

Multimetro

Istruzioni di servizio



Multimetro, trifase 24 grandezze
montaggio frontepannello 96x96 mm

Inserzione TA 7KT1 302

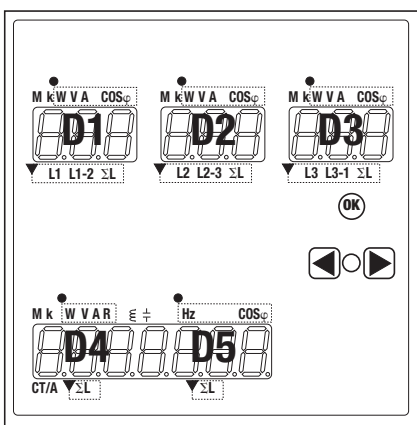
7KT1 302	
Visualizzazione di 24 grandezze elettriche	■
Collegamento trifase a 4 fili	■
Collegamento trifase a 3 fili	■
Collegamento monofase a 2 fili	■
Collegamento con TA di corrente da 10 a 5000/1 o /5 A	■



ATTENZIONE

L'installazione deve essere effettuata e verificata da uno specialista o sotto la sua supervisione.
Togliere tensione prima di intervenire sull'apparecchio.

Display e tasti di controllo



● Icone relative alla grandezza

▼ Icone relative alle fasi

D1
D2
D3
D4
D5
Display di lettura e di selezione

► **Impostazione:** seleziona il display o la cifra
Modifica: selezione della grandezza / fase

◄ **Impostazione:** seleziona il display o la cifra
Modifica: selezione della grandezza / fase

◁ ▷ Selettore di comando

⊗ Tasto di conferma

ε Energia e potenza reattiva induttiva

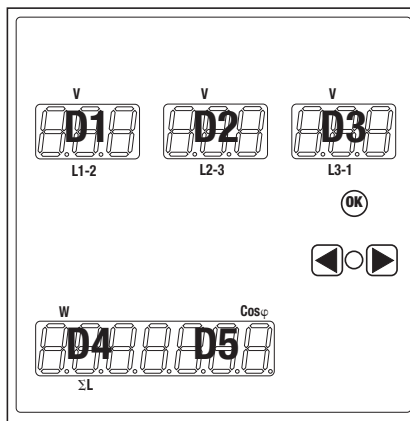
⊕ Energia e potenza reattiva capacitiva

Prefissi automatici associati ai valori visualizzati:

k = kilo = 10³

M = Mega = 10⁶

Impostazione di fabbrica



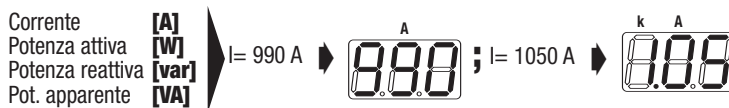
Password: 000000
D1: V (L1-2)
D2: V (L2-3)
D3: V (L3-1)
D4: W (ΣL)
D5: cos φ (ΣL)

Connessione elettrica = 3L/N

Corrente primaria TA = 5000 A

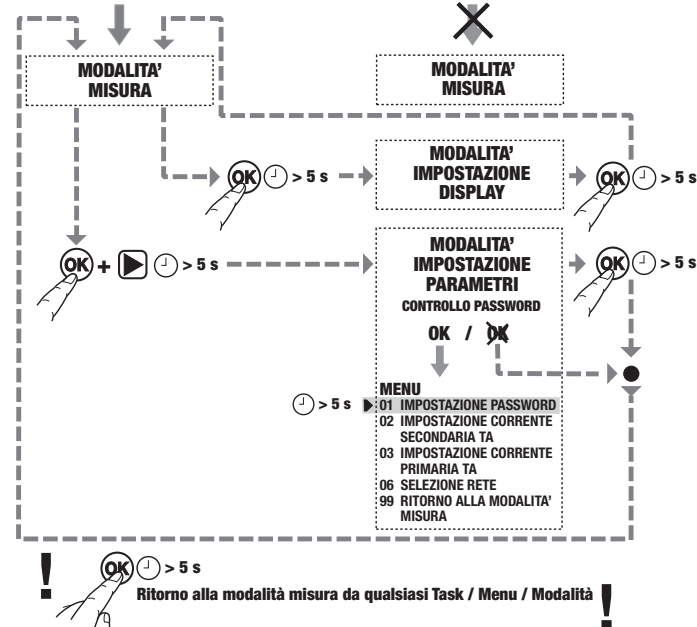
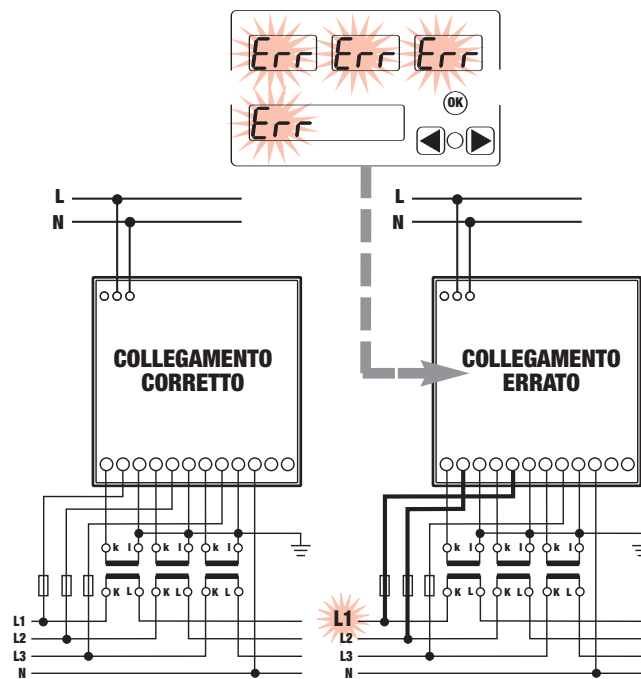
Corrente secondaria TA = (5 A) - 1 A

Display

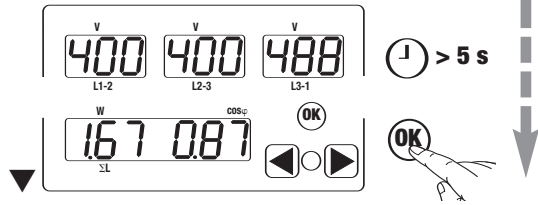


Schema di collegamento

Circuito di alimentazione ausiliaria



**BETRIEBSART MESSEN / MEASUREMENT MODE
MODALITA' MISURA / MODE MESURE**



**BETRIEBSART-ANZEIGE-EINSTELLUNG / DISPLAY SETTING MODE
MODALITA' IMPOSTAZIONE DISPLAY / MODE CONFIGURATION AFFICHEUR**

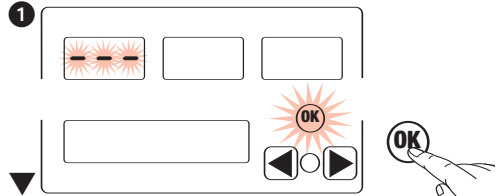
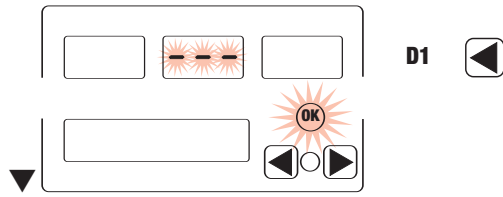
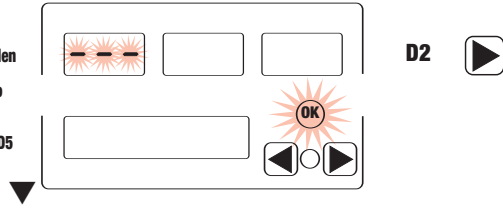
D1 = $\cos\phi \Sigma L$

Display D1 bis D5 auswählen

Selection of Displays D1 to D5

Selezione del Display D1÷D5

Sélection de l'afficheur D1÷D5

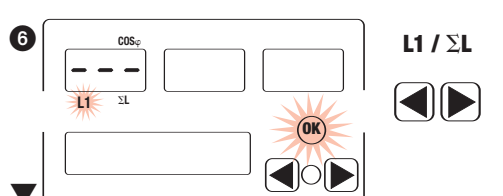
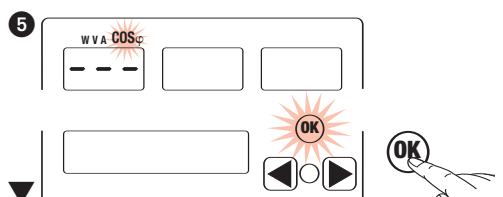
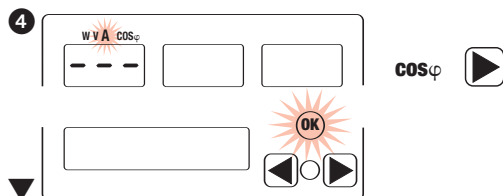
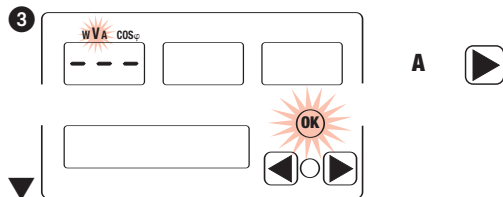
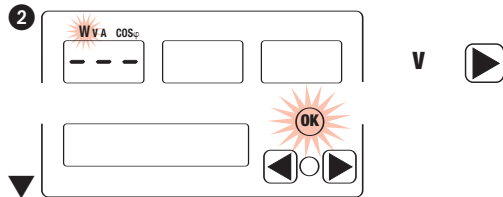


Messgröße auswählen

Quantity selection

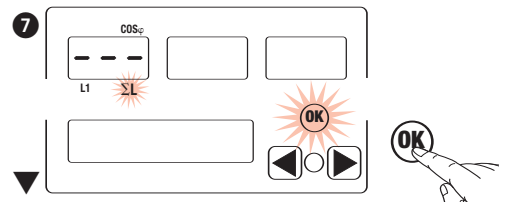
Selezione delle grandezze

Sélection des grandeurs



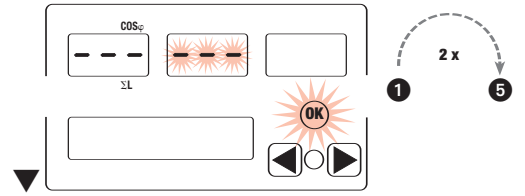
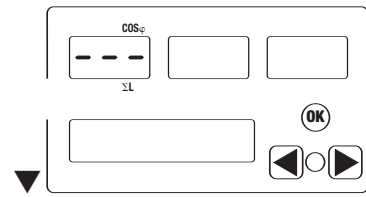
D1 = $\cos\phi \Sigma L$

OK!



D2 = V L2

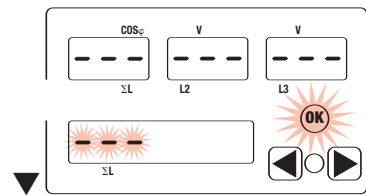
D3 = V L3



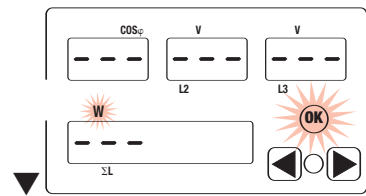
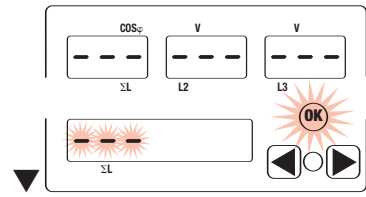
D2 = V L2

D3 = V L3

OK!

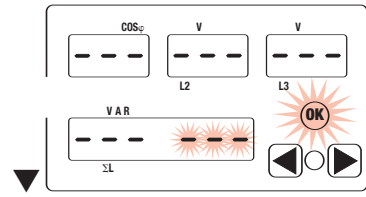
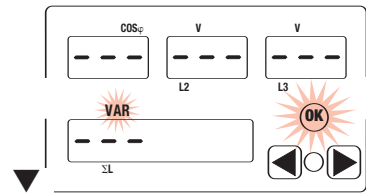


D4 = var ΣL

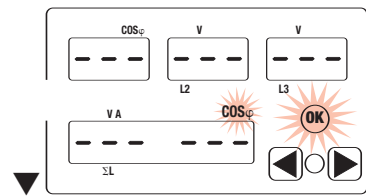


D4 = var ΣL

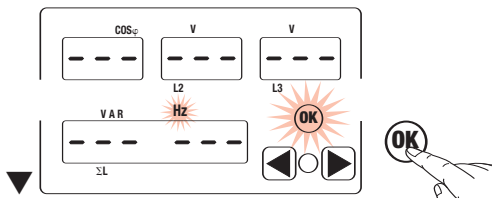
OK!



D5 = Hz

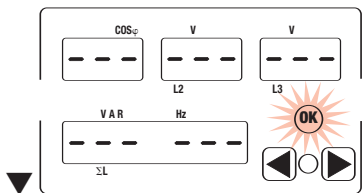


Hz / $\cos\phi$



D5 = Hz

OK!



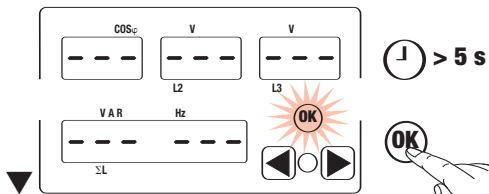
D1 = $\cos\phi$ ΣL

D2 = V L2

D3 = V L3

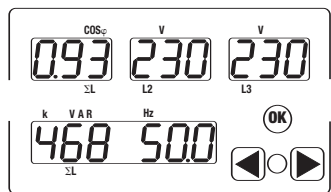
D4 = var ΣL

D5 = Hz

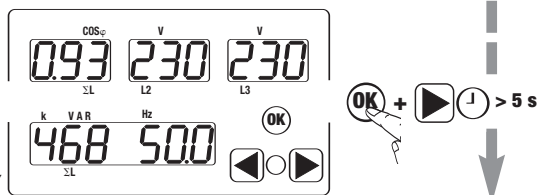


$\text{J} > 5 \text{ s}$

**BETRIEBSART MESSEN / MEASUREMENT MODE
MODALITA' MISURA / MODE MESURE**

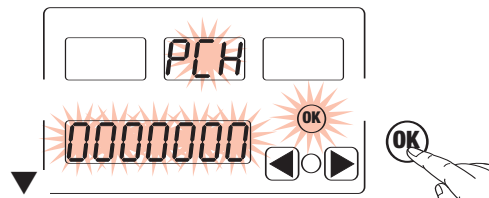
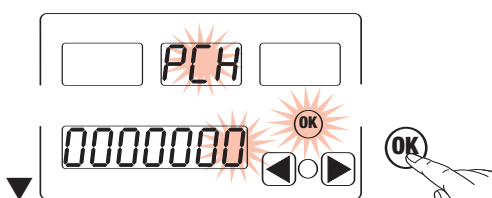
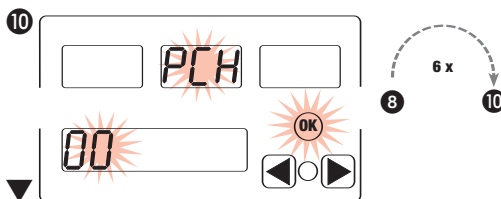
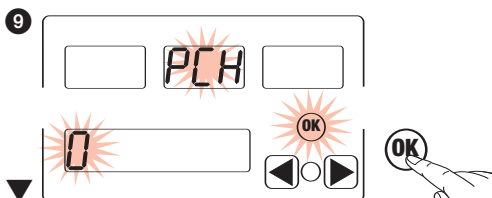
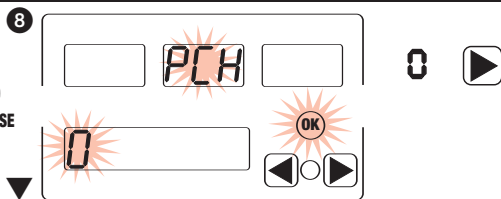


**BETRIEBSART MESSEN / MEASUREMENT MODE
MODALITA' MISURA / MODE MESURE**



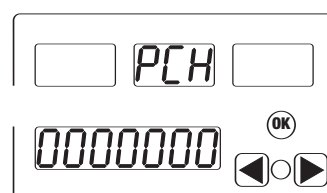
**BETRIEBSART PARAMETEREINSTELLUNG / PARAMETER SETTING MODE
MODALITA' IMPOSTAZIONE PARAMETRI
MODE CONFIGURATION PARAMÈTRES**

8
PASSWORT KONTROLLE
PASSWORD CHECK
CONTROLLO PASSWORD
CONTRÔLE MOT DE PASSE



PASSWORT =
PASSWORD =
PASSWORD =
MOT DE PASSE =
0000000

OK!

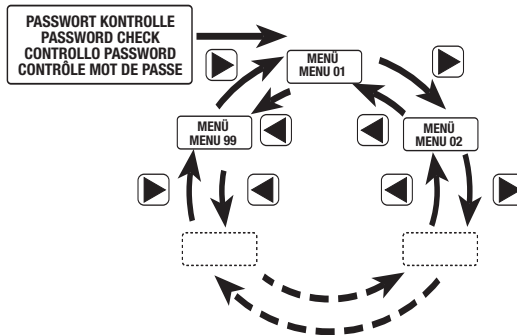


**MENÜ-FOLGE / MENU SEQUENCE
SEQUENZA MENU / SÉQUENCE MENU**

BETRIEBSART MESSEN
MEASUREMENT MODE
MODALITA' MISURA
MODE MESURE

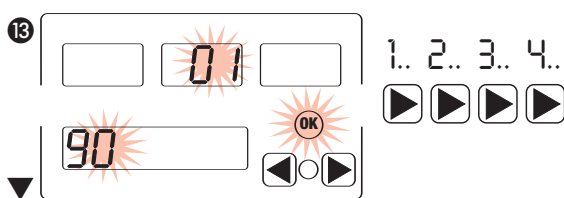
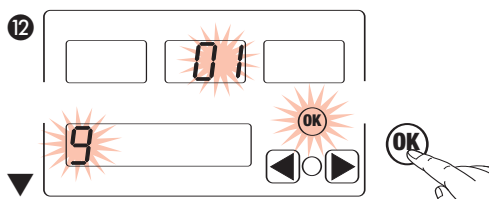
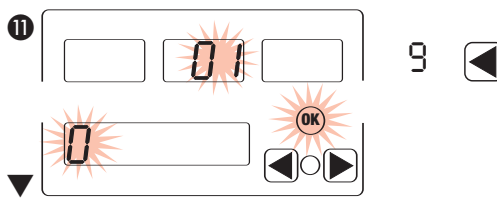
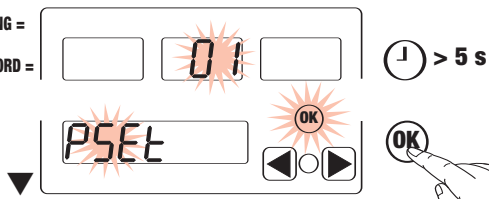
OK + $\text{J} > 5 \text{ s}$

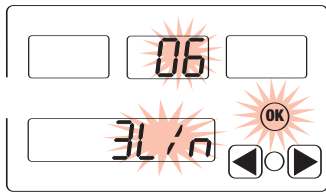
BETRIEBSART PARAMETEREINSTELLUNG
PARAMETER SETTING MODE
MODALITA' IMPOSTAZIONE PARAMETRI
MODE CONFIGURATION PARAMÈTRES



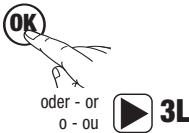
MENÜ / MENU 01

PASSWORT-EINSTELLUNG =
SETTING PASSWORD =
IMPOSTAZIONE PASSWORD =
CONFIGURATION
MOT DE PASSE =
9456789





3L/N (Grundeinstellung
-Default-Défaut)

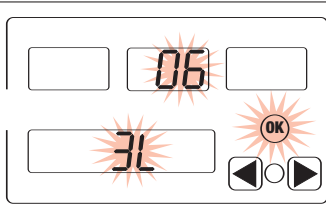


ES WERDEN FOLGENDE GRÖSSEN NICHT ANGEZEIGT:

THE SIZES WILL NOT BE VISUALIZED

NON VERRANNO VISUALIZZATE LE GRANDEZZE:

ELLES NE SERONT PAS VISUALISÉES LES GRANDEURS:



3L

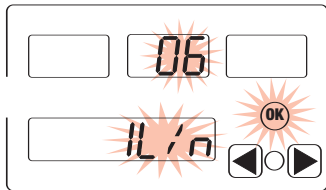


Spannung-Stern Voltage-star Tensione-stella Tension-étoile	L1/N L2/N L3/N	Wirkleistung Active power Potenza attiva Puissance active	L1 L2 L3	Scheinleistung Apparent power Potenza apparente Puissance apparente	L1 L2 L3	Cosφ	L1 L2 L3
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DIE WERTE DER PHASEN 2 UND 3 SOWIE DIE SPANNUNG L1-L2 WERDEN NICHT ABGEBILDET

THE VALUES FOR PHASES 2 AND 3 AND THE L1-L2 VOLTAGE WILL NOT BE DISPLAYED

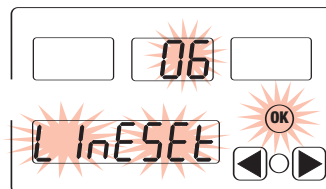
NON VERRANNO VISUALIZZATE LE GRANDEZZE DELLE FASE 2 E 3 E LA TENSIONE L1-L2



1L/N



LES GRANDEURS DES PHASES 2 ET 3 ET LA TENSION L1-L2 NE SERONT PAS AFFICHÉES



**MENÜ
MENU
99**

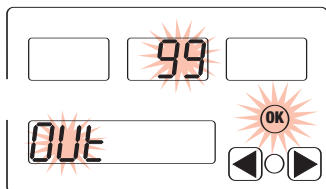
MENÜ / MENU 99

ZURÜCK ZUM BETRIEBSART MESSEN

TO MEASUREMENT MODE

RITORNO MODALITA' MISURA

RETOUR AU MODE MESURE



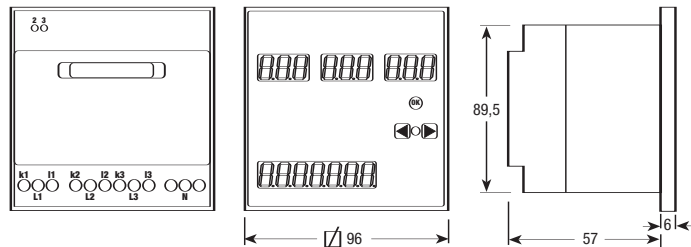
> 5 s



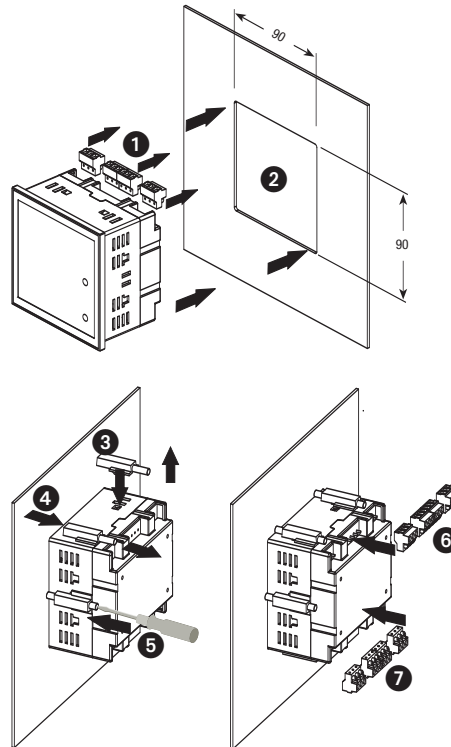
**BETRIEBSART MESSEN / MEASUREMENT MODE
MODALITA' MISURA / MODE MESURE**



Maße / Dimension / Dimensioni / Dimensions

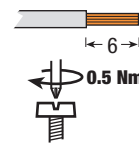


Einbau / Mounting / Montaggio / Installation



**Abisolierlänge und Max Drehmoment
Cable stripping length and max terminal screw torque
Lunghezza di spelatura dei fili e coppia massima di serraggio
Longueur de dénudage des fils et couple de serrage maximum**

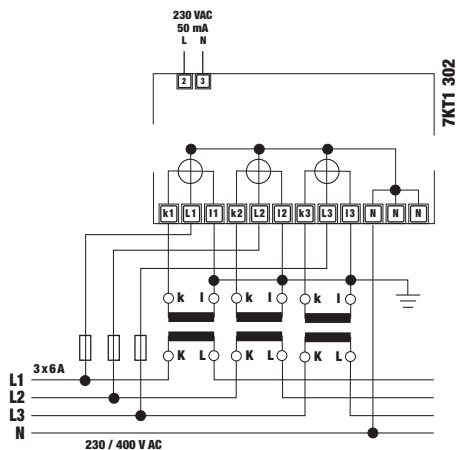
- 5 A Wandleranschluss Hauptklemmen
- 5 A CT connection main terminals
- 5 A connessione TA morsetti principali
- 5 A connexion CT bornes principales



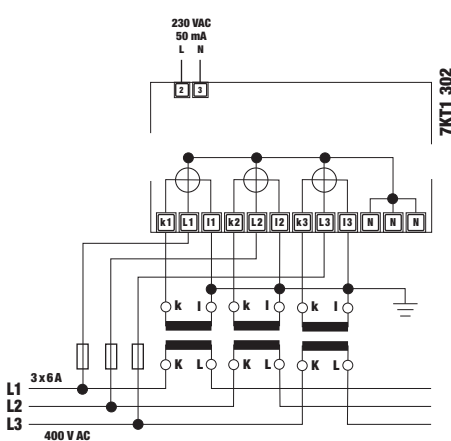
- Betriebsspannungs-Tarif- und Datenübertragungsklemmen
- Auxiliary supply, tariff and communication terminals
- Morsetti alimentazione ausiliaria, tariffe e comunicazioni
- Bornes alimentation auxiliaire, tarifs et communications

Schaltbild / Wiring diagram / Schema di cablaggio / Schéma de câblage

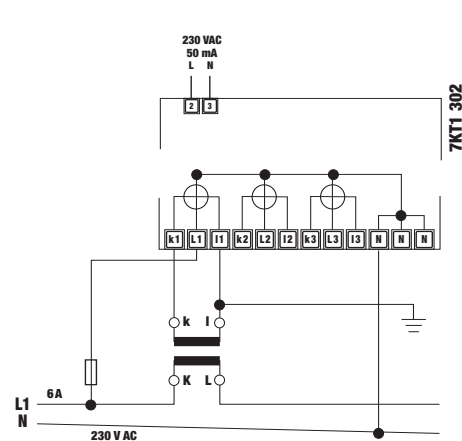
3P+N



3P



1P+N



Secondo DIN 43751-1, DIN 43751-2, DIN 61010-1

7KT1 302

Alimentazione

• Tensione nominale di alimentazione U_n	V	230
• Campo di variazione	xU_n	0,8 ... 1,2
• Frequenza nominale	Hz	50
• Campo di variazione	Hz	45 ... 65
• Potenza assorbita	VA	≤ 10

Sovraccaricabilità

• Tensione	permanente: fase/fase	V	480
	1 secondo: fase/fase	V	800
	permanente: fase/N	V	276
	1 secondo: fase/N	V	460
• Corrente	permanente	A	6
	0,5 s	A	110

Ingressi di misura

• Inserzione			TA /1 A o /5A
• Tensione U_n	fase/fase	V	400
	fase/N	V	230
• Campo di tensione	fase/fase	V	87 ... 480
	fase/N	V	50 ... 276
• Corrente I_b / I_n		A	1 o 5
• Campo di corrente		A	0,012 ... 6
• Riduttore di corrente	primario	A	5 ... 5000
	minimo impostabile	A	5
• Frequenza		Hz	50
• Campo di frequenza		Hz	45 ... 65

Visualizzazione

• Errore di collegamento	fase		Err
• Tensione: 3 cifre, 3-digit	triangolo L1 - L2, L2 - L3, L3 - L1	V	87 ... 480
	stella L1/N - L2/N - L3/N	V	50 ... 276
	tensione >480/276 V		H H H
	tensione <87/50 V		---
• Corrente: 3 cifre, 3-digit	L1 - L2 - L3	A o kA	0,1 ... 1,2 I_n
	per corrente >76; 1,2 x 6 A		H H H
	x rapporto TA		
	per corrente <0,3; 0,012 A		0 0 0
	x rapporto TA		
• Frequenza: 1 indicatore, 3 cifre	ΣL	Hz	45,0 ... 65,0
• Potenza attiva: 3 indicatori, 3 cifre	L1 - L2 - L3; ΣL	W, kW o MW	0 ... 999
	indicatore con virgola mobile		
• Potenza reattiva: 1 indicatore, 3 cifre	ΣL, indicatore con virgola mobile	var, kvar o Mvar	0 ... 999
• Potenza apparente: 3 indicatori, 3 cifre	L1 - L2 - L3; ΣL	VA, kVA o MVA	0 ... 999
1 indicatore, 3 cifre	indicatore con virgola mobile		
• Cosφ: 3 indicatori, 3 cifre oppure 1 indicatore, 3 cifre	L1 - L2 - L3; ΣL		0,01 ... 1,00
1 indicatore, 3 cifre	indicatore con virgola mobile		
• Primario riduttore	solo dopo impostazione	A	5 ... 5000
• Secondario riduttore	solo dopo impostazione	A	1 o 5
• Ciclo di visualizzazione		/s	2
• Memorizzazioni delle impostazioni e dei valori di energia			EEPROM

Precisione (dei valori nominali $I_n - I_b - U_n$)

• Tensione	%	±2 ±1 digit
• Corrente	%	±2 ±1 digit
• Potenza	%	±2 ... ±4 ±1 digit
• Cosφ	%	±2 ... ±10 ±1 digit
• Frequenza	%	±1 ±1 digit

Sicurezza secondo DIN EN 61010-1

• Grado di inquinamento			2
• Categoria di sovratensione			II
• Tensione di funzionamento		V	600
• Tenuta all'impulso	1,2/50 μs	kV	4

Morsetti

• Amperometriche	vite a impronta ±	(Pozidrive) mm	PZ0
• Alimentazione e ausiliarie	vite a impronta ±	(Pozidrive) mm	PZ0
• Sezione conduttori amperometriche	rigido, max.	mm ²	2,5
	rigido, min.	mm ²	0,2
• Sezione conduttori alimentazione e ausiliarie	rigido, max.	mm ²	2,5
	flessibile con capocorda max. / (min.)	mm ²	1,5 / (0,25)

Condizioni ambientali

• Temperatura		°C	0 ... +55
• Umidità relativa		%	≤ 80
• Vibrazioni	con ampiezza sinusoidale a 50 Hz	mm	± 0,25
• Classe di protezione	EN 61010-1		II
• Grado di protezione	EN 60529		IP20
	frontale, 96 x 96 mm		IP54