

**Power and Energy Meter**  
**Direct connection 10(63)A**  
**CT-connected meter 5(6)A**

**7KT1 162**  
**7KT1 165**

Revision: December 2001

#### Product and Applications Description

KWh metering in single-phase and three-phase power distribution networks in e.g. industrial plants, offices and apartments in multi-family dwellings.

The device types with LC-Display are used to analyse the power consumption and minimize the operational costs in industrial plants and office buildings.

These values can be read via meters 7KT1 162 and 7KT1 165:

Energy (kWh) Tariff 1  
 Energy (kWh) Tariff 2

Instrument no.

Power (kW) Phase L1  
 Power (kW) Phase L2  
 Power (kW) Phase L3

The instrument no can be entered via the display at any time (see section 7.1 of the Operation Instructions FISCE 4620.2L SIE)

#### Application Programs

see N 162 Siemens product database from version H onward or: <http://www.siemens.de/installationstechnik>

#### Technical Specifications

##### Power Supply

Power for meter and bus is provided by the meter measurement circuit

##### Test standards

Insulation, Power frequency test	IEC 60
Insulation, Impulse voltage test	IEC 60
Radiated RF electro-magnetic field, Immunity test	ENV 50140
Radio disturbance characteristics	CISPR 22, EN 55022
RF, Conducted disturbances	EN 61000-4-6, ENV 50141
Burst	IEC 1000-4-4, EN 61000-4-4
Electrostatic discharge	IEC 1000-4-2, EN 61000-4-2
Snap hammer test	IEC 1036-5.2.1
Mechanical shock	IEC 1036-5.2.2
Vibration	IEC 1036-5.2.3
Resistance to heat / fire	IEC 1036-5.2.4
Protection against water	IEC 1036-5.2.5
Protection against dust	IEC 1036-5.2.5

##### Mechanical Specifications

- Dimensions: DIN-rail mounted electrical installation device width 6 SU (1SU = 18mm)
- weight: approx. 380g
- Fire load: approx. 6000 kJ ± 10 %

##### Environmental specifications

- Climatic conditions EN 50090-2-2 : 3K5
- Ambient temperature, operating: - 10 ... + 50 °C
- Ambient temperature, non-operating: - 40 ... + 70 °C
- rel. humidity (non-condensing): 5 % bis 93 %

##### Certification

EIB certified  
 PTB certified (( starting Dec-2001))

##### CE norm

Complies with the EMC regulations (residential and non-residential buildings), and low voltage regulations

#### Installation Instructions

- The device may be used for permanent interior installations in dry locations, within distribution boards, or small casings.

#### **WARNING**

- The device may be placed into distribution boards (230/400V) together with appropriate VDE devices and must be mounted and commissioned by an authorized electrician.
- Free DIN rail areas with sticked-in data rail must be covered with covers, order no 5WG1 192-8AB01.
- The prevailing safety and installation rules must be observed.
- The device must not be opened. A device suspected faulty should be returned to the local Siemens office.

#### Mounting and Wiring

##### Mounting

The meter can be installed in surface-mounted or flush-mounted distribution boards conforming to DIN 43880, an in any other location or enclosure with a DIN EN 50022-35 x 7,5mm rail.

The connection to the bus line is established via a bus connector block.

##### Mounting the device on a DIN rail (Figure 1)

- Slide the device (B1) onto the DIN rail (B2) and
- swivel the device (B1) back onto the DIN rail until the slide clicks into place audibly.

##### Dismounting the device from the DIN rail (Figure 1)

- Press down the slide (C3) with a screw driver and secure the slide in place by gently pressing it down and
- swivel the device (C1) from the DIN rail (C2) to the front.

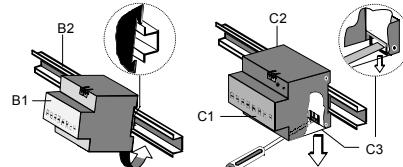


Figure 1 Mounting and Dismounting a DIN rail device

##### Slipping off bus connection blocks (Figure 2)

- The bus connection block is situated on the top of the meter.
- The bus connection block (E1) consists of two components (E1.1 and E1.2) with four terminal contacts each. Take care not to damage the two test sockets (E1.3) by accidentally connecting them to the bus cable or with the screw-driver (e.g. when attempting to unplug the bus connection block).
- Carefully put the screw-driver to the wire-inserting slit of the bus connection block's grey component and pull the bus connection block (E1) from the meter 7KT1 167 (E2).

##### Slipping on bus connection blocks (Figure 2)

- Slip the bus connection block onto the guide slot and press the bus connection block (E1) down to the stop.

##### Connecting bus cables (Figure 2)

- The bus connection block (E1) can be used with single core conductors Ø 0,6 ... 0,8 mm.
- Remove approx. 5 mm of insulation from the conductor (E1.4) and plug it into the bus connection block (E1) (red = +, black = -).

##### Disconnecting bus cables (Figure 2)

- Unplug the bus connection block (E1) and remove the bus cable conductor (E1.4) while simultaneously wiggling it.

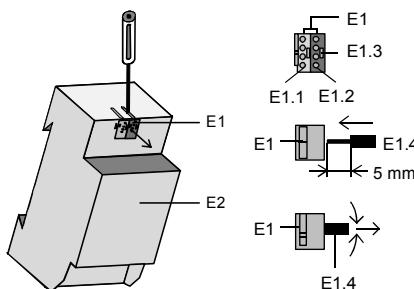


Figure 2: Connecting and disconnecting bus wires

#### Mounting, Connection and Operation

see Operation Instructions FISCE 4620.2L SIE