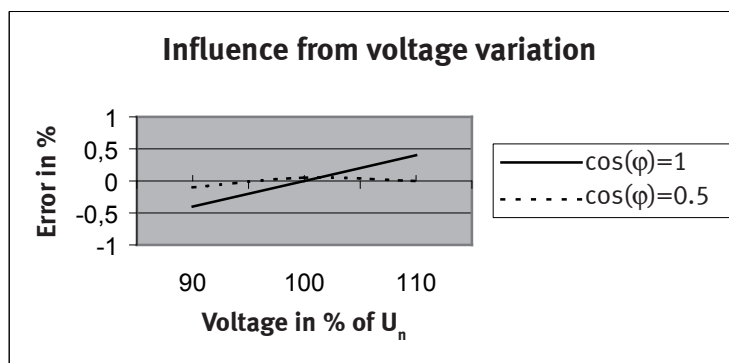
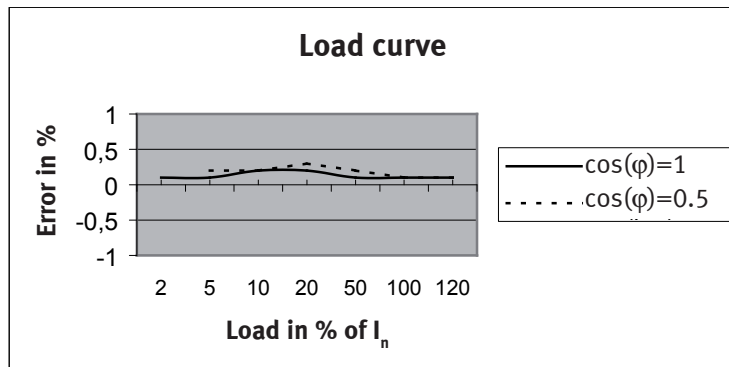
The overview below shows information codes and descriptions.

Information code	Description	"E" is shown in the display	Contact your local Kamstrup representative
1	-	-	No
10	EEPROM checksum error	Yes	Yes
100	EEPROM test error	Yes	Yes
1,000	RAM test error	Yes	Yes
10,000	ROM checksum error	Yes	Yes
100,000	Alarm input activated	No	No
1,000,000	Voltage missing on one or two phases	No	No

## Alarm input – status input

Kamstrup 351 Combi is equipped with an alarm input – status input for future applications.

## Typical accuracy graphs



Only apply to 4-wire meters.

## Metrological data

Approval	Norm	Approval	Norm
Meter	Class 1, IEC 61036, 2. edition Class 2, IEC 61268, 1. edition	Terminal block	DIN 43857
Optical reading	IEC 61107	S0	DIN 43864

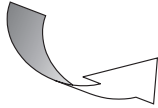
## Technical data

Measuring principle	Current transformers	Memory	EEPROM
Voltage range $U_n$	3 x 230/400 VAC +/- 10% 3 x 230 VAC +/- 10%	Data storage	> 10 years without power (EEPROM)
Current range		Display	1+7+3 digits, 7 mm digit height
$I_n$	5A	Optical communication	IEC 61107 mode A
$I_{max}$	6A	S0 LED (meter constant)	10,000 imp/kWh 10,000 imp/kvarh
Frequency $f_n$	50 Hz	S0 pulse output	5,000 imp/kWh 5,000 imp/kvarh
Power factor	$\cos\phi = 0.5_{\text{inductive}}$ $\cos\phi = 0.8_{\text{capacitive}}$	<b>Connections</b>	
Power consumption		Current/ voltage terminals	Elevator terminals 2.5 - 10 mm <sup>2</sup>
Pressure circuit	≤ 0.3VA, 0.3W	Screws	Ph2/6x1mm
Current circuit v/ $I_n$	≤ 0.1VA	Tightening	2.5-3 Nm
Location	Indoors or in a suitable cabinet	Voltage terminals	Elevator terminals 0.5 - 1.5 mm <sup>2</sup>
Operating temperature	-40°C - +60°C	Tightening	0.4 Nm
Storage temperature	-40°C - +75°C	S0 pulse output	0.15 - 1.5 mm <sup>2</sup>
Protection class	IP51		
Protective class	II		
Relative humidity	< 95% (IEC 61036)		
Weight	880 g		
Materials			
Cover	Transparent polycarbonate		
Base	Glass-reinforced polycarbonate		

## Mounting

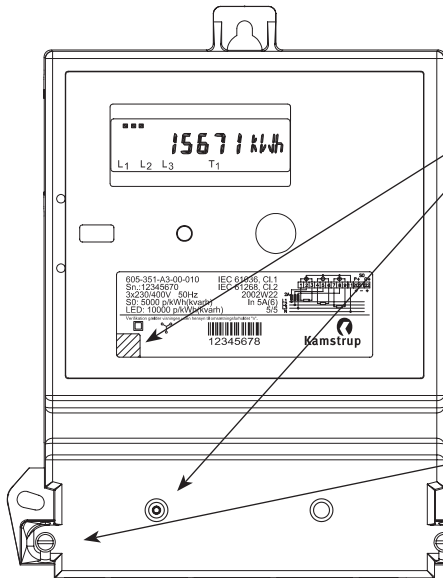


The flexible and small design of the Kamstrup electricity meter and the DIN standard terminal block makes it easy to install.



The meters can be used in central hallways and can be supplied with a long terminal cover. This ensures double insulated installation and simple sealing of installation screws. Due to the meter's integrated fitting bracket it can be mounted on a DIN-rail.

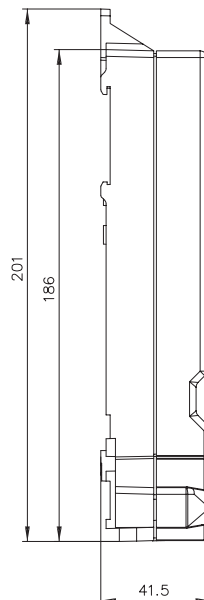
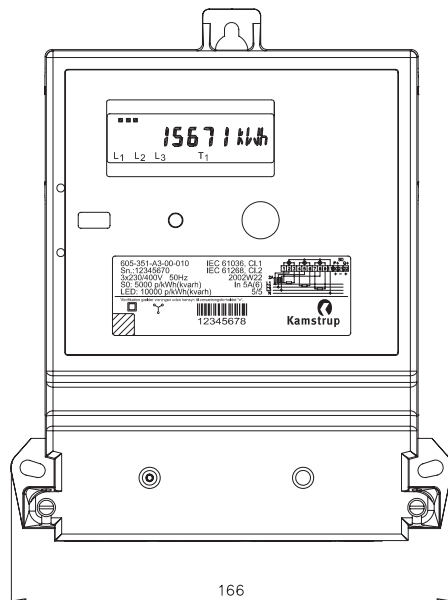
## Sealing



The electricity meter's verification seal is fitted by the factory and can be seen through the transparent part of the top cover.

The top can be sealed with ordinary types of seals through the sealing screws and the holes at the top of the meter or with void label on one of the sealing screws.

## Dimensions



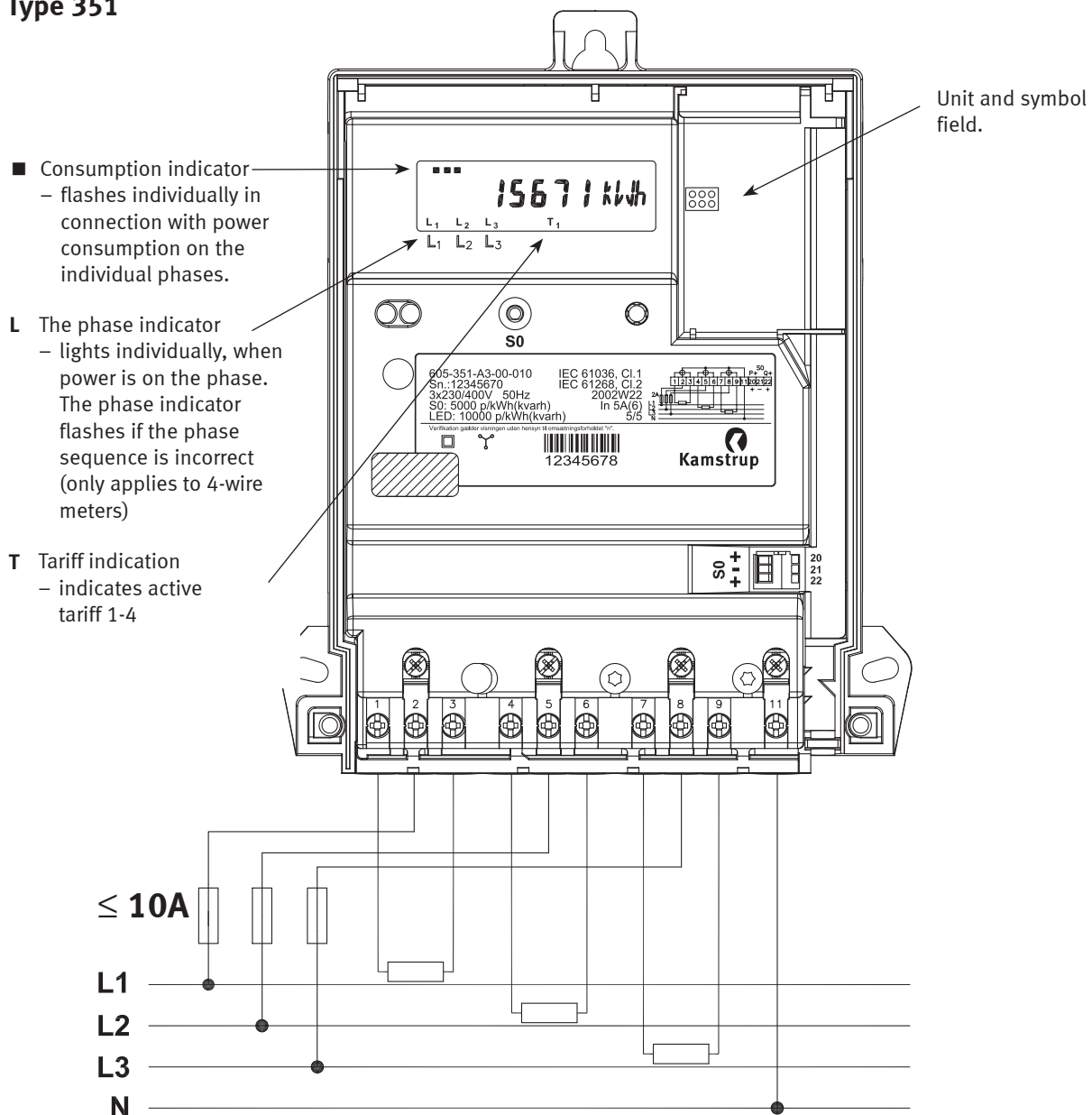
All dimensions are stated in mm

# Installation

## Installation guide

1. Install the meter on suitable background material
2. Connect communication module, if mounted
3. Mount current and voltage terminals. Please note pre-fuse  $\leq 10A$  on the power connection, as per the installation diagram below
4. Mount the top cover
5. Connect voltage and make sure that load indicators (three in all) are lit.
6. If one or more load indicators are not lit it might be due to a failed power connection. Remove the voltage for the installation and check it or the power connections and proceed then to item 4
7. Make sure that the voltage indicators are lit and remain permanently visible (please note that this only applies to 4 wire meters).
8. If the voltage indicators flash, this might be due to incorrect phase sequence. Remove the voltage from the installation and check the phase connection, and proceed to item 4
9. If the load and voltage indicators indicate correct mounting, the meter installation is then complete
10. If a communication module is installed, please follow the manual for the module in question

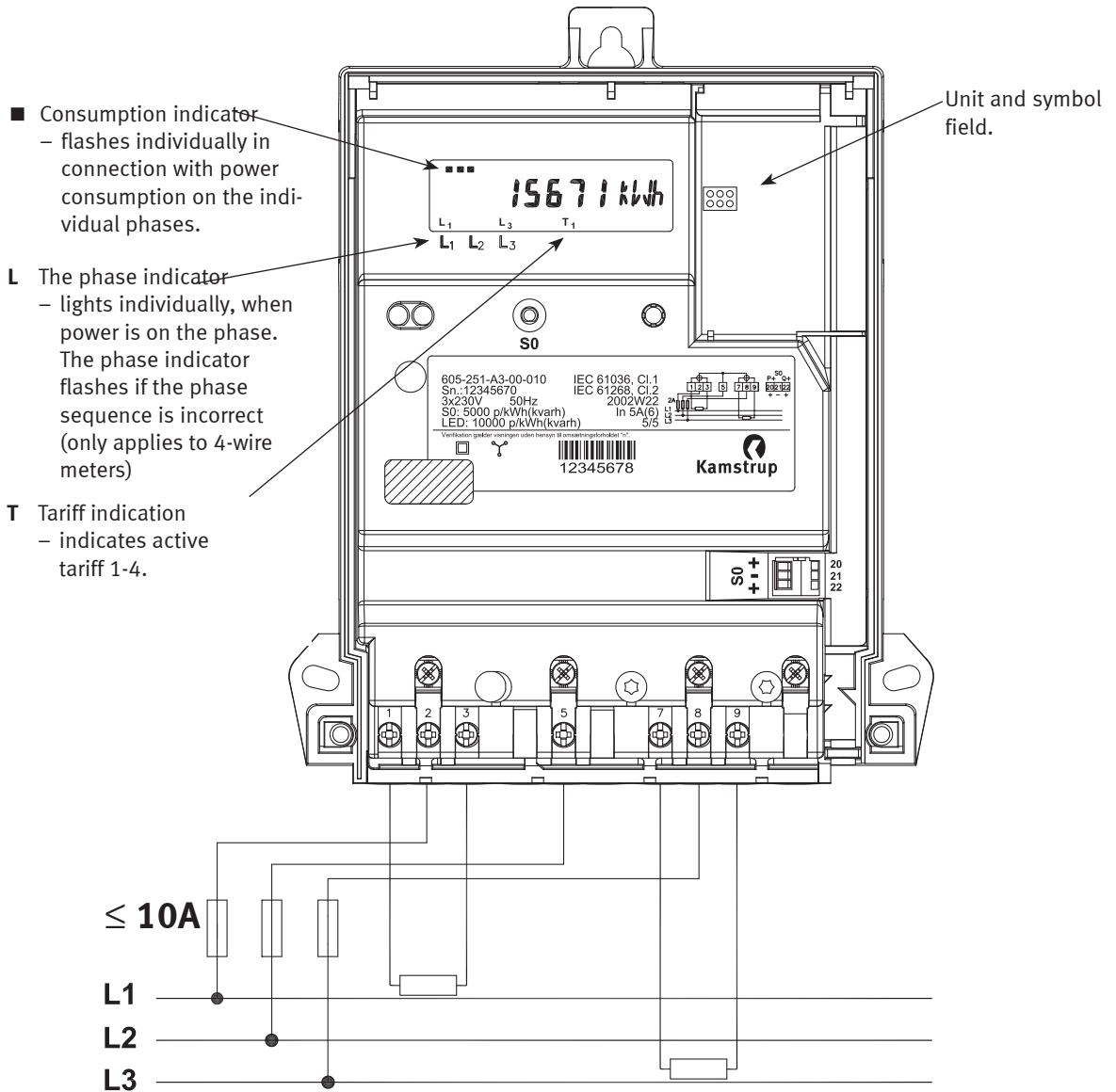
## Type 351



**Warning: Installation by authorised personnel only.**

# Installation

## Type 251



**Warning: Installation by authorised personnel only**



## Display configuration

The display readings in Kamstrup 351 Combi meter can be configured as required. The meter will return to the initial reading after two minutes.

A Kamstrup 351 Combi meter is supplied with the following display configurations:

<b>Verified active energy</b> Verified active energy is the verified (secondary) energy measured according to the meter's markings, without taking into account the external transformer.	cal/kWh	<b>Active peak power</b> Active peak power shows the highest active power of the month. E.g. if the logging period e.g. is 15 min., it is therefore the quarter-power, which is reflected. Peak power is stored monthly. The new peak power overwrites the preceding value.	PK/kW
<b>Verified reactive energy</b> Verified reactive energy is the verified (secondary) energy measured according to the meter's markings, without taking into account the external transformer.	cal/kvarh	<b>Reactive peak power</b> Reactive peak power shows the highest reactive power of the month. E.g. if the logging period is 15 min., it is therefore the quarter-power, which is reflected. Peak power is stored monthly. The new peak power overwrites the preceding value (primary value).	PK/kvar
<b>True active energy</b> True active energy is the true consumption (primary value), where the customer can see the total consumption - without conversions.	kWh/kWh	<b>Accumulated active peak power</b> This register contains the accumulated true reactive peak power. The peak power is registered in connection with a monthly logging (primary value).	APK/kW
<b>True active energy - tariff 1</b> Indicates the total consumption of true active energy in tariff 1 (primary value).	T1/kWh	<b>Accumulated reactive peak power</b> This register contains the accumulated true reactive peak power (primary value). The peak power is registered in connection with a monthly logging.	APK/kvar
<b>True active energy - tariff 2</b> Indicates the total consumption of true active energy in tariff 2 (primary value).	T2/kWh	<b>True active energy counter</b> Here the counter value for true active energy is shown (primary value). The counter can be reset by pressing the function key (counters for active and reactive energy are reset simultaneously).	TRP/kWh
<b>True active energy - tariff 3</b> Indicates the total consumption of true active energy in tariff 3 (primary value).	T3/kWh	<b>True reactive energy counter</b> Here the value of the counter is displayed for true reactive energy (primary value). The counter can be reset by pressing the function key (counters for active and reactive energy are reset simultaneously).	TRP/kvarh
<b>True active energy - tariff 4</b> Indicates the total consumption of true active energy in tariff 4 (primary value).	T4/kWh	<b>Transformer ratio</b> The display reflects the transformer linked to the meter. The transformer ratio can be changed without reverifying the meter.	xxxx/5
<b>True reactive energy</b> True reactive energy is the true consumption (primary value), where the customer can see the total consumption - without conversions.	kvarh/kvarh	<b>Meter number</b> Offers the possibility of programming a separate 8 digit consumer/meter number.	NUM/NUM
<b>Current active power</b> The current power shows the true instantaneous effect as an average over 10 sec. (primary value).	kW/kW	<b>Date</b> The date is shown as YY.MM.DD.	DAT/DAT
<b>Current reactive power</b> The current power shows the true instantaneous effect as an average over 10 sec. (primary value).	kvar/kvar	<b>Clock</b> The clock of the electricity meter always shows standard time, i.e. daylight saving time is not taken into consideration. The format is HH.MM.SS.	CLK/CLK

## Display configurations

<b>Operating hour counter</b> The hour counter shows the number of hours the meter has been in operation. Operation under battery power is not included.	<b>HRS/HRS</b>	<b>Display</b> Blank value	
<b>Special data 1-2</b> Can be used for special customer data. 8 digits can be shown.	<b>SPC1-2</b>	<b>Display test</b> Shows all LCD-segments in the display.	
<b>Pulse input</b> The display shows total m <sup>3</sup> , l, kWh without unit value.	<b>m<sup>3</sup></b> <b>l</b> <b>kWh</b>	<b>Call</b> Can be used for activating a plug in module.	<b>call/call</b>
<b>Module data I/O</b>		<b>Configuration number 1</b> Contains among other things information on the display setup (see order specification).	<b>KF1/KF1</b>
<b>Information register</b> Contains status information and can be used for service purposes, if an "E" appears at the outer left side of the display.	<b>info/info</b>	<b>Configuration number 2</b> Contains among other things information on unit on the pulse inlet (see order specification).	<b>KF2/KF2</b>

Note: The unit display shifts between unit 1 and unit 2, e.g. between T1 and kWh.

If the internal monitor of the meter detects an error, an "E" lights up in the left side of the display. Please contact the local Kamstrup distributor.

Please refer to the order specification for a complete overview of possible standard display set-ups.

## Plug-in modules

Kamstrup 351 Combi can be supplied or retrofitted with plug-in modules without reverification.

Following modules can easily be mounted as "plug & play.:

### **GSM5i**

Dual band GSM modem with control output and status input as well as datalogger option

### **Radio module**

Remote reading of meter data via radio communication including pulse/tariff control input

### **PLC module**

Remote reading of metering data via powerline. Uses the A-band.

### **Data/impulse module**

RS232 interface (e.g. for external GSM modem), pulse/tariff control input and potential-free pulse output.

### **V22 Modem**

Analogue telephone modem including pulse/tariff control input.

### **Tariff module, 4 tariffs, 230 V, data**

Control of 4 tariffs, 230 V control input and RS232 interface.

### **Tariff module, 4 tariffs, 230 V, CS**

Control of 4 tariffs, 230 V control input and current loop interface.

### **Tariff module, 2 tariffs, 230 V**

Control of 2 tariffs, 230 V control input.

### **Tariff module, 2 tariffs, CS, peak reset**

Control of 2 tariffs, potential-free input, current loop interface for reading and input for peak reset

### **S0 supply module**

S0 pulses as per DIN43864 with or without 24 VDC supply, including pulse output

# Order specification

Type number	685-	A	B	C	D	E	FF	GGG
		□	□	□	□	□	□□	□□□
<b>A Meter type</b>								
3-phased Aron.....		2						
3-phased meter.....		3						
<b>B Current range</b>								
5 A .....			5					
<b>C Accuracy class</b>								
Class 1 (Reactive class 2).....				1				
<b>D Generation</b>								
1 .....					A			
<b>E Energy</b>								
Active (pure active meter) .....						1		
Combi (active/reactive meter).....						3		
<b>FF Module</b>								
No module.....OK.....							00	
Tariff module, 2 tariffs, 230V, current loop .....							FK.....	14
Tariff module, 4 tariffs, 230V, current loop .....							PK .....	18
S0 Supply module .....							SK .....	01
Data/pulse module, relay output .....							RK .....	03
M-Bus module .....							MK.....	05
Tariff module, 2 tariffs, 230V .....							WK .....	08
V22 modem.....							HK .....	10
S0 module.....							UK .....	21
Radio module, router.....							QK.....	22
Radio module, router with plastic frame .....							QL .....	26
Radio Module, router load .....							QM .....	27
Radio module, router function 230 VAC tariff control.....							QO .....	38
Radio module, High Power with router function .....							QR.....	43
PLC module, router with i/o .....							PO.....	39
GSM5i .....							YN .....	42
GSM5i/RF, mini concentrator .....							YO .....	46
IP101i, TCP/IP .....							IK.....	40
<b>GGG Country code</b>								
LIT .....							Standard - LIT .....	049
GB .....							Standard - GB .....	050
CH-I .....							Standard - I.....	059
EST.....							Estonia - GB.....	061
CH-D.....							Standard - D .....	063
PL.....							Standard - PL .....	064
CH-F.....							Standard - F.....	065
FIN.....							Standard - FIN 2.....	084

# Configurations

## Configuration 1

	HH □□	J □	KK □□	LLL □□□
<b>HH Transformer ratio (x/5)</b>				
5 A .....	00			
50 A .....	02			
100 A .....	05			
120 A .....	07			
150 A .....	10			
160 A .....	11			
200 A .....	15			
250 A .....	20			
300 A .....	25			
400 A .....	30			
500 A .....	35			
600 A .....	40			
800 A .....	50			
1000 A .....	60			
1200 A .....	70			
1250 A .....	71			
1400 A .....	80			
1500 A .....	84			
1800 A .....	90			
2000 A .....	95			
<b>J Logging period</b>				
5 min.....		1		
15 min.....		2		
30 min.....		3		
60 min.....		4		
<b>KK Module I/O (see scheme).....</b>				
<b>LLL Display configuration (see scheme).....</b>				

## KK Module i/o

Description	Tariff control	KK
00 - No function	Communication	00
01 - 4-tariff	Module	01
02 - 4-tariff inverted	Module	02
03 - Pulse in/alarm in	Communication	03
04 - Pulse in/inv. alarm in	Communication	04
05 - Pulse in/A+ out	Communication	05
06 - R+ out/A+ out	Communication	06
07 - 2-tariff/alarm in	Module	07
08 - 2-tariff inv./alarm in	Module	08
09 - 2-tariff/alarm in inv.	Module	09
10 - 2-tariff inv./alarm in inv.	Module	10
11 - 2-tariff/A+ out	Module	11
12 - 2-tariff inv./A+ out	Module	12
13 - Pulse in/2-tariff	Module	13
14 - Pulse in/2-tariff inv.	Module	14
15 - Max reset/2-tariff	Module	15
16 - Max reset/2-tariff inv.	Module	16
17 - Max reset/A+ out	Communication	17
18 - Max reset/alarm in	Communication	18
19 - Max reset/alarm in inv.	Communication	19

# Configurations

## LLL Display Configuration

		Unit 1	Unit 2	LLL							
				Active/Reactive				Active			
				101	102	103	104	501	502	503	504
1	Verified active energy	cal	kWh	4	8	8	1	3	7	7	1
2	Verified reactive energy	cal	kvarh	5	9	9	2				
3	True active energy	kWh	kWh	1	1	1		1	1	1	
4	True active energy - tariff 1	T1	kWh		3	3			2	2	
5	True active energy - tariff 2	T2	kWh		4	4			3	3	
6	True active energy - tariff 3	T3	kWh		5	5			4	4	
7	True active energy - tariff 4	T4	kWh		6	6			5	5	
8	True reactive energy	kvarh	kvarh	2	2	2					
9	Current active power	kW	kW	6	12	12		4	9	8	
10	Current reactive power	kvar	kvar	7	12	13					
11	Active peak power	PK	kW	8	10		3	5	8		2
12	Reactive peak power	PK	kvar	9	11		4				
13	Accumulated active peak power	APK	kW			10				9	
14	Accumulated reactive peak power	APK	kvar			11					
15	True active energy counter	TRP	kWh								
16	True reactive energy counter	TRP	kvarh								
17	Current transformer (x/5)	/5	/5	3	7	7		2	6	6	
18	Meter number	NUM	NUM	10	14	14	5	6	10	10	3
19	Date	DAT	DAT		15	15			11	11	
20	Clock	CLK	CLK		16	16			12	12	
21	Operation hour counter	HRS	HRS								
22	Special data 1	SPC1	SPC1								
23	Special data 2	SPC2	SPC2								
24	Pulse input	255	255								
25	Module data port 1/2										
26	Information register	info	info								
27	Blank value										
28	Display test			11	17	17	6	7	13	13	4
29	Call	call	call								
30	Configuration number 1	KF1	KF1								
31	Configuration number 2	KF2	KF2								

Every second shifts are made between unit 1 and unit 2

The numbers in the LLL column indicate the sequence of displays

Calibrated energy is energy registered without regard to the transformer ratio. **Calibrated display cannot be deactivated from the display.**

# Configurations

## Configuration 2

	MM □□	NN □□	P □	Q □	RR □□
<b>MM Set-up - input/pulse length (module)</b>					
Blocking for alarm calls/pulse length 30 ms .....	01				
Blocking for alarm calls/pulse length 80 ms .....	02				
Open for alarm calls/pulse length 30 ms .....	03				
Open for alarm calls/pulse length 80 ms .....	04				
<b>NN Logging date (stop for debiting)</b>					
Module controlled .....		00			
1. (standard) .....		01			
2. ....		02			
3. ....		03			
4. ....		04			
... ..		...			
26. ....		26			
27. ....		27			
28. ....		28			
<b>P Pulse output (module)</b>					
Based on verified energy .....			1		
Based on true energy .....			2		
<b>Q Unit for pulse input</b>					
kWh .....				1	
m <sup>3</sup> .....				2	
l .....				3	
- .....				4	
<b>RR (reserved, not in use) .....</b>					

## Accessories

<b>Modules</b>	<b>Type number</b>
Tariff module, 2 tariffs, 230V, current loop	S7590026
Tariff module, 4 tariffs, 230V, current loop	S7590036
S0 Supply module	6850 001
Data/pulse module, relay output	6850 003
M-Bus module	6850 005
Tariff module, 2 tariffs, 230V	6850 008
V22 modem	6850 010
S0 module	6850 021
Radio module, router	6850 022
Radio module, router with plastic frame	6850 026
Radio module, router load	6850 027
Radio module, router function with 230 VAC tariff control	6850 038 319
Radio module, High Power with router function	6850 043 339
PLC module, router with i/o	6850 039
GSM5i	6811 xxx
GSM5i/RF, mini concentrator	6812 xxx xx
IP101i, TCP/IP	6850 040
<b>Diverse</b>	
Long terminal cover	3026 226
Top fitting, metal bow	6850 101
METERTOOL for Kamstrup 351 Combi	6899 550
Optical read-out head with USB	6699 099
Optical read-out head with 9 pin serial connecto	6699 102
Data cable for RS232	6699 106