



Exploration & Production

GENERAL SPECIFICATION

ELECTRICAL

GS EP ELE 137

Distribution boards

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1. Scope

This specification cover the minimum requirements for the design, manufacture, testing and supply of fixed low voltage stationary distribution boards (UPS distribution boards, lighting and small power, heat tracing, etc.). It does not include motive power distribution for process equipment.

2. Reference documents

The reference documents listed below form an integral part of this General Specification. Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the EFFECTIVE DATE of the CONTRACT.

Design and engineering shall conform as a minimum requirement to the current edition of the following in order of preference:

- Applicable laws and regulations of the country in which the system will be operated. In cases where no "local" regulations exist, then French laws and regulations shall be used
- Company Particular Specifications and data sheet (if any)
- Company General Specifications
- Applicable International Electrotechnical Commission (IEC) publications
- Applicable CENELEC Standards
- Applicable recognised standards and codes (e.g. UTE-NFC, BSI, VDE, etc.) where IEC publications have not yet been issued.

Distribution boards shall be designed, manufactured and tested in accordance with the latest applicable sections (with amendments) of the relevant IEC standards.

Standards

Reference	Title
IEC 60044 (Parts 1; 2)	Instrument transformers - (Parts 1; 2)
IEC 60050	International Electrotechnical Vocabulary
IEC 60068	Environmental testing
IEC 60255	Electrical relays
IEC 60269	Low voltage fuses
IEC 60439 series	Low voltage switchgear and controlgear assemblies
IEC 60445	Basic and safety principles for man-machine interface, marking and identification – Identification of equipment terminals, conductor terminations and conductors
IEC 60529	Degrees of protection provided by enclosures (IP code)
IEC 60664	Insulation co-ordination within low voltage systems
IEC 60706	Maintainability of equipment
IEC 60947	Low voltage switchgear and controlgear



Reference	Title
IEC 61000	Electromagnetic Compatibility (EMC)
IEC 61293	Marking of electrical equipment with ratings related to electrical supply - Safety requirements
IEC 62262	Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)

Professional Documents

Reference	Title
Not applicable	

Regulations

Reference	Title
Not applicable	

Codes

Reference	Title
Not applicable	

Other documents

Reference	Title
Not applicable	

Total General Specifications

Reference	Title
GS EP COR 350	External protection of off-shore and coastal structures and equipment by painting
GS EP ELE 079	Electrical apparatus for potentially explosive gas atmospheres

3. Service conditions

The distribution board shall be suitable in all aspects for continuous operation at full load service.

The distribution board shall be designed for use under normal service and environmental conditions as specified in the particular project specification.

The equipment shall be suitable for operation, without deleterious effect, with variations of voltage and frequencies as follows:

- Voltage supply: $\pm 10\%$
- Frequency: $\pm 5\%$.

4. Neutral earthing system

The earthing system shall be indicated in the particular project specification. In case of IT system, the permanent earth fault monitoring device shall be installed inside the distribution board assembly.

5. Construction requirements

5.1 Degree of protection

The minimum degrees of protection shall be at least:

- IP21 when installed indoors
- IP55 when installed outdoors, in protected areas and under shelters and IP65 in unprotected and exposed areas (the local control panel of some packaged units shall be mounted on the skid), however this shall be subject to Company approval
- IK 08 for any type of enclosure.

5.2 Enclosure

Distribution board shall be entirely prefabricated and tested in Manufacturer's factory.

Distribution board enclosure shall be made of metal sheeting or polyester.

Distribution board shall be cubicle type for floor standing installation or box type for wall mounting installation and flush fronted construction.

Metal sheeting enclosure shall be hot dip galvanised steel for outdoor installation with finishing paint.

Polyester enclosure shall be self-extinguishable.

Distribution board above 25 kg shall be fitted with eyebolt/lifting eyes.

Distribution board assembly shall be self-ventilated. Where louvers are necessary, the louvers shall be within the IP and IK ratings.

Unless otherwise specified, distribution board shall be designed for front access only with door.

Unless otherwise specified, distribution board shall be bottom entry.

Outdoor and/or wall mounted distribution boards shall be fitted with a gland plate. The gland plate shall be sized such as to accommodate cable glands for all incoming and outgoing circuits including plugs for spare circuits.

Distribution board shall be equipped with door stay system and handles. No key or locking device board is required for distribution board installed in technical room.