

# Energy Meters start page

At Victron Energy, we stock two types of Energy Meters: the ET112 for single phase installations, and the EM24 for multi-phase installations.

## 1. Selection guide

Requirement	Solution			
	Part number	Model	Specs	Type
Single phase up to 100A	REL300100000	ET112	1 phase - max 100A - ET112	Shunt
Three phase up to 65A/phase	REL200100000	EM24	3 phase max 65A/phase	Shunt
Single phase more than 100A/phase	See three phase CT solution			CT
Three phase more than 65A/phase	Carlo Gavazzi EM24DINAV53DISX (see FAQ Q8)			CTs

Note that the ET112 is supported in CCGX firmware version v2.01 and later.

### 1.1 Support for other Carlo Gavazzi meters

Besides above listed meters, there are many more meters available from Carlo Gavazzi. Use this list to see which ones are compatible.

Type	Support	Remarks
EM112	Supported	Compatible with ET112, needs CCGX v2.01 or later
ET340	Supported	Needs CCGX v2.01 or later
EM340	Not supported	does not report exported energy per phase (unlike the ET340)
EM21 72D	Not supported	does not report exported energy, com protocol not compatible with supported grid meters
EM271	Not supported	does not report exported energy, com protocol not compatible with supported grid meters

## 2. Manuals

- [REL300100000 - ET112 - 1 phase - max 100A](#)
- [REL200100000 - EM24 - 3 phase max 65A/phase](#)
- [REL300300000 - ET340 - 3 phase max 65A/phase](#)

## 3. FAQ

### Q1: Can I combine three ET112s for a three phase system?

No.

**Q2: Can I use other meters, for example from other brands?**

No.

**Q3: I already have a Fronius SmartGrid meter, can I use that?**

No.

**Q4: When do you start shipping the ET340?**

We start shipping the REL300300000, aka the Carlo Gavazzi ET340-DIN.AV23.X.S1.X, as soon as its predecessor is out of stock.

Its predecessor is the REL200100000 - Carlo Gavazzi EM24DINAV93XISX.

**Q5: What are the differences between the old and new three meters?**

Old meter: REL200100000 - Carlo Gavazzi EM24DINAV93XISX

New meters:

- REL300100000 - Carlo Gavazzi ET112-DIN.AV01.X.S1.X
- REL300300000 - Carlo Gavazzi ET340-DIN.AV23.X.S1.X

Differences:

- The new meters don't have a front selector that the installer needs to put in a different setting than it comes out of the box: easier, less mistakes to be made.
- The new meters have no display. The only thing they have is an LED, which blinks in case of active communication.
- The new meters have 2 RJ45 sockets for the Modbus RS485 connection. But they are not used. Note the possible confusion because of yet another RJ-45 socket in the Victron world though. Don't mix that with VE.Bus, VE.Can or VE.net. Besides the RJ-45 sockets, the meters still also have terminals for the RS485 wiring, which is how we advise to connect a meter to the CCGX.
- Since there is no display, the Modbus address can no longer be changed on the meter. Combining multiple of those meters on one RS485 network is therefore not possible.

Three-phase new meter only (ET340):

- Measuring a single phase PV Inverter on the second phase of the meter actually works. Whereas with the old meter only the Power Metering (Watts) worked, and the Energy Metering (kWh) did not.

**Q6: Will you keep shipping the old meter? (EM24)**

No.

Why not? Because it is more expensive than the new one.

And also because measuring a single phase inverter on the second phase does not work 100%.

In case you still prefer to use the EM24, you can always buy that from Carlo Gavazzi directly, or through one of their distributors.

**Q7: Can I buy those meters directly from Carlo Gavazzi instead of from you?**

Yes. That is also why we make no secret of the CG part numbers.

**Q8: I want to use Current Transformers (CTs), is that possible?**

Yes. You can buy the CG EM24DINAV53DISX directly from Carlo Gavazzi or one of their distributors. Even though Victron does not stock that type of meter, we do support it in our software.

The EM24DINAV53DISX is the solution for three-phase systems that go over 65A per phase.

## DISQUS

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