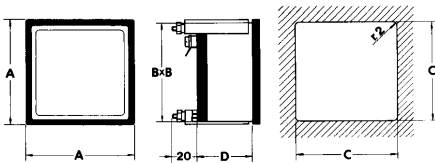
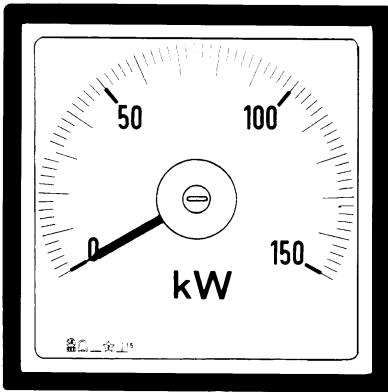
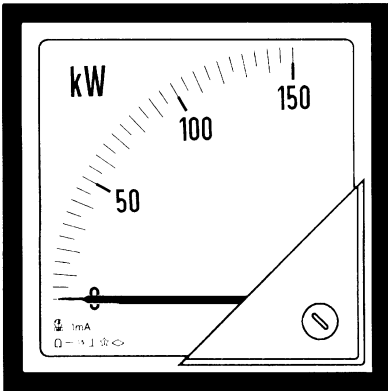


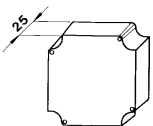
# Panel Wattmeter and Varmeter 90°/240° with External Transducer



### dimensions and weight

	(A)48W	(A)72W	(A)96W	(A)144W
A/mm	48	72	96	144
B/mm	44	67	91	137
C/mm	45	68	92	138
D/mm	46	46	46	50
kg	0,150	0,180	0,200	0,450

terminal cover



## TECHNICAL DATA

Square panel wattmeter and varmeter with external transducer, 90° and 240° indicator deflection; according to DIN 43 780

accuracy (class)	±1,5% (DIN 43 780)
self-consumption: <i>current</i>	approx. 0,5VA (5A)
<i>voltage</i>	approx. 3VA (100V)
operating frequency	45...65Hz
operating voltage	660V
test voltage	2kV-50Hz-60s
load impedance	max. 100Ω
operating temperature	-25...50°C
storage temperature	-40...80°C
manufactured according to	DIN, VDE, IEC, CEI

<b>Input Current:</b>	1A or 5A (current transformer)
<b>Input Voltage:</b>	100/110V, 230V, 400V or 440V

#### Active power meter for single-phase:

<b>90° indicator deflection:</b>	48WSM	72WSM	96WSM	144WSM
<b>240° indicator deflection:</b>	A48WSM	A72WSM	A96WSM	A144WSM

#### Active power meter three-phase three-wires circuits with balanced load:

<b>90° indicator deflection:</b>	48WY	72WY	96WY	144WY
<b>240° indicator deflection:</b>	A48WY	A72WY	A96WY	A144WY

#### Active power meter three-phase four-wires circuits with balanced load:

<b>90° indicator deflection:</b>	48WST	72WST	96WST	144WST
<b>240° indicator deflection:</b>	A48WST	A72WST	A96WST	A144WST

#### Active power meter three-phase three wires circuits with unbalanced load:

<b>90° indicator deflection:</b>	48WD	72WD	96WD	144WD
<b>240° indicator deflection:</b>	A48WD	A72WD	A96WD	A144WD

#### Active power meter three phase four wires circuits with unbalanced load:

<b>90° indicator deflection:</b>	48WDT	72WDT	96WDT	144WDT
<b>240° indicator deflection:</b>	A48WDT	A72WDT	A96WDT	A144WDT

For varmeter please replace letter „W“ with letter „R“ when ordering!

## Ordering Information

- Order Code
- Current Transformer, Input Voltage
- Scale

**Langer**  
MESSTECHNIK

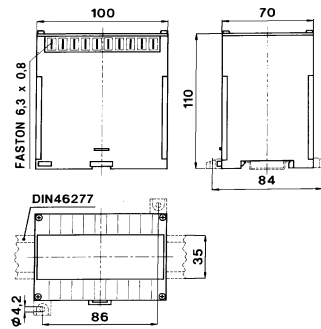
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Germany

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☎ +49-89 - 69 99 86 78  
Fax +49-89 - 69 99 86 79

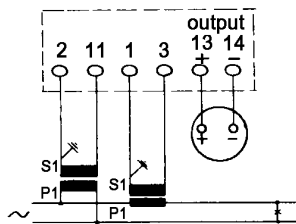
eMail & Internet:  
info@Langer-Messtechnik.de  
www.Langer-Messtechnik.de

# Wiring Diagrams for Wattmeter and Varmeter

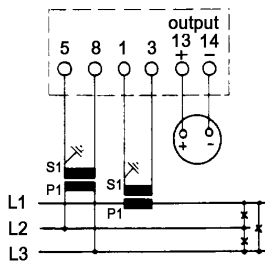
dimension of transducer:



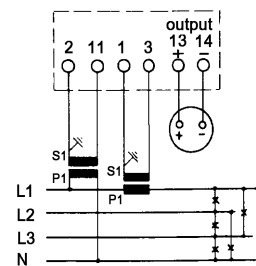
wattmeter and varmeter for single phase



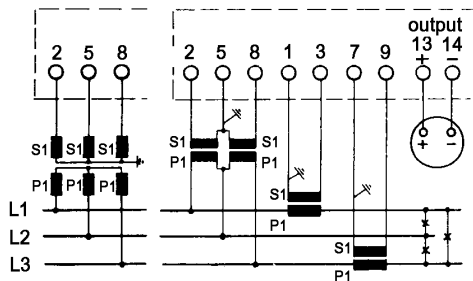
wattmeter and varmeter for three-phase three-wires balanced load



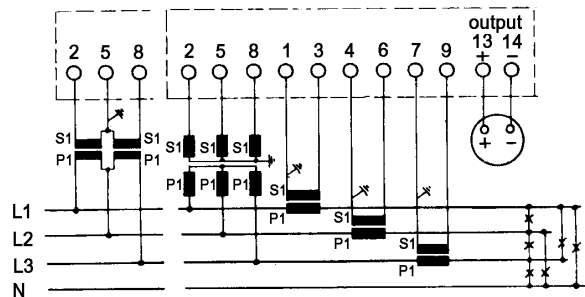
wattmeter and varmeter for three-phase four wires balanced load



wattmeter and varmeter for three-phase three-wires unbalanced load



wattmeter and varmeter for three-phase four-wires unbalanced load



**UP TO 440V THERE IS NO VOLTAGE TRANSFORMER NECESSARY!**

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