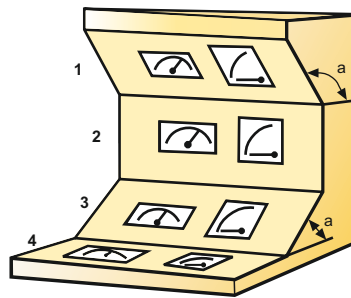


GENERAL FEATURES

Standards	EN60051, VDE 0410, BS-89, EN50081, EN50082, EN61010
Certifications	ISO 9001-2008 DET NORSKE VERITAS, BUREAU VERITAS GERMANISCHER LLOYD (relay)
Casings	IEC 61554 72x72, 96x96, 144x144, 80x64, 105x80, 130x100 MODULAR (for DIN rail)
Scales	Full scale value, DIN 43701 Scale division, DIN 43802
Pointers	DIN 43802

1	$a > 90^\circ$
2	\perp
3	$a < 90^\circ$
4	\square



Overloads	1.2 Vn continuous, 2 Vn 5 s 1.5 In continuous, 5 In 30 s, 10 In 5 s, 40 In 1 s
Vibration resistance	VDE 0410, Section 27: 2.5 g, ± 0.25 mm, 50 Hz
Shock resistance	VDE 0410, Section 28: 15 g
Operating temperature	-25°C..+40°C
Reference temperature	+10°C..+30°C (for accuracy class)
Test voltage	2kV, 50 Hz, 1 min.
Tropicalization	DIN 40040 (on request)
Protection	IP52, (IP54, IP65 on request) casings IP00, (IP20 on request) terminals

ELAPSED TIME METER

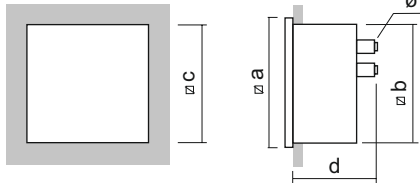
Operating time control of machines and equipment.

- Meter: mechanical, 7 digits (99999.99)
- Voltage (Vn): 110, 230, 400 V
- Voltage range: $\pm 10\%$ Vn
- Burden: 10 mA
- Frequency: 50 or 60 Hz



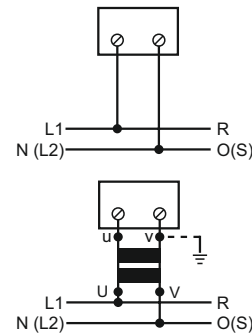
Models		HC5	HC4	HC3
Dimensions	mm	48x48	72x72	96x96
Peso aprox.	kg.	0,06	0,14	0,175

Dimensions (mm)



Models	Ranges	∅a	∅b	∅c	d	ø
HC5	110÷400	48	44,5	45,2 ^{+0,6}	34	M.3
HC4	110÷400	72	66,5	68 ^{+0,7}	60	M.3
HC3	110÷400	96	89	92 ^{+0,8}	60	M.3

Connection diagrams



PHASE SEQUENCE INDICATORS

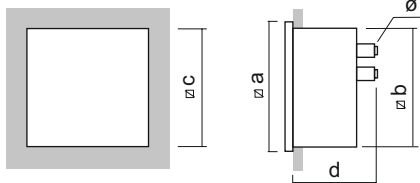
Phase sequence detection on a three-phase system.

- Voltage: (Vn): 100..600 V
- Voltage range: $\pm 10\%$ Vn
- Frequency: 50 or 60 Hz
- Burden: 1,2 VA



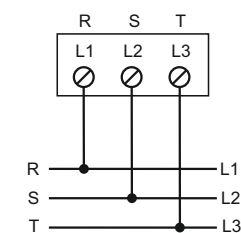
Models		IRC4E	IRC3E
Dimensions	mm	72x72	96x96
Approx. weight	kg.	0,20	0,26

Dimensions (mm)



Models	Ranges	∅a	∅b	∅c	d	ø
IRC4E	100÷600 V	72	66,5	68 ^{+0,7}	79	M.4
IRC3E	100÷600 V	96	89	92 ^{+0,8}	78	M.4

Connection diagrams






SPECIALITIES

SPECIALITIES												
	Ø 48	Ø 72	Ø 96	Ø 144	80 x 64	105 x 80	130 x 100	MODULAR	Ø 48	Ø 72	Ø 96	Ø 144
POINTERS												
Knife pointer + fine divisions	---	●	●	●	---	---	---	---	---	---	---	---
Knife pointer + fine divisions + mirror	---	●	●	●	---	●	---	---	---	---	---	---
Red pointer, set externally		●				●		---				
SCALE												
Non standard scale (*)		●				●		●		●		
Antiparallax scale		---				---		---	---	●	●	---
Black scale, white div., figures and pointer	---	●	●	●		●		---		---		
Black scale, yellow div., figures and pointer	---	●	●	●		---		---	---	●	●	●
Double scale	---	●	●	●		●		---		●		
Double numbering	---	●	●	●		●		---	---	●	●	●
Red line		●				●		●		●		
Colour arc (until 20 mm)		●				●		●		●		
Add text (<10 letters)		●				●		●		●		
Non electrical unit measuring												
PROTECTION												
Naval series or tropicalized		●				●		●		●		
Protection IP43		●				●		---		●		
Housing protection IP54		●				---		---		●		
Terminal cover (protection IP20)	●	●	●	---		---		---	●	---	---	---
Movil equipment and critical damping		●				●		---		●		
Frontal protection (IP65)	---	●	●	---		---		---	---	●	●	---
MISCELLANEOUS												
Makrolon glass		●				●		---		●		
Antireflecting glass		●				●		---		●		
Lighting 12, 24 V (with white scale)	---	●	●	●	---	●	●	---	---	●	●	●
Indirect Lighting 12, 24 V (with black scale)	---	●	●	●	---	●	●	---	---	●	●	●
Non vertical working position		●				●		●		●		
Rubber gasket (Panel)	---	●	●	---		---		---		---		
MOVIN IRON METERS												
Non standard input (**)		●				●		●		---		
Calibrated for 150 or 400 Hz		●				●		●		---		
Calibrated in D.C.		●				●		●		---		
Accuracy 1%		●				●		●		---		
Insulation 3 kV		●				●		●		---		
750 to 1000V (with external box)		●				●		●		---		
Overload 200% (A, mA)		●				●		●		---		
Overload 500% (A, mA)		●				●		●		---		
Double range		●				●		●		---		
MOVING COIL AND MOVING COIL RECTIFIED METERS												
Non standard input (**)		●				●		●		●		
Insulation 3 kV		●				●		●		●		
Central zero		●				●		●		●		
Displaced zero		●				●		●		●		
Zero mechanically suppressed (max. 25%)		●				●		●		●		
Overload 200 or 500% (for Amm. A.C.)		●				●		●		●		
Non linear function scale (Ohm, db, etc.)		●				●		●		●		
Adjusted to specific internal resistance		●				●		●		●		
Accuracy		●				●		●		●		
600 up to 1000 V D.C.(with external box)		●				●		●		●		
>1.000+2.000V D.C.(with external box)		●				●		●		●		
>2.000+4.000V D.C (with external box)		●				●		●		●		
Full scale adjustable by potentiometer (±10%)	---	●	●	●	---	---	---	---	---	●	●	●
Double range		●				●		●		●		

(*) Scale: striped and numbered.

(**) Current or voltage required to move the needle at the end of the measurement zone.

SPECIALITIES

SPECIALITIES										
	∅ 48	∅ 72	∅ 96	∅ 144	MODULAR	∅ 48	∅ 72	∅ 96	∅ 144	
INDUCTION WATTMETERS AND VARMETERS										
Central zero		●			●			●		
Displaced zero		●			●			●		
Non standard voltage			●		●			●		
Current 1 A			●		●			●		
Calibrated between 0,4 and 0,5 of appa. power			●		●			---		
Calibrated between 0,6 and 0,8 of appa. power			---		---			●		
Calibrated between 1,3 and 1,5 of appa. power			●		●			●		
Accuracy 1%			●		●			●		
ELECTRONIC WATTMETERS AND VARMETERS										
Calibrated to 400 Hz			●		●			●		
Current 1 A			●		●			●		
Accuracy 1%			●		●			●		
INDUCTION POWER FACTOR METERS										
Non standard voltage (single phase)			●		●			●		
Non standard voltage (three phase)			●		●			●		
Current 1A			●		●			●		
ELECTRONIC POWER FACTOR METERS										
Non standard voltage			●		●			●		
Scale 0-1-0 (single phase), 0,1-1-0,1 (three phase)			●		●			●		
Current 1A			●		●			●		