

DIN Rail Split PLC Keypad Meter

PPH44SDPA is an STS compliant split keypad meter. It contains all the critical metering, token decryption, relay disconnection and reverse energy detection functionality.

This meter is comprised of a separate Energy Management Unit (EMU) and User Interface Unit (UIU). The EMU is a DIN rail mounted unit and it can be installed in a secure cabinet.

The UIU is plugged into any AC mains power socket, located inside the customer premises, after the distribution board. Once plugged, in the UIU communicates with the EMU over the existing AC mains power circuit using Power Line Communication (PLC) technology.



Functionalities



Easy and Secure Crediting

Credit transfer from Point of Sale is facilitated by entering a 20-digit STS credit token into the UIU via the keypad

Power Control Management

When the credit limit recorded in the EMU reaches 0.0kWh, the EMU built-in relay will be automatically disconnected. The relay will also disconnect in protection of the EMU whenever a Power Limit overload condition occurs.

In addition to these automatic disconnect events the EMU relay will also disconnect when instructed to do so by inputting a 20-digit STS Clear Credit token.

Communication

PPH44SDPA provides an IEC62056-21 compliant optical communications port to enable local connection for interrogation access to stored information and upload via a handheld unit.

Communication between the EMU and UIU is facilitated by means of PLC. The maximum distance between the EMU and UIU is 150 meters.

Low Credit Warning

The UIU provides the consumer with both visual and audible low credit warnings. When credit is low the UIU displays an indicator. Once the credit level drops below a predefined level the audible buzzer will sound.

Smart Prepaid

PPH44SDPA provides a PLC communication interface to communicate with a PPHDC301 Data Concentrator. The combination of PPH44SDPA and PPHDC301 enables bi-directional communication between the prepayment server and the PPH44SDPA.

This combination enables Smart Prepaid services where instructions can be sent to the meter directly over network. Smart Prepaid also enables detail energy consumption reporting and events such as tamper conditions. When working in Smart prepaid mode the PPH44SDPA supports Time of Use billing in addition to flat and stepped tariff schemes.



Technical Specifications

Item	Specification
Standards compliance	IEC62053-21, IEC6203-31
Rated voltage	240V
Rated frequency	50Hz
Accuracy class	CL1.0
Base current	5A
Maximum current (I _{max})	80A
Starting current	0.4%I _b
Power consumption / Phase voltage circuit	< 2W/10A per phase
User interface	LCD display on the UIU
Low credit warning	LED, buzzer
Rate indicator	LED 1000 pulses/kWh
Communication	Optical port IEC62056-21
Operating temperature	-25°C to +55°C
Storage temperature	-40°C to +80°C
Humidity operating range	95% RH
Degree of protection	IP51
Weight	0.6kg
Over voltage	48 hours under 420V
Meter case material	UV stable/ reinforced polycarbonate
Meter terminal material	UV stable/ radiation resistant polycarbonate
Contactor	Internal latch relay, compliant with IEC62055-31
Data transfer	20-digit STS compliant numeric token
Data retention	> 15 years
ECU dimensions (L x W x H)	50.5 x 100 x 159 (mm)
UIU dimensions (L x W x H)	160 x 110 x 47 (mm)

