

## LOAD SHEDDING: THE FRENCH SYSTEM OF DÉLESTAGE

A rather unknown inhabitant of the French distribution board that should be mentioned is the *délesteur*. Interesting, because it can be a money saver, in the long term. If you have a lot of electric *convecteurs* or *accumulateurs* to heat your house, when everything is on, you quickly go beyond the limit of your *puissance souscrite*. Switch on your washing machine or water heater, a pity, too much current. And the main switch, either the old “disjoncteur de branchement” or the smartmeter Linky, comes into action. And everything goes dark, everybody starts shivering in anticipation. Modern mankind in despair: no internet, no WiFi! Existential crisis!

| Puissance souscrite [kVA] | Réglage disjoncteur [A] monophasé | Réglage disjoncteur [A] triphasé |
|---------------------------|-----------------------------------|----------------------------------|
| 3                         | 15                                |                                  |
| 6                         | 30                                | 10                               |
| 9                         | 45                                | 15                               |
| 12                        | 60                                | 20                               |
| 15                        | 75                                | 25                               |
| 18                        | 90                                | 30                               |
| 24                        |                                   | 40                               |
| 30                        |                                   | 50                               |
| 36                        |                                   | 60                               |

When this happens too often there is no other option than to ask the EDF and ENEDIS for more power, comes at a price. The technique of *délestage* offers a solution here. Basically, this device continuously monitors how much current flows through your supply wires from the main switch. If it comes too close to the maximum, the *délesteur* will automatically switch off 1, 2 or 3 of those large non-priority power consumers. In plain English: load shedding. Lighting, sockets etc. have priority. And a little later these big guys switch on again automatically, if the total power consumption has decreased somewhat. They are not cheap: around € 200 or more. But over a number of years these costs will have been amortized.

The simple mechanical *délesteurs* are outdated by now. Instead, electronic versions have been introduced. A coil (*capteur*) is attached to the phase and transmits the

continuously measured signal to the *délesteur*. These current pick-up coils are much easier to place in an already existing distribution board, no difficult rewiring of the feed. An example of such an approach with more explanation can be found on this website. These modern *délesteurs* have switch contacts that can only handle 1 amp. If you want to connect larger power consumers, there is often no alternative but to add a number of *contacteurs* (relays). The footprint of all this can be considerable, new distribution board?



A *délesteur*, current range adjustable from 15 to 90 A. Already a width of more than two modules. Add several relays and you need an extra DIN-rail in your distribution board.



King of the hill délestage unit. We had almost 24 kW of accumulateurs and convecteurs. On a “simple” 12 kVA supply in single-phase.