



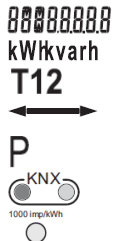
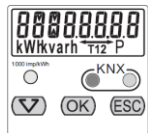
Contatore di Energia monofase – Inserzione diretta 63A

Descrizione prodotto e applicazione

- Questo contatore di Energia fornisce le funzionalità di misura essenziali necessari per monitorare un impianto elettrico monofase.
- 0.25-5 (63) A, Classe B, 230 VAC 50 Hz, -25 °C ... +55 °C, 4 Quadranti, 2 Tariffe.
- Energia attiva Classe B (in accordo con EN-50470) Energia reattiva Classe 2 (in accordo con IEC 62053-23)
- Inserzione diretta (fino a 63 A)
- Display LCD e 3 pulsanti a pressione (per la lettura dell'Energia, V, I, PF, F, P, Q e configurare i parametri)
- 1 pulsante e 1 LED dedicati alla comunicazione KNX.
- Display a 8 cifre
- Autoalimentazione (grazie all'ingresso in tensione).

Il dispositivo è progettato per essere installato su barra DIN

Display



- Valore dell'Energia
- Visualizzazione kWh / kvarh
- Cambio e applicazione tariffa
- Export Energia (ricevuta)
- Import Energia (emessa)
- Valore dell'Energia "Parziale"
- Pulsante e LED dedicati a comunicazione KNX
- Metrologica LED

Comandi



- Tasto Scroll:** Questo pulsante consente di scorrere le pagine e modificare il valore dei parametri. La pressione è accettata se inferiore a 1,5 secondi.
- Tasto OK:** Questa pulsante viene utilizzato solo per attivare una nuova funzione del menu o per confermare un valore di parametro durante la sua modifica. La pressione è accettata se inferiore a 1,5 secondi
- Tasto ESC:** Questo pulsante è usato per uscire da un sotto-menu, per annullare una modifica dei parametri o per tornare alla pagina principale. Per questa funzione la pressione è accettata se inferiore a 1,5 secondi
- Una pressione lunga (> 1,5 secondi) del tasto "ESC" viene utilizzata per resettare i valori dei contatori parziali d'Energia.
- Una pressione lunga (> 5 secondi) viene utilizzata per resettare i valori dei contatori dell'Energia totale.

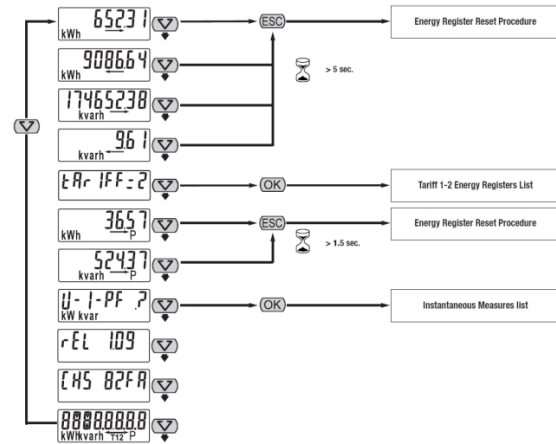
Accensione dispositivo e pagina principale



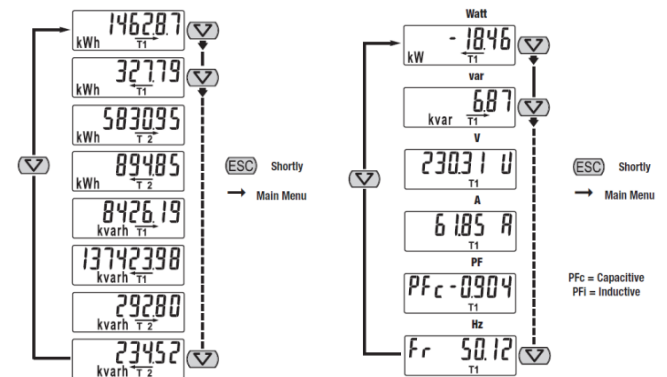
Pagina principale:
Questa pagina appare non solo all'accensione del dispositivo, ma anche nel caso in cui per 30 secondi non venga premuto alcun tasto. Il valore è la somma di 2 contatori

Energia attiva importata con tariffa T1 + Energia attiva importata con tariffa T2. (O, in alternativa, la somma di quelle esportate)

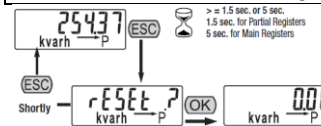
Menu principale



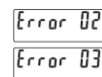
Tariffa 1-2 Lista dei contatori d'Energia Lista delle misure istantanee



Procedura di reset del contatore Energia

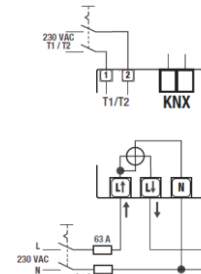


Messaggi di diagnostica



Condizione di Errore
Se il display visualizza questi messaggi, il contatore ha un guasto e deve essere sostituito

Diagramma per il cablaggio



(* Questo fusibile è consigliato se il neutro non è collegato a terra

Assistenza e manutenzione

Non dovrebbe essere necessario ricalibrare il dispositivo durante il suo ciclo di vita in quanto è un contatore elettronico senza parti in movimento con l'elettronica e i sensori di tensione e corrente che non degradano naturalmente o cambiano nel tempo nelle condizioni ambientali specificate. Se si osserva un degrado delle prestazioni del dispositivo probabilmente sono presenti delle parti danneggiate e il dispositivo deve essere inviato per la riparazione o sostituzione. Se lo strumento è sporco e deve essere pulito, utilizzare del tessuto leggermente inumidito con un detergente delicato a base d'acqua. Assicurarsi che nessun liquido vada all'interno del contatore in quanto ciò potrebbe danneggiare il dispositivo

Specifiche tecniche

In accordo con EN 50470-1, EN 50470-3, EN 62053-23 e EN 62053-31

General characteristics

• Housing	DIN 43880	DIN	2 Module
• Mounting	EN 60715	35 mm	DIN rail
• Depth		mm	70
• Weight		g	175

Operating features

• Connection	to single-phase network	n° wires	2
• Storage of energy values and config.	Internal flash memory	-	yes
• Tariff	for active and reactive energy	n° 2	T1 / T2

Measuring features (according to EN 50470-1, EN 50470-3)

• Reference Voltage Un		VAC	230
• Reference Current (Iref)		A	5
• Minimum Current (Imin)		A	0.25
• Maximum Current (Imax)		A	63
• Starting Current (Ist)		A	0.015
• Reference Frequency (fn)		Hz	50
• Number of phases (number of wires)		-	1 (2)

• Accuracy	Active Energies (accor. to EN 50470-3) and Active Powers	Class	B
	Reactive Energies (accor. to EN 62053-23) and Reactive Power	Class	2

Supply Voltage and Power Consumption

• Operating Supply Voltage range		V	92 ... 276
• Maximum Power Dissipation (Voltage circuit)		VA (W)	<2 (1)
• Maximum VA burden (Current circuit) @ I_{max}		VA	<1
• Voltage Input Waveform		-	AC
• Voltage impedance		MΩ	1
• Current impedance		mΩ	<20

Overload capability

• Voltage	continuous		VAC	276
		Temporary (1 s)	VAC	300
• Current	continuous		A	63
		Temporary (10 ms)	A	1890

Measuring Features

• Voltage range		VAC	92 ... 276
• Current range		A	0.015 ... 63
• Frequency range		Hz	45 ... 65
• Measured Quantities		-	V, A, kWh, kVARh, PF, Hz, kW, kVAR

Display features

• Display type	LCD backlightet	-	6.2 +3
	Energy digits dimension	mm	6 x 3
• Active Energy	6 digits + 2 decimal digits	min. max. kWh	0.01 ... 999999.99
• Reactive Energy	6 digits + 2 decimal digits	min. max. kvarh	0.01 ... 999999.99
• Voltage	3 digits + 2 decimal digits	V	92.00 ... 276.00
• Current	2 digits + 2 decimal digits	A	0.00 ... 63.00
• Power factor	1 digits + 3 dec. digits + capac./induc. indic.	-	0.000 ... 1.000
• Frequency	2 digits + 2 decimal digits	Hz	45.00 ... 65.00
• Active Power	2 digits + 2 decimal digits with sign	kW	0.00 ... 17.40
• Reactive Power	2 digits + 2 decimal digits with sign	kVAR	0.00 ... 17.40
• Running Tariff	1 digit	-	T1 / T2
• Display refresh period		s	1

Optical metrological LED

• Front mounted red LED (meter constant) proportional to active imp/exp Energy		p/kWh	1000
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Safety

• Protective class		Class	II
• AC voltage test (EN 50470-3, 7.2)		kV	4
• Degree of pollution		-	2
• Operational voltage		V	300
		1.2/50 μs-kV	6
• Impulse voltage test		kV	6
• Housing material flame resistance	UL 94	Class	V0

Embedded communication

• Physical interface		-	KNX terminal
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• Isolation class	-		SELV circuit
Tariff			
• Tariff 1	-		open contact
• Tariff 2	VAC		230 ±20%
• Input impedance		kΩ	224
Connection terminals			
• Screwdriver for mains terminals	head with Z +/-	POZIDRI V	PZ2
• Screwdriver for tariff terminals	slotted head	mm	0.8 x 3.5
• Terminal capacity main current paths solid wire min. (max)		mm²	1.65 (33)
	stranded wire with sleeve min. (max)	mm²	1.65 (33)
• Terminal capacity for tariff	solid wire min. (max)	mm²	1 (4)
	stranded wire with sleeve min. (max)	mm²	1 (2.5)
Environmental conditions (storage)			
• Temperature range		°C	-25 ... +70
Environmental conditions (operating)			
• Temperature range		°C	-25 ... +55
• Mechanical environment		-	M1
• Electromagnetic environment		-	E2
• Installation	Indoor	-	yes
• Altitude (max.)		meter	<2000
• Humidity	yearly average, not condensing	-	<75%
	on 30 days per year (not condensing)	-	<95%
• IP rating		-	IP51(-)/IP40

(*) The metering equipment must be installed inside a cabinet with IP rating IP51 or better.

Avvertenze per l'installazione
IMPORTANTE

Il dispositivo deve essere installato mantenendo una distanza minima di 4mm tra le linee in tensione non SELV (230V) e i cavi collegati agli ingressi o al bus EIB/KNX.

- L'apparecchio deve essere impiegato per installazione in ambienti chiusi e asc.
- Il dispositivo deve essere installato in posizione accessibile solo agli installatori qualificati
- L'apparecchio deve essere installato e messo in servizio da un installatore abilitato.
- Devono essere osservate le norme in vigore in materia di sicurezza e prevenzione antinfortunistica.
- L'apparecchio non deve essere aperto. Eventuali apparecchi difettosi devono essere fatti pervenire alla sede competente.
- Il bus KNX permette di inviare comandi da remoto agli attuatori dell'impianto. Verificare sempre che l'esecuzione di comandi a distanza non crei situazioni pericolose e che l'utente abbia sempre segnalazione di quali comandi possono essere attivati a distanza.


SMALTIMENTO

Il simbolo del cassonetto barrato indica che il prodotto alla fine della propria vita utile deve essere raccolto separatamente dagli altri rifiuti. Al termine dell'utilizzo, l'utente dovrà farsi carico di conferire il prodotto ad un idoneo centro di raccolta differenziata oppure di riconsegnarlo al rivenditore all'atto dell'acquisto di un nuovo prodotto. L'adeguata raccolta differenziata per l'avvio successivo dell'apparecchiatura dimessa al riciclaggio contribuisce ad evitare possibili effetti negativi sull'ambiente e sulla salute e favorisce il reimpiego e/o riciclo dei materiali di cui è composta l'apparecchiatura.


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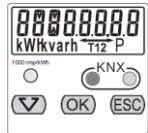

Single-phase Digital Energy meters - Direct connection 63A

Product and Applications description

- This Energy-meter provides the essential measurement capabilities required to monitor a single phase electrical installation.
- 0.25-5 (63) A, Class B, 230 VAC 50 Hz, -25 °C ... +55 °C, 4 Quadrants, 2 Tariffs.
- Active Energy Class B (according to EN-50470) and Reactive Energy Class 2 (according to IEC 62053-23)
- Direct connected (up to 63 A)
- LCD display and 3 push-button keys (to read Energies, V, I, PF, F, P, Q and to configure some parameters)
- 1 push button and 1 LED dedicated to KNX.
- Display with 8 digits.
- Self supplied (by the input voltage itself).

Device is intended to be installed on DIN rail.

Display

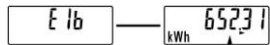


- 00000000 Energy value
- kWkvarh kWh / kvarh display
- T12 Running tariff, called tariff
- ↔ Energy export (received)
- ↔ Energy import (delivered)
- P Energy value "Partial"
- KNX Push button and LED dedicated to KNX
- 1000 Imp/kWh Metrological LED

Commands

- Scroll Key: This key is used to scroll pages and to modify parameters value. Its pushing is accepted only if it is shorter than 1.5 second.
- OK key: This key is used alone to enable a new menu function or to confirm a parameter value during its modification. Its pushing is accepted only if shorter than 1.5 seconds
- ESC key: This key is used alone to exit from a sub-menu, to cancel a parameter modification or to go back to the main page. In these cases, its pushing is accepted only <1.5 seconds
- A long pushing (>1.5 seconds) of the "ESC key" is used in the Partial Energy Registers Pages to reset their values.
- A long pushing (>5 seconds) is used in the Main Energy Registers Pages to reset their values

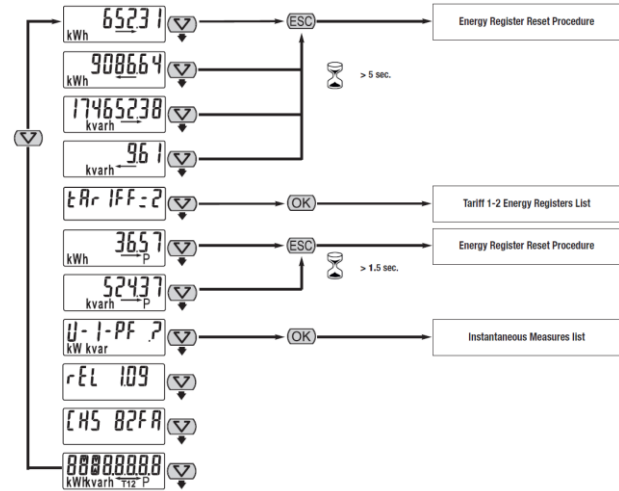
Device Switch-on and Main Page



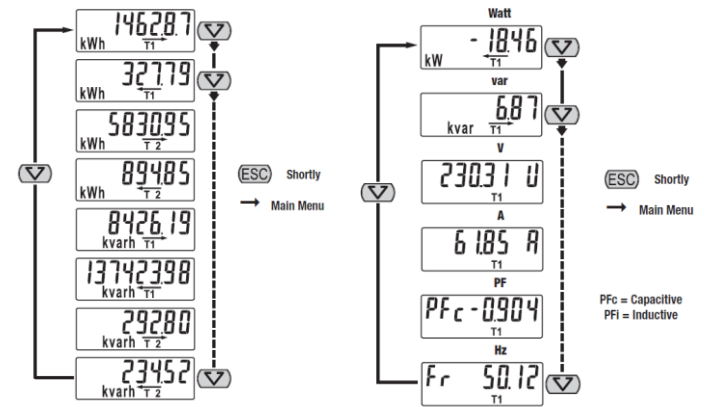
Main Page:
This page appears not only at device switch on, but also in case for 30 seconds no key is pushed. The value is the sum of 2 registers:

Imported Act. Energy Tariff T1 + Imported Act. Energy Tariff T2. (or, alternatively, the sum of the Exported ones).

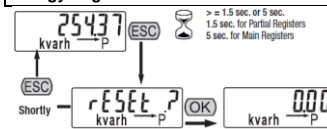
Main Menu



Tariff 1-2 Energy Register List Instantaneous Measurement List



Energy Register Reset Procedure

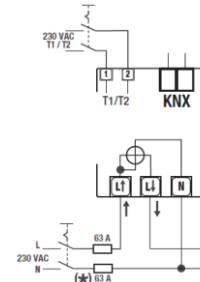


Diagnostic Message

- Error 02
- Error 03

Error Condition
If the display shows these messages, the meters has got a malfunction and must be replaced.

Wiring Diagram



(*) This fuse is recommended if Neutral is not earthed

Service and Maintenance

It should not be necessary to recalibrate device during its lifetime as it is an electronic meter with no moving parts with electronics and voltage and current sensors that do not naturally degrade or change with time under specified environmental conditions. If a degradation in the performance is observed the device has probably been partly damaged and should be sent for repair or exchanged. If the meter is dirty and needs to be cleaned, use lightly moistened tissue with a water based mild detergent.
Make sure no liquid goes into the meter as this could damage the meter.



Technical Specifications

Data in compliance with EN 50470-1, EN 50470-3, EN 62053-23 and EN 62053-31

General characteristics			
• Housing	DIN 43880	DIN	2 Module
• Mounting	EN 60715	35 mm	DIN rail
• Depth		mm	70
• Weight		g	175
Operating features			
• Connection	to single-phase network	n° wires	2
• Storage of energy values and config.	Internal flash memory	-	yes
• Tariff	for active and reactive energy	n° 2	T1 / T2
Measuring features (according to EN 50470-1, EN 50470-3)			
• Reference Voltage Un		VAC	230
• Reference Current (Iref)		A	5
• Minimum Current (Imin)		A	0.25
• Maximum Current (Imax)		A	63
• Starting Current (Ist)		A	0.015
• Reference Frequency (fn)		Hz	50
• Number of phases (number of wires)		-	1 (2)
• Accuracy	Active Energies (accor. to EN 50470-3) and Active Powers Reactive Energies (accor. to EN 62053-23) and Reactive Power	Class	B 2
Supply Voltage and Power Consumption			
• Operating Supply Voltage range		V	92 ... 276
• Maximum Power Dissipation (Voltage circuit)		VA (W)	<2 (1)
• Maximum VA burden (Current circuit) @ I_{max}		VA	<1
• Voltage Input Waveform		-	AC
• Voltage impedance		MΩ	1
• Current impedance		mΩ	<20
Overload capability			
• Voltage	continuous	VAC	276
	Temporary (1 s)	VAC	300
• Current	continuous	A	63
	Temporary (10 ms)	A	1890
Measuring Features			
• Voltage range		VAC	92 ... 276
• Current range		A	0.015 ... 63
• Frequency range		Hz	45 ... 65
• Measured Quantities		-	V, A, kWh, kVARh, PF, Hz, kW, kVAR
Display features			
• Display type	LCD backlightet	-	6.2 +3
	Energy digits dimension	mm	6 x 3
• Active Energy	6 digits + 2 decimal digits	min. max. kWh	0.01 ... 999999.99
• Reactive Energy	6 digits + 2 decimal digits	min. max. kvarh	0.01 ... 999999.99
• Voltage	3 digits + 2 decimal digits	V	92.00 ... 276.00
• Current	2 digits + 2 decimal digits	A	0.00 ... 63.00
• Power factor	1 digits + 3 dec. digits + capac./induc. indic.	-	0.000 ... 1.000
• Frequency	2 digits + 2 decimal digits	Hz	45.00 ... 65.00
• Active Power	2 digits + 2 decimal digits with sign	kW	0.00 ... 17.40
• Reactive Power	2 digits + 2 decimal digits with sign	kVAR	0.00 ... 17.40
• Running Tariff	1 digit	-	T1 / T2
• Display refresh period		s	1
Optical metrological LED			
• Front mounted red LED (meter constant) proportional to active imp/exp Energy		p/kWh	1000
Safety			
• Protective class		Class	II
• AC voltage test (EN 50470-3, 7.2)		kV	4
• Degree of pollution		-	2
• Operational voltage		V	300
		1.2/50 μs-kV	6
• Impulse voltage test		kV	6
• Housing material flame resistance	UL 94	Class	V0
Embedded communication			
• Physical interface		-	KNX terminal

• Isolation class	-	SELV circuit
Tariff		
• Tariff 1	-	open contact
• Tariff 2	VAC	230 ±20%
• Input impedance	kΩ	224
Connection terminals		
• Screwdriver for mains terminals	head with Z +/-	POZIDRI V
• Screwdriver for tariff terminals	slotted head	mm
• Terminal capacity main current paths solid wire min. (max)		mm²
	stranded wire with sleeve min. (max)	mm²
• Terminal capacity for tariff	solid wire min. (max)	mm²
	stranded wire with sleeve min. (max)	mm²
Environmental conditions (storage)		
• Temperature range	°C	-25 ... +70
Environmental conditions (operating)		
• Temperature range	°C	-25 ... +55
• Mechanical environment	-	M1
• Electromagnetic environment	-	E2
• Installation	Indoor	-
• Altitude (max.)		meter
• Humidity	yearly average, not condensing	-
	on 30 days per year (not condensing)	-
• IP rating		-

(*) The metering equipment must be installed inside a cabinet with IP rating IP51 or better.

Installation instructions

WARNING

Device must be installed keeping a minimum distance of 4mm between electrical power line (mains - 230V) and red / black bus connector or bus cable.

- Device may be used for indoor installations in dry locations.
- Device must be mounted by an authorised installer.
- Device must be installed in a location that is accessible only to qualified installers
- The applicable safety and accident prevention regulations must be observed.
- Device must not be opened. Any faulty device should be returned to manufacturer.
- For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.
- KNX bus allows you to remotely send commands to the system actuators. Always make sure that the execution of remote commands do not lead to hazardous situations, and that the user always has a warning about which commands can be activated remotely.



DISPOSAL

The crossed-out bin symbol on the equipment or packaging means the product must not be included with other general waste at the end of its working life. The user must take the worn product to a sorted waste centre, or return it to the retailer when purchasing a new one. An efficient sorted waste collection of the environmentally friendly disposal of the used device, or its subsequent recycling, helps avoid the potential negative effects on the environment and people's health, and encourages the re-use and/or recycling of the construction materials.



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