



# Final Distribution Board Data sheet

# Final Distribution Board

FGECO final distribution board is designed to be a safe and reliable switching device for the end user where the most important part in the network is human protection.

Final Distribution board provides the safest solution for the final load in residential, commercial and industrial premises.



## Overview

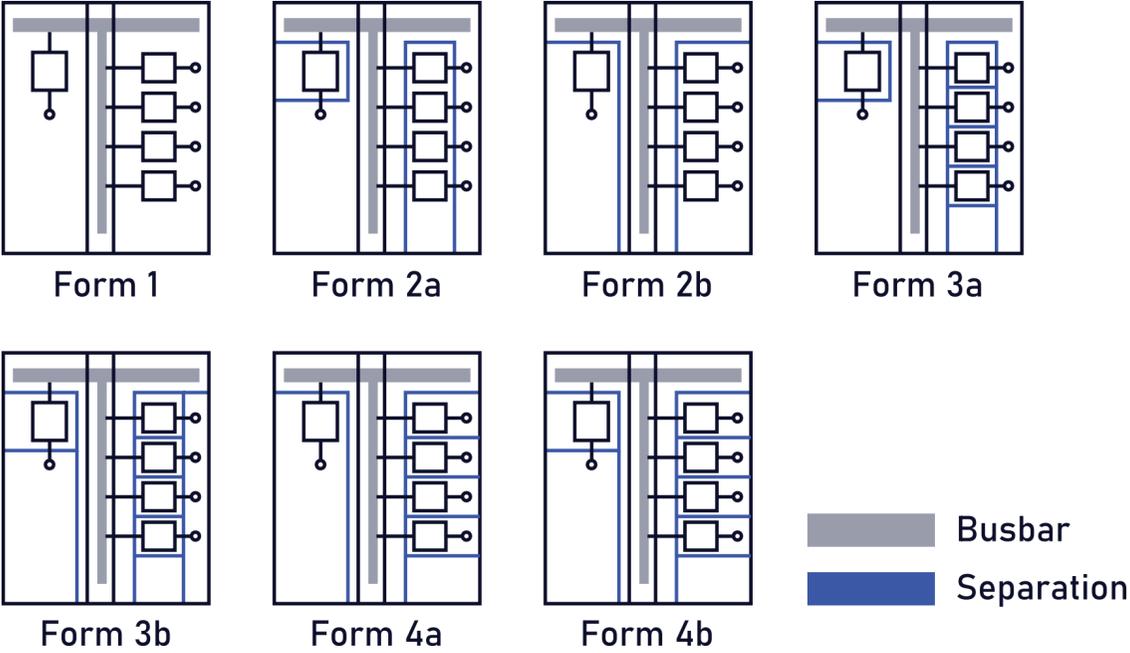
- Easy interchangeability of components
- Internal separation up to form 3a
- Rated short-time withstand current ( $I_{cw}$ ) per 0.25s up to 25 kA
- Peak withstand current  $I_{pk}$  52.5 KA
- Ingress protection up to IP66
- Flexibility to provide up to 60 ways

## Technical Data

Enclosure Name	FGECO		
Electrical Data	Rated voltage	Rated operating voltage $U_e$	415 V
		Rated insulation voltage $U_i$	500 V
		Rated impulse withstand voltage $U_{imp}$	Up to 4 kV
		Overvoltage category	Up to IV
		Material group	IIIa
		Degree of pollution	3
		Rated frequency	50/60 Hz
	Rated current	Busbar type	Pure Copper Bars, with 99.9% conductivity
		Rated current for Distribution Busbar $I_n$	Up to 250 A
		Rated diversity factor (RFD)	1
		Conditional short circuit current $I_{cc}$	18 KA
		Rated short-time withstand current $I_{cw}$	25 kA @ 0.25 Sec
		Rated peak withstand current $I_{pk}$	Up to 52,5 kA
		Incoming and outgoing	Incoming feeders
Distribution feeders	Up to 63 A		
Direct contact protection	Form of separation	Up to 3a	
	Protection against electric shock	Yes	
-	Ventilation	Normal	
-	Number of ways	Up to 54	
Mechanical Characteristics	Degree of protection	External mechanical impacts strength IK	IK08
		External degree of protection IP	Up to IP66
	Steel components	Sheet metal material	AluZinc steel Electrogalvanized / Stainless Steel
		Sheet metal thickness	Up to 2 mm
	-	Surface protection	Electrostatic powder coating/ Epoxy
	-	Standard colors	RAL7035*
	-	Panel mounting	Free standing and wall mounting
General	Installation environment	Ambient temperature ( $^{\circ}C$ )	40*
		Relative humidity	max 50% at 40 $^{\circ}C$
		Maximum altitude	Up to 2000m*
	Busbar	Busbar system	3 PH, Neutral and PE
		Busbar insulating material	PVC sleeving
	Busbar plating material	Bare / tin / Silver	

# Separation Forms

## Technical Data



Form	IEC Standard Definition	Specific Recommendations
1	No Internal separation	Protection over busbar for customer safety
2a	Separation of busbars from the functional units	Terminals not separated from busbars
2b	Separation of busbars from the functional units	Terminals separated from busbars
3a	Separation of busbars from the functional units and of all functional units from each other	Terminals not separated from busbars
3b	Separation of busbars from the functional units and of all functional units from each other	Terminals separated from busbars
4a	Separation of busbars from the functional units and of all functional units from each other, also separation of terminals from any functional unit	Terminals in the same compartment as associated functional units
4b	Separation of busbars from the functional units and of all functional units from each other, also separation of terminals from any functional unit	Terminals are not in the same compartment as the associated functional units

# Ingress Protection (IP)

Standard IEC 60529 (February 2001) indicates the degree of protection provided by electrical equipment enclosures against accidental direct contact with live parts and against the ingress of solid foreign objects or water.

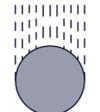
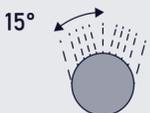
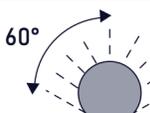
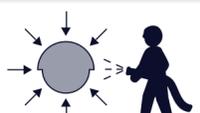
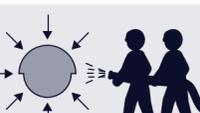
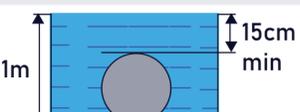
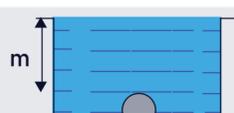
The IP code comprises 2 characteristic numerals and may include an additional letter when the actual protection of persons against direct contact with live parts is better than that indicated by the first numeral.

The first numeral characterizes the protection of the equipment against penetration of solid objects and the protection of people. The second numeral characterizes the protection of the equipment against penetration of water with harmful effects.

## Protection Against Solid Bodies Data Table

Protection of Equipment		Protection of Persons	
No.	Tests	Non-protected	Non-protected
1	$\Phi 50\text{mm}$ 	Protected against the penetration of solid objects having a diameter greater than or equal to 50 mm	Protected against direct contact with the back of the hand (accidental contacts).
2	$\Phi 12.5\text{mm}$ 	Protected against the penetration of solid objects having a diameter greater than or equal to 12.5 mm.	Protected against direct finger contact.
3	$\Phi 2.5\text{mm}$ 	Protected against the penetration of solid objects having a diameter greater than or equal to 2.5 mm.	Protected against direct contact with a $\Phi 2.5\text{ mm}$ tool.
4	$\Phi 1\text{mm}$ 	Protected against the penetration of solid objects having a diameter greater than or equal to 1 mm.	Protected against direct contact with a $\Phi 1\text{ mm}$ wire.
5		Dust protected (no harmful deposits).	Protected against direct contact with a $\Phi 1\text{ mm}$ wire.
6		Dust tight.	Protected against direct contact with a $\Phi 1\text{ mm}$ wire.

# Protection Against Liquids Data Table

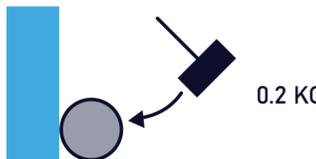
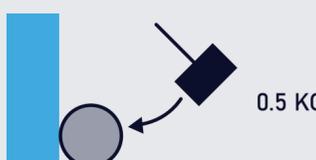
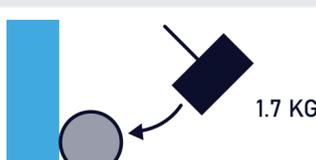
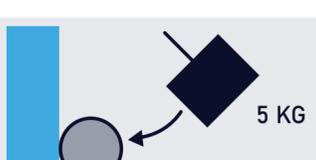
No.	Tests	Non-protected
1		Protected against vertical dripping water, (condensation).
2		Protected against dripping water at an angle of up to 15°.
3		Protected against rain at an angle of up to 60°.
4		Protected against splashing water in all directions.
5		Protected against water jets in all directions.
6		Protected against powerful jets of water and waves.
7		Protected against the effects of temporary immersion.
8		Protected against the effects of prolonged immersion under specified conditions.

# Protected Against Access To Hazardous Parts With

Level	Tests
A	With the back of the hand.
B	With the finger.
B	With a $\phi$ 2.5 mm tool.
C	With a $\phi$ 1 mm tool.

# IK Code "Mechanical Impact Test"

The European standard EN 50102/IEC 62262 defines a coding system (IK code) for indicating the degree of protection provided by electrical equipment enclosures against external mechanical impact.

No.	Tests	Non-protected	
		H (cm)	Energy (J)
01		7.5	0.15
02		10	0.2
03		17.5	0.35
04		25	0.5
05		35	0.7
06		20	1
07		40	2
08		30	5
09		20	10
10		40	20

Standard NF C 15-100 (May 1991 edition), section 512, table 51 A, provides a cross-reference between the various degrees of protection and the environmental conditions classification, relating to the selection of equipment according to external factors.

Practical guide UTE C 15-103 contains tables showing the specifications required for electrical equipment (including minimum degrees of protection), according to the locations in which they are installed.