kamstrup

ABLE Instruments & Controls

Kamstrup Precision Meters

Combi/4-quadrant meters

Accuracy class 1, class 0.5 and class 0.2

5 - 60 min. data logging of several channels

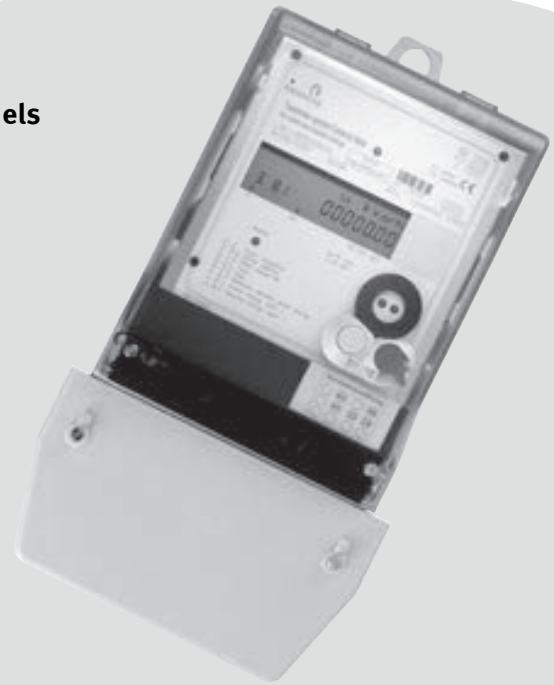
VDEW display with DBis

Real time clock

Voltage from 58/100 V to 240/415 V

Fulfills DIN-norms

As 19" or wall-mounted



Application

Kamstrup precision meters are used to measure electrical energy in substations and heavy as well as small industries.

It is also ideal for high voltage applications and wind energy systems thanks to the large voltage span.

Kamstrup precision meters, which have DIN-standard terminals, fit into standard switch cabinets.

Communication is possible via RS232, RS485 or optical reading based on IEC1107.

The meter is easily operated by using the two push-buttons.

The built-in real time clock is synchronized internally by quartz or net frequency or externally by either RCR or radio.

More than 40,000 loggings of up to 32 channels are possible.

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Technical data

Measuring device

Voltage	
2L	1x58 V....1x240 V
3L	3x100 V....3x415 V
4L	3x58/100 V....3x240/415 V Optimal 3x400/690 V
Current	5II 1A, 5A, 1A, 1(2)A, 1(6)A
Frequency	50 Hz, 60 Hz
Accuracy	Class 1 (2%) Class 0.5 (1%) Class 0.2 (0.5%)
Meter constant (LED)	Programmable, standard:
230 V	5A 10,000 imp/kWh
58 V, 63 V	5A-1A-5II1A 40,000-100,000-40,000 imp/kWh

Tariff device

Energy measurement	32 registers with max. 15 historical values plus 8 tariffless registers
Maximum measurement	32 registers with max. 15 historical values plus 8 tariffless registers
Measuring period	1, 10, 15, 30, 60 minutes (configurable)
Load profile memory (at t_m=15 min.)	1...32 channels, 317 days at 1 channel
Tariff system	Can be configured by the customer
Data retention time	> 20 years

Display

VDEW display without text

Tariff switch, real time clock

Adjustable	By means of optical interface D0 or electrical interface
Accuracy	Max. ± 5 ppm
Running reserve (SuperCap)	> 10 days
Running reserve (Li-battery)	> 20 years
Synchronization	DCF77 transmitter with DCF77-TH antenna

Interfaces

Data exchange, configuration	D0 RS232 acc. to IEC 62056-21

Inputs

1 control input	S0, max. 27 VDC, 27 mA for the connection of a DCF77-TH antenna

Outputs

For the output of several switching states, e.g. energy pulses, measuring period, tariff states, special customer switches etc.	Max. 7 S0 **or** MOSFET or 1 relay plus 5 x S0 **or** MOSFET MOSFET max. 250 VAC/DC 100mA RELAYS max. 250 VAC/DC 100mA
Optical fibre interface	Used for connecting an optical fibre separation box

Power supply (single phase) – with external auxiliary voltage

Wide range power supply	48-300 VDC/AC

Power consumption

Voltage path:	
with auxiliary voltage	< 0.02 VA/0.01 W
without auxiliary voltage	< 1.8 VA....< 2.9 VA
Current path	< 0.004 VA

Mechanical specification

Dimensions	DIN 43 857
Weight	1.35 kg
Protection class	Class II appliance insulation
Housing	Polycarbonate
Protective class	IP51

Temperature range

Operating temperature	-25°C...+55°C
Max. permitted temp.	-20°C...+55°C
Storage/transport temp.	-40°C...+70°C

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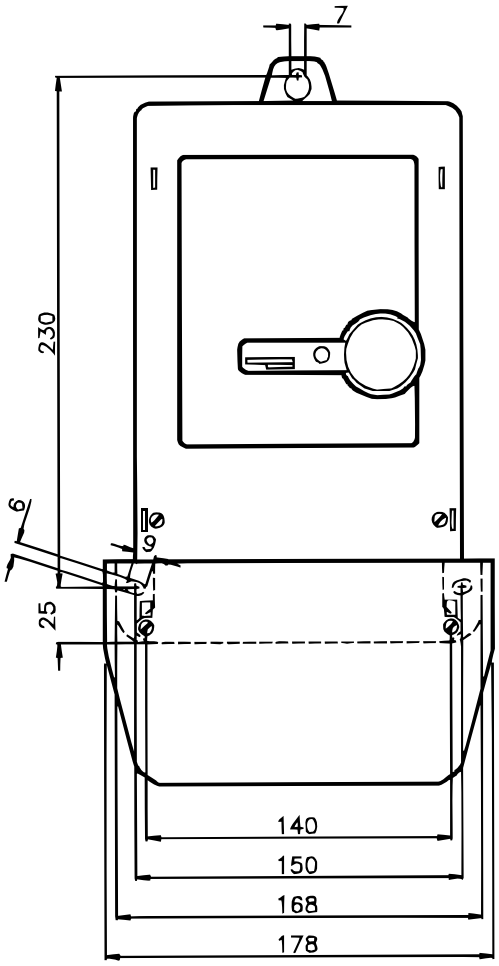
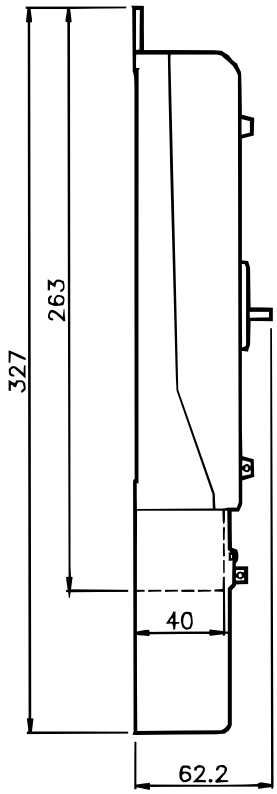
Dimensional drawing





All measurements are stated in mm.

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