

Installation Manual

3P Smart Meter



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Other Information

This manual is an integral part of the unit. Please read the manual carefully before installation, operation or maintenance. Keep this manual for future reference.

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1 Introduction

1.1 Read this first

The main purpose of this user manual is to provide instructions and a detailed description of procedures for installing, operating, maintaining and troubleshooting the Autarco 3-phase (3P) smart meter used with Autarco inverters. Always keep this user manual available at all times.

1.2 Important symbols

To reduce the risk of electrical shock, and to ensure the safe installation and operation, the following safety symbols appear throughout this document to indicate dangerous conditions and important safety instructions.



WARNING! Indicates safety instruction, which if not correctly followed, can result in injury or property damages.



RISK OF ELECTRIC SHOCK! Indicates safety instructions, which if not correctly followed, could result in electric shock.



HOT SURFACE! Indicates safety instructions, which if not correctly followed, could result in burns.

1.3 Target Audience

This manual is intended for anyone who installs or maintains Autarco inverters in conjunction with a 3-phase consumption meter (smart meter). Before any further action, the operators must first read all safety regulations and be aware of the potential danger to operate high-voltage devices. Operators must also have a complete understanding of this device's features and functions.



ATTENTION! Qualified personnel means a person with valid license from the local authority in:

- Installing electrical equipment and PV power systems (up to 1000 V).
- Applying all applicable installation codes and using Personal Protective Equipment.
- Analyzing and reducing the hazards involved in performing electrical work.



WARNING! Do not use this product unless it has been successfully installed by qualified personnel in accordance with the instructions in chapter 4 "Installation".

1.4 Content of package



3P smart meter
(3-phase consumption meter)

Brand: ACREL
Type: DTSD1352



3 CT clamps



RS485-cable
+ comm-connector
+ RJ45-connector

1.5 Intended Application

This manual applies to the following products;

- S2.3P-SMARTMETER Consumption meter for 3 phase inverters

All current inverter models have the possibility of internal power export limitation using an external current clamp or consumption meter. The internal power export limitation (EPM) is only applicable for systems with one inverter. Please read the relevant inverter series manual for more information. External power export limitation with more than one inverter is possible using the external PELD. This is possible with all inverters.

2 Preparation

2.1 Safety instructions



DANGER! Do not touch any internal components whilst the inverter is in operation.



NOTICE! Do not directly connect AC output of the inverter to any private AC equipment. The PV inverter is designed to feed AC power directly into the public utility power grid.



WARNING! The installation, service, recycling and disposal of the inverters must be performed by qualified personnel in compliance with national and local standards and regulations. Please contact your dealer to get the information of an authorized repair facility for any maintenance or repairmen.

Any unauthorized actions including modification of product functionality of any form will affect the validation of warranty service; Autarco may deny the obligation of warranty service accordingly.

3 Overview

3.1 Front Panel Display

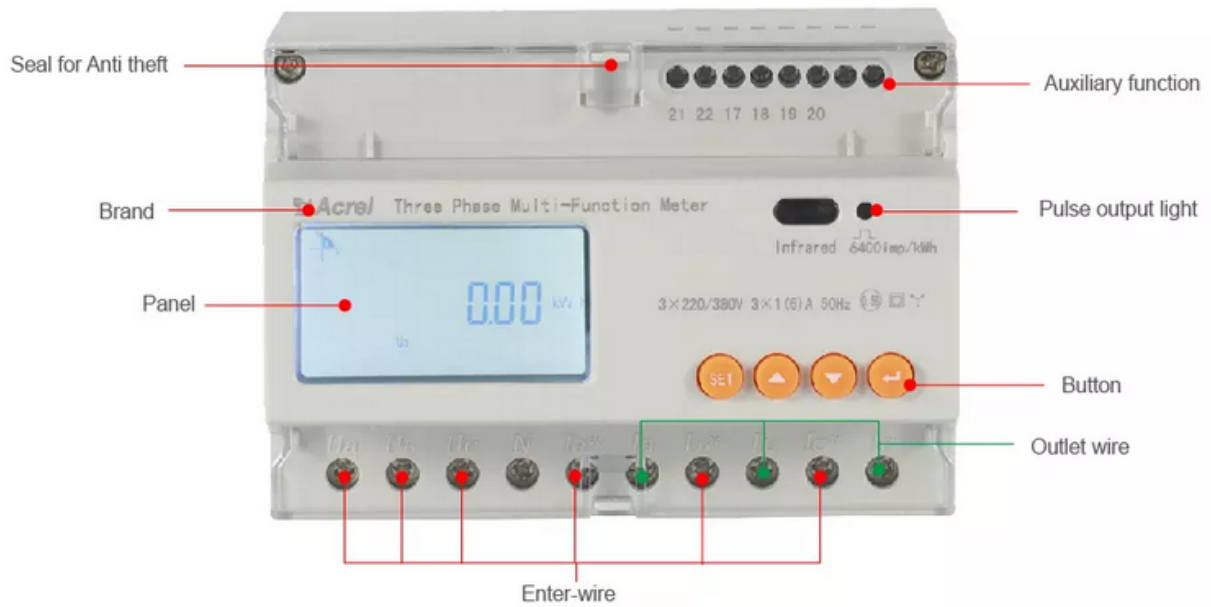
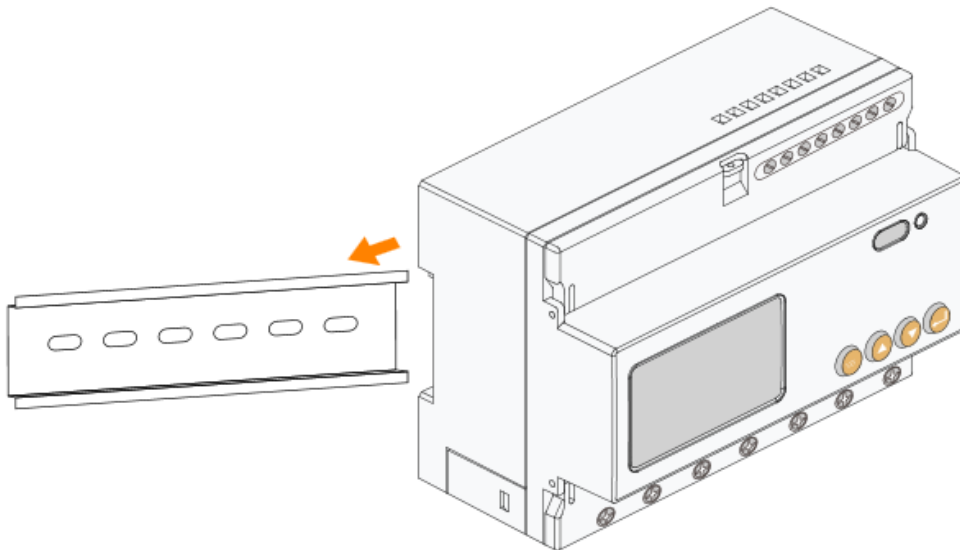


Figure 3.1: Front panel display

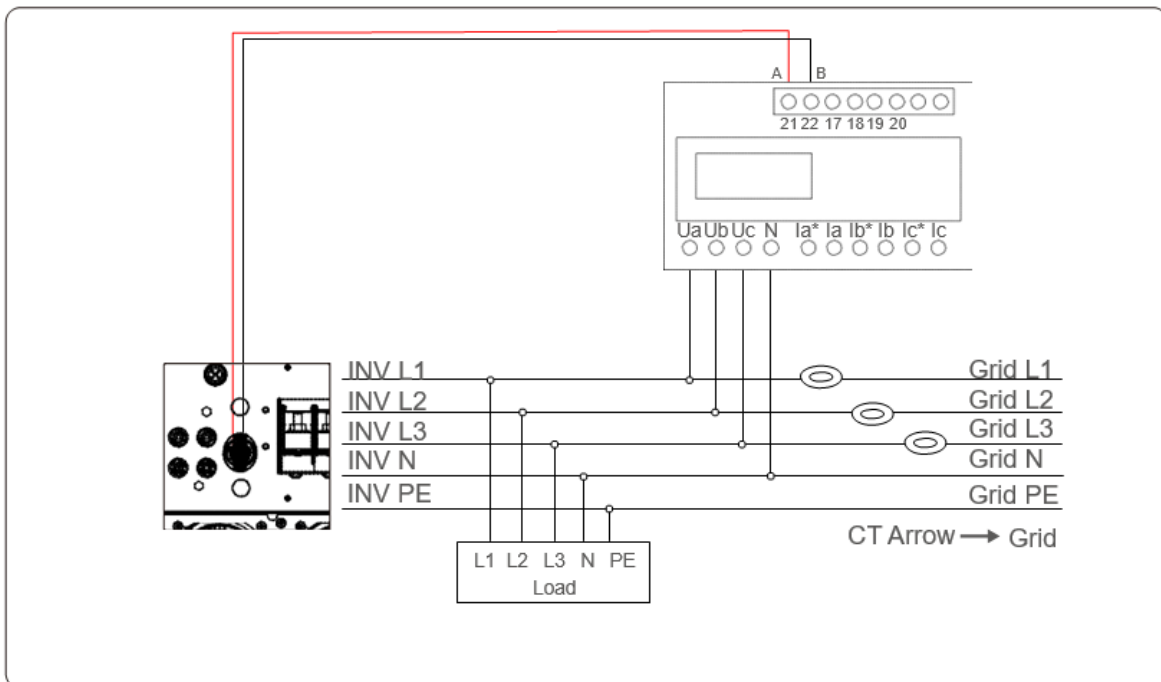
4 Installation

4.1 Mounting the smart meter

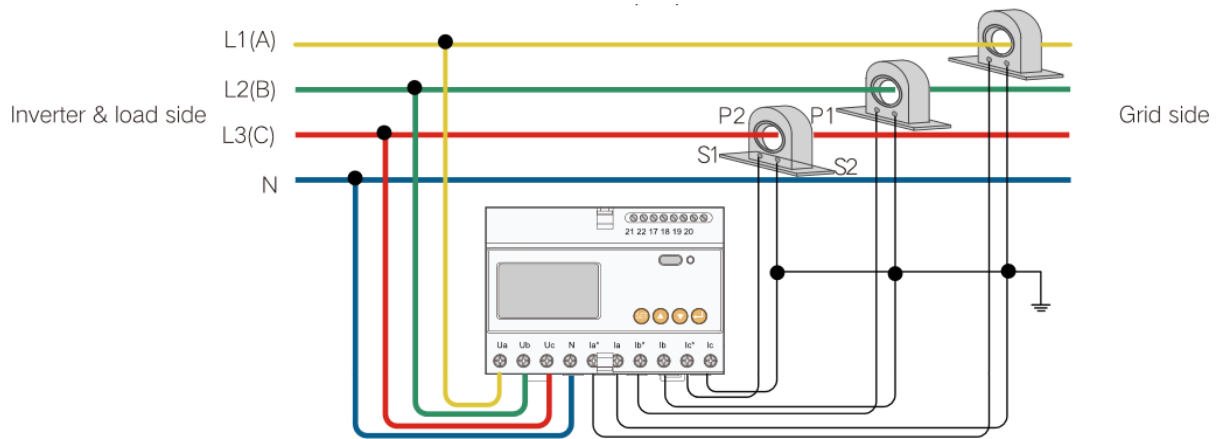
The consumption meter needs to be installed in the meter cupboard and can be installed on a 35mm DIN rail.



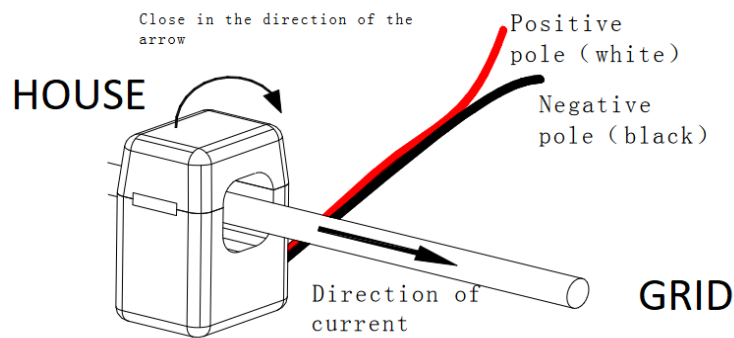
4.2 Electrical Connections



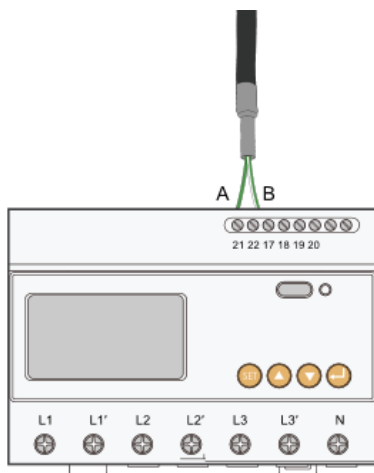
4.3 Wiring



Install the current clamps (CT clamps) on the phase cables that directs to the grid. Note the arrow on the current clamp and make sure it is installed in the right direction.



Use port 21 and 22 on the meter to connect it to the meter port of the inverter.



4.4 Settings

It is possible that the CT ratio of the meter needs to be set up correctly, this also needs to be done if you choose to use different CT clamps.

1. Press **SET** button to enter the Main Menu and get in "**PASS**" interface
2. Press Enter to show "0000", and enter the code **0001**
3. Press Enter and navigate to **In. > Transformer settings > CT**
4. Adjust CT ratio to correct value
5. Press **Enter**
6. Press **Set** x 2 times
7. Press **Enter** to save
8. Press **Down** to change to **Yes**
9. Press **Enter** to save

The CT ratio needs to be set to **30** if you use the delivered CT clamps.

4.5 Monitoring

In order to get consumption data, a WIFI-STICK-D, LAN-STICK-D or GPRS-STICK-D (one of our 'D' sticks, either digital sticks) needs to be used, and settings on the inverter need to be changed.

Use the up and down buttons on the inverter to navigate through the menu.



NOTE! The access to this area is for fully qualified and accredited technicians only. Enter menu "Advanced Info" and "Advanced Settings" (password needed).

- Go to Advanced settings
- Enter password (*contact Autarco Support for instructions*)
- Select 24h Switch
- Set to ON and press ENTER
- Go to Internal EPM set -> Mode Select
- Select Consumption Monitor and press ENTER

5 Specifications

Model name	S2.3P-SMARTMETER
Grid topology	3P+N
Rated voltage	3 x 230V/400V
Input current	3 x 1 (6) A (via CTs)
Operating temperature	-25°C - 55°C
Relative humidity	<95% (non-condensing)
Dimension (L*W*H)	127L*70W*89H (mm)