

# Current and voltage are our passion

Many years of experience, comprehensive expertise, international market presence and the desire to continuously develop our products; these aspects make us an efficient and solution-orientated partner.



PFIFFNER

# An optimistic view of the future

«Outdoor MV we have developed from simple origins. Emil Pfiffner founded the company more than 80 years ago. Full of ideas and innovative energy but with little commercial expertise, he was operating in a difficult economic and political environment. My father was his first apprentice, and after 25 years he became the managing director of the company, a role that he then conferred upon me 35 years later.

As the smallest of six Swiss instrument transformer companies, we were in a constant battle for survival. This shaped us and gave us the capacity to keep going in the face of subsequent international competition. With a flair for recognising opportunities and using them, we developed into an internationally active, medium-sized company.

Despite strong growth, a modern infrastructure and a group turnover of more than CHF 100 million, the original spirit of enterprise continues. We want to remain a simple and modest but above all, an innovative and efficient organisation. Thanks to our customers, suppliers and staff we are taking an optimistic view of the future.»

Fritz Hunziker  
President PFIFFNER Holding Ltd



# Medium voltage instrument transformers

PFIFFNER has been producing instrument transformers for more than 80 years. The devices perform their tasks in electric plant – day and night, summer and winter. Our instrument transformers meet the requirements of the international customers and are designed for a service life of 40 years.

Our medium-voltage instrument transformers are encapsulated under vacuum with epoxy resin. At operating voltage they are free from partial discharges and guarantee long-term and safe operation. The instrument transformers can be officially calibrated in our certified laboratories to meet customer requirements.





1

Current transformer

## AC1 - 24

- epoxy resin-insulated
- for outdoor application
- partial discharge free at operating voltage
- type-approved according to IEC
- tropicalised
- maintenance-free



2

Current transformer

## AC1 - 36

- epoxy resin-insulated
- for outdoor application
- partial discharge free at operating voltage
- type-approved according to IEC
- tropicalised
- maintenance-free



3

Voltage transformer  
Single Pole

## GC1 - 24

- epoxy resin-insulated
- for outdoor application
- partial discharge free at operating voltage
- type-approved according to IEC
- tropicalised
- maintenance-free



4

Voltage transformer  
Single Pole

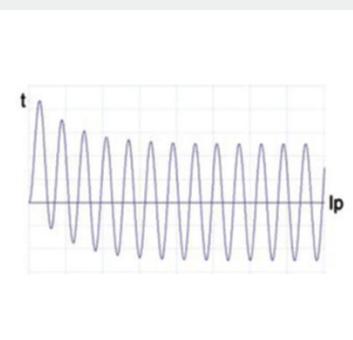
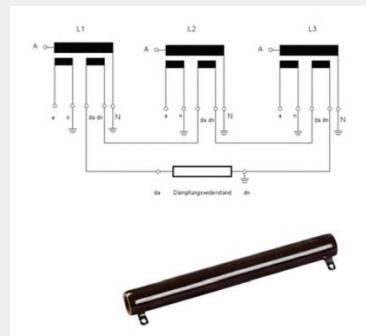
## GC1A - 24

- epoxy resin-insulated
- for outdoor application
- partial discharge free at operating voltage
- type-approved according to IEC
- tropicalised
- maintenance-free

Available with secondary for open delta connection.

Appropriate resistances for ferro-resonance damping available as accessories.

[1]



Current transformer short-time current-proof even for short-circuited secondary windings according to IEC [3, 4, 5]





5

Voltage transformer  
Double Pole

## GC2 - 24

- epoxy resin-insulated
- for outdoor application with uninsulated conductor
- primary current up to 15'000 A
- partial discharge free at operating voltage
- type-approved according to IEC
- tropicalised
- maintenance-free



6

Voltage transformer  
Single Pole

## GC1 - 36

- epoxy resin-insulated
- for outdoor application with uninsulated conductor
- primary current up to 15'000 A
- partial discharge free at operating voltage
- type-approved according to IEC
- tropicalised
- maintenance-free

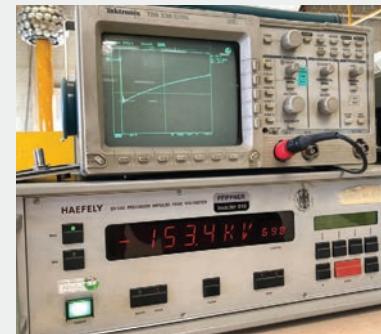


7

Voltage transformer  
Double Pole

## GC2 - 36

- epoxy resin-insulated
- for outdoor application
- partial discharge free at operating voltage
- type-approved according to IEC
- tropicalised
- maintenance-free



# Outdoor M.V. Resin Cast Instrument Transformers

## Current - Voltage Transformers



**PFIFFNER**

Current and voltage – our passion



IEC Design

Current Transformer  
Epoxy resin insulation  
Outdoor  
DIN 2600 compatible

Current Transformer  
Epoxy resin insulation  
Outdoor  
DIN 2600 compatible

Voltage Transformer  
Epoxy resin insulation  
Outdoor  
DIN 2600 compatible

Voltage Transformer  
Epoxy resin insulation  
Outdoor  
DIN 2600 compatible

Um (kV)

up to 24 kV

up to 36 kV

up to 24 kV

up to 24 kV

Type

AC1 - 24

AC1 - 36

GC1 - 24

GC1A - 24

Page

6

7

8

9



Current and voltage – our passion

## Outdoor M.V. Resin Cast Instrument Transformers Current - Voltage Transformers



IEC Design

Voltage Transformer  
Epoxy resin insulation  
Outdoor  
DIN 2600 compatible

Voltage Transformer  
Epoxy resin insulation  
Outdoor  
DIN 2600 compatible

Voltage Transformer  
Epoxy resin insulation  
Outdoor  
DIN 2600 compatible

Um (kV)

up to 24 kV

up to 36 kV

up to 36 kV

Type

GC2 - 24

GC1 - 36

GC2 - 36

Page

10

11

12

# Outdoor Current Transformers

## AC1 - 24



**PFIFFNER**

Current and voltage – our passion



Current Transformer  
Epoxy resin insulation  
Outdoor

### Indications for the ordering

- Type designation
- Nominal primary current
- Nominal secondary current
  - Frequency
  - Nominal output
  - Accuracy class
- Short-time thermal current

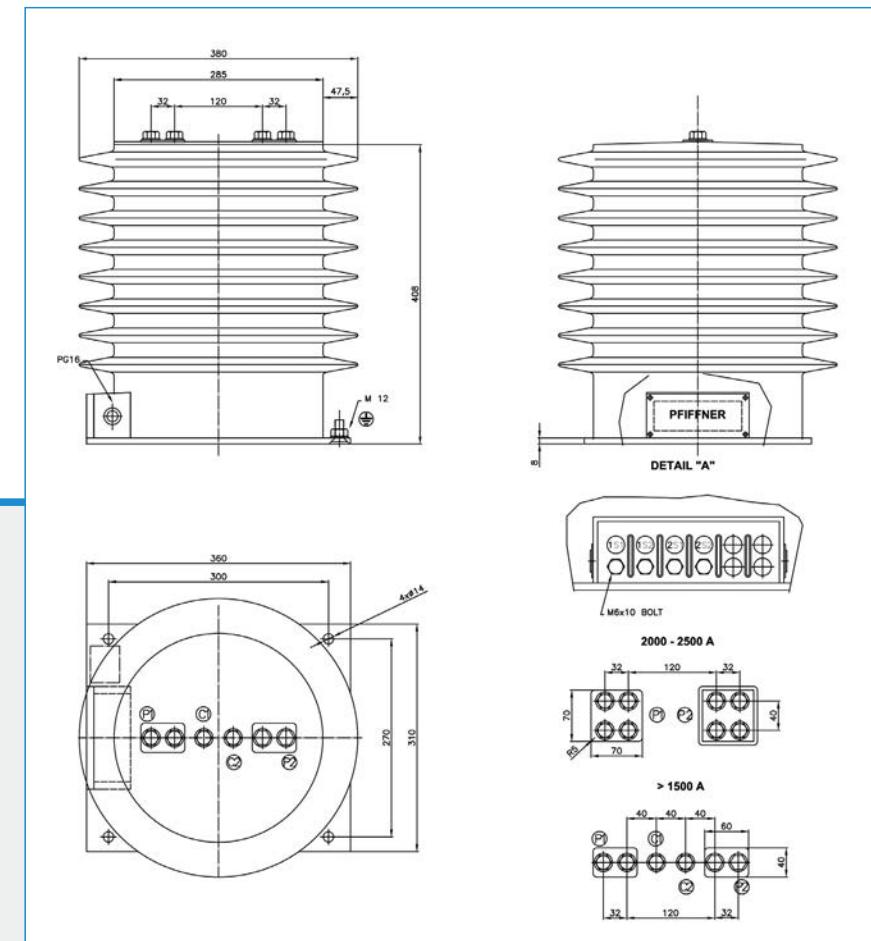
### TECHNICAL DATA

Um	0.24
Rated Frequency	50-60
Rated Primary Current Ipn	A up to 4000A
Rated Secondary Current-Isn	A 1 and 5
Insulation Class	E
Rated dynamic current(Idyn)	ka 2,5lth
Rated Short Thermal Current Ith	ka up to 1000xIpn, max 200 kA
Number of Cores	Must be determined on the basis of the requirements accuracy class, over-current value,burden

Creepage Distance	875
Weight	55
NBI/BIL/NBI	150
Standard	TS, IEC, ABNT, ANSI, VDE, GOST

### AC1-24

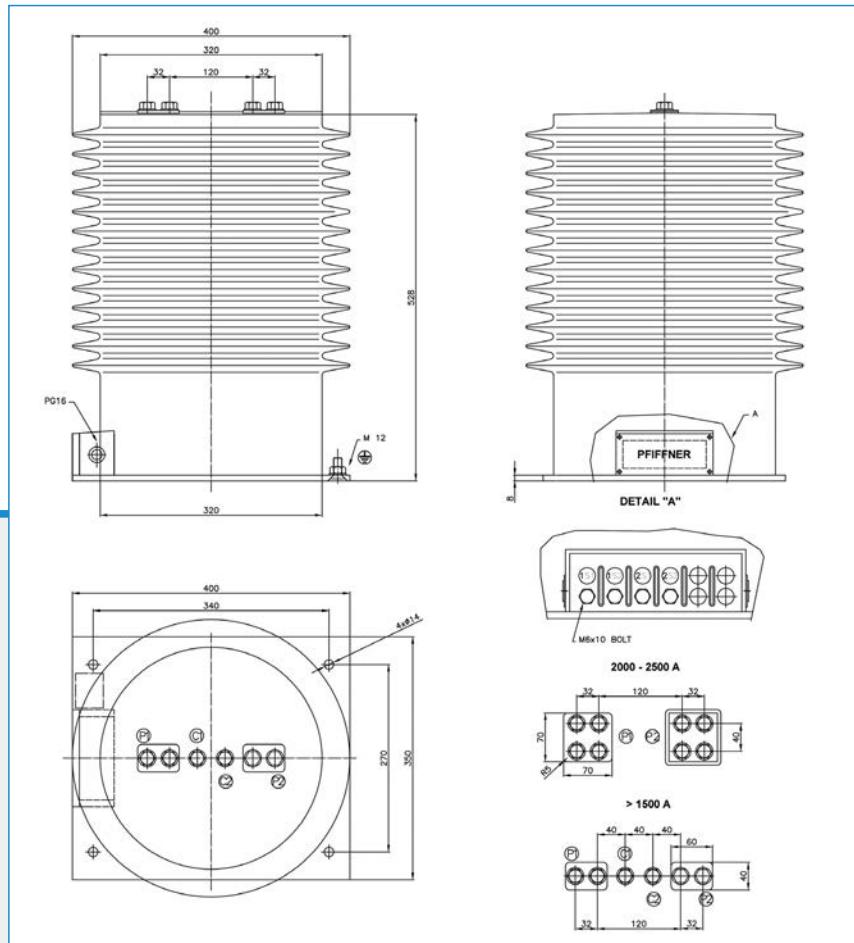
kV	0.24
Hz	50-60
A up to 4000A	
A 1 and 5	
E	
ka 2,5lth	
ka up to 1000xIpn, max 200 kA	
Must be determined on the basis of the requirements accuracy class, over-current value,burden	
mm	875
kg	55
kV	150
Standard	TS, IEC, ABNT, ANSI, VDE, GOST





# PFIFFNER

Current and voltage – our passion



## Outdoor Current Transformers AC1 - 36

Current Transformer  
Epoxy resin insulation  
Outdoor

### Indications for the ordering

- Type designation
- Nominal primary current
- Nominal secondary current
- Frequency
- Nominal output
- Accuracy class
- Short-time thermal current



### TECHNICAL DATA

Um	AC1 - 36
Rated Frequency	kV 36
Rated Primary Current Ipn	Hz 50-60
Rated Secondary Current-Isn	A up to 4000A
Insulation Class	A 1 and 5
Rated dynamic current(Idyn)	E
Rated Short Thermal Current Ith	kA 2,5Ith
Number of Cores	kA up to 1000xIpn, max 200 kA
Creepage Distance	Must be determined on the basis of the requirements
Weight	accuracy class, over-current value, burden
NBI/BIL/NBI	mm 1240
Standard	kg 70
	kV 200
	TS, IEC, ABNT, ANSI, VDE, GOST

# Outdoor Voltage Transformers Single Pole GC1 - 24



**PFIFFNER**

Current and voltage – our passion



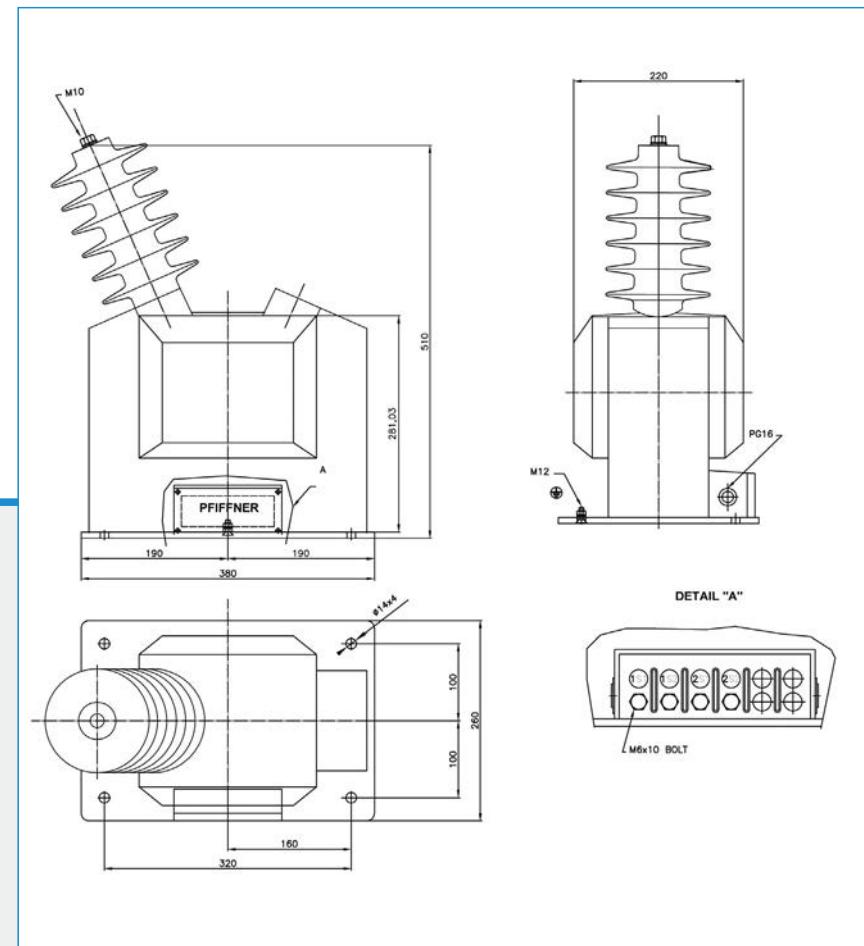
Voltage Transformer  
Epoxy resin insulation  
Outdoor

## Indications for the ordering

- Type designation
- Nominal primary voltages
- Nominal secondary voltages
  - Frequency
  - Nominal output
  - Accuracy class
- Rated voltage factor
- Thermal burden

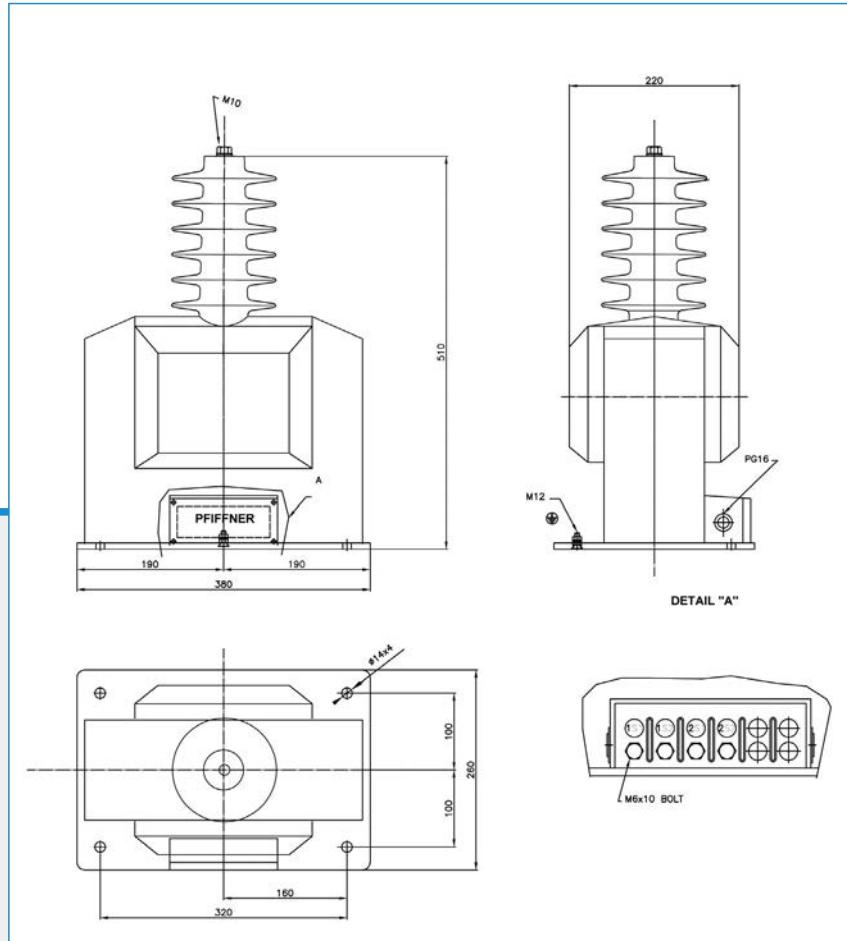
## TECHNICAL DATA

Um	kV	0.24	
Rated Frequency	Hz	50-60	
Rated Primary Voltage-Upn	kV	3,6 - 7,2 - 12 - 17,5 - 20 - 24	
Rated Secondary Voltage-Usn	V	100-120-100/ $\sqrt{3}$ -120/ $\sqrt{3}$ -200-200/ $\sqrt{3}$	
Rated Output in Accuracy Class(IEC)	0.2	VA	60 60
	0.5	VA	120 120
	1	VA	200 200
Rated Voltage Factor RVF	1,9 Un 8h/30S , 1,2Un Cont		
Thermal Limit Current	A	9	
Creepage Distance	mm	875	
Weight	kg	40	
NBI/BIL/NBI	kV	150	
Standard	TS, IEC, ABNT,ANSI ,VDE, GOST		





Current and voltage – our passion



# Outdoor Voltage Transformers Single Pole GC1A - 24

Voltage Transformer  
Epoxy resin insulation  
Outdoor

## Indications for the ordering

- Type designation
- Nominal primary voltages
- Nominal secondary voltages
- Frequency
- Nominal output
- Accuracy class
- Rated voltage factor
- Thermal burden

## TECHNICAL DATA

Um  
Rated Frequency  
Rated Primary Voltage-Upn  
Rated Secondary Voltage-Usn  
Rated Output in Accuracy Class(IEC)

Rated Voltage Factor RVF  
Thermal Limit Current  
Creepage Distance  
Weight  
NBI/BIL/NBI  
Standard

## GC1A - 24

kV	0-24
Hz	50-60
kV	3,6 - 7,2 - 12 - 17,5 - 20 - 24
V	100-120-100/ $\sqrt{3}$ -120/ $\sqrt{3}$ -200-200/ $\sqrt{3}$
0.2	VA      60      60
0.5	VA      120      120
1	VA      200      200
1,9 Un 8h/30S , 1.2Un Cont	
A	9
mm	875
kg	40
kV	150
TS, IEC, ABNT,ANSI ,VDE, GOST	



# Outdoor Voltage Transformers Double Pole GC2 - 24



**PFIFFNER**

Current and voltage – our passion

Voltage Transformer  
Epoxy resin insulation  
Outdoor

## Indications for the ordering

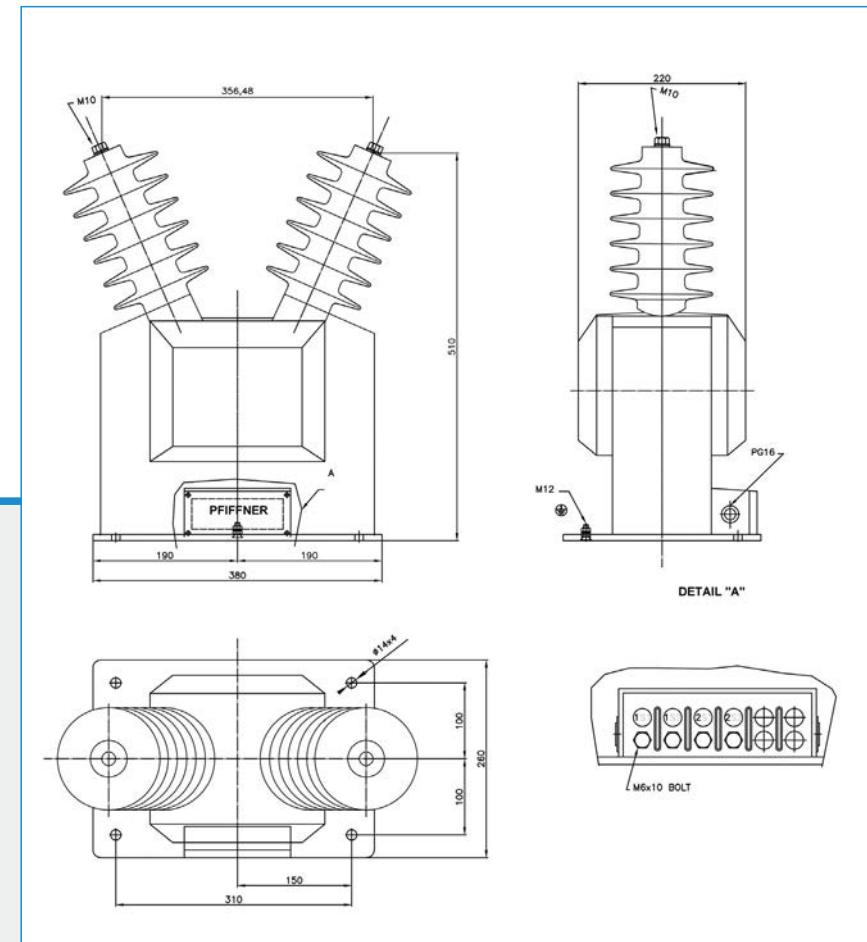
- Type designation
- Nominal primary voltages
- Nominal secondary voltages
- Frequency
  - Nominal output
  - Accuracy class
- Rated voltage factor
- Thermal burden

## TECHNICAL DATA

Um	kV	0.24	
Rated Frequency	Hz	50-60	
Rated Primary Voltage-Upn	kV	3,6 - 7,2 - 12 - 17,5 - 20 - 24	
Rated Secondary Voltage-Usn	V	100-120-200-240	
Rated Output in Accuracy Class(IEC)	0.2	VA	60 60
	0.5	VA	120 120
	1	VA	200 200
Rated Voltage Factor RVF	1.2Un Cont / 1,9 Un 30s		
Thermal Limit Current	A	6	
Creepage Distance	mm	875	
Weight	kg	45	
NBI/BIL/NBI	kV	150	
Standard	TS, IEC, ABNT, ANSI, VDE, GOST		

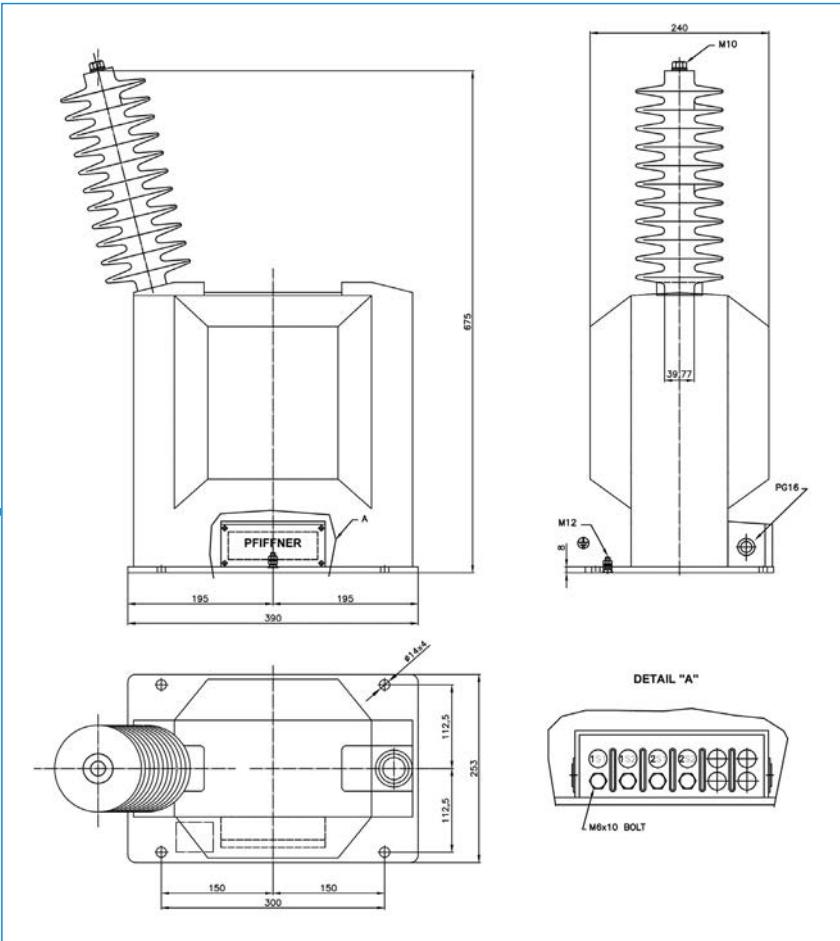
## GC2-24

1.2Un Cont / 1,9 Un 30s	
A	6
mm	875
kg	45
kV	150
TS, IEC, ABNT, ANSI, VDE, GOST	





Current and voltage – our passion



# Outdoor Voltage Transformers Single Pole GC1 - 36

Voltage Transformer  
Epoxy resin insulation  
Outdoor



## Indications for the ordering

- Type designation
- Nominal primary voltages
- Nominal secondary voltages
- Frequency
- Nominal output
- Accuracy class
- Rated voltage factor
- Thermal burden

## TECHNICAL DATA

Um	kV 36		
Rated Frequency	Hz 50-60		
Rated Primary Voltage-Upn	kV 30 - 36		
Rated Secondary Voltage-Usn	V 100-120-100/ $\sqrt{3}$ -120/ $\sqrt{3}$ -200-200/ $\sqrt{3}$		
Rated Output in Accuracy Class(IEC)	0.2	VA 60	60
	0.5	VA 120	120
	1	VA 200	200
Thermal Limit Current	A	9	
Creepage Distance	mm	1240	
Weight	kg	55	
NBI/BIL/NBI	kV	200	
Standard	TS, IEC, ABNT,ANSI ,VDE, TS, IEC, ABNT, ANSI ,VDE, GOST		

# Outdoor Voltage Transformers Double Pole GC2 - 36



# PFIFFNER

Current and voltage – our passion

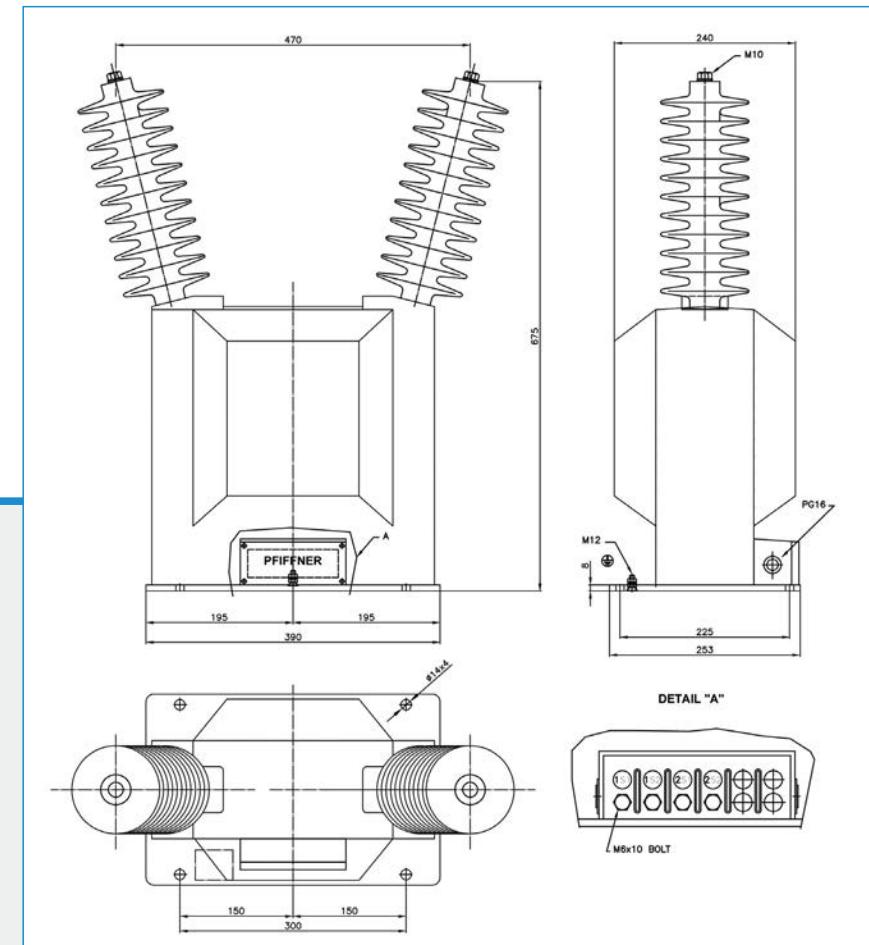
Voltage Transformer  
Ring type  
Epoxy resin insulation  
Outdoor

## Indications for the ordering

- Type designation
- Nominal primary voltages
- Nominal secondary voltages
  - Frequency
  - Nominal output
  - Accuracy class
- Rated voltage factor
- Thermal burden

## TECHNICAL DATA

	<b>GC2-36</b>		
Um	kV	36	
Rated Frequency	Hz	50-60	
Rated Primary Voltage-Upn	kV	30 - 36	
Rated Secondary Voltage-Usn	V	100-120-200-240	
Rated Output in Accuracy Class(IEC)	0.2	VA	60 60
	0.5	VA	120 120
	1	VA	200 200
Rated Voltage Factor RVF	1.2Un Cont /1,9 Un 30s		
Thermal Limit Current	A	9	
Creepage Distance	mm	1240	
Weight	kg	55	
NBI/BIL/NBI	kV	200	
Standard	TS, IEC, ABNT,ANSI ,VDE, GOST		





LOW VOLTAGE

MEDIUM VOLTAGE

HIGH VOLTAGE

Swiss quality combined with global experience

PFIFFNER is a values-driven Swiss company with:

- Over 85 years of experience and an enormous amount of know-how
- Long-lasting partnerships with customers and suppliers
- A high level of vertical integration to control all key processes in-house
- Swiss quality - from development right through to delivery

Total customer satisfaction is our goal. With many years of experience and technical expertise we can provide the right solutions to meet all our customers' needs. We offer a wide range of instrument transformers for voltage levels up to 550 kV. Thanks to our strong presence in international markets and our close contact with customers and local authorities, we fully understand the importance of local factors. This enables us to develop optimally customised products.

Qualified and motivated employees, who ensure efficient production and the ongoing development of our products, are the basis of our success. By constantly training and developing our employees, we guarantee up-to-date knowledge and high-quality products.

As an independent Swiss company, we are a reliable and authentic partner for customers like you.

PFIFFNER – the symbol of unique quality

Current and voltage are - our passion

# PFIFFNER



