

Three-Phase Split Configured Prepayment Meter

The BEC33HC is a three-phase, four wire, class 2 and split configured prepayment electricity meter. The meter provides a cost effective control of loads up to 250A per phase and is an ideal unit for industrial and commercial applications requiring enhanced security and convenience.

The split meter is unique in that it separates the User Interface Unit(UIU) from the measurement and control Unit(MCU) This allows utilities to mount the MCU in a location where it is readily accessible, while the UIU is installed at a point of convenience within the customer's premises. The UIU draws its power from the MCU via the current loop communication wires.



Features



- 250A bi stable disconnection device per phase
- Thermal protection of terminals
- Optional tamper detection facility
- Optional intelligent commissioning
- Programmable power overload functionality
- Programmable load unbalance trip setting
- Protection against over and under voltage
- Transformer less power supply for improved reliability
- Low Ib rating (30A) - starting current 150mA
- Displays user consumption and configuration information
- STS compliant encryption
- Calibration retained over the life of the meter
- Optional audible feedback on UIU
- Manufactured to ISO 9001:2000 and ISO 14001 standards

Functionality



Meter Settings

The UIU provides the user with a convenient interface to the remote MCU. A user-friendly interface is ensured through the large format, custom designed LCD display, a visual consumption rate LED and the numeric keypad data entry terminal.

Each meter has a unique security key and credit is entered into the meter in the form of a secure 20-digit token, through the numeric keypad. Secure data transfer takes place via an encryption algorithm included within the Standard Transfer.

Measurement and Control Unit (MCU)

The MCU contains the measurement and control circuits. This includes the power supply, reset circuit, disconnection circuitry, voltage and current sensing circuits, non-volatile memory, three disconnect contractors rated at 250A per phase, over temperature sensing and tamper detection.

Surge Protection

A 5kA/5kV surge arrestor provides protection against lightning and voltage surges and the meter can withstand 420V for a period of 48 hours



Technical Specifications

Item	Specification
Phase voltage range	230VAC: -20% +15% per phase (184VAC to 265VAC)
Line voltage range	400VAC: -20% +15% per phase (320VAC to 460VAC)
Supply frequency	50Hz \pm 2% or 60Hz \pm 2%
Base current(Ib)	30A
Starting current(0.005Ib)	0.15A
Maximum current (Imax)	250A per phase at 30°C 227A per phase at 55°C
Supply burden	Nominally 2.5W and 18VA per phase
Meter class	2
Over voltage rating	420VAC (phase to neutral) for up to 48 hours
Short circuit withstand current	7.5kA
Operating temperature	-10°C to +55°C
Storage temperature	-25°C to +70°C
Humidity	95% non-condensing
MCU IP rating	IP54
UIU IP rating	IP51
Surge protection	Each phase protected by 5kA surge arrestor
UIU	Current loop noise immune communications
Other functions	LED to check meter accuracy IEC 62056-21 optical probe port
Standards	IEC 62052-11 IEC 62053-21 IEC 60255-41 IEC 62056-21 ISO 14001:2004 ISO 9001:2000 ESKOM TRMSCAAP2
MCU unit mass	35kg
UIU unit mass	0.27kg
MCU unit size (h x w x d)	600 x 600 x 250 (mm)
UIU unit size (h x w x d)	135 x 135 x 40 (mm)

