Inductive voltage transformers

Outdoor operation
SF_6-gas insulated

EGF (245 – 550) kV

PFIFFNER

Current and voltage – our passion

General description

Voltage transformers type EGF are used in high voltage substations within the 245–550 kV range. They transform high voltage into standardised, equivalent values for meters, measuring and protection devices.

The active section of the voltage transformer is located in the pressure-resistant foot housing. The iron core is on earth potential. The secondary windings are directly positioned on the iron core. The secondary windings are passed through an SF_6/air bushing into the terminal box. The high voltage connection is implemented via a short-circuit proof aluminium pipe.

The electrical field distribution along the insulator is optimised by a special layout of the control electrode inside the silicone composite insulator.

The housing components consist of helium-tight, corrosion-resistant cast aluminium. All housing components under pressure are individually type-tested according to applicable pressure vessel standards.

The SF_6 gas density is monitored by a temperature-compensated gas density monitor with alarm contacts. The special design means the function of the gas density monitor can be checked without dismounting it.

A corrosion-resistant metal rupture disc, protected by a metal cover, is located at the top of the housing and ensures safe pressure relief in case of error.

The generously designed terminal box is equipped with a cover that opens sidewards.

Pure SF_6 gas is used for ambient temperatures up to -40°C. The transformer is filled with a mixed gas for lower ambient temperatures up to -60°C.

Advantages of inductive voltage transformers

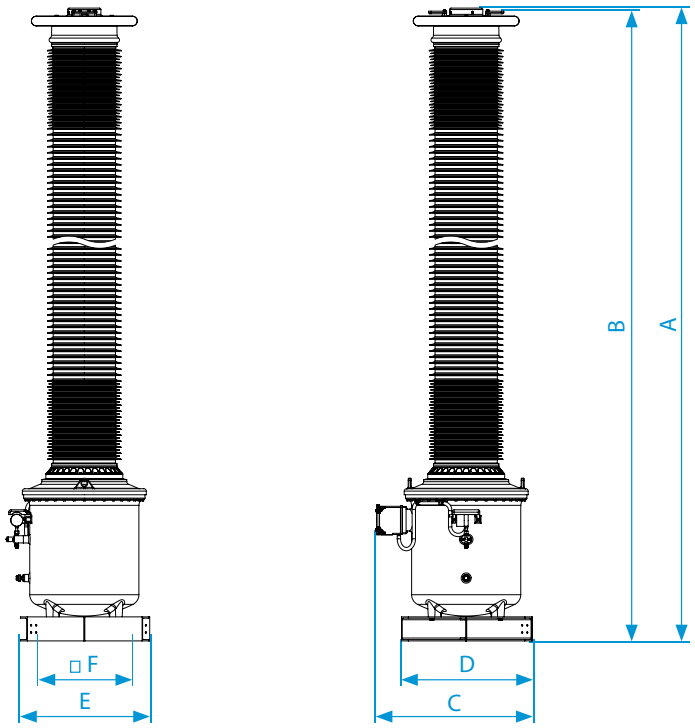
- High operating safety through optimised current distribution in the field-controlled bushing
- Low weight and high creepage resistance through the use of composite insulators
- Special iron core provides protection against any ferro resonances

Design

Possible options

- Colour coated housings and flanges
- Fuses or circuit breakers (with or without auxiliary contacts) in terminal box
- Heater in the terminal box
- Sealable cover on terminals for billing purposes
- Additional terminal box
- Sealable gas filling valve

Technical data



Type EGF		245	300	330	362	420	550
Standard		IEC / IEEE					
Highest voltage for equipment	kV	245	300	330	363	420	550
Rated power-frequency withstand voltage	kV	460	460	460	575	630	680
Rated lightning impulse withstand voltage	kV	1050	1050	1175	1175	1425	1550
Frequency	Hz	50 / 60					
Accuracy class		0.1 – 3; 3P; 6P					
Rated thermal limiting output	VA	≤ 3000					
Max. simultaneous burden (cl. 0.2)	VA	300					
Max. number windings		5					
Nominal operating / transport overpressure (20°C)	bar	4 / 0.5					

Type EGF			245	300	330	362	420	550
Height of unit*	A	mm	3930	3930	4993	4993	5353	6183
Height to primary terminal*	B	mm	3905	3905	4968	4968	5328	6153
Depth of unit including terminal box	C	mm	1052	1052	1293	1293	1293	1293
Depth of unit base	D	mm	742	742	1088	1088	1088	1088
Width of unit base	E	mm	730	730	1075	1075	1075	1075
Distance between screw holes at base	F	mm	600	600	900	900	900	900
Min. creepage distance*		mm	6700	7500	8250	9050	10500	13759
Gross weight / gas weight, approx.*		kg	670 / 21	670 / 21	805 / 34	805 / 34	820 / 36	850 / 39

* with standard composite silicone insulator, creepage distance 25 mm/kV

Highlights

Optimally protected density monitor

- Precise function is ensured through temperature compensation down to -60°C.
- The density monitor is equipped with two alarm contacts to signal a pressure loss.
- The density monitor can be checked without dismounting it via a special test connection.
- A solid metal cover protects the density monitor against mechanical damage and direct sunlight.

Excellent protection against moisture

- The inner side of the instrument transformer is protected against moisture by means of special sealing rings.
- All housings are designed with a drain-age area to protect the sealing surfaces of the housings against rain. This significantly reduces crevice corrosion.
- The housing elements are connected with special stainless steel screws. They are designed in such a way that no humidity can enter the screw hole.

Installation-friendly terminal box

- The generously sized terminal box with a cover that can be opened sidewards, is secured with captive screws. It can accommodate terminal blocks, fuses, additional auxiliary contacts and sealable covers.
- The terminal box is equipped as standard with a blind flange. Cable glands can be installed on request.
- The terminal box has a protected ventilation aperture to prevent condensation.

Global presence

PFIFFNER Instr. Transformers Ltd
5042 Hirschthal
Switzerland

☎ +41 (0)62 7392828
✉ sales@pmw.ch
💻 www.pfiffner-group.com/pch

PFIFFNER Technologie Ltd
5042 Hirschthal
Switzerland

☎ +41 (0)62 7392828
✉ technologie@pmw.ch
💻 www.pfiffner-group.com/pte

PFIFFNER Systems Ltd
4303 Kaiseraugst
Switzerland

☎ +41 (0)61 4676111
✉ info@pfiffner-systems.com
💻 www.pfiffner-systems.com

PFIFFNER Deutschland GmbH
25524 Itzehoe
Germany

☎ +49 (0)48 21408270
✉ sales@pfiffner-messwandler.de
💻 www.pfiffner-group.com/pde

PFIFFNER Transformatör A.S.
06750 Akyurt/Ankara
Turkey

☎ +90 (0)31 28475521
✉ info@pfiffner.com.tr
💻 www.pfiffner-group.com/ptr

PFIFFNER do Brasil Ltda
88307-740 Itajaí
Brazil

☎ +55 (0)47 33481700
✉ pfiffner@pfiffner.com.br
💻 www.pfiffner-group.com/pbr

MGC Moser-Glaser Ltd
4303 Kaiseraugst
Switzerland

☎ +41 (0)61 4676111
✉ info@mgc.ch
💻 www.mgc.ch

ALPHA Elektrotechnik Ltd
2560 Nidau
Switzerland

☎ +41 (0)32 3328700
✉ mail@alpha-et.ch
💻 www.alpha-et.ch

PFIFFNER

Current and voltage – our passion

HV HIGH VOLTAGE
MV MEDIUM VOLTAGE
LV LOW VOLTAGE