







REGISTER MACHINE ID	Description Bit [15:8] contain the module's ID: 26. Bit [7:0] contain the firmware's external revision.	IND. 40001	R/W R
CHECK_TA	Kind of CT used: passive CT or compensated CT	40024	R/W
Bit [15:1] Bit 0	Not used. Select the kind of CT used: 0*: Passive CT (like the CT in bundle). 1: Compensated CT, which has no phase error. Precision class if CT is passive is granted only with bundle Cts.		
PHASE_RETR	Select the phase on which the analog output will transmit.	40025	R/W
Bit [15:0]	Select the phase on which the analog output will transmit the quantity selected: 0: Phase A (default for single-phase). 1: Phase B. 2: Phase C. All other values: Three phase value (default three-phase).		
TA_RATIO_FL_MSW	Select the rated current of CTs in floating point (most significant word).	40026	R/W
Bit [15:0]	Select the rated current of the CTs connected to the instrument in floating point format. This register influences floating point value of: Irms, Active power, Apparent Power, Reactive Power and Energy (both single and three-phase). It doesn't influence normalised values (0 - 10000) and transmitted output. Default: 1000.0.		
TA_RATIO_FL_LSW	Select the rated current of CTs in floating point (least significant word).	40027	R/W
MINOUT_FL_MSW	Value of the quantity to transmit which gives the minimum retransmitted output (floating point format, most significant word).	40028	R/W
Bit [15:0]	Value of the quantity to transmit (defined via DIP-switch and phase selected via PHASE_RETR register, 40025) which gives the minimum value (0%) of the transmitted output. The value is expressed in floating point format (most significant word) and therefore it must be expressed in the corresponding measurement unit of the quantity chosen (V for Vrms, mA for Irms, W for Watt). Default: 0.0.		

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MINOUT_FL_LSW	Value of the quantity to transmit which gives the minimum retransmitted output (floating point format, least significant word).	40029	R/W
MAXOUT_FL_MSW	Value of the quantity to transmit which gives the maximum retransmitted output (floating point format, most significant word).	40030	R/W
Bit [15:0]	Value of the quantity to transmit (defined via DIP-switch and phase selected via PHASE_RETR register, 40025) which gives the maximum value (100%) of the transmitted output. The value is expressed in floating point format (most significant word) and therefore it must be expressed in the corresponding measurement unit of the quantity chosen (V for Vrms, mA for Irms, W for Watt). Default: 600.0.		
MAXOUT_FL_LSW	Value of the quantity to transmit which gives the maximum retransmitted output (floating point format, least significant word).	40031	R/W
CHECK_FREQ	Enables measurement errors compensation of Active Power and Energy caused by network frequency variations.	40032	R/W
Bit [15:1] Bit 0	Not used. Errors compensation caused by network frequency variations: 1: If network frequency is not stable at 50 Hz or 60 Hz, or has consistent variations (> 30 mHz), this register corrects the measurement of Power and Energy. The measurements of Vrms and Irms are not influenced by this setting.		
ADDR_PARITY	Register for the setting of the module's address and parity control.	40033	R/W
Bit [15:8] Bit [7:0]	Set the module's address. Allowed values from 0x00 a 0xFF (decimal values in the interval of 0-255). Default: 1. Set the type of parity control: 00000000* : No parity (NONE) 00000001 : Even parity (EVEN) 00000010 : Odd parity (ODD)		
BAUDR_ANSDDEL	Register for the setting of the Baud rate and the response delay time in characters.	40034	R/W
Bit [15:8]	Set the serial communication speed value (Baudrate):		

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	00000000 (0x00): 4800 Baud 00000001 (0x01): 9600 Baud 00000010 (0x02): 19200 Baud 00000011* (0x03): 38400 Baud 00000100 (0x04): 57600 Baud 00000101 (0x05): 115200 Baud 00000110 (0x06): 1200 Baud 00000111 (0x07): 2400 Baud		
Bit [7:0]	Set the response delay time in characters that represents the number of pauses of 6 characters each to be entered between the end of the Rx message and the start of the Tx message. Default: 0		
RESET_ZERO ENERGY	Reset instrument and zero setting energy	40131	R/W
Bit [15:0]	-Writing 0x1234 resets(boots) instrument. -Writing 0x1000, resets active energy accumulation in all three phases.		
STATUS	Status Register	40133	R
Bit 15 Bit [14:7] Bit 6 Bit 5 Bit 4 Bit 3 Bit [2:0]	1: Error saving Active Energy value. Not Used. 1: Phase B and C are reverse-connected 1: Voltage on phase C is > 40 V therefore measurements on phase C are correctly acquired. 1: Voltage on phase B is > 40 V therefore measurements on phase B are correctly acquired. 1: Voltage on phase A is > 40 V therefore measurements on phase A are correctly acquired. Non utilized.		
VRMS_A_FL_MSW	Single phase or phase A Vrms measurement (floating point, most significant word) in Volt	40135	R
VRMS_A_FL_LSW	Single phase or phase A Vrms measurement (floating point, least significant word) in Volt	40136	R
VRMS_B_FL_MSW	Phase B Vrms measurement (floating point, most significant word) in Volt	40137	R
VRMS_B_FL_LSW	Phase B Vrms measurement (floating point, least significant word) in Volt	40138	R
VRMS_C_FL_MSW	Phase C Vrms measurement (floating point, most significant word) in Volt	40139	R
VRMS_C_FL_LSW	Phase C Vrms measurement (floating point, least significant word) in Volt	40140	R

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VRMS_3PH_FL_MSW	Mean Vrms in Volt: $(V_A+V_B+V_C)/3$ (floating point, most significant word).	40141	R
VRMS_3PH_FL_LSW	Mean Vrms in Volt: $(V_A+V_B+V_C)/3$ (floating point, least significant word).	40142	R
IRMS_A_FL_MSW	Single phase or phase A Irms measurement (floating point, most significant word) in mA	40143	R
IRMS_A_FL_LSW	Single phase or phase A Irms measurement (floating point, least significant word) in mA	40144	R
IRMS_B_FL_MSW	Phase B Irms measurement (floating point, most significant word) in mA.	40145	R
IRMS_B_FL_LSW	Phase B Irms measurement (floating point, least significant word) in mA.	40146	R
IRMS_C_FL_MSW	Phase C Irms measurement (floating point, most significant word) in mA.	40147	R
IRMS_C_FL_LSW	Phase C Irms measurement (floating point, least significant word) in mA.	40148	R
IRMS_3PH_FL_MSW	Mean Irms in mA: $(I_A+I_B+I_C)/3$ (floating point, most significant word).	40149	R
IRMS_3PH_FL_LSW	Mean Irms in mA: $(I_A+I_B+I_C)/3$ (floating point, least significant word).	40150	R
WATT_A_FL_MSW	Single phase or phase A Power measurement (floating point, most significant word) in W	40151	R
WATT_A_FL_LSW	Single phase or phase A Power measurement (floating point, least significant word) in W	40152	R
WATT_B_FL_MSW	Phase B Power measurement (floating point, most significant word) in W	40153	R
WATT_B_FL_LSW	Phase B Power measurement (floating point, least significant word) in W	40154	R
WATT_C_FL_MSW	Phase C Power measurement (floating point, most significant word) in W	40155	R
WATT_C_FL_LSW	Phase C Power measurement (floating point, least significant word) in W	40156	R
WATT_3PH_FL_MSW	Three phase Power in W: $P_A+P_B+P_C$ (floating point, most significant word).	40157	R
WATT_3PH_FL_LSW	Three phase Power in W: $P_A+P_B+P_C$ (floating point, least significant word).	40158	R
VAR_A_FL_MSW	Single phase or phase A Reactive Power in VAR (floating point, most significant word).	40159	R
VAR_A_FL_LSW	Single phase or phase A Reactive Power in VAR (floating point, least significant word).	40160	R

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VAR_B_FL_MSW	Phase B Reactive Power in VAR (floating point, most significant word).	40161	R
VAR_B_FL_LSW	Phase B Reactive Power in VAR (floating point, least significant word).	40162	R
VAR_C_FL_MSW	Phase C Reactive Power in VAR (floating point, most significant word).	40163	R
VAR_C_FL_LSW	Phase C Reactive Power in VAR (floating point, least significant word).	40164	R
VAR_3PH_FL_MSW	Reactive power three-phase in VAR: $Q_A+Q_B+Q_C$ (floating point, most significant word).	40165	R
VAR_3PH_FL_LSW	Reactive power three-phase in VAR: $Q_A+Q_B+Q_C$ (floating point, least significant word).	40166	R
VA_A_FL_MSW	Single phase or phase A Apparent Power in VA (floating point, most significant word).	40167	R
VA_A_FL_LSW	Single phase or phase A Apparent Power in VA (floating point, least significant word).	40168	R
VA_B_FL_MSW	Phase B Apparent Power in VA (floating point, most significant word).	40169	R
VA_B_FL_LSW	Phase B Apparent Power in VA (floating point, least significant word).	40170	R
VA_C_FL_MSW	Phase C Apparent Power in VA (floating point, most significant word).	40171	R
VA_C_FL_LSW	Phase C Apparent Power in VA (floating point, least significant word).	40172	R
VA_3PH_FL_MSW	Apparent Power Three-phase in VA: $S_A+S_B+S_C$ (floating point, most significant word).	40173	R
VA_3PH_FL_LSW	Apparent Power Three-phase in VA: $S_A+S_B+S_C$ (floating point, least significant word).	40174	R
cosφ_A_FL_MSW	Single phase or phase A Power factor (floating point, most significant word).	40175	R
cosφ_A_FL_LSW	Single phase or phase A Power factor (floating point, least significant word).	40176	R
cosφ_B_FL_MSW	Phase B Power factor cosφ (floating point, most significant word).	40177	R
cosφ_B_FL_LSW	Phase B Power factor cosφ (floating point, least significant word).	40178	R
cosφ_C_FL_MSW	Phase C Power factor cosφ (floating point, most significant word).	40179	R

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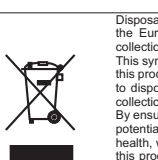
cosφ_C_FL_LSW	Phase C Power factor cosφ (floating point, least significant word).	40180	R
cosφ_3PH_FL_MSW	cosφ three phase: WATT_3PH / VA_3PH (floating point, most significant word).	40181	R
cosφ_3PH_FL_LSW	cosφ three phase: WATT_3PH / VA_3PH (floating point, least significant word).	40182	R
FREQ_FL_MSW	Frequency measurement in Hz (floating point, most significant word).	40183	R
FREQ_FL_LSW	Frequency measurement in Hz (floating point, least significant word).	40184	R
ENER_A_FL_MSW	Single phase or phase A Active Energy in Wh (floating point, most significant word).	40185	R
ENER_A_FL_LSW	Single phase or phase A Active Energy in Wh (floating point, least significant word).	40186	R
ENER_B_FL_MSW	Phase B Active Energy in Wh (floating point, most significant word).	40187	R
ENER_B_FL_LSW	Phase B Active Energy in Wh (floating point, least significant word).	40188	R
ENER_C_FL_MSW	Phase C Active Energy in Wh (floating point, most significant word).	40189	R
ENER_C_FL_LSW	Phase C Active Energy in Wh (floating point, least significant word).	40190	R
ENER_3PH_FL_MSW	Active energy three phase in Wh: $E_A+E_B+E_C$ (floating point, most significant word).	40191	R
ENER_3PH_FL_LSW	Active energy three phase in Wh: $E_A+E_B+E_C$ (floating point, least significant word).	40192	R
VRMS_A_INT	Single phase or phase A Vrms normalised 0..+10000.	40193	R
VRMS_B_INT	Phase B Vrms normalised 0..+10000.	40194	R
VRMS_C_INT	Phase C Vrms normalised 0..+10000.	40195	R
VRMS_3PH_INT	Mean Vrms $(V_A+V_B+V_C)/3$ normalised 0..+10000.	40196	R
IRMS_A_INT	Single phase or phase A Irms normalised 0..+10000.	40197	R
IRMS_B_INT	Phase B Irms normalised 0..+10000.	40198	R
IRMS_C_INT	Phase C Irms normalised 0..+10000.	40199	R

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IRMS_3PH_INT	Mean Irms $(I_A+I_B+I_C)/3$ normalised 0..+10000.	40200	R
WATT_A_INT	Single phase or phase A Active power normalised 0..+10000.	40201	R
WATT_B_INT	Phase B Active power normalised 0..+10000.	40202	R
WATT_C_INT	Phase C Active power normalised 0..+10000.	40203	R
WATT_3PH_INT	Three phase active power $P_A+P_B+P_C$ normalised 0..+10000.	40204	R
VAR_A_INT	Single phase or phase A Reactive Power normalised -10000..+10000.	40205	R
VAR_B_INT	Phase B Reactive Power normalised -10000..+10000.	40206	R
VAR_C_INT	Phase C Reactive Power normalised -10000..+10000.	40207	R
VAR_3PH_INT	Three phase reactive power $Q_A+Q_B+Q_C$ normalised -10000..+10000.	40208	R
VA_A_INT	Single phase or phase A Apparent Power normalised 0..+10000.	40209	R
VA_B_INT	Phase B Apparent Power normalised 0..+10000.	40210	R
VA_C_INT	Phase C Apparent Power normalised 0..+10000.	40211	R
VA_3PH_INT	Apparent power three phase $S_A+S_B+S_C$ normalised 0..+10000.	40212	R
cosφ_A_INT	Single phase or phase A power factor cosφ normalised: -10000..+10000.	40213	R
cosφ_B_INT	Phase B power factor cosφ normalised: -10000..+10000.	40214	R
cosφ_C_INT	Phase C power factor cosφ normalised: -10000..+10000.	40215	R
cosφ_3PH_INT	Three phase power factor cosφ=WATT/VA normalised: -10000..+10000.	40216	R

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RETRANS_INT	Visualize the quantity to transmit normalised 0..+10000, scaled to min and MAX values set.	40217	R
Bit [15:0]	Value of the quantity to transmit normalised 0..+10000, scaled to the minimum and maximum threshold set in registers MINOUT_FL (40028-29) e MAXOUT_FL (40030-31) respectively. 0: If the floating point value of the quantity to transmit is less than MINOUT_FL (40028-29) 10000: if the floating point value of the quantity to transmit is equal to MAXOUT_FL (40030-31). In the intermediate points has a linear behaviour. The value of the register follows linearly the quantity to transmit until maximum value set to 11000, saturating over this value.		



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