

Instruction Manual  
Base Instrument

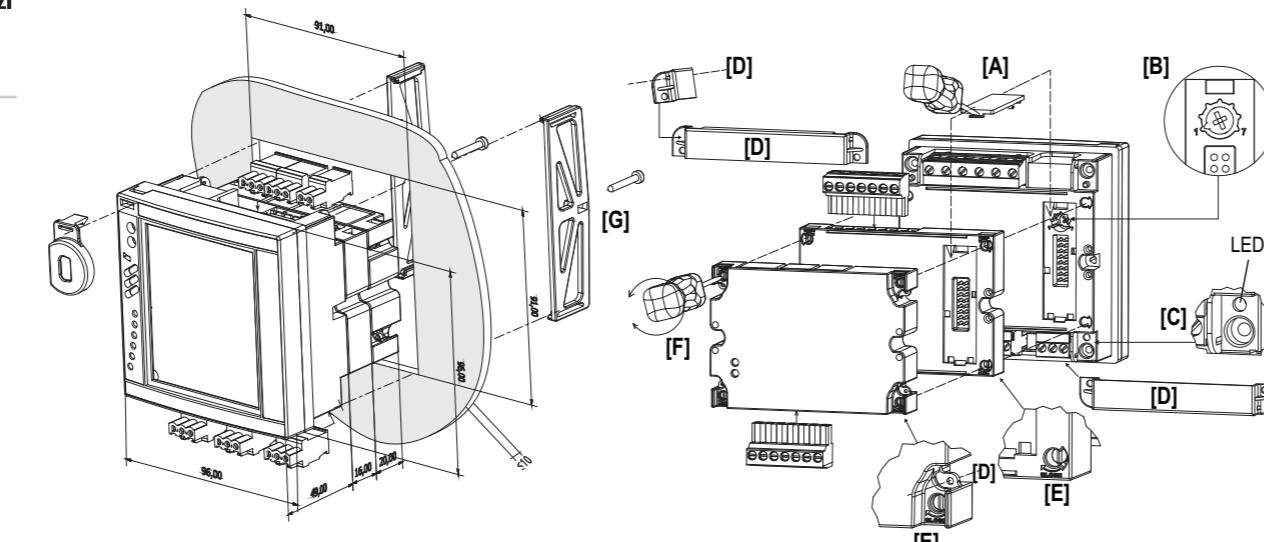
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per aver scelto i nostri prodotti.

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Ihnen dafür, dass Sie unsere  
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**Gracias**  
por elegir nuestros productos.

**Merci**  
d'avoir choisi nos produits.



## ENGLISH

**!**  
Read carefully the instruction manual. If the instrument is used in a manner not specified by the producer, the protection provided by the instrument may be impaired. **Maintenance:** make sure that the connections are correctly carried out in order to avoid any malfunctioning or damage to the instrument. To keep the instrument clean, use a slightly damp cloth; do not use any abrasives or solvents. We recommend to disconnect the instrument before cleaning it.

**WARNING:** to make sure that the screw tightening torque is 0.5Nm. ALL THE MOUNTING AND DISASSEMBLY OPERATIONS OF THE INSTRUMENT AND MODULES HAVE TO OCCUR WHEN POWER SUPPLY AND THE LOADS ARE NOT CONNECTED.

**Preliminary operations:** if necessary remove the protection cover of the contacts [A], using a properly screwdriver.

**Lock the programming and LED of power supply on:** to lock the access to the programming of the instrument turning (clockwise) the rotary switch [B] to position 7. To unlock the programming come-back the rotary switch to the position 1. The green LED [C] on warns that the instrument is power supplied.

**The instrument and modules sealing:** to lock the modules turning (clockwise) the properly fixing elements on the corners [E], using a properly screwdriver [F]. To seal the instrument use the dedicated covers and holes [D]. Bracket tightening torque: 0.4 Nm max [G].

## ■ WIRING DIAGRAMS

[1] 3-ph, 2-wire, balanced load, 1-CT connection.  
[2] 3-ph, 2-wire, balanced load, 1-CT and 1-VT/PT connections

[3] 3-ph, 4-wire, unbalanced load, 3-CT connection

[4] 3-ph, 4-wire, unbalanced load, 3-CT and 3-VT/PT connections

[5] 3-ph, 3-wire, unbalanced load, 3-CT connection

[6] 3-ph, 3-wire unbalanced load, 3-CT and 2-VT/PT connections

[7] 3-ph, 3-wire, balanced load, 1-CT connections

[8] 3-ph, 3-wire, unbalanced load, 2-CT connections (ARON)

[9] 3-ph, 3-wire, balanced load, 1-CT and 2-VT/PT connections

[10] 2-ph, 3-wire, 2-CT connection

[11] 2-ph, 3-wire, 2-CT and 2-VT/PT connections

[12] 1-ph, 2-wire, 1-CT connection

[13] 1-ph, 2-wire, 1-CT and 1-VT connections

[14] 3-ph, 3-wire, unbalanced load, 2-CT and 2-VT/PT connections ARON

[15] Power supply 90 to 260VAC/DC. F=250V [T] 630mA.

Power supply 18 to 60VAC/CC. F=250V [T] 3.15A.

## ITALIANO

**Leggere attentamente il manuale di istruzioni.** Qualora l'apparecchio venisse adoperato in un modo non specificato dal costruttore, la protezione prevista dall'apparecchio potrebbe essere compromessa.

**Manutenzione:** Per mantenere pulito lo strumento usare un panno inumidito; non usare abrasivi o solventi. Si consiglia di scolare lo strumento prima di eseguire la pulizia.

**ATTENZIONE:** assicurarsi che la coppia di serraggio applicata alle viti dei morsetti sia di: 0,5Nm. TUTTE LE OPERAZIONI DI MONTAGGIO E SMONTAGGIO DELLO STRUMENTO E DEI MODULI VANNO ESEGUITE CON ALIMENTAZIONE E CARICO SCOLLEGATI.

**Operazione preliminare:** smontare, se necessario, la finestra di protezione dei contatti [A], utilizzando un apposito cacciavite a taglio.

**Blocco della programmazione e LED di presenza alimentazione:** per bloccare la programmazione dello strumento agire (ruotandolo in senso orario) sul commutatore rotante [B] portandolo nella posizione 7, per sbloccare la programmazione portarlo nella posizione 1. Il LED verde acceso [C] avvisa che lo strumento è alimentato.

**Sigillatura dei moduli e dello strumento:** per bloccare i moduli agire (ruotandoli in senso orario) sugli appositi elementi di fissaggio posti agli angoli dei moduli stessi [E], utilizzando un adeguato cacciavite a taglio [F]. Il sigillo va apposto utilizzando i fori e i copri morsetti dedicati [D]. Coppia di serraggio delle staffe: 0,4 Nm max [G].

## ■ COLLEGAMENTI ELETTRICI

[1] 3 fasi, 2 fili, carico equilibrato, connessione con 1 TA

[2] 3 fasi, 2 fili, carico equilibrato, connessione con 1TA e 1 TV

[3] 3 fasi, 4 fili, carico squilibrato, connessione con 3 TA

[4] 3 fasi, 4 fili, carico squilibrato, connessione con 3 TA e 3 TV

[5] 3 fasi, 3 fili, carico squilibrato, connessione con 3 TA

[6] 3 fasi, 3 fili, carico squilibrato, connessione con 3 TA e 2 TV

[7] 3 fasi, 3 fili, carico equilibrato, connessione con 1 TA

[8] 3 fasi, 3 fili, carico equilibrato, connessione con 2 TV (ARON)

[9] 3 fasi, 3 fili, carico equilibrato, connessione con 1 TA e 2 TV

[10] 2 fasi, 3 fili, connessioni con 2 TA

[11] 2 fasi, 3 fili, connessioni con 2 TA e 2 VT

[12] 1 fase, 2 fili, connessione con 1TA

[13] 1 fase, 2 fili, connessione con 1 TA e 1 TV

[14] 3 fasi, 3 fili, carico squilibrato, connessione con 2 TA e 2 TV (ARON)

[15] Alimentazione da 90 a 260VCA/CC. F=250V [T] 630mA.

Alimentazione da 18 a 60VCA/CC. F=250V [T] 3.15A.

## DEUTSCH

**Die Betriebsanleitung aufmerksam lesen.** Sollte das Gerät nicht gemäss der Herstellerangaben verwendet werden, könnte der vom Gerät vorgesehene Schutz beeinträchtigt werden. **Wartung:** Das Gerät mit einem feuchten Tuch reinigen; keine Scheuer- oder Lösemittel verwenden. Das Gerät vor der Reinigung ausschalten

**ACHTUNG:** Darauf achten, dass das Anzugsmoment der Klemmschrauben 0,5Nm beträgt. SOWOHL BEI DER MONTAGE, ALS AUCH BEIM AUSBAU DES GERÄTES UND DER MODULE MÜSSEN STROMVERSORGUNG UND STROMLAST STETS VORHER ABGETRENNT WERDEN.

**Vorbereitung:** Gegebenenfalls das Schutzfenster der Kontakte [A] mit einem Schlitzschaubenzieher entfernen.

**Programmierungssperre und LED Stromversorgung vorhanden:** Um die Programmierung des Gerätes zu sperren, den Drehschalter [B] im Uhrzeigersinn auf Position 7 drehen, für die erneute Freigabe auf Position 1. Das Leuchten der grünen LED [C] zeigt an, dass das Gerät mit Strom versorgt wird.

**Versiegelung der Module und des Geräts:** Die Befestigung der Module erfolgt (durch Drehen derselben im Uhrzeigersinn) über die an den Ecken vorgesehenen Befestigungselemente [E], mit Hilfe eines passenden Schlitzschaubenziehers [F]. Das Siegel wird über die hierfür vorgesehenen Löcher und Klemmendeckel [D] angebracht. Befestigungsbügel Anzugsmoment: max 0,4 Nm [G].

## ■ ELEKTRISCHE ANSCHLÜSSE

[1] 3 Phasen, 2 Adern, symmetrische Last, Anschluss mit 1 TA

[2] 3 Phasen, 2 Adern, symmetrische Last, Anschluss mit 1 TA und 1 TV

[3] 3 Phasen, 4 Adern, unsymmetrische Last, Anschluss mit 3 TA

[4] 3 Phasen, 4 Adern, unsymmetrische Last, Anschluss mit 3 TA und 3 TV

[5] 3 Phasen, 3 Adern, unsymmetrische Last, Anschluss mit 3 TA

[6] 3 Phasen, 3 Adern, unsymmetrische Last, Anschluss mit 3 TA und 2 TV

[7] 3 Phasen, 3 Adern, carico equilibrato, connessione con 1 TA

[8] 3 Phasen, 3 Adern, carico equilibrato, connessione con 2 TV (ARON)

[9] 3 Phasen, 3 Adern, carico equilibrato, connessione con 1 TA e 2 TV

[10] 2 fasi, 3 fili, connessioni con 2 TA

[11] 2 fasi, 3 fili, connessioni con 2 TA e 2 VT

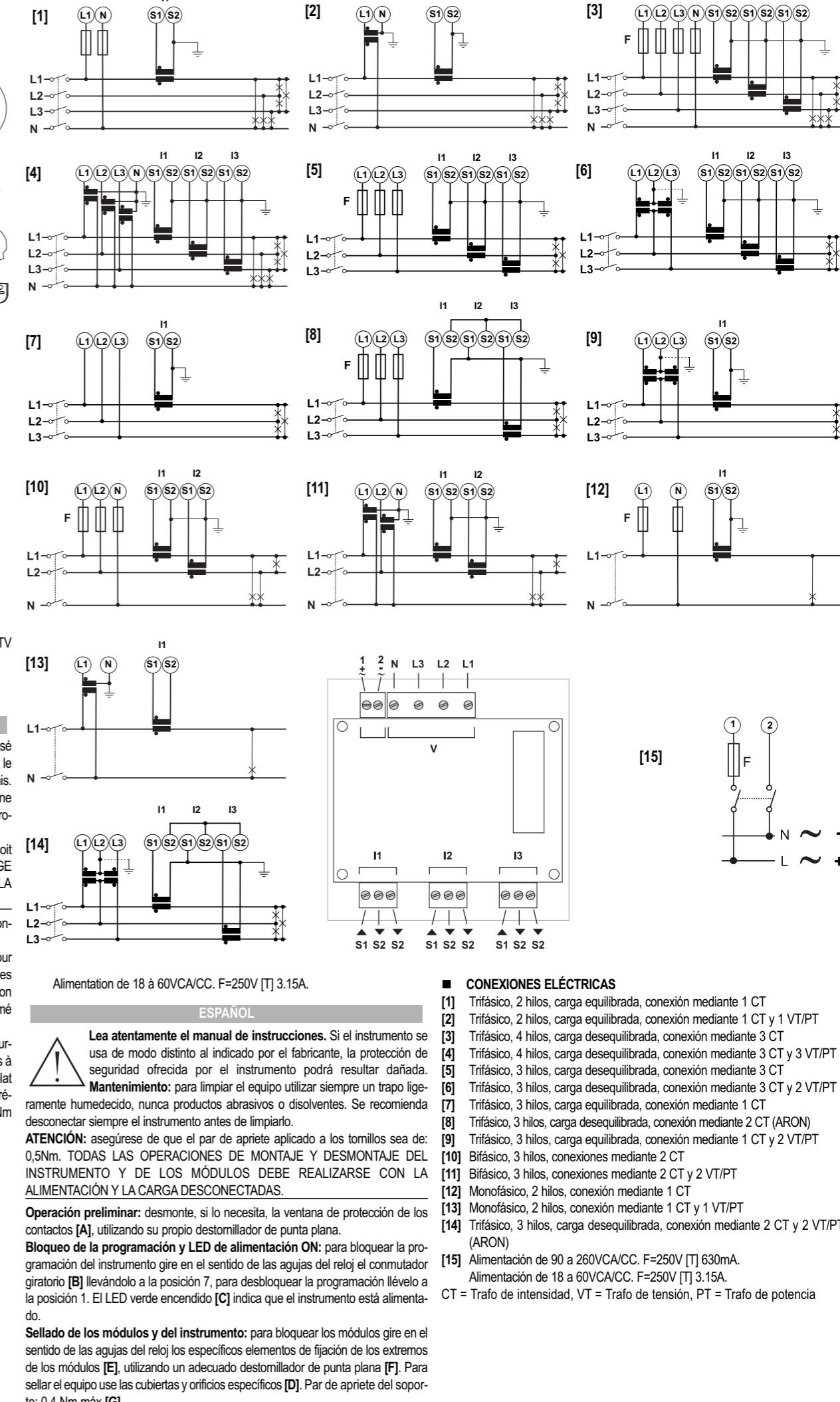
[12] 1 ph, 2 fili, connessione con 1TA

[13] 1 ph, 2 fili, connessione con 1 TA e 1 TV

[14] 3 fasi, 3 fili, carico desequilibrato, connessione con 2 TA e 2 TV (ARON)

[15] Alimentation de 90 à 260VCA/CC. F=250V [T] 630mA.

Alimentation de 18 à 60VCA/CC. F=250V [T] 3.15A.



## ENGLISH

**Rated inputs**, system type: 1, 2 or 3-phase. Galvanic insulation by means of built-in CT's. Current range (by CT) AV5 and AV6: 5(6)A; AV4 and AV7: 1(2)A. Voltage (by direct connection or VT/PT) AV4, AV5: 400/690VLL; AV6, AV7: 100/208VLL. **Accuracy** (Display + RS485) (@25°C ±5°C, R.H. ≤60%, 48 to 62 Hz). In: see below, Un: see below AV4 model In: 1A, Imax: 2A; Un: 160 to 480VNL (277 to 830VLL). AV5 model In: 5A, Imax: 6A; Un: 160 to 480VNL (277 to 830VLL). AV5 model, In: 5A, Imax: 6A; Un: 40 to 144VNL (70 to 250VLL), AV7 model In: 1A, Imax: 2A; Un: 40 to 144VNL (70 to 250VLL). Current AV4, AV5, AV6, AV7 models from 0,01In to 0,05In: ±(0,5% RDG +2DGT). From 0,05In to Imax: ±(0,2% RDG +2DGT). Phase-neutral voltage: In the range Un: ±(0,2% RDG +1DGT). Phase-phase voltage: In the range Un: ±(0,5% RDG +1DGT). Frequency: ±0,1Hz (45 to 65Hz). Active and Apparent power: 0,01In to 0,05In, PF 1: ±(1%RDG+1DGT). From 0,05In to Imax PF 0,5L, PF1, PF0,8C: ±(0,5%RDG+1DGT). Power Factor ±[0,001+0,5%(1,000 - "PF RDG")]. Reactive power 0,01In to Imax, senp 0,5L/C: ±(1%RDG+1DGT). 0,05In to 0,1In, senp 0,5L/C: ±(1%RDG+1DGT). 0,05In to Imax, senp 1: ±(1%RDG+1DGT). 0,02In to 0,05In, senp 1: ±(1,5%RDG+1DGT). Active energy, class 0,5 according to EN62053-22, ANSI C12.20, class C according to EN50470-3. Reactive energy class 1 according to EN62053-23, ANSI C12.1. Start up current AV5, AV6: 5mA. Start up current AV4, AV7 1mA. **Energy additional errors**: according to EN62053-22, ANSI C12.20. Influence quantities, class B or C according to EN50470-3, EN62053-23, ANSI C12.1. **Total Harmonic Distortion (THD)**: ±1% FS (FS: 100%). AV4: Imin: 5mA RMS; Imax: 3Ap; Umin: 30VRMS; Umax: 679Vp. AV5: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 679Vp. AV6: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 204Vp. AV7: Imin: 5mA RMS; Imax: 3Ap; Umin: 30VRMS; Umax: 204Vp. **Total Demand Distortion (TDD)**: ±1% FS (FS: 100%). Imin: 5mA RMS; Imax: 15Ap; K-Factor and factor K ±(0,5%RDG+1DGT). **Temperature drift** ≤200ppm/°C. **Coupling rate** 3200 samples/s @ 50Hz, 3840 samples @ 60Hz. Method TRMS measurements of distorted wave forms. Coupling type by means of CT's. **Crest factor**, AV5, AV6: ≤3 (15A max. peak), AV4, AV7: ≤3 (3A max. peak). **Current Overloads**, continuous (AV5 and AV6) 6A, @ 50Hz/60Hz. Continuous (AV4 and AV7) 2A, @ 50Hz/60Hz. For 500ms (AV5 and AV6) 120A, @ 50Hz/60Hz. For 500ms (AV4 and AV7) 40A, @ 50Hz/60Hz. **Voltage Overloads**, continuous (AV4 and AV5) 830 VLL, continuous (AV6 and AV7) 250 VLL. For 500 ms (AV4 and AV5) 1380 VLL, for 500 ms (AV6 and AV7) 415 VLL. **Input impedance**, continuo (AV4 e AV5) >1,6MΩ; 208VL-L (AV6 and AV7) >1,6MΩ. 5(10)A (AV5 and AV6) <0,2VA. 1(2)A (AV4 and AV7) <0,2VA. **Frequency** 40 to 440 Hz. **Meters**. Total 4 (10 digit). **Pulse output** connectable to total and/or partial meters. **Energy meter recording**, storage of total and partial energy meters. Energy meter storage format (EEPROM) Min. -9,999,999,999 kWh/kvarh, Max. 9,999,999,999 kWh/kvarh. **Energy Meters**, total energy meters +kWh, +kvarh, -kvarh. Partial energy meters +kWh, -kWh, -kvarh, +kvarh. **Analysis principle FFT**. **Harmonic measurement**. Current up to the 32nd harmonic. **Type of harmonics THD** (VL1 and VL1-N) THD odd (VL1 and VL1-N) THD even (VL1 and VL1-N) TDD. The same for the other phases: L2, L3, THD (AL1) THD odd (AL1) THD even (AL1). The same for the other phases: L2, L3. **Power supply**: H: 90 to 265VAC/DC; L: 19 to 60VAC (48 to 62Hz), 21,6 to 60VDC. **Auxiliary power supply according to UL**: 100 to 240VAC +10% -15% 100 to 240VDC +10% -20% 24 to 48VAC +10% -15% 24 to 48VDC +10% -20%. **Power consumption**: AC: 20 VA; DC: 10 W. **Operating temperature** -25°C to +55°C (-13°F to 131°F) (R.H. from 0 to 90% non-condensing @ 40°C) according to EN62053-21, EN50470-1 and EN62053-23. **Storage temperature** -30°C to +70°C (-22°F to 158°F) (R.H. < 90% non-condensing @ 40°C) according to EN62053-21, EN50470-1 and EN62053-23. **Temperature di immagazzinamento** da -30°C a +70°C (da -22°F a 140°F) (U.R. <90% senza condensa @ 40°C) secondo EN62053-21 e EN62053-23. **Dielectric strength** 4000 VRMS for 1 minute. **Noise rejection** CMRR 100 dB, 48 to 62 Hz. **EMC** according to EN62052-11. Electrostatic discharges: 15kV air discharge. Immunity to irradiation: test with current: 10V/m from 80 to 2000MHz. Electromagnetic fields: test without any current: 30V/m from 80 to 2000MHz. Burst: on current and voltage measuring inputs circuit: 4kV. Immunity to conducted disturbances: 10V/m from 150kHz to 80MHz. Surge: on current and voltage measuring inputs circuit: 4kV; on "L" auxiliary power supply input: 1kV. Radio frequency suppression: according to CISPR 22. **Standard compliance**: safety: IEC60664, IEC61010-1 EN60664, EN61010-1 EN62052-11. Metrology: EN62053-21, EN62053-23, EN61010-1 EN62052-11. **Protection degree**: front: IP65, UL type 4x indoor (NEMA4x indoor), UL type 12 (NEMA12). Screw terminals: IP20.

**UL NOTES**: Use with 60 or 75°C copper conductor. Maximum surrounding air temperature 40°C. The device shall be installed in a pollution degree 2 environment. Open Type Device. The terminals L1, L2, L3 shall be acquired by a circuit where devices or system, including filters or air gaps, are used to control overvoltages at the maximum rated impulse withstand voltage peak of 6,0 kV. Devices or system shall be evaluated using the requirements in the Standard for Transient Voltage Surge Suppressors, UL 1449 and shall also withstand the available short circuit current in accordance with UL 1449. Terminals tightening torque 7 Lb-In. The sum of the internal power consumption of the assembled modules shall not be more than 5,3W. For use on Flat Surface of a Type 4X Indoor Enclosure. For use on Flat Surface of a Type 12 Enclosure. Screw for use on flat surface Tightening torque of 4,5-9 Lb-In.

## ITALIANO

**Ingressi di misura**. Sistema: 1, 2 o 3 fasi. Isolamento galvanico mediante TA integrati. Portata corrente (TA) AV5 e AV6: 5(6)A. AV4 e AV7: 1(2)A. Tensione (connesione diretta o TV) AV4, AV5: 400/690VLL; AV6, AV7: 100/208VLL. **Precisione** (Display + RS485) (@25°C ±5°C, R.H. ≤60%, 48 a 62 Hz) In: vedere sotto, Un: vedere sotto, Modello AV4, In: 1A, Imax: 2A; Un: da 160 a 480VNL (277 a 830VLL). Modello AV5, In: 5A, Imax: 6A; Un: da 160 a 480VNL (da 277 a 830VLL). Modello AV6, In: 5A, Imax: 6A; Un: da 40 a 144VNL (70 a 250VLL). Modello AV7 In: 1A, Imax: 2A; Un: da 40 a 144VNL (70 bis 250VLL). Corrente, modelli AV4, AV5, AV6, AV7 Da 0,01In a 0,5In: ±(0,2% RDG +2DGT). Da 0,05In a Imax: ±(0,2% RDG +1DGT). Tensione fase-neutra, nel campo Un: ±(0,2% RDG +2DGT). Tensione fase-fase, nel campo Un: ±(0,5% RDG +1DGT). Frequenza ±0,1Hz (45 a 65Hz). Potenza attiva ed apparente: da 0,01In a 0,05In, cosφ 1: ±(1% RDG +1DGT), da 0,05In a Imax, cosφ 0,5L, cosφ 1, cosφ 0,8C: ±(0,5% RDG +1DGT). Fattore di potenza: 0,01In a Imax, senp 0,5L/C: ±(1%RDG+1DGT). 0,05In a 0,1In, senp 0,5L/C: ±(0,5%RDG+1DGT). 0,05In a Imax, senp 1: ±(1%RDG+1DGT). 0,02In a 0,05In, senp 1: ±(1,5%RDG+1DGT). Active energy, class 0,5 according to EN62053-22, ANSI C12.20, class C according to EN50470-3. Reactive energy class 1 according to EN62053-23, ANSI C12.1. Start up current AV5, AV6: 5mA. Start up current AV4, AV7 1mA. **Energy additional errors**: according to EN62053-22, ANSI C12.20. Influence quantities, class B or C according to EN50470-3, EN62053-23, ANSI C12.1. **Total Harmonic Distortion (THD)**: ±1% FS (FS: 100%). AV4: Imin: 5mA RMS; Imax: 3Ap; Umin: 30VRMS; Umax: 679Vp. AV5: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 679Vp. AV6: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 204Vp. AV7: Imin: 5mA RMS; Imax: 3Ap; Umin: 30VRMS; Umax: 204Vp. **Zusätzlicher Energiefehler**: gemäß EN62053-22, ANSI C12.20, Bereichsüberschreitungs-abhängig: Klasse B oder C gemäß EN50470-3, EN62053-23, ANSI C12.1. **Distorsione armonica totale (THD)**: ±1% FS (BE: 100%). AV4: Imin: 5mA RMS; Imax: 3Ap; Umin: 30VRMS; Umax: 679Vp. AV5: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 679Vp. AV6: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 204Vp. AV7: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 204Vp. **Gesamte Harmonische Verzerrung (THD)**: ±1% BE (BE: 100%). AV4: Imin: 5mA RMS; Imax: 3Ap; Umin: 30VRMS; Umax: 679Vp. AV5: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 679Vp. AV6: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 204Vp. AV7: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 204Vp. **Distorsione del Demand (TDD)**: ±1% FS (FS: 100%). Imin: 5mA RMS; Imax: 15Ap; K-Faktor und Faktor K: ±(0,5%RDG+1DGT). **Temperaturdrift** ≤200ppm/°C. **Coupling rate** 3200 samples/s @ 50Hz, 3840 samples @ 60Hz. Method TRMS measurements of distorted wave forms. Coupling type by means of CT's. **Crest factor**, AV5, AV6: ≤3 (15A max. peak), AV4, AV7: ≤3 (3A max. peak). **Current Overloads**, continuous (AV5 and AV6) 6A, @ 50Hz/60Hz. Continuous (AV4 and AV7) 2A, @ 50Hz/60Hz. For 500ms (AV5 and AV6) 120A, @ 50Hz/60Hz. For 500ms (AV4 and AV7) 40A, @ 50Hz/60Hz. **Voltage Overloads**, continuous (AV4 and AV5) 830 VLL, continuous (AV6 and AV7) 250 VLL. For 500 ms (AV4 and AV5) 1380 VLL, for 500 ms (AV6 and AV7) 415 VLL. **Input impedance**, continuo (AV4 e AV5) >1,6MΩ; 208VL-L (AV6 and AV7) >1,6MΩ. 5(10)A (AV5 and AV6) <0,2VA. 1(2)A (AV4 and AV7) <0,2VA. **Frequency** 40 to 440 Hz. **Meters**. Total 4 (10 digit). **Pulse output** connectable to total and/or partial meters. **Energy meter recording**, storage of total and partial energy meters. Energy meter storage format (EEPROM) Min. -9,999,999,999 kWh/kvarh, Max. 9,999,999,999 kWh/kvarh. **Energy Meters**, total energy meters +kWh, +kvarh, -kvarh. Partial energy meters +kWh, -kWh, -kvarh, +kvarh. **Analysis principle FFT**. **Harmonic measurement**. Current up to the 32nd harmonic. **Type of harmonics THD** (VL1 and VL1-N) THD odd (VL1 and VL1-N) THD even (VL1 and VL1-N) TDD. The same for the other phases: L2, L3, THD (AL1) THD odd (AL1) THD even (AL1). 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Electromagnetic fields: test without any current: 30V/m from 80 to 2000MHz. Burst: on current and voltage measuring inputs circuit: 4kV. Immunity to conducted disturbances: 10V/m from 150kHz to 80MHz. Surge: on current and voltage measuring inputs circuit: 4kV; on "L" auxiliary power supply input: 1kV. Radio frequency suppression: according to CISPR 22. **Standard compliance**: safety: IEC60664, IEC61010-1 EN60664, IEC61010-1 EN62052-11. Metrology: EN62053-21, EN62053-23, EN61010-1 EN62052-11. **Protection degree**: front: IP65, UL type 4x indoor (NEMA4x indoor), UL type 12 (NEMA12). Screw terminals: IP20.

**Connections**: Screw-type. Cable cross-section area: max. 2.5 mm<sup>2</sup>. Min./max. Screws tightening torque: 0.4 Nm / 0.8 Nm. Suggested: 0.5 Nm. Module holder: 96x96x50mm. "A" and "B" type modules: 89,5x63x16mm. "C" type module: 89,5x63x20mm. Max. depth behind the panel. With 3 modules (A+B+C): 81,7 mm. Material: ABS/Nylon PA66, self-extinguishing: UL 94 V-0. **Protection degree**, front: IP65, UL type 4x indoor (NEMA4x indoor), UL type 12 (NEMA12). Screw terminals: IP20.

**UL NOTES**: Use with 60 or 75°C copper conductor. Maximum surrounding air temperature 40°C. The device shall be installed in a pollution degree 2 environment. Open Type Device. The terminals L1, L2, L3 shall be acquired by a circuit where devices or system, including filters or air gaps, are used to control overvoltages at the maximum rated impulse withstand voltage peak of 6,0 kV. Devices or system shall be evaluated using the requirements in the Standard for Transient Voltage Surge Suppressors, UL 1449 and shall also withstand the available short circuit current in accordance with UL 1449. Terminals tightening torque 7 Lb-In. The sum of the internal power consumption of the assembled modules shall not be more than 5,3W. For use on Flat Surface of a Type 4X Indoor Enclosure. For use on Flat Surface of a Type 12 Enclosure. Screw for use on flat surface Tightening torque of 4,5-9 Lb-In.

## DEUTSCH

**Messeingänge**: Phasensystem: Systemcode: 1, 2 oder 3. Strommessung: Galvanische Isolation durch integrierte Stromwandler. Strombereich (Stromwandler) AV5 und AV6: 5(6)A. AV4 und AV7: 1(2)A. Spannung (Direktmessung oder Spannungswandler) AV4, AV5: 400/690VLL; AV6, AV7: 100/208VLL. **Precisione** (Display + RS485) (@25°C ±5°C, R.H. ≤60%, 48 a 62 Hz) In: vedere sotto, Un: vedere sotto, Modello AV4, In: 1A, Imax: 2A; Un: da 160 a 480VNL (277 a 830VLL). Modello AV5, In: 5A, Imax: 6A; Un: da 160 a 480VNL (da 277 a 830VLL). Modello AV6, In: 5A, Imax: 6A; Un: 40 a 144VNL (70 a 250VLL). Current AV4, AV5, AV6, AV7 models from 0,01In to 0,05In: ±(0,5% RDG +2DGT). From 0,05In to Imax: ±(0,2% RDG +2DGT). Phase-neutral voltage: In the range Un: ±(0,2% RDG +1DGT). Phase-phase voltage: In the range Un: ±(0,5% RDG +1DGT). Frequency: ±0,1Hz (45 a 65Hz). Active and Apparent power: 0,01In to 0,05In, PF 1: ±(1%RDG+1DGT). From 0,05In to Imax PF 0,5L, PF1, PF0,8C: ±(0,5%RDG+1DGT). Power Factor ±[0,001+0,5%(1,000 - "PF RDG")]. Reactive power 0,01In to Imax, senp 0,5L/C: ±(1%RDG+1DGT). 0,05In to 0,1In, senp 0,5L/C: ±(1%RDG+1DGT). 0,05In to Imax, senp 1: ±(1%RDG+1DGT). 0,02In to 0,05In, senp 1: ±(1,5%RDG+1DGT). Active energy, class 0,5 according to EN62053-22, ANSI C12.20, class C according to EN50470-3. Reactive energy class 1 according to EN62053-23, ANSI C12.1. Start up current AV5, AV6: 5mA. Start up current AV4, AV7 1mA. **Energy additional errors**: according to EN62053-22, ANSI C12.20. Influence quantities, class B or C according to EN50470-3, EN62053-23, ANSI C12.1. **Total Harmonic Distortion (THD)**: ±1% FS (FS: 100%). AV4: Imin: 5mA RMS; Imax: 3Ap; Umin: 30VRMS; Umax: 679Vp. AV5: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 679Vp. AV6: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 204Vp. AV7: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 204Vp. **Zusätzlicher Energiefehler**: gemäß EN62053-22, ANSI C12.20, Bereichsüberschreitungs-abhängig: Klasse B oder C gemäß EN50470-3, EN62053-23, ANSI C12.1. **Distorsione armonica totale (THD)**: ±1% FS (BE: 100%). AV4: Imin: 5mA RMS; Imax: 3Ap; Umin: 30VRMS; Umax: 679Vp. AV5: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 679Vp. AV6: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 204Vp. AV7: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 204Vp. **Gesamte Harmonische Verzerrung (THD)**: ±1% BE (BE: 100%). AV4: Imin: 5mA RMS; Imax: 3Ap; Umin: 30VRMS; Umax: 679Vp. AV5: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 679Vp. AV6: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 204Vp. AV7: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 204Vp. **Distrorsione del Demand (TDD)**: ±1% PE (PE: 100%). AV4: Imin: 5mA RMS; Imax: 3Ap; Umin: 30VRMS; Umax: 679Vp. AV5: Imin: 5mA RMS; Imax: 15Ap; Umin: 30VRMS; Umax: 679Vp. AV6: Imin: 5mA RMS;