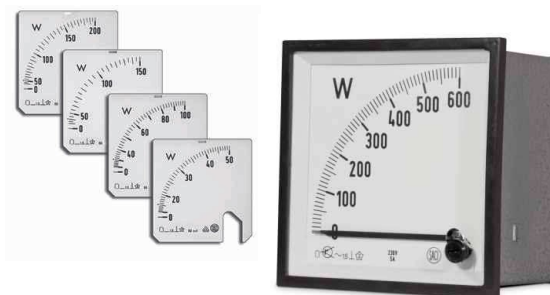


## WATTMETERS (ELECTRONIC)

System active power measuring.

### Alternating current

- Frequency: 50 or 60 Hz
- Voltage range:  $\pm 15\%$  Vn
- Voltage: (Vn): 100, 110  
230, 400, 440 V
- Current range: 20-120%
- Current input: (In): 5A, 1A
- Accuracy: 1,5 %
- Burden: 3..12 mA (Voltage circuits)
- Burden: 1..3,5 VA (Current circuits)



		90° SCALE	90° SCALE			
Dimensions	mm	45x52,5 CARRIL DIN	48x48	72x72	96x96	144x144
<b>A.C. SINGLE PHASE - BALANCE THREE-PHASE</b>						
Approx. weight	kg.	0,55	0,55	0,55	0,84	0,84
A.C. Single-phase		<b>WC5VRE*</b>	<b>WC5VE*</b>	<b>WC4VE*</b>	<b>WC3VE</b>	<b>WC2VE</b>
3-phase, 3 or 4 wire		<b>WC5VRIE*</b>	<b>WC5VIE*</b>	<b>WC4VIE*</b>	<b>WC3VIE</b>	<b>WC2VIE</b>
<b>UNBALANCE THREE-PHASE</b>						
Approx. weight	kg.	1,00	1,00	1,00	1,55	1,55
3-phase, 3 wire		<b>WC5VRIIE*</b>	<b>WC5VIEI*</b>	<b>WC4VIEI*</b>	<b>WC3VIEI</b>	<b>WC2VIEI</b>
3-phase, 4 wire		<b>WC5VR3E*</b>	<b>WC5V3E*</b>	<b>WC4V3E*</b>	<b>WC3V3E</b>	<b>WC2V3E</b>



		240° SCALE			
Dimensions	mm	48x48	72x72	96x96	144x144
<b>A.C. SINGLE PHASE - BALANCE THREE-PHASE</b>					
Approx. weight	kg.	0,55	0,55	0,84	0,84
A.C. Single-phase		<b>WC5CE*</b>	<b>WC4CE*</b>	<b>WC3CE</b>	<b>WC2CE</b>
3-phase, 3 or 4 wire		<b>WC5CIE*</b>	<b>WC4CIE*</b>	<b>WC3CIE</b>	<b>WC2CIE</b>
<b>UNBALANCE THREE-PHASE</b>					
Approx. weight	kg.	1,00	1,00	1,55	1,55
3-phase, 3 wire		<b>WC5CIIIE*</b>	<b>WC4CIIIE*</b>	<b>WC3CIIIE</b>	<b>WC2CIIIE</b>
3-phase, 4 wire		<b>WC5C3E*</b>	<b>WC4C3E*</b>	<b>WC3C3E</b>	<b>WC2C3E</b>

\* With additional module: MBW.. Models

INTERCHANGEABLE SCALE (90° scale only), for models: WC5V..., WC5VR..., WC4V... and WC3V...  
For 3 or 4 wire, balanced or unbalanced three-phase systems, the instruments and scales are:

Instruments	110 V, 5 A	230 V, 5 A	400 V, 5 A	440 V, 5 A
Calibration	1000 W	2000 W	3000 W	3000 W
Transformer	Scales			
10/5 A	0-2 kW	0-4 kW	0-6 kW	0-6 kW
15/5 A	0-3 kW	0-6 kW	0-9 kW	0-9 kW
20/5 A	0-4 kW	0-8 kW	0-12 kW	0-12 kW
25/5 A	0-5 kW	0-10 kW	0-15 kW	0-15 kW
30/5 A	0-6 kW	0-12 kW	0-18 kW	0-18 kW

Instruments	110 V, 5 A	230 V, 5 A	400 V, 5 A	440 V, 5 A
Calibration	1000 W	2000 W	3000 W	3000 W
Transformer	Scales			
40/5 A	0-8 kW	0-15 kW	0-24 kW	0-24 kW
50/5 A	0-10 kW	0-20 kW	0-30 kW	0-30 kW
60/5 A	0-12 kW	0-24 kW	0-36 kW	0-36 kW
75/5 A	0-15 kW	0-30 kW	0-45 kW	0-45 kW
Multiples	Multiples	Multiples	Multiples	Multiples

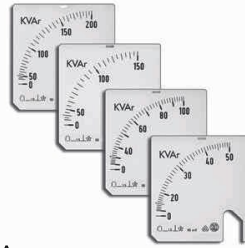
Dimensions and connection diagrams, available on page AN-35-36.

## VARMETERS (ELECTRONIC)

System's reactive power measuring.

### Alternating current

- Frequency: 50 or 60 Hz
- Voltage range:  $\pm 15\%$  Vn
- Voltage: (Vn): 100, 110, 230, 400, 440 V
- Current range: 20-120%
- Current input: (In): 5A, 1A
- Accuracy: 1,5 %
- Burden: 3..12 mA (Voltage circuits)
- Burden: 1..3,5 VA (Current circuits)



		90° SCALE		90° SCALE			
Dimensions	mm	45x52,5 DIN RAIL	48x48	72x72	96x96	144x144	
<b>AC. SINGLE-PHASE - BALANCED THREE-PHASE</b>							
Approx. weight	Kg.	0,55	0,55	0,55	0,84	0,84	
AC. Single-phas		<b>WC5VRrE*</b>	<b>WC5VrE*</b>	<b>WC4VrE*</b>	<b>WC3VrE</b>	<b>WC2VrE</b>	
Three-phase, 3 or 4 wire		<b>WC5VRlrE*</b>	<b>WC5VlrE*</b>	<b>WC4VlrE*</b>	<b>WC3VlrE</b>	<b>WC2VlrE</b>	
<b>UNBALANCED THREE-PHASE</b>							
Approx. weight	Kg.	1,00	1,00	1,00	1,55	1,55	
Three-phase, 3 wire		<b>WC5VRllrE*</b>	<b>WC5VllrE*</b>	<b>WC4VllrE*</b>	<b>WC3VllrE</b>	<b>WC2VllrE</b>	
Three-phase, 4 wire		<b>WC5VR3rE*</b>	<b>WC5V3rE*</b>	<b>WC4V3rE*</b>	<b>WC3V3rE</b>	<b>WC2V3rE</b>	



		240° SCALE			
Dimensions	mm	48x48	72x72	96x96	144x144
<b>AC. SINGLE-PHASE - BALANCED THREE-PHASE</b>					
Approx. weight	kg.	0,55	0,55	0,84	0,84
AC. Single-phas		<b>WC5CrE*</b>	<b>WC4CrE*</b>	<b>WC3CrE</b>	<b>WC2CrE</b>
Three-phase, 3 or 4 wire		<b>WC5ClrE*</b>	<b>WC4ClrE*</b>	<b>WC3ClrE</b>	<b>WC2ClrE</b>
		<b>UNBALANCED THREE-PHASE</b>		<b>UNBALANCED THREE-PHASE</b>	
Approx. weight	kg.	1,00	1,00	1,55	1,55
Three-phase, 3 wire		<b>WC5CllrE*</b>	<b>WC4CllrE*</b>	<b>WC3CllrE</b>	<b>WC2CllrE</b>
Three-phase, 4 wire		<b>WC5C3rE*</b>	<b>WC4C3rE*</b>	<b>WC3C3rE</b>	<b>WC2C3rE</b>

\* With additional module: MBW... Models

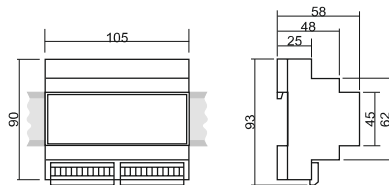
INTERCHANGEABLE SCALE (90° scale only), for models: WC5V...rE, WC5VR...rE, WC4V...rE y WC3V...rE  
For 3 or 4 wire, balanced or unbalanced three-phase systems, the instruments and scales are:

Instruments	110 V, 5 A	230 V, 5 A	400 V, 5 A	440 V, 5 A	Instruments	110 V, 5 A	230 V, 5 A	400 V, 5 A	440 V, 5 A
Calibration	500 Var	1000 Var	1500 Var	1500 Var	Calibration	500 Var	1000 Var	1500 Var	1500 Var
Transformer	Scales				Transformer	Scales			
10/5 A	0-1 Kvar	0-2 Kvar	0-3 Kvar	0-3 Kvar	40/5 A	0-4 Kvar	0-7,5 Kvar	0-12 Kvar	0-12 Kvar
15/5 A	0-1,5 Kvar	0-3 Kvar	0-4,5 Kvar	0-4,5 Kvar	50/5 A	0-5 Kvar	0-10 Kvar	0-15 Kvar	0-15 Kvar
20/5 A	0-2 Kvar	0-4 Kvar	0-6 Kvar	0-6 Kvar	60/5 A	0-6 Kvar	0-12 Kvar	0-18 Kvar	0-18 Kvar
25/5 A	0-2,5 Kvar	0-5 Kvar	0-7,5 Kvar	0-7,5 Kvar	75/5 A	0-7,5 Kvar	0-15 Kvar	0-22,5 Kvar	0-22,5 Kvar
30/5 A	0-3 Kvar	0-6 Kvar	0-9 Kvar	0-9 Kvar	Multiples	Multiples	Multiples	Multiples	Multiples

Dimensions and connection diagrams, available on page AN-35-36.

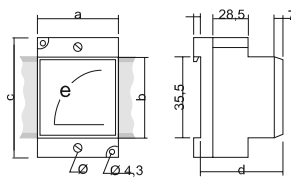
Dimensions (mm)

DIN rail MBW and MBWr modules



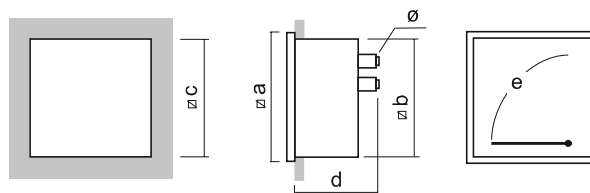
Weight= 0,24  
Plug.in connectors

Dimensions (mm)



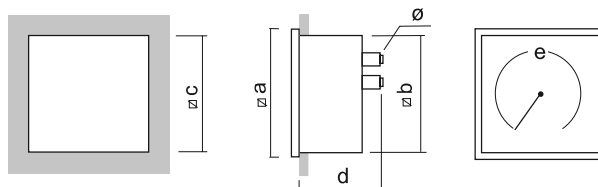
Active power model	Reactive power model	Range	a	b	c	d	e	ø
WC5VR..E	WC5VR..rE	../5 ../1	52,5	45	75	60	38	M.6

Dimensions (mm)



Active power model	Reactive power model	Range	∇a	∇b	∇c	d	e	ø
WC5V..E	WC5V..rE	../5 ../1	48	44,5	45 <sup>+0,6</sup>	59	38	M.4
WC4V..E	WC4V..rE	../5 ../1	72	66,5	68 <sup>+0,7</sup>	60	65	M.4
WC3V..E	WC3V..rE	../5 ../1	96	89	92 <sup>+0,8</sup>	75	100	M.4
WC2V..E	WC2V..rE	../5 ../1	144	135	138 <sup>+1</sup>	87	140	M.4

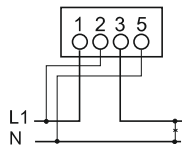
Dimensions (mm)



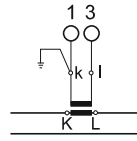
Active power model	Reactive power model	Range	∇a	∇b	∇c	d	e	ø
WC5C..E	WC5C..rE	../5 ../1	48	44,5	45 <sup>+0,6</sup>	83	72	M.4
WC4C..E	WC4C..rE	../5 ../1	72	66,5	68 <sup>+0,7</sup>	88	101	M.4
WC3C..E	WC3C..rE	../5 ../1	96	89	92 <sup>+0,8</sup>	124	140	M.4
WC2C..E	WC2C..rE	../5 ../1	144	135	138 <sup>+1</sup>	134	220	M.4

## Connection diagrams

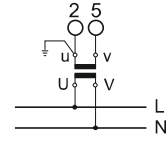
Single-phase, Active and Reactive Power



Connection: Direct input



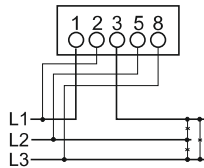
Current Transf.



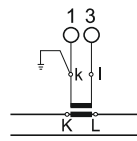
Voltage Transf.

## Connection diagrams

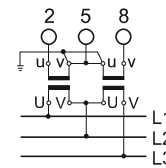
Balanced three-phase, Active and Reactive Power



Connection: Direct input



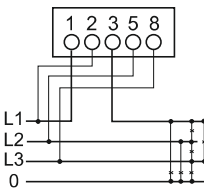
Current Transf.



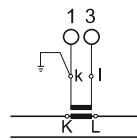
Voltage Transf.

## Connection diagrams

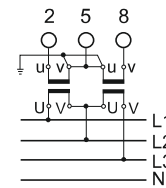
4 wire balanced three-phase, Active and Reactive Power



Connection: Direct input



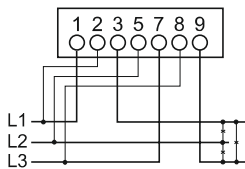
Current Transf.



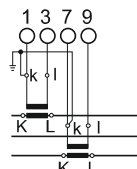
Voltage Transf.

## Connection diagrams

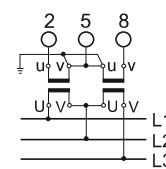
3 wire unbalanced three-phase, Active and Reactive Power



Connection: Direct input



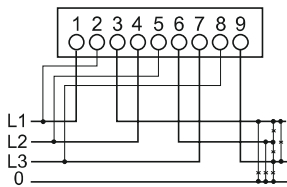
Current Transf.



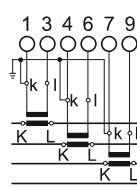
Voltage Transf.

## Connection diagrams

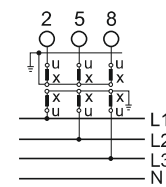
3 wire unbalanced three-phase, Active and Reactive Power



Connection: Direct input



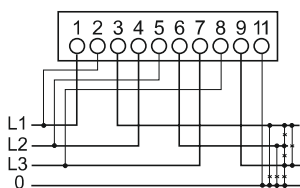
Current Transf.



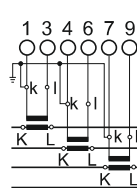
Voltage Transf.

## Connection diagrams

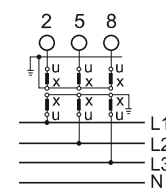
4 wire unbalanced three-phase, Active and Reactive Power



Connection: Direct input



Current Transf.



Voltage Transf.