



*Instrument Transformers*

## Metal Clad Instrument Transformers



**RITZ HAMBURG**

**RITZ GERMANY** WIRGES · KIRCHAICH · DRESDEN

**RITZ AUSTRIA** MARCHTRENK **RITZ HUNGARY** KECSKEMÉT **RITZ CHINA** SHANGHAI **RITZ USA** HARTWELL



# Metal Clad Combi Instrument Transformer 12 - 36 kV

## (Current and Voltage Instrument Transformer)



Technical data										
Type (Size)	KGBEI 12 KGBEA 12		KGBEI 24 KGBEA 24			KGBEI 36 KGBEA 36				
Max. Primary Voltage $U_m$	12 kV		24 kV			36 kV				
With Inner Cone (Drawing on request)	MB 3.3800 (KGBEI 12)		MB 3.5165 (KGBEI 24)			MB 3.5910 (KGBEI 36)				
With Outer Cone (Drawing on request)	MB 3.3801 (KGBEA 12)		MB 3.5144 (KGBEA 24)			MB 3.5913 (KGBEA 36)				
Plug Size Inner Cone	Size 1 for 600 A; $I_{th}$ 20 kA/1 sec. Size 2 for 800 A; $I_{th}$ 20 kA/1 sec.									
Plug Size Outer Cone	Size A for max. 250 A; 12.5 kA/1 sec. Size B for max. 400 A; 16 kA/1 sec. Size C for max. 600 A; 28 kA/1 sec.									
<b>Current Transformer Part</b>										
Rated Primary Current $I_{pn}$	inside cone 5 A ... 800 A outside cone 5 A ... 600 A									
Rated Secondary Current $I_{sn}$	5 A or 1 A									
Accuracy Factor	0,2s / 0,2 / 0,5s / 0,5 / 1 / 10P / 5P									
<b>Max. Core Data</b>	<b>For Example</b>									
<b>1 Measuring Core</b>	<b>max.</b>	<b>5 VA Kl. 0.2 (<math>I_{th}=800 \times I_n</math>) or 10 VA Kl. 0.2s (<math>I_{th}= 500 \times I_n</math>)</b>								
<b>1 Protection Core</b>	<b>max.</b>	<b>20 VA Kl. 10P 10 (<math>I_{th}=100 \times I_n</math>) or 5 VA Kl. 10P 10 (<math>I_{th}= 300 \times I_n</math>)</b>								
<b>2 Cores</b>	<b>max.</b>	<b>Core 1: 10 VA Kl. 0.5s Core 2: 10 VA cl. 0.5s (<math>I_{th}= 300 \times I_n</math>) Core 1: 10 VA cl. 0.5s Core 2: 10 VA cl. 5P 10 (<math>I_{th}= 100 \times I_n</math>)</b>								
<b>Voltage Transformer Part</b>										
Rated Primary Voltage [V]	5000/ $\sqrt{3}$ ... 11000/ $\sqrt{3}$		10000/ $\sqrt{3}$ ... 22000/ $\sqrt{3}$			22000/ $\sqrt{3}$ ... 36000/ $\sqrt{3}$				
Rated Secondary Voltage [V]	100/ $\sqrt{3}$ / 110/ $\sqrt{3}$									
Number of Measuring Windings	1 or 2* (optional: with Earthing Winding 100:3 or 110:3 V)									
Accuracy Class	0,2	0,5	1	0,2	0,5	1	0,2	0,5	1	
Max. Rated Output [VA]	15	50	120	30	75	180	30	75	180	
Thermal Limit Current	6 A / 8 h									
Rated Voltage Factor	1,9 $U_n$ / 8 h									

\* The more accurate measuring winding will limit the max. rated output to the indicated value for one measuring winding.



# Metal Clad Current Transformer

## 12 - 36 kV



Technical Data				
Typ (Size)	GBW 12 (1)	GBW 24 (1)	GBW 36 (1)	GBW 36 (3)
Max. Primary Voltage $U_m$	12 kV	24 kV	36 kV	36 kV
With Inner Cone (Drawing on request)	MB 3.3236	MB 3.3237	MB 3.3238	MB.3.6778
With Outer Cone (Drawing on request)	-	-	-	-
Plug Size Inner Cone	1	1	1 or 2	3
Plug Size Outer Cone	-	-	-	-
Rated Short Time- Thermal Current $I_{th}$	20 kA/1s			25 kA/3s
Standards	DIN VDE, IEC, ANSI, BS, CSA, AS, ÖVE, SEV, ...			
Frequency	50 Hz or 60 Hz			
Rated Primary Current $I_{pn}$	5 A ... 300 A			
Secondary Tapping - Example	10-5 A; 15-7.5 A; 20-10 A to 300-150 A			
Rated Secondary Current $I_{sn}$	5 A or 1 A			
Accuracy Factor	0,2 / 0,2S / 0,5 / 0,5S / 1 / 3 / 5P / 10P			
Max. Rated Output [VA]	<p>The rated output of the cores must be determined on the basis of the requirements of: number of cores, accuracy, rated primary current and instrument security factor.</p> <p>For detailed information please do not hesitate to contact the Ritz sales engineer.</p>			
Possibles Number of Cores	1, 2 or 3			

# Metal Clad Voltage Transformer

## 12 - 40,5 kV

### Single Pole Insulated



Technical Data						
Type (Size)	GBEIN 12/0 GBEAN 12/0		GBEIN 24/0 GBEAN 24/0		GBEI 36, GBEI 40,5 GBEA 36	
Max. Primary Voltage $U_m$	12 kV		24 kV		36 kV / 40,5 kV	
With Inner Cone (Drawing on request)	MB 3.5851 (GBEIN 12/0 ... GBEIN 24/0)				MB 4.4574	
With Outer Coner (Drawing on request)	MB 4.5857 (GBEAN 12/0 ... 24/0)				MB 3.6902	
Plug Size Inner Cone	0, 1, 2				1, 2	
Plug Size Outer Cone	A, B, C				A, B, C	
Rated Primary Voltage [V]	5000/ $\sqrt{3}$ ... 11000/ $\sqrt{3}$		10000/ $\sqrt{3}$ ... 20000/ $\sqrt{3}$		22000/ $\sqrt{3}$ ... 36000/ $\sqrt{3}$	
Rated Secondary Voltage [V]	100/ $\sqrt{3}$   110/ $\sqrt{3}$   110;100/ $\sqrt{3}$					
Number of Measuring Windings	1 or 2 (optional: with open delta winding 100:3 V or 110:3 V)					
Accuracy Class	0,2	0,5	1	0,2	0,5	1
Max. Rated Output [VA]	25	60	180	50	120	250
Secondary Thermal Limit Current	7 A				10 A	
Standards	DIN VDE, IEC, ANSI, BS, CSA, AS, ÖVE, SEV, ...					
Frequency	50 Hz or 60 Hz					
Rated Voltage Factor	1,9 $U_n$ / 8 h					
Thermal Limit Current	6 A / 8 h					

For ratings not listed above please do not hesitate to contact Ritz Instrument Transformers GmbH.  
 Ritz offers a wide product range beside the standard types.  
 Additional information will be sent on request.

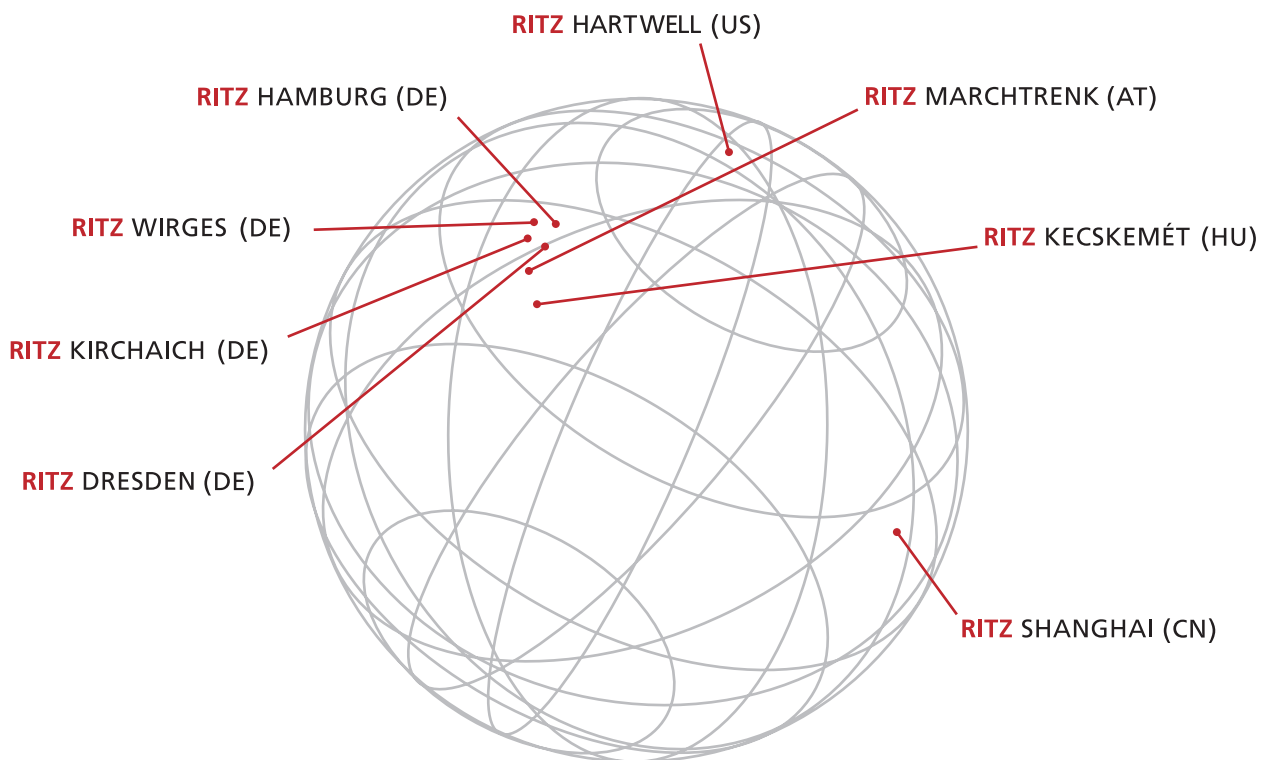
## RITZ Instrument Transformers GmbH – Core competency

Under the trading name „RITZ Instrument Transformers GmbH“ RITZ has been pooling its activities to gather new strengths since 01.08.2007.

The tradition and knowledge of the parent company „RITZ Messwandler Hamburg“ and the subsidiary „RITZ Messwandler Dresden (TuR)“ has been united with the companies “Wandler- und Transformatoren-Werk Wirges (WTW) and “Messwandlerbau Bamberg (MWB)” under this name. This merger unites a total of more than two hundred years of know-how in instrument transformers production.

In addition, RITZ has decided to concentrate on the core business of medium voltage and low voltage transformers in which the high voltage division is sold. The resources gained through this shall now be applied for additional innovations and quality standards in the medium and low voltage products. RITZ is therefore securing its position on the global market.

The overseas corporations of RITZ Instrument Transformers GmbH in Austria (Marchtrenk), Hungary (Kecskemét), China (Shanghai) and USA (Hartwell) strengthen the company’s position on the international market.



# Sales

<b>RITZ HAMBURG</b> <b>RITZ Instrument Transformers GmbH</b> Wandsbeker Zollstraße 92-98 22041 Hamburg <b>GERMANY</b> Tel +49 40 51123-0 Fax +49 40 51123-333 Medium Voltage Fax +49 40 51123-111 Low Voltage	Low Voltage Instrument Transformers		Medium Voltage Instrument Transformers		Cast Resin Insulated Bus Bar Systems		Cast Resin Power Transformers		Electronic Instrument Transformers and Sensor		Customised Cast Resin Parts
<b>RITZ WIRGES</b> <b>RITZ Instrument Transformers GmbH</b> Siemensstraße 2 56422 Wirges <b>GERMANY</b> Tel +49 2602 679-0 Fax +49 2602 9436-00	Low Voltage Instrument Transformers		Medium Voltage Instrument Transformers		Cast Resin Insulated Bus Bar Systems		Cast Resin Power Transformers		Electronic Instrument Transformers and Sensor		Customised Cast Resin Parts
<b>RITZ DRESDEN</b> <b>RITZ Instrument Transformers GmbH</b> Bergener Ring 65-67 01458 Ottendorf-Okrilla <b>GERMANY</b> Tel +49 35205 62-0 Fax +49 35205 62-216											
<b>RITZ KIRCHAICH</b> <b>RITZ Instrument Transformers GmbH</b> Mühlberg 1 97514 Oberaurach-Kirchaich <b>GERMANY</b> Tel +49 9549 89-0 Fax +49 9549 89-11											
<b>RITZ MARCHTRENK</b> <b>RITZ Instrument Transformers GmbH</b> Linzer Straße 79 4614 Marchtrenk <b>AUSTRIA</b> Tel +43 7243 52285-0 Fax +43 7243 52285-38											
<b>RITZ KECSKEMÉT</b> <b>RITZ Instrument Transformers Kft.</b> Technik-Park Heliport 6000 Kecskemét-Kadafalva <b>HUNGARY</b> Tel +36 76 5040-10 Fax +36 76 470311											
<b>RITZ SHANGHAI</b> <b>RITZ Instrument Transformers</b> Shanghai Co. Ltd. 99 Huajia Road, Building 1-3, Huabin Industrial Park Songjiang Industrial Zone Shanghai, 201613 P.R. China Tel +86 21 67747698 Fax +86 21 67747678											
<b>RITZ HARTWELL</b> <b>RITZ Instrument Transformers Inc.</b> 25 Hamburg Avenue Lavonia, GA 30553 <b>USA</b> Tel +1 706-356-7180 Fax +1 866-772-5245											