

CTS-Ex p Compact Distribution and Transformer Substation

Compact distribution and transformer Substation CTS-Ex p is manufactured with Ex-type “internal pressure”, protection “p” suitable for installation in a mine with a classified area Group I Category M2 and petrochemical plants and Oil & Gas Group II 2G with protection level Gb.

- Manufactured for outdoor and tunnel installations;
- Free-standing, easy to move and ready for use;
- It could Contain M.V.and/or LV switchgear, transformer;
- Maximum overpressure capacity 35m3;
- Fitted with safety devices;
- Substation may be designed to be mobile with M.V. cable reel;
- Designed to suit the customer’s requirements.

Safety and reference standards

International standard	EN 60079-0 EN-60079-2 EN 60079-11
Atex Directive	2014/34/EU I M2 Ex pxb I Mb II 2G Ex pxb IIC T4 Gb II2D Ex pxb IIIC T135°C Db



Main Electrical Features

Distribution system	TN
Transformer type	Cast resin
Rated power transformer (Pn)	100÷1250 kVA
Connection	Dyn11 - Class F
Earthed neutral system	Direct
Frequency	50 Hz
Rated voltage MV (Ue1)	24 kV
Rated current MV (In1)	630 A
Short current Icc x 1 sec	16 kA
Rated voltage LV (Ue1)	0.4 kV
Rated current LV (In1)	Depending from the Power
Rated voltage MV cabinet (Ur)	24 kV
Power frequency withstand voltage (50/60 Hz 1 min) - (Ud)	50 kV
Rated lighting impulse withstand voltage (Up)	95 kV
Auxiliary circuit voltage	24 V dc 230 V ac
Cable entry	bottom

The electrical references are purely indicative and can be made according to customer specifications and in accordance with the reference legislation.

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Service and environmental conditions

Type of installation	for tunnel and outdoor
Pressurization Total nominal Volume	From 10 to 35m ³
Maximum and minimum overpressure in service	From 0,5mbar up to 8mbar
Compartment number	Starting from 1
Maximum ambient temperature	+ 45°C
Minimum ambient temperature	- 20°C
External protection class	IP 55
Altitude	<1000m s.l.m.
Relative humidity	0÷90%
Painting	RAL 3020 (other shades on request)



Fittings & Accessories

Accessory electrical equipment

- External cabinet sockets and plugs up to 800A and Atex certified up to 500A;
- PFC switchgear for transformer;
- UPS (Uninterruptable Power Supply);
- APFC switchgear (optional);
- Fire detection and extinguishing system (optional);
- Plug protection cover (optional).

External cabinet accessories

- Warning horn (IP66), suitable for long term continuous activation;
- Flashing warning light (IP55);
- Emergency pushbutton (under glass);
- Skid or wheel mounted;
- Protective Shield;
- Atex Cable reel.