

AMR Concentrator - Central Unit

The Concentrator is a part of **AMI** (Advanced Metering Infrastructure) system. The concentrator performs communication between AMI master station (control center) and electricity meters.

The concentrator is a central unit for remote reading, processing and controlling electricity meters that communicates with the meters over the low voltage power network, using two way PLC (Power Line Communication).

The concentrator communicates with the control center over the cellular network - **GSM/GPRS**.

Complete reports are transferred periodically from the **concentrator** to the control center, directly via the cellular network **-GSM/GPRS**.

The concentrator can also operate as a three phase meter for measurement of the substation voltage, output power and accumulated energy consumed.



Fig.1. General view of concentrator.



AMR Concentrator – Central Unit

Features:

- Two way communication access to all units.
- Indicates the electricity phase associated with every consumer.
- Optional software application packages, such as:
 - Load control programs.
 - Prepayment schemes.
- Powered by any combination of the three power line phases.
- Reports the power loading of each of the three phases.
- Reports the voltage on each of the three phases.
- Reports the total consumption drawn from each of the three phases.
- Keeps the reports of the last ten power failures.
- Real time recovery synchronization from the cellular network.
- Accumulates 24 hour load curves for all the meters.
- Sends periodical reading report and load curves to an email box.
- Informs immediately on a power failure by an SMS.
- Handles TOU & STS prepayment schemes.
- Remote download of the operating program and tariff tables.
- Easily installed at any convenient location in the low voltage network.
- Also functions as a stand alone Three-Phase electricity meter.



AMR Concentrator – Central Unit

Technical Specifications

General	
Nominal Voltage (Un)	3 x 230(400)V AC
Supply Voltage range	80% - 115% Un
Nominal Frequency (fn)	50Hz
Consumption at Un	5 W – 4.1 Var (Capacitive)
System connection	3 phase 4 wire
Measurement	
Class Index	
Class energy according to IEC62053-21	Class 2
Class energy according to IEC62053-23	Class 2
Basic Current (Ib)	3x5A
Maximum continuous current (Imax)	3x20A
Environmental	
Temperature range	
operation	-10°C to 55°C
storage	-25°C to 70°C
Insulation Strength	
Protective Class acc. to IEC62052-11	Class I I
Display	
Туре	LCD
Format	16 Characters x 2 Lines
Character size	9.55mm x 5.2mm
LED Indicator	
Flash rate	200 imp/kWh
Communication Interfaces	
Cellular	Quad band GSM 850/900/1800/1900 MHz
PLC Frequency range	A-band 60-90 kHz
PLC Method	Spread FSK
Optical IrDA baud rate	9600bps



AMR Concentrator - Central Unit

Weight/External Dimensions	
Weight	1300 g
Width	145 mm
Height	228 mm
Depth	80 mm
Enclosure protection (IEC60529)	IP51

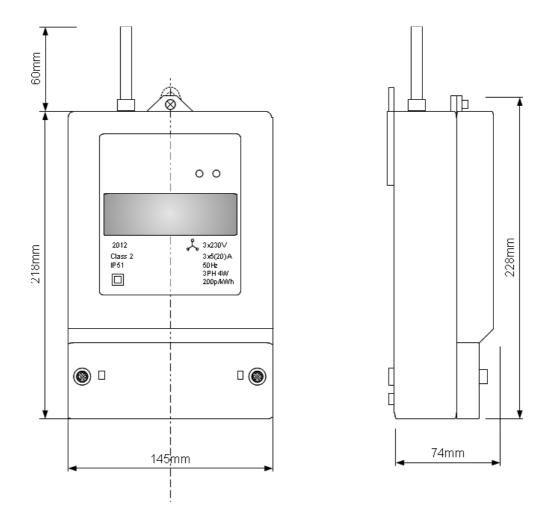


Fig.2. Concentrator Dimensions



AMR Concentrator – Central Unit

Connections

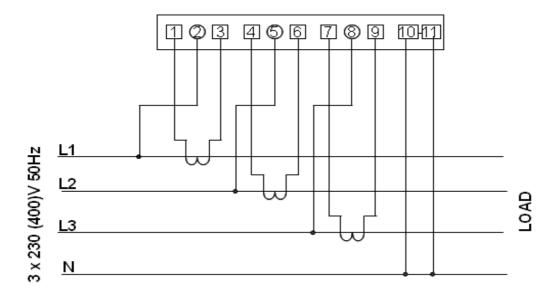


Fig. 3. Connection diagram



Unique Technology (1993) Ltd

6 Hayozmim st. Or Yehuda, 60373 ,Israel Tel: + 972-3-6340889/99 Fax: +972-3-5330182 Info@collectric.net www.collectric.net

The content of this brochure is presented as general information only and is not meant, nor does it, to constitute any representation or warranty by Unique Technology (1993) Ltd. It is not meant to serve or be used in substitution for the information contained in any approved specification, manual or the like issued by Unique Technology (1993) Ltd. It shall not in any way add to, amend, delete or change any term of any contract in which Unique Technology (1993) Ltd. is a party.