



# Secondary Distribution Switchgears

# SF6 metal enclosed switchgear CABINEL

Our mission is to deliver efficient, sustainable energy solutions that safeguard the environment and advance human technology. For more than 45 years, Inael Electrical Systems has established itself as a leader in meeting market demands.

We offer enhanced customer service and expert consultation, providing tailored solutions for client needs on every continent.

Thanks to the reliability and performance of our products, we provide medium voltage switchgear and electrical equipment that few companies worldwide can match.

Since 1998, Inael Electrical Systems has specialized in the design and production of medium voltage switchgear. Our

Cabinel units adhere to international regulations and are approved by major electrical companies globally.

Remarkably, over 90% of the components for our Cabinel medium voltage switchgear are manufactured and assembled right here at our production facility in Toledo, Spain.

Inael Electrical Systems is deeply committed to both the environment and social responsibility. We actively invest in sustainable and social initiatives, striving to create a better future for our planet.



## CABINEL switchgear system

The equipment for electrical energy distribution that we present in this catalogue, are composed switchgear manufactured under a metallic housing isolated in sulphur hexafluoride, SF6.

The CABINEL system offer two types of solutions: Modular system in which the modules may be connected in parallel, making the combination more appropriate to the needs of the customer.

Compact cells, with the same characteristics that the modular system, but compact system is less expensive than the modular system equivalent.

The modular and compact switchgear, by customer request, may also be extensible on one, both sides or none.

The CABINEL switchgear has been carried out internal arc tested according to IEC 60298 to guarantee the safety of the users of ours panels.

The quality requirements on the materials used in our products, as well as the manufacturing process control and the professional employees skill, they guarantee the high quality level of CABINEL switchgears given to our customers.

## Medium voltage switchgear isolated in SF6

The modular or compact swithgear with metallic housing isolated in SF6 are specially designed for indoor installation in all kinds of medium voltage distribution networks, ringed or not, with possibilities of supply from one or several points.

Due to its hermetic construction and all active elements being within an atmosphere of SF6 gas, they are insensitivity to environmental variations.

They may also be set up in underground transformer substations with risk of flood. They are able to work during 24 hours covered by water.

When the place of installation is at a height greater than 1000 m above sea level, and/or the ambient temperature is not between -10oC and +55oC, we request to be consulted.

## Applied standards

Both the switchgear and their main components, are manufactured according with the following standards:

| Normas y especificaciones    |                  |                |
|------------------------------|------------------|----------------|
| Panels                       | UNE-EN 62271-200 | IEC 602271-200 |
| On load disconnecter         | UNE-EN 62271-103 | IEC 62271-103  |
| On load disconnecter + Fuses | UNE-EN 60420     | IEC 62271-105  |
| Ground disconnectors         | UNE-EN 62271-102 | IEC 62271-102  |
| Circuit breakers             | UNE-EN 62271-100 | IEC 62271-100  |
| Bushing external cone        | UNE-EN 50181     | IEC 60137      |
| Bushing internal cone        | UNE-EN 50181     | DIN 4763       |
| Fuses                        | UNE-EN 60282-1   | IEC 60282-1    |
| SF6 Gas                      | UNE-EN 60376     | IEC 60376      |
| IP Protection degree         | UNE 20324        | IEC 60529      |
| UK Protection degree         | UNE-EN 50102     |                |

General characteristics

|                                                  | Rated Voltage |       |
|--------------------------------------------------|---------------|-------|
|                                                  | 24 kW         | 36 kW |
| SF6 filling pressure Mpa                         | 0,03          | 0,05  |
| Protection degree against strange bodies ingress | IP2X          | IP2X  |
| Protection degree against mechanical impact      | IK08          | IK08  |
| Protection degree of the SF6 tank                | IP67          | IP67  |

ISF switch-disconnectors

|                                                                                                                                                                                               |         | Rated Voltage             |            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------------|------------|
|                                                                                                                                                                                               |         | 24 kW                     | 36 kW      |
| 1.2/50 μs lightning impulse withstand voltage. To earth and between poles:<br>Across the isolating distance:                                                                                  | ∧<br>kV | 125<br>145                | 175<br>195 |
| Power frequency witshstand voltage - 1 minute: To earth and between poles:<br>Across the isolating distance:                                                                                  | kV      | 50<br>60                  | 70<br>80   |
| Frecuency                                                                                                                                                                                     | HZ      | 48/62                     |            |
| Rated current                                                                                                                                                                                 | A       | 400/630                   |            |
| Short time current                                                                                                                                                                            | kA      | 20                        |            |
| Peak value of the short time current                                                                                                                                                          | A       | 50                        |            |
| Short-circuit duration                                                                                                                                                                        | S       | 1                         |            |
| Interrupting capacity: <ul style="list-style-type: none"><li>Mainly active load</li><li>No load cables and lines</li><li>Ground fault</li><li>No load cables and lines ground fault</li></ul> | A       | 400/630<br>25<br>50<br>16 |            |
| Short circuit making capacity                                                                                                                                                                 | A       | 50                        |            |
| Mechanical endurance                                                                                                                                                                          |         | M2                        |            |
| Class                                                                                                                                                                                         |         | E3                        |            |
| Transfer Current                                                                                                                                                                              | A       | 1200                      | 850        |

Ground disconnecter (in L-function) and fuses income (in P-function)

|                                                |         | Rated voltage |       |
|------------------------------------------------|---------|---------------|-------|
|                                                |         | 24 kW         | 36 kW |
| 1.2/50 μs lightning impulse with stand voltage | ∧<br>kV | 125           | 170   |
| Power frequency withstand voltage - 1 minute   | kV      | 50            | 70    |
| Frecuency                                      | Hz      | 48/62         |       |
| Short time current                             | kA      | 16            |       |
| Peak value of the short duration rated current | ∧<br>kA | 40            |       |
| Short-circuit duration                         | S       | 1             |       |
| Short-circuit making capacity                  | ∧<br>kA | 40            |       |
| Mechanical enduran                             |         | M1            |       |

Ground disconnecter at fuses outgoing in P-function

|                               |         | Rated voltage |       |
|-------------------------------|---------|---------------|-------|
|                               |         | 24 kW         | 36 kW |
| Short circuit making capacity | ∧<br>kA | A,5           |       |

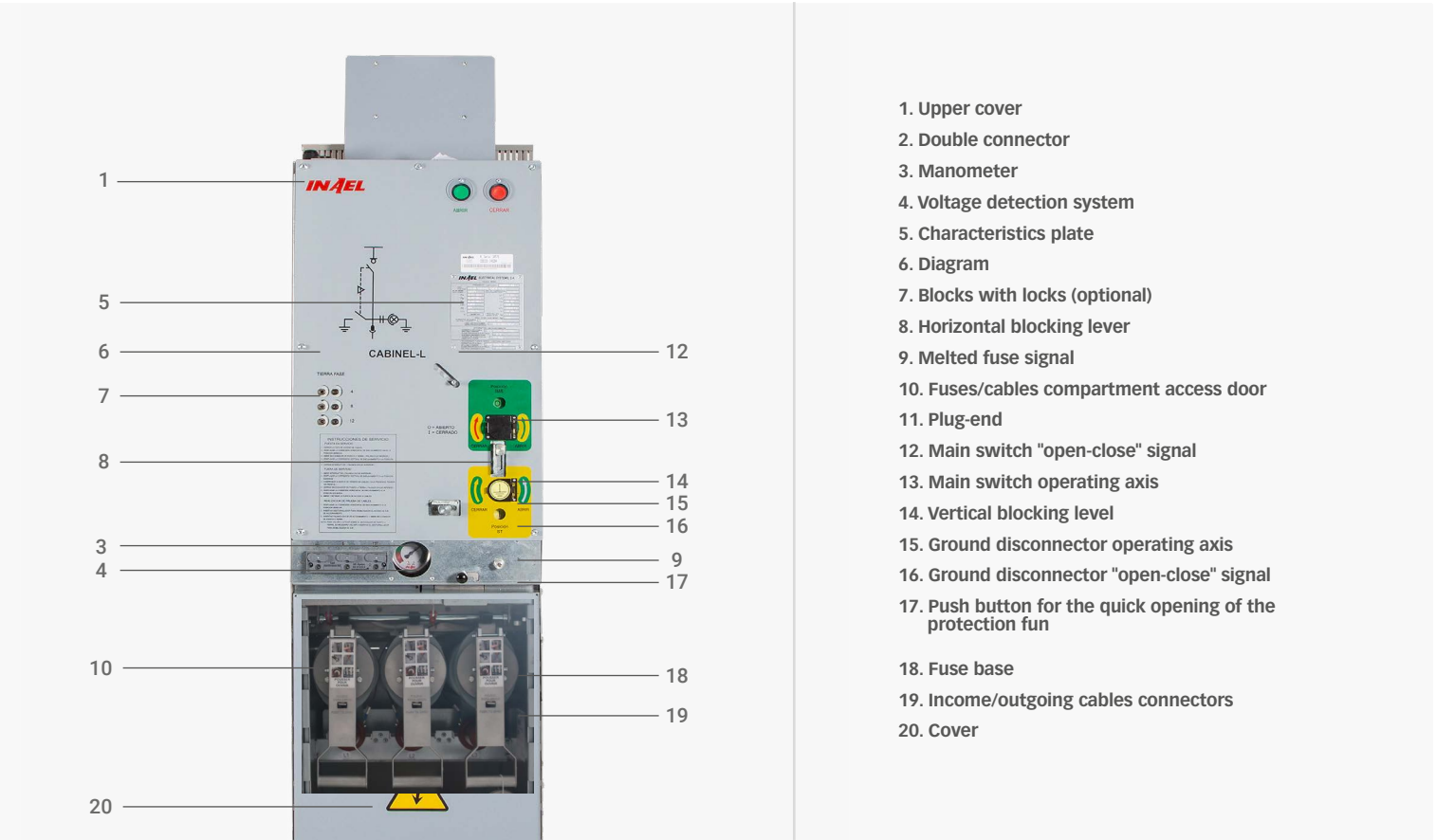
Vacuum circuit breakers

|                                               |             | Rated Voltage |       |
|-----------------------------------------------|-------------|---------------|-------|
|                                               |             | 24 kW         | 36 kW |
| 1.2/50 μs lightning impulse withstand voltage | ∧<br>kV     | 125           | 170   |
| Power frequency witshstand voltage - 1 minute | kV          | 50            | 70    |
| Frequency                                     | Hz          | 48/62         |       |
| Transit recovery voltage. Rate of rise of TRV | kV<br>kV/μs | 400/630       |       |
| Closing time approx.                          | μs          | 20            |       |
| Arcing time                                   | μs          | 50            |       |
| Rate short circuit breaking current           | ∧<br>kA     | 1             |       |
| Rated short circuit making current            | ∧<br>kA     | 50            |       |
| Rated short time surrente 3 seg               | kA          | 20            |       |
| Rated peak withstand current                  | ∧<br>kA     | 50            |       |
| Mechanical endurance                          |             | 10.000        |       |

Modular system

The coupling system for the extension of the modular switchgear appears at the upper sides. For each junction, three 630A double connectors should be used.

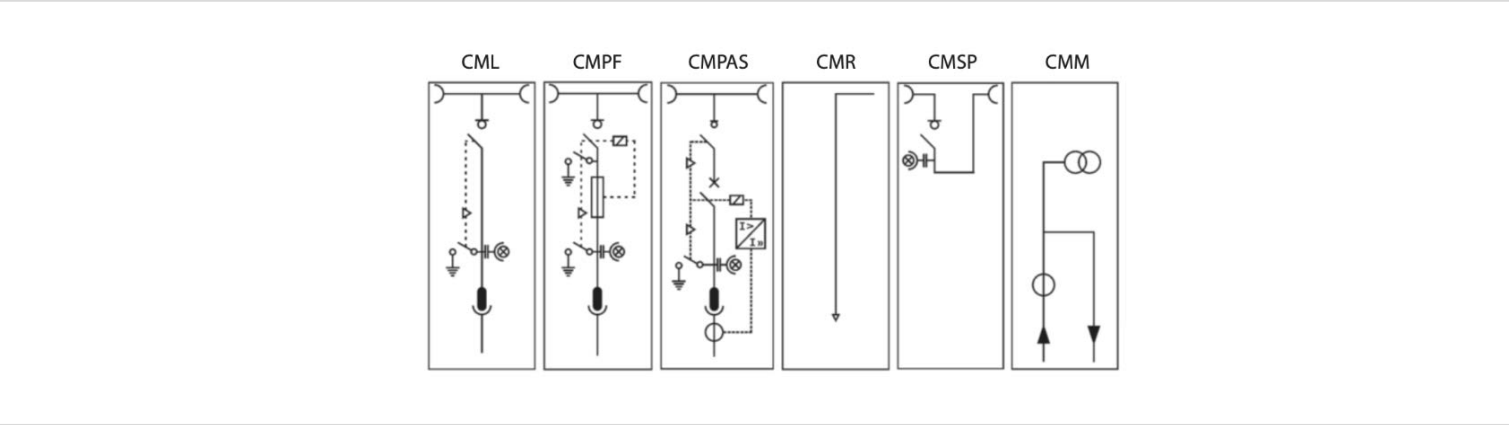
Obviously, the switchgear placed at the end of a set, has one connection-free side, may be required to be extensible or not. If the “end-of-set” switchgear is required to be extensible, its connection free side should be duly closed by means of the corresponding “end-of-set” plugs.



Functions description of modular switchgear

|                                                                                                               |
|---------------------------------------------------------------------------------------------------------------|
| CML1                                                                                                          |
| Line modular switchgear, with one lateral connection                                                          |
| CML2                                                                                                          |
| Line modular switchgear, with two lateral connection                                                          |
| CMPF1                                                                                                         |
| Fused-Protection modular switchgear, with one side connection                                                 |
| CMPF2                                                                                                         |
| Fused-Protection modular switchgear, with two sides connection                                                |
| CMPAS                                                                                                         |
| Protection modular switchgear, with circuit breaker and disconnector                                          |
| CMR                                                                                                           |
| Step-up modular switchgear                                                                                    |
| CMM                                                                                                           |
| Crossing disconnecter switchgear                                                                              |
| UTM-CMPF                                                                                                      |
| Fused-Protection modular switchgear no extensible, with lateral connection through plugging connectors (250A) |

Modular switchgear drawings



Weights and dimensions of modular switchgear

| Designation   | Height mm. |      | Depth mm. |      | Width mm. |     | Weight mm. |     |
|---------------|------------|------|-----------|------|-----------|-----|------------|-----|
| Rated voltage | 24         | 36   | 24        | 36   | 24        | 36  | 24         | 36  |
| CML           | 1400       | 1400 | 755       | 755  | 400       | 400 | 125        | 125 |
| CMPF          |            |      |           | 810  |           |     | 160        | 170 |
| CMPAS         |            |      |           | 755  | 524       | 524 | 225        | 250 |
| CMR           |            |      |           |      | 600       | 600 | 145        | 175 |
| CMM (X)       |            |      | 1055      | 1024 | 700       | 965 | 165        | 195 |

The cells may also be extensible on one, both sides or none. X': The weight does not include the measuring transformers.

Compact system

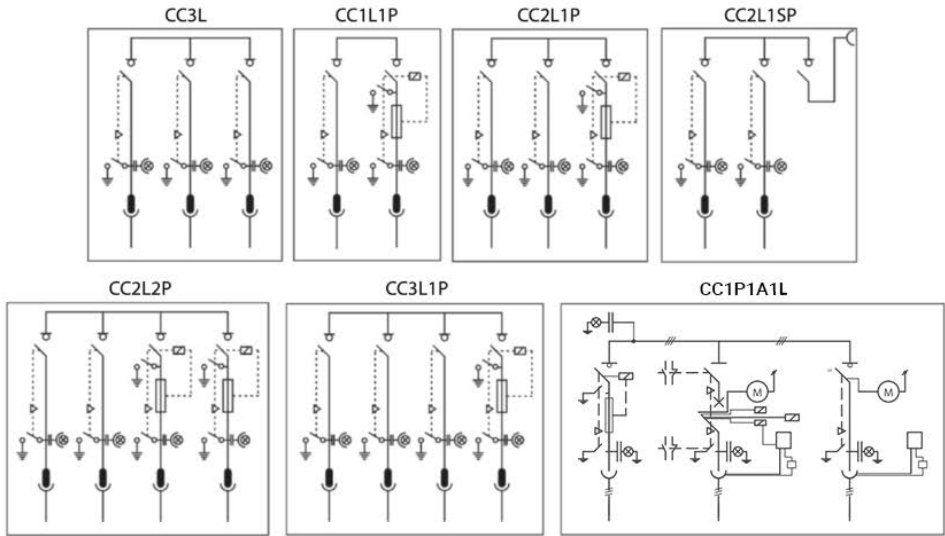
The compact system, keeps all functions under the same housing. They can be extensible or non extensible.

When the switchgear has one extensible side, with no additional switchgear coupled through it, that side should be duly closed by means of the corresponding plugs, it is not supply with the rest of material.

- 1. Upper cover
- 2. Manometer
- 3. Double connector
- 4. Voltage detection system
- 5. Characteristics plate
- 6. Diagram
- 7. Blocks with locks (optional)
- 8. Horizontal blocking lever
- 9. Manacle of the fuses/cables compartment access door
- 10. Fuses/cables compartment access door
- 11. Upper cover fixing bolt
- 12. Plug end
- 13. Main switch "open-close" signal
- 14. Main switch operating axis
- 15. Verical blocking lever
- 16. Ground disconnector operating axis
- 17. Gound disconnector "open-close" signal
- 18. Push button for the quick opening of the protection fun
- 19. Melted fuse signal
- 20. Fuse base
- 21. Income/outgoing cables connectors
- 22. Cover

| CC1L1P | CC2L1P | CC2L1A | CC2L2A | CC2L2P | CC3L1P | CC1P1A1L |
|--------|--------|--------|--------|--------|--------|----------|
|        |        |        |        |        |        |          |

Compact switchgear drawing



Weights and dimensions for compact switchgear

| Denominación | Altura | Profundidad | Ancho | Ancho | Peso |     |
|--------------|--------|-------------|-------|-------|------|-----|
| CC3L         | 24     | 1400        | 755   | 1200  | 345  |     |
| CC1L1P       |        |             |       | 800   | 265  |     |
| CC2L1P       |        |             |       | 1200  | 390  |     |
| CC2L1SP      |        |             |       | 1330  | 400  |     |
| CC2L2P       |        |             |       | 1600  | 530  |     |
| CC3L1P       |        |             |       | 1600  | 495  |     |
| CC3L         |        |             |       | 1200  | 345  |     |
| CC1L1P       | 36     |             | 810   | 800   | 265  |     |
| CC2L1P       |        |             |       | 1200  | 405  |     |
| CC2L1SP      |        |             |       | 755   | 1330 | 400 |
| CC2L2P       |        |             |       | 810   | 1600 | 560 |
| CC3L1P       |        |             |       |       | 1600 | 540 |

Constructive characteristics of modular and compact switchgear

Both, modular and compact switchgear have the following common equipment:



Manometer  
(one for each modular function or one for the compact switchgear).



Blocks by means of padlock (not included). These blocks are carried out on the holes of the interlocking levers and may lock out any position:

- Main disconnector switch: open.
- Earth disconnector switch: closed or open.



Blocks by means of lock (only by order). There are three locks which facilitate the following blocks:

- Main switch open
- Main switch closed
- Earth closed disconnector switch



Interlocking which impedes the connection of the earch switch when the main switch is closed and viceversa. It is impossible to close the main switch is closed and viceversa.

- It is impossible to close the main switch in the earth disconnector switch is closed.



General Line of earth of 120 mm2 from section.

- Subjection of cables by means of insulating staples.



Membrane of security that, in case of defects for internal arch, they liberate the gases originated in a direction that impedes damages to people that they can be maneuvering switchgear



Union between switchgears, in modular or compact systems is made by means of standard connectors. An unlimited number of switchgears are able to be connected in parallel. Connection between functions in the modular system is made by the upper side. At this moment in time, equipment from different manufactures cannot be connected.

In other words, modular systems are only compatible with the same manufacturer, given that the connection systems among switchgear, or the distances between the connection elements are not normalised.



The insulators of the switches disconnector of the line switchgears and protection go mounted on a metallic badge united rigidly to the chasis, for what any flight current derives directly to earth.  
Elevation eyebolts.

## Constructive characteristics of modular and compact switchgear

The line switchgear is generally controlled by supplier of electrical energy. Its objective is to handle the entrance/exit cables of the distribution line.

The line switchgear incorporates the following elements in, the modular as well as in the compact system:

- Mechanism that allows to carry out the test of cables.
- Synoptic with an indication of the state of the main switch and earth switch.



Entrance of calbes by means of 400 A or 630 A connectors which may be plugged in or screwed, according to the specifications or the client. Normally we supply it with a 630 A bushing which houses connectors in T. In our line functions switchgear it is not possible to enter with cable end terminations.

400 A or 630 A main disconnecter switch which always incorporates an earth disconnecter switch. The main disconnecter switch and the earth disconnecter switch has independent commands, the superior is for the disconnecter switch and the inferior is for the earth disconnecter switch. The main disconnecter switch does not accumulate energy during closure which, the command has to be motorized, it this possibility is required.

## Constructive characteristic common of the switchgear of protection or function of protection

The fuse protection function has the object to make an individual transformers’s protections, in the case of shortcircuit. The protection function against short incorporates the following elements:



System of shot of the switch- disconnecter for merge of a fuse. Combined switch: It includes shot system that carries out the opening tripolar ante the performance of a fuse (included of series). Associate switch: It doesn’t include shot system, for reason before the merge of a fuse continues feeding to the circuit for 2 phases. (Optional, to indicate in the orders).

400 A disconnecter switch individual control which accumulates energy during the closure, in order to subsequently be able to open automatically. This operation may be carried out by:

- A tripping coil, which can be activated either remotely or by receiving a signal from an external element, such as a thermometer or a relay. The blowing of one of the fuses.
- Overpressure, due to excessive heating, in the fuse compartment.



Earth disconnecter switch.

- This switch is double and when it is closed, both ends od the fuses are earthed. The axis of action is below the action axis of the main switch. Signaling of merged fuse or in operation, by means of red or green color.
- Synoptic with indication of the open/closed position of the switch and earth switch.
- Emergency trigger.

Shot reel.

- Box of auxiliary contacts 2NA+2NC in the main switch. (I lower order boxes they can be given with 1NA+1NC or with 4NA+4NC).

### Metering switchgear

The voltage transformers as well as the current transformers, which incorporate those switchgear, go in air atmosphere. The switchgear may house up to three voltage and three current transformers, which are mounted on a tray which facilitates its substitution if this is necessary.

### Crossing disconnecter switchgear

This is a function like that of the line switchgear, with the alternative of incorporate or not the earth switch. The entrance and exit of the line is carried out by the upper part of both side walls.

### Step up switchgear

The objet of this switchgear is to transfer a connection which comes in by the botton to the top area or viceversa.

### General protection with automatic breaker

When protection with fuses insufficient, due to the power of transformer, general or individual protection will be carried out in each case, with an automatic breaker in whiech a protection program against maximun current and/or a differential protection program may be incorporated. This function generally incorporates a disconnecter switch, in series with the automatic breaker. The used switch for this function is a vacuum circuit breaker.



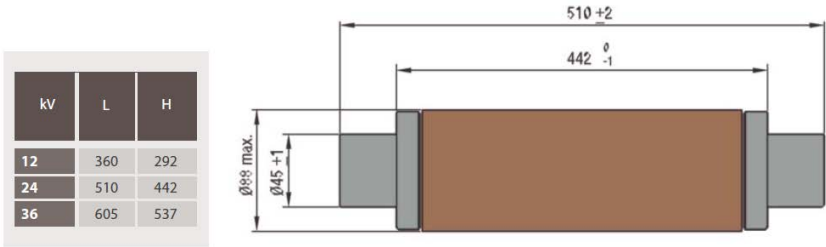
Accesories

Protection with fuses

The fuse protection function in the modular as well in the compact system of the INAEL switchgear, should equip limiting fuses manufactured in accordance with EN 60282-1 and DIN 43625. Selection of the fuses should be made bearing in mind that:

What losses in the fuses, when working in the air, with the maximal current, set out in the circuit in which the switchgear, is installed, should not be greater than 50W.

- A medium type striker should be incorporated, in concordance with the aforementioned standard.
- The rated current from the fuses will be selected, if there is not other specification to the contrary, in concordance with the indications given in the drawing below.
- The dimensions of the fuses will be always the indicated in the figure, bearing in mind that, when the switchgear, are used at 36 kV, the fuses with the dimensions indicated should guarantee a determined breaking capacity under the mentioned voltage, 36 kV.
- When the cells are used with service voltage equal or less than 24 kV, only 24 kV certified fuses may be used.
- In the switchgear, of 36 kV, fuses have dimensions of 36kV according to INAEL´s catalogue no1, with the exception of the eolic generation switchgear, that use fuses of 36kV in dimension of 24kV.



Fuses recommended for the transformers’ protection

| Power kVA              | Rated voltage kV |     |       |     |         |     |       |    |       |    |       |    |
|------------------------|------------------|-----|-------|-----|---------|-----|-------|----|-------|----|-------|----|
|                        | 6-7,2            |     | 10-12 |     | 15-17,5 |     | 20-24 |    | 25-28 |    | 30-36 |    |
| Transformers currentsA |                  |     |       |     |         |     |       |    |       |    |       |    |
| 100                    | 9,6              | 20  | 5,7   | 12  | 3,8     | 6   | 2,8   | c  | 2,3   | 5  | 1,6   | 4  |
| 125                    | 12               | 25  | 7,2   | 16  | 4,8     | 10  | 3,6   | 8  | 2,8   | 6  | 2,0   | 4  |
| 160                    | 15,3             | 32  | 9,2   | 20  | 6,1     | 12  | 4,6   | 10 | 3,6   | 8  | 2,5   | 5  |
| 200                    | 19,2             | 40  | 11,6  | 25  | 7,6     | 16  | 5,7   | 12 | 4,6   | 10 | 3,2   | 6  |
| 250                    | 24               | 50  | 14,4  | 32  | 9,6     | 20  | 7,2   | 16 | 5,7   | 12 | 4,0   | 8  |
| 315                    | 30,3             | 63  | 18,1  | 40  | 12,1    | 25  | 9     | 20 | 7,2   | 16 | 5     | 10 |
| 400                    | 38,4             | 80  | 23    | 50  | 15,3    | 32  | 11,5  | 25 | 9,2   | 20 | 6,4   | 12 |
| 500                    | 48,1             | 100 | 28,8  | 63  | 19,2    | 40  | 14,4  | 32 | 11,5  | 25 | 8     | 16 |
| 630                    | 60.6             | 125 | 36,3  | 80  | 24,2    | 50  | 18,1  | 40 | 14,5  | 32 | 10,1  | 20 |
| 800                    | 77               |     | 46,1  | 100 | 30,7    | 63  | 23    | 50 | 18,4  | 40 | 12,8  | 25 |
| 1000                   | 96               |     | 57,7  |     | 38,4    | 80  | 28,8  | 63 | 23    | 50 | 16    | 32 |
| 1250                   | 120              |     | 72,1  |     | 48,1    | 100 | 36    | 80 | 28,8  | 63 | 20    | 40 |
| Fuse drated current A  |                  |     |       |     |         |     |       |    |       |    |       |    |

Integral Protection System

The fuse protection function of INAEL SWITCHGEAR CABINEL is prepared to offer integral safety to the equipment that we want to protect, the transformer. This function is always equipped with two operating systems which are a trip coil with emission of tension and three fuses for short circuits protection. Moreover, by order, we can provide protection via relay, against overload and earth defects:

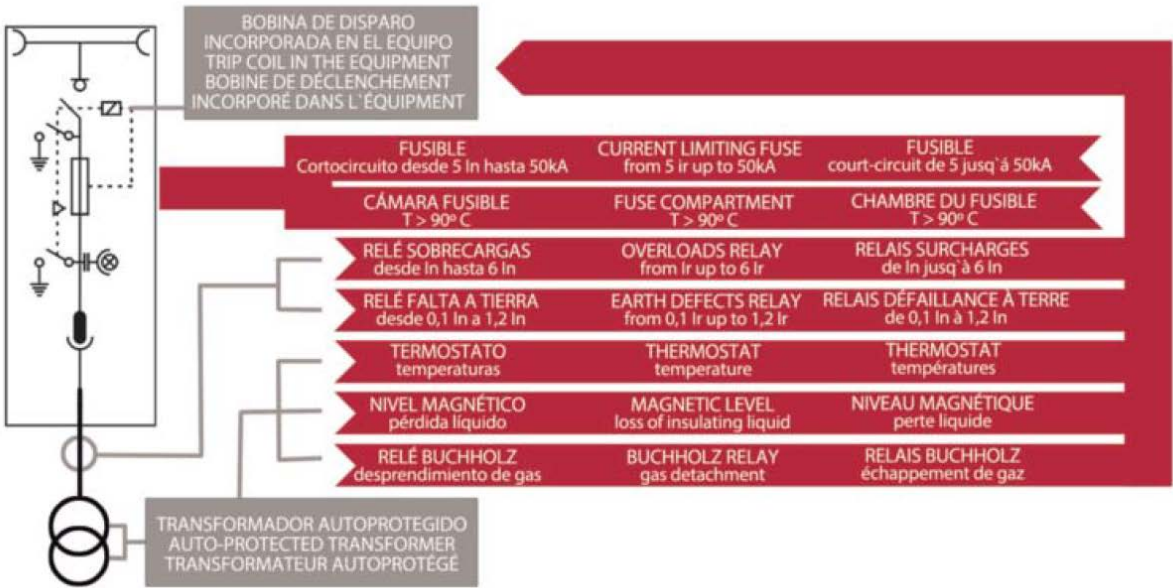
The trip coil, when working, produces the opening of the main switch. Its operation may be motivated by the following events:

- High temperature signal in the transformer, given by a thermometer or thermostat situated in the interior of the tank, or inside a transformer coil with isolation.
- High pressure signal in the transformer tank, given by a pressure switch incorporated in the same.
- Signal of gas detachment in the isolating liquid, given a BUCHHOLZ relay.
- Signal of losses of isolating liquid, provided by a magnetic level.

The fuses, protect the transformer against short circuits, the fusion of any one of the fuses and consequently the action of its striker release the trip mechanism of the switch. Moreover, if the temperature in the fuse compartments increases above certain limits, the trip mechanism will also work without the fusion of any of the fused. The protection relay will give a trip signal to the switch whenever a current greater than a previously determined value circulates. This relay is able to offer various triping waves (time/current curves). It is fundamental to select a triping wave selective with the melting wave of the fuses, in such a way that the relay must be quicker in the area corresponding to overloads, in other words, with current less than 300 A. On the other hand, the fuse must be able to operate faster than the relay for short circuit currents, in other words, greater than 300 A.

To summarise, the fuse protection function gives safety against:

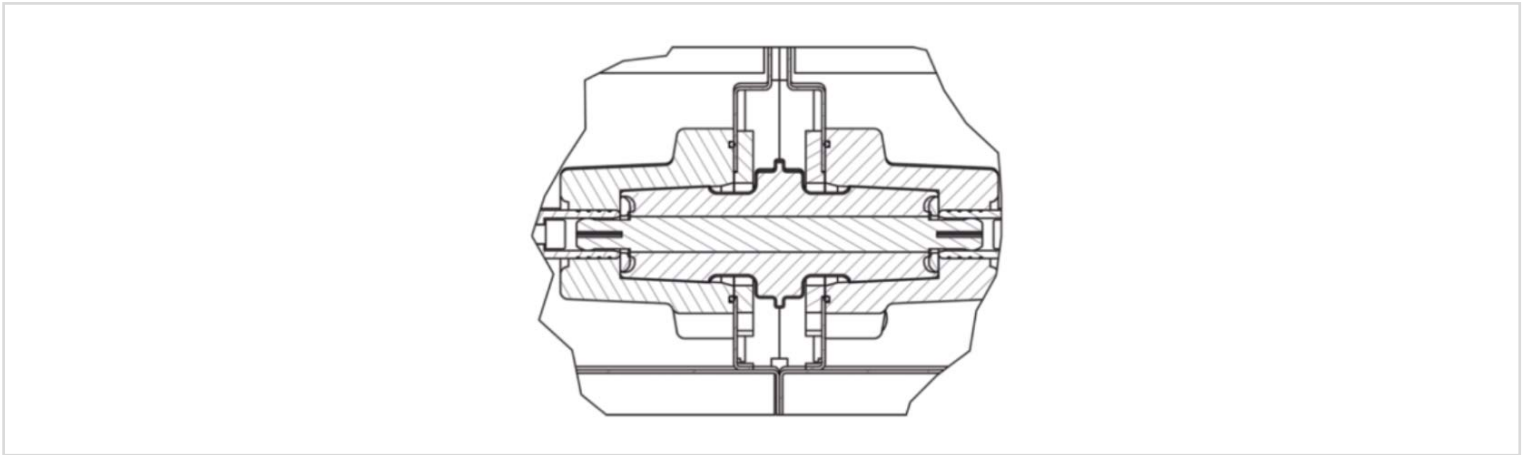
- Temperature and/or pressure increase in the transformer.
- Lack or loss of isolating liquid.
- Short circuits.
- Abnormal heating in the fuse base. Overloads.
- Earth Defects.



## Interconnection of switchgear: Connector and plug-end

The SWITCHGEAR CABINEL system facilitates the connection between modular cells, and also between modular cells and extensible compact cells.

Extension or connection in parallel may only be carried out on extensible switchgear Extensible switchgear incorporate three bushings in their upper sides according to DIN 47.637. A double connector is introduced in each one of these bushings that makes the connection in parallel between switchgear.



Suggested connectors for dry cable

| Connectors for bushings 250 A - 400 A |              |               |                |         |                |         |                |            |
|---------------------------------------|--------------|---------------|----------------|---------|----------------|---------|----------------|------------|
| Connector Type                        | Manufacturer | Rated Current | 12 kV - 250 A  |         | 24 Kv - 250 A  |         | 36 kV - 400 A  |            |
|                                       |              |               | Connector Type | Section | Connector Type | Section | Connector Type | Section    |
| Elbow connector                       | Euromold     | 250           | 158 LR         | 16-150  | K-158BLR       | 15-150  | Fabricante     | Fabricante |
|                                       | 3M           |               | 93-EE-8XX-2    | 25-95   | 93-EE-8XX-2    | 25-95   | -              | -          |
|                                       | Pirelli      |               | PMA-1250/24    | 25-95   | PMA-250/24     | 25-95   | MSCE-400       | 35-400     |
|                                       | Cellpack     |               | CWS            | 16-150  | CWS            | 16-150  | CWS            | 50-240     |

| Connectors for bushings 400/630 A |            |           |                |         |                 |         |                |         |
|-----------------------------------|------------|-----------|----------------|---------|-----------------|---------|----------------|---------|
| Connector Type                    | Fabricante | I.Nominal | 12 kV - 250 A  |         | 24 Kv - 250 A   |         | 36 kV - 400 A  |         |
|                                   |            |           | Connector Type | Section | Connector Type  | Section | Connector Type | Section |
| Shielded (Recommended)            | Cellpack   | 400       | CWS            | 25-240  | CWS             | 25-240  | -              | -       |
|                                   |            | 630       | CTS            | 25-400  | CTS             | 25-400  | CTS            | 50-400  |
|                                   | Euromold   | 400       | 400LR          | 70-300  | K-400LR         | 25-300  | -              | -       |
|                                   |            |           | 400TE          | 70-300  | K-400TE         | 25-300  | -              | -       |
|                                   |            | 630       | 400TBR/G       | 50-300  | K-400TBR/G      | 50-300  | K 400 TB       | 35-240  |
|                                   |            |           | 400TB          | 70-300  | K-440TB         | 35-300  | -              | -       |
|                                   |            |           | 440TB          | 185-630 | K-440TB         | 185-630 | -              | -       |
|                                   | Pirelli    | 400       | PMA-2-400/24   | 25-95   | PMA-2-400/24    | 50-240  | MSCT           | 25-240  |
|                                   |            |           | PMA-3-400/24   | 95-240  | PMA-3-400/24 AC | 50-240  | -              | -       |
|                                   |            | 630       | FMCEA-630/24   | 70-400  | FMCEA-630/24    | 50-400  | -              | -       |

## Motorization

Opening and closing of the main disconnecter switch, in the line function of modular and compact switchgear, may be motorized. The motorized controls are prepared so that opening and closing may also be performed manually.

- The motor operating times are:
- Opening: 1.5s on protection, 4” on line.
  - Closure: 14” on protection, 4” on line.

We have motorized controls for 48 and 110 V direct current and 110/220 V alternating current.

| Type       | End. | Oppening |
|------------|------|----------|
| Line       | 4"   | 4"       |
| Protection | 14"  | <1"      |

## Other accesories

- Locks
- Auxiliary contacts box
- (1NA+1NC, 2NA+2NC, 4NA+4NC)
- Baseboards for the elevation of cells
- Manometer with tripping contact.
- Remote Control.



| GENERAL TERMS OF SALE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
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| <p><b>ALL PRICES, CODES, AND REFERENCES INDICATED IN THIS PRICE LIST ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <p><b>GENERAL TERMS</b></p> <p>All sales made by the Seller are expressly subject to the full acceptance by the Buyer of the terms and conditions specified below and to the waiver of the Buyer's general purchasing conditions. Such acceptance and waiver shall be deemed made upon any order placed by the Buyer.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <p><b>PURPOSE AND SCOPE OF OFFERS</b></p> <p>Applicable prices are those shown in the Seller's current price list on the date of the order.</p> <p>Prices and conditions for specific offers refer exclusively to the quoted products and are valid for one month, unless otherwise stated.</p> <p>Acceptance of an offer must be formalized with a purchase order to the Seller. This will be definitively accepted only after the Seller provides express and unconditional confirmation. Any modifications and/or variations to the scope, deadlines, or other terms of the contract proposed by either party must always be notified in writing and accepted in the same manner.</p>                                                                                                                                                                                                                                                                                                                           |
| <p><b>PAYMENT TERMS</b></p> <p>nless otherwise agreed, all our sales are insured by an insurance company and shall be paid within a maximum of 60 days from the invoice date, in accordance with Law 15/2010 of July 5, amending Law 3/2004 of December 29, which establishes measures to combat late payment in commercial transactions, without ever exceeding the maximum deadlines established therein.</p> <p>For orders below €300, payment must be made in advance.</p> <p>In the case of international sales, when payment is made by documentary credit, the Buyer must obtain the Seller's acceptance of the terms of the letter of credit and of the confirming bank before it is issued.</p> <p>Due to handling costs incurred by the Seller, all sales are subject to a minimum invoice amount of €150.</p>                                                                                                                                                                                           |
| <p><b>TRANSPORT AND INSURANCE</b></p> <p>For shipments within the Iberian Peninsula, orders exceeding €2,000 net will be delivered carriage paid. For any other destination, goods will be delivered under EXW Toledo conditions. For carriage-paid deliveries, no transport claims will be accepted more than 48 hours after delivery. For urgent shipments requested by the customer, goods will always be shipped carriage forward. Goods always travel at the Buyer's risk; in case of damage or delay, the Buyer must file the appropriate claim with the transport companies or agents within 48 hours.</p>                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>TOOLING AND PACKAGING</b></p> <p>Tooling built for the manufacture of special products will be charged to the client and will be stored at INAEL, used exclusively for the orders for which they were made. They may only be used for third parties with the express authorization of the client, and will become INAEL's property after five years of non-use. Tooling delivery must be expressly agreed upon with the order. All materials shipped from INAEL to clients are packaged in standard packaging suitable for road transport; any other specific packaging requested by the Buyer will be charged to the Buyer.</p>                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>MANUFACTURING</b></p> <p>In case of force majeure, of any kind — including but not limited to raw material shortages, manufacturing difficulties, strikes, communication breakdowns, or catastrophes — INAEL shall be automatically released from all commitments and reserves the right to cancel pending orders without prior notice.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>DELIVERY TIMES</b></p> <p>Delivery times are approximate, unless expressly agreed by the Seller as fixed deadlines.</p> <p>Delivery times will start from the latest of the following dates:</p> <ul style="list-style-type: none"><li>• The date of unconditional acceptance of the order by INAEL.</li><li>• The date INAEL receives the customer-supplied information required to fulfill the order.</li><li>• The date INAEL receives any advance payment agreed upon under the sales contract.</li><li>• In case of payment by Letter of Credit, the date INAEL is notified of an acceptable and, where applicable, confirmed credit.</li></ul> <p>If the above conditions are not met within 6 months from the conclusion of the contract, it shall become null and void, and the Buyer waives any claim for damages. If the Buyer requests a delivery postponement, INAEL may invoice the goods upon their availability on the agreed date, and charge the Buyer for any resulting storage costs.</p> |

| GENERAL TERMS OF SALE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
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| <p><b>OWNERSHIP OF GOODS AND RETENTION OF TITLE</b></p> <p>INAEL shall retain ownership of the goods until full payment of the invoice sale price, even if a bill of exchange has been issued. The customer is authorized to transform the goods; however, this authorization shall automatically cease if the customer fails to strictly comply with the established conditions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>RETURN OF MATERIALS</b></p> <p>Returns will not be accepted without the express consent and involvement of INAEL, and under no circumstances for special-order materials. If a return is accepted, all transportation, inspection, repair, or reconditioning costs shall be borne exclusively by the sender. No returns of any kind will be accepted more than one year after the delivery date.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p><b>TESTING</b></p> <p>Our products are always tested and inspected before being shipped to our clients. If desired, routine tests may be carried out in the presence of the client at our factory, provided prior notice is given when the order is placed so that a date can be arranged. Should additional testing, third-party inspection, or any other specific actions be required, these must be quoted and approved by INAEL and will always be at the client's expense.</p>                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>WARRANTY</b></p> <p>We guarantee our products for a period of one year from the factory dispatch date against any material defects or manufacturing faults. During this period, we commit to repairing or replacing any part acknowledged as defective, at our expense and within our facilities, in the shortest possible time. No compensation will be granted to either party, and we accept no liability for direct or indirect damages.</p> <p>To maintain the validity of our warranty, compliance with our installation and maintenance manuals is essential. Any notification of malfunction or repair carried out without our involvement and consent will result in the immediate voiding of the warranty.</p> <p>The repair or replacement of a product or any of its components during the warranty period will not, under any circumstances, extend the original warranty period.</p> |
| <p><b>ENVIRONMENTAL REGULATIONS</b></p> <p>It is the responsibility of the waste holder to collect and dispose of the waste or to ensure that it is collected and disposed of. For professional electrical and electronic equipment covered by European Directives 2002/96/EC of 27 January 2003 and 2006/66/EC of 6 September 2006, as well as current legislation derived from them, the organizational and financial responsibility for the collection and treatment of waste generated by these products marketed after 13 August 2005 is transferred to the direct buyer, who accepts this responsibility. The direct buyer commits to assuming the responsibility for collecting, treating, and recycling the resulting waste.</p>                                                                                                                                                                 |
| <p>Failure to comply with these obligations by the buyer could lead to the imposition of criminal penalties in each EU member state. INAEL hereby guarantees that the substances, whether alone or contained within products used in the production process, have been used in accordance with applicable registration, authorization, and restriction regulations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <p><b>JURISDICTION</b></p> <p>In the event of any disputes, the Courts and Tribunals of Toledo shall have jurisdiction. Both parties expressly agree to submit to them, waiving any other jurisdiction that may apply.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |



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