

Medium voltage instrument transf. Block design

Indoor

VD (12 -72) kV

WD (12 -36) kV

BD (12 -72) kV



PFIFFNER

Current and voltage – our passion



Voltage transformer VD (12–72) kV

Medium voltage transformers of the type VD are used in indoor switchgear. They transform high voltages into standardised, equivalent values for counters, measuring equipment and protection devices.

The 1-pole isolated voltage transformer in a dry block design has been developed for use in air-insulated medium voltage cells.

A specific core padding and the complete casting of all active parts in epoxy resin ensures that the magnetic properties, and therefore the class accuracy, remain constant for decades.

Safe operation is guaranteed thanks to compliance with the partial discharge limit values of IEC 61869-1.

Any installation position is normally possible.

However, when using the 72 kV variant, the installation position must be discussed with the manufacturer in order to take account of any mechanical requirements (earthquakes, vibrations), unless the device is installed upright.

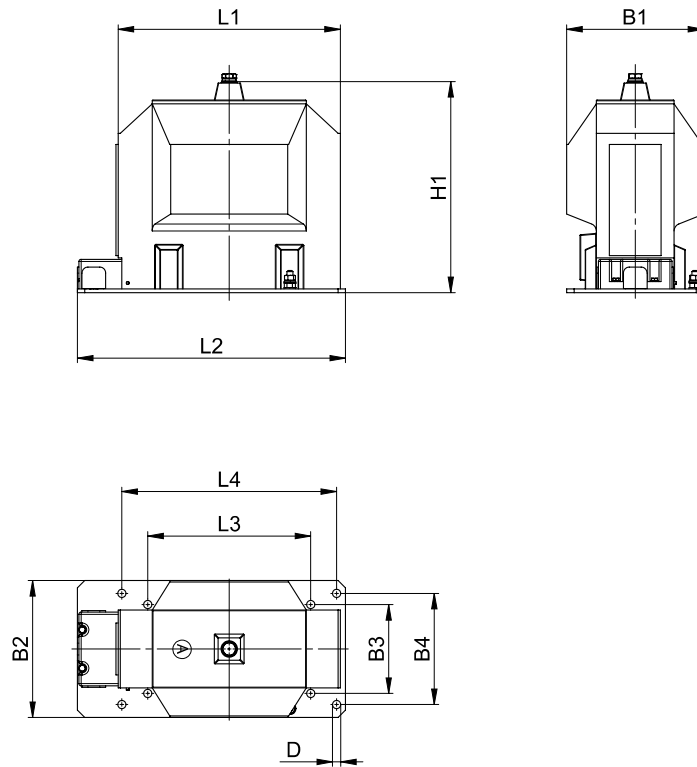
The voltage transformers are designed according to the applicable national and international standards. It is normally possible to accommodate special customer requirements upon request.



Advantages of the VD

- Indoor use
- Constant class accuracy
- Two different transformation ratios available
- Suitable for use in medium voltage cells

Voltage transformer VD (12–72) kV



* Schematic dimension drawing

Type VD		12-M1	24-M1	36-O1	72-T1
Standard		DIN / IEC / IEEE			
Maximum system voltage	kV	12	24	36	72.5
Power frequency withstand voltage	kV	28	50	70	140
Lightning impulse withstand voltage	kV	75	125	170	325
Frequency	Hz	50/60			
Accuracy classes		0.1 – 3; 3P; 6P			
Thermal limit	VA	450	450	600	1500
Max. total power (cl. 0.2)	VA	25	25	40	40
Max. total power (cl. 0.5)	VA	75	75	100	100
Insulating material class		E			
Max. number of windings		2	3	3	3

Type VD		12-M1	24-M1	36-O1	72-T1
L1 length of voltage transformer	mm	300	300	375	410
L2 length of voltage transformer including	mm	362	362	432	475
L3 / L4 length of hole spacing in base plate	mm	220 / 290	220 / 290	290 / 350	300
H1 height of voltage transformer including	mm	285	285	350	770
B1 width of voltage transformer	mm	185	185	222	285
B2 width of base plate	mm	150	150	225	285
B3 / B4 width of hole spacing in base plate	mm	120 / 150	120 / 150	150 / 200	200
D diameter of fastening hole	mm	11	11	11	14
Weight approx.*	kg	27	27	44	102



Voltage transformer WD (12–36) kV

2-pole isolated medium voltage transformers of the type WD are used in indoor switchgear. They transform high voltages into standardised, equivalent values for counters, measuring equipment and protection devices.

The 2-pole isolated voltage transformer in a dry block design has been developed for use in air-insulated medium voltage cells.

A specific core padding and the complete casting of all active parts in epoxy resin ensures that the magnetic properties, and therefore the class accuracy, remain constant for decades.

Safe operation is guaranteed thanks to compliance with the partial discharge limit values of IEC 61869-1.

Any installation position is possible.

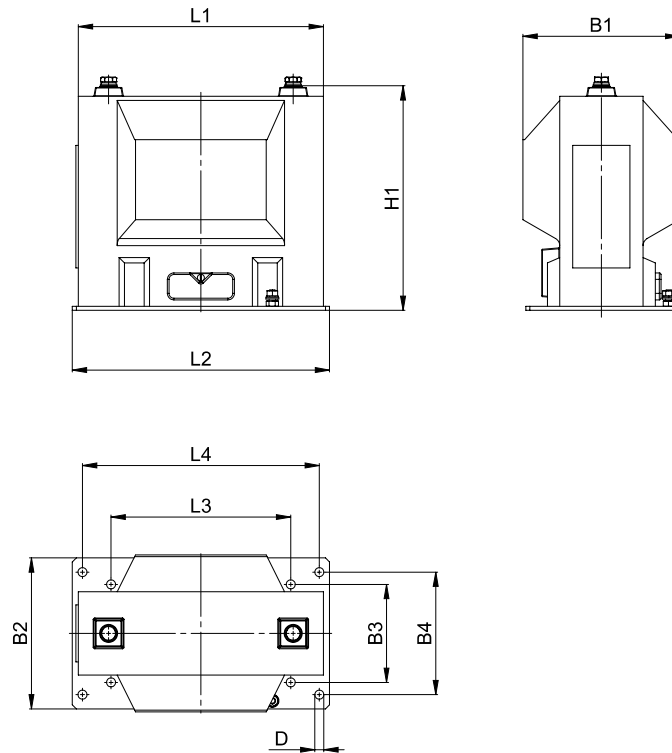
The voltage transformers are designed according to the applicable national and international standards. It is normally possible to accommodate special customer requirements upon request.



Advantages of the WD

- Indoor use
- Constant class accuracy
- Two different transformation ratios available
- Suitable for use in medium voltage cells
- The 2-pole design of the voltage transformer in conjunction with the Aron circuit makes it possible to measure energy levels with just two voltage transformers and two current transformers

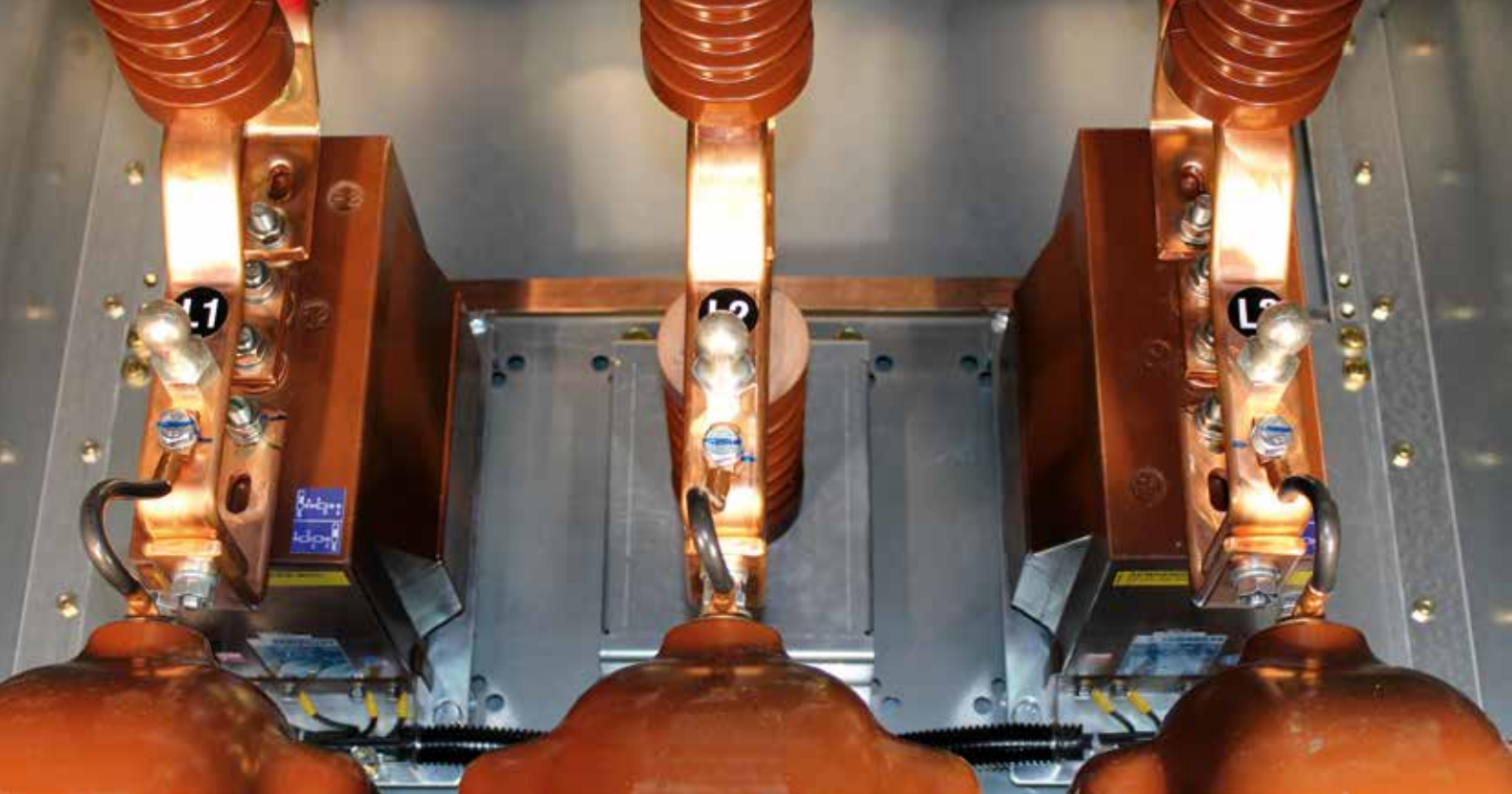
Voltage transformer WD (12–36) kV



* Schematic dimension drawing

Type WD		12-M1	24-M1	36-O1
Standard		DIN / IEC / IEEE		
Maximum system voltage	kV	12	24	36
Power frequency withstand voltage	kV	28	50	70
Lightning impulse withstand voltage	kV	75	125	170
Frequency	Hz	50 / 60		
Accuracy classes		0.1 – 3; 3P; 6P		
Thermal limit	VA	600	750	750
Max. total power (cl. 0.2)	VA	40	40	75
Max. total power (cl. 0.5)	VA	125	125	200
Insulating material class		E		
Max. number of windings		1	1	3

Type WD		12-M1	24-M1	36-O1
L1 length of voltage transformer	mm	300	300	375
L2 length of voltage transformer including	mm	315	315	380
L3 / L4 length of hole spacing in base plate	mm	220 / 290	220 / 290	290 / 350
H1 height of voltage transformer including	mm	275	275	415
B1 width of voltage transformer	mm	185	185	222
B2 width of base plate	mm	185	185	225
B3 / B4 width of hole spacing in base plate	mm	120 / 150	120 / 150	150 / 200
D diameter of fastening hole	mm	11	11	11
Weight approx.*	kg	28	28	45



Current transformer BD (12–72) kV

Medium voltage current transformers of the type BD are used in indoor switchgear. They transform high currents up to 2500 A into standardised, equivalent values for counters, measuring equipment and protection devices.

The support-type current transformer in a dry block design has been developed for use in air-insulated medium voltage cells.

A specific core padding and the complete casting of all active parts in epoxy resin ensures that the magnetic properties, and therefore the class accuracy, remain constant for decades.

Safe operation is guaranteed thanks to compliance with the partial discharge limit values of IEC 61869-1.

The primary and secondary connections are made of brass as standard, while the protective cover on the secondary terminals is constructed from transparent polycarbonate. Any installation position is normally possi-

ble. However, when using the 72 kV variant, the installation position must be discussed with the manufacturer in order to take account of any mechanical requirements (earthquakes, vibrations), unless the device is installed upright.

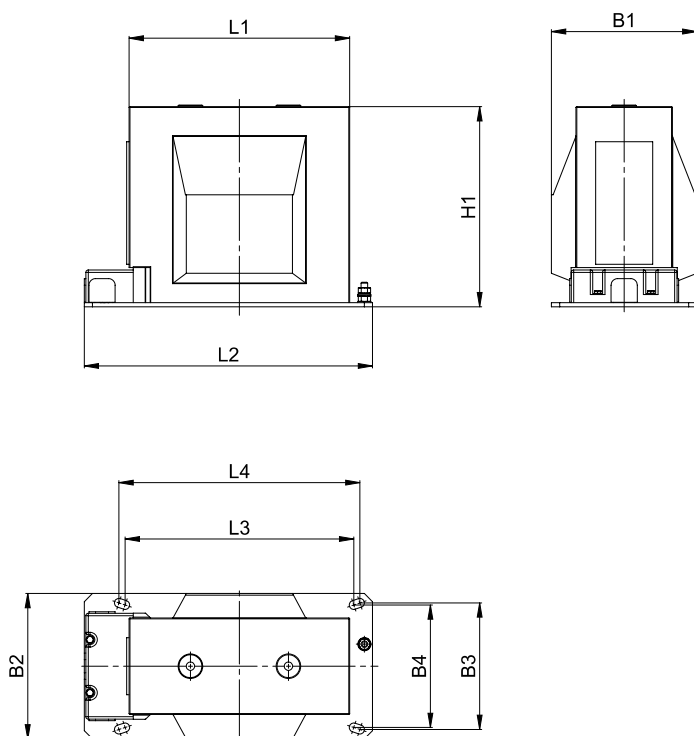
The current transformers are designed according to the applicable national and international standards. It is normally possible to accommodate special customer requirements upon request.



Advantages of the BD

- Indoor use
- Constant class accuracy
- up to 2500 A
- Primary switching function
- High class accuracy even at small primary nominal currents thanks to primary windings
- Suitable for use in medium voltage cells

Current transformer BD (12–72) kV



* Schematic dimension drawing

Type BD		12-G1	24-G1	36-G1	72-L1
Standard		DIN / IEC / IEEE			
Maximum system voltage	kV	12	24	36	72.5
Power frequency withstand voltage	kV	28	50	70	140
Lightning impulse withstand voltage	kV	75	125	170	325
Frequency	Hz	50 / 60			
Primary nominal current	A	10 – 2000			10 – 2500
Primary switching up to	A	2 x 600			2 x 1000
Secondary nominal current	A	1 / 5			
Accuracy classes		0.1 – 3; 3P; 6P			
Thermal limiting current [I _{th}]	kA/1s	≤ 50			
Insulating material class		E			
Max. number of cores		3			

Type BD		12-G1	24-G1	36-G1	72-L1
L1 length of current transformer	mm	270	270	270	355
L2 length of current transformer including	mm	353	295	353	417.5
L3 / L4 / L5 length of hole spacing in base	mm	280 / 295	280 / 295	280 / 295	300
H1 height of current transformer including	mm	245	245	355	650
B1 width of current transformer	mm	178	178	210	310
B2 width of base plate	mm	178	178	178	310
B3 / B4 width of hole spacing in current	mm	150 / 155	150 / 155	150 / 155	225
Weight approx.*	kg	27	27	36	105

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PFIFFNER

Current and voltage – our passion

HV

HIGH VOLTAGE

MV

MEDIUM VOLTAGE

LV

LOW VOLTAGE