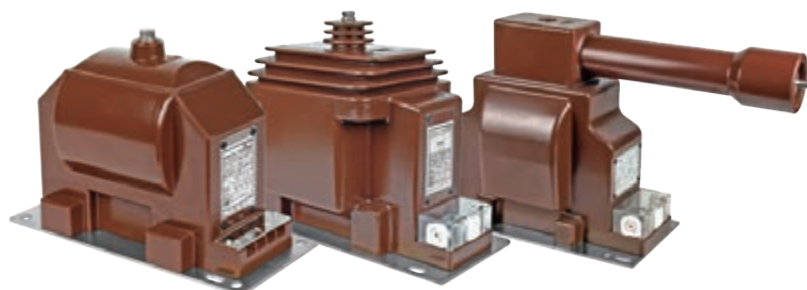


# SINGLE-POLE VOLTAGE TRANSFORMERS



**EPF-10CE EPF-10DE**  
**EPF-20SK EPF-20SL EPF-30DE**

## Introduction

Cast in Araldite® epoxy resin and designed for 12/24/36 kV power systems, these single-pole voltage transformers, or potential transformers, are self-extinguishing and are characterized by their superior insulation and excellent moisture resistance. These VTs (PTs) can be used with measuring or monitoring instruments for power system analysis and monitoring; alternatively, they can be paired with protective relays to maintain system safety during power supply.

For models *EPF-20SL* and *EPF-30DE*, optional accessories are offered, which include an elbow-type connector (for the primary side) and a tubular epoxy housing, which contains a built-in primary fuse. The tubular epoxy housing may be attached to the VT (PT) through the elbow-type connector. This option helps to enhance safety of operation, allow easier repair, and reduce the size of the switchgear panel.

Model *EPF-20SL* provides a rated thermal burden of 1000VA (maximum) and can be used as a power source for circuit breaker operation.

## Product Features

- Indoor usage; cast in Araldite® epoxy resin for superior insulation
- Standard: IEC or IEEE
- Frequency: 50 or 60 Hz
- *EPF-20SL and EPF-30DE only:* (Option) Elbow-type connector and tubular epoxy housing with a built-in primary fuse
- *GVT (GPT) Functionality:* Connect three voltage transformers (potential transformers) from this series through a Y-Y-open  $\triangle$  connection for the combined functionality of a three-phase VT (PT) and a grounding voltage transformer (grounding potential transformer) (i.e. 3 $\Phi$  VT + GVT, or 3 $\Phi$  PT + GPT).

## Selection Tables

Model	System Voltage (kV)	Primary Voltage (kV)	Secondary Voltage (V)	Tertiary Voltage (V)	Voltage Ratio	Burden / Accuracy	AC / BIL (kV)	Usage (Refer to following table)	Approx. Weight (kg)	Fig.
EPF-10CE	12	11/√3	110/√3	110/√3 or 110/3	100:1	250 (100) VA / 3.0 (0.5) or 250 (100) VA / 3.0 (0.5) + 250VA / 3P	28/75	A or B	17	1
EPF-10DE									20	2
EPF-20SK	24	22/√3		-	200:1	50 VA / 1.0 or 100 VA / 3.0	50/125	A	18	3
EPF-20SL*	24	22/√3		-		200 VA / 1.0 or 500 VA / 3.0			24	4
EPF-20SL* (w/ Fuse)	24	22/√3		-		29			5	
EPF-30DE	36	33/√3		110/√3 or 110/3	300:1	100 (50) VA / 1.0 (0.5) or 100 (50) VA / 1.0 (0.5) + 50VA / 3P	70/170	A or B	35	6
EPF-30DE (w/ Fuse)			39						7	

\* Model marked with an asterisk can be used as a circuit breaker operation power source due to its rated thermal burden of 1000VA (max.).

Usage	Description	Rated Voltage Factor**	Rated Time
A	Use as single-pole voltage transformer	1.2	Continuous
		1.5	30 s
B	Connecting three voltage transformers to use as a 3-phase voltage transformer and grounding voltage transformer (GVT)	1.2	Continuous
		1.9	8 h

\*\* Values according to Standard Values of Rated Voltage Factors by IEC 61869-3: 2011.



Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

Fig. 6

Fig. 7

Note: Other standards and specifications available.



### CHALLENGE INDUSTRIAL CO., LTD.

1F, No. 46, Ln. 80, Sec. 3, Nangang Rd.,  
Taipei City 115, Taiwan (R.O.C.)  
T: 886-2-2788-3368 ext. 2318