

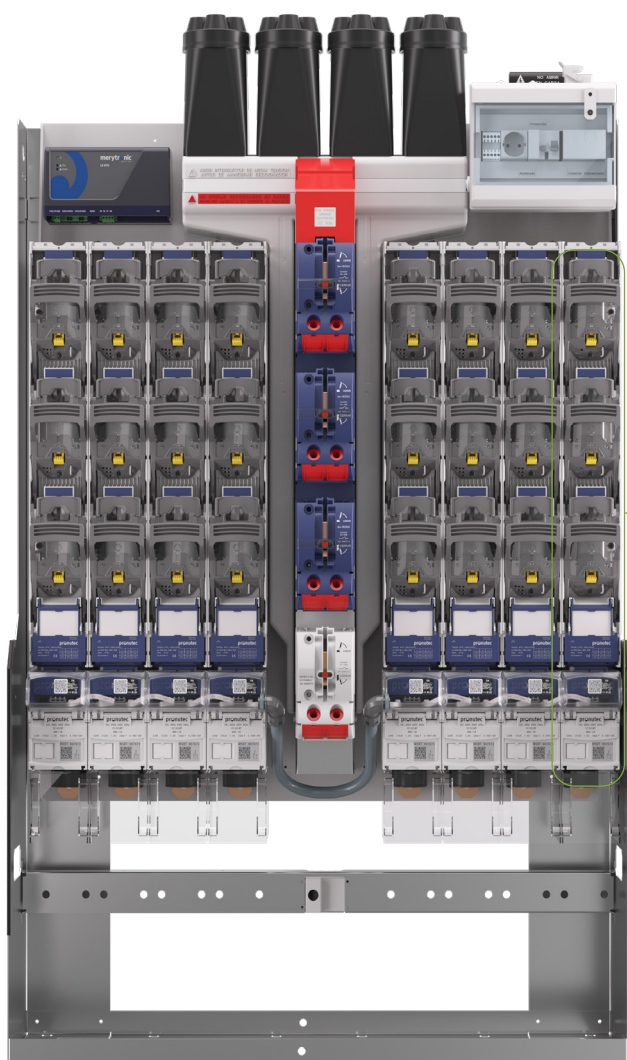
04 Product range

► 04.1 SMART FUSE SWITCH (SFS)

LOWER SOLUTION (NH 00/1/2/3)

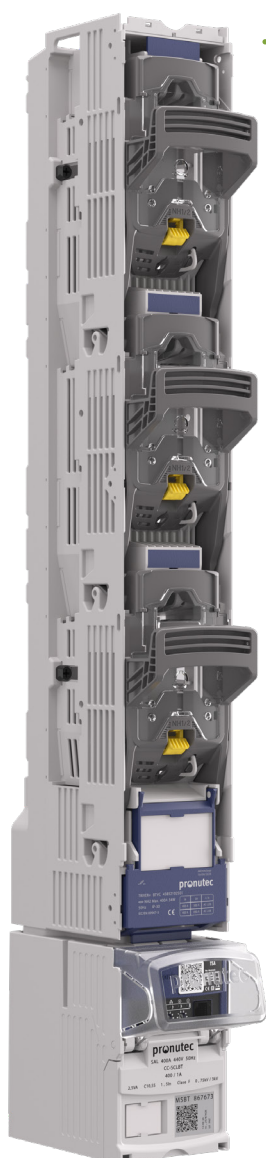
SFS Lower Solution consists of a fuse switch, a SAL (Line Advanced Supervisor) which is assembled beneath the fuse switch, and a feeder meter.

- Compact design & very few cabling
- Protection fuses
- Permits replacement of feeder meters on tension, no need of switching off
- Possible RETROFIT of existing fuse switches



FEATURES

Three phase supervisor per outgoing.
Built-in Current Transformers / Voltage taps.



LV Fuse Switch size NH 00/1/2/3

These fuse switches can incorporate the entire range of Pronutec accessories and terminals.



TSA (Advanced Supervision Card)

The feeder meter is assembled inside of the Supervisor (SAL). It's a three phase meter which reads all the electrical parameters and send them to the LV Remote unit through RS485 serial bus ports.



SAL (Line Advanced)

It includes built-in current transformers and a voltage taps per phase.

Available current transformers with different current ratios, based on fuse switches amperage.

Current transformer ratios

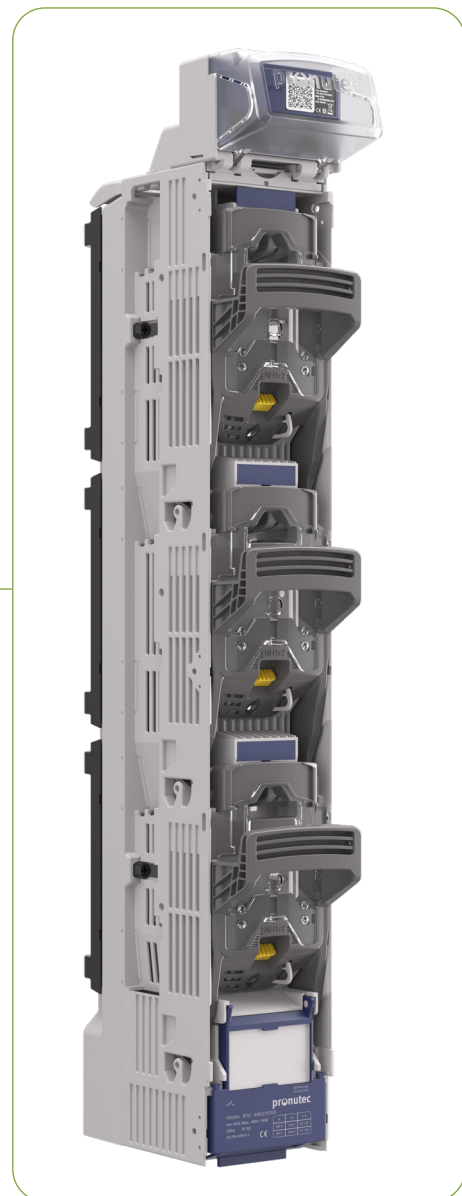
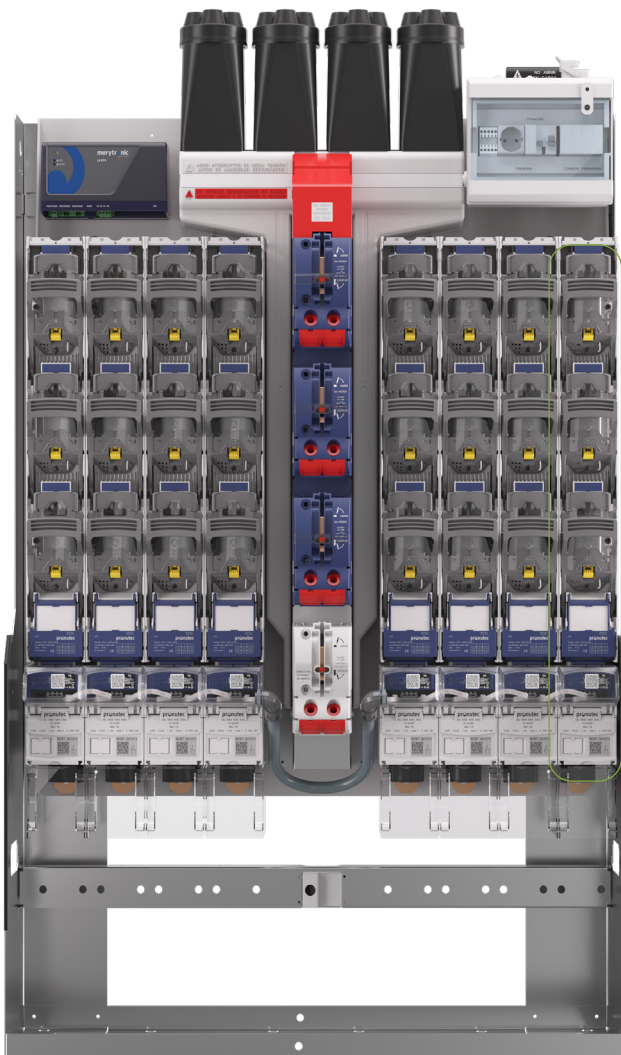
I prim.	I sec.	VA	Pr. Cl.	FS	Range
250 A	1 A	2,5 VA	0,5	< 5	120 %
400 A	1 A	2,5 VA	0,5S	< 3	120 %
600 A	1 A	2,5 VA	0,5	< 5	120 %

► 04.1 SMART FUSE SWITCH (SFS)

UPPER SOLUTION (NH 00/1/2/3)

SFS upper solution consists of a fuse switch, protection case on top of it, current transformers, voltage connections and feeder meter.

- Compact design & very few cabling
- Protection fuses
- Permits replacement of feeder meters on tension, no need of switching off



FEATURES

Protection case per outgoing.

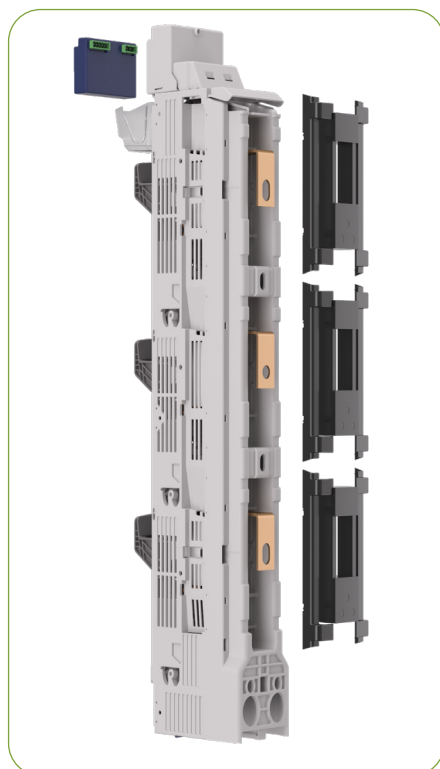
Current Transformers /Voltage taps at the back of the fuse switch.



The feeder meter (TSA) is assembled in an upper case on top of the fuse switch. This case includes three protection fuses.

LV Fuse Switch size NH 00/1/2/3

These fuse switches can incorporate the entire range of Pronutec accessories and terminals.



CTs and voltage taps are wired to the protection case in which the feeder meter (TSA) is assembled.

Available current transformers with different current ratios, based on fuse switches amperage.

Current transformer ratios

I prim.	I sec.	VA	Pr. Cl.	FS	Range
250 A	1 A	1,5 VA	1,0	< 5	120 %
400 A	1 A	1,0 VA	0,5	< 5	120 %
600 A	1 A	1,0 VA	0,5	< 5	120 %

► 04.1 SMART FUSE SWITCH (SFS)

FEEDER METER | TSA & SBT 00

NH 00 | UPPER SOLUTION

The SBT is the feeder meter for NH 00 switches. It's located on top of the fuse switch, as an extension of the BTVC. The SBT is connected to the CT's and voltage taps installed at the rear of the fuse switch.



TSA (ADVANCED SUPERVISION CARD NH 1/2/3)

TSA is a three phase feeder meter compatible with both upper and lower LV monitoring solutions. It calculates RMS values per second of the following variables:

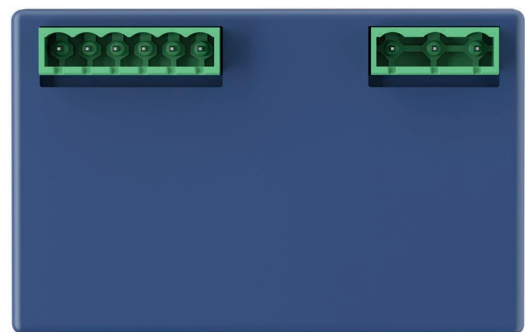
- Voltage per phase
- Current per phase and calculated neutral current
- Imported / exported active, reactive and apparent power per phase and total
- Power factor per phase
- Phase presence
- Frequency
- Cumulative values of imported and exported energy
- Cumulative values of reactive energy in all four quadrants
- Temperature inside the card
- Voltage and current oscillography in case of an alarm

Moreover the card can generate the following alarms per phase: blown fuse, over/under voltage, current overload, shortcircuit current.

TSA can communicate by **DLMS / COSEM** protocol on HDLC with the LV Edge Node, or by **Modbus RTU**. They are connected by a RS485 serial bus in daisychain format (maximum 24 feeder meters per bus).



Front view



Rear view



The solution for NH 00 fuse switches is SBT 00, with the same capabilities of TSA.