



All versions



Only in Plus version



EED

Register Name	Description	Register Type	R/W	Default	Modbus Address
Machine_Id	Machine ID	unsigned short	R	36 or 37 (STD. PLUS)	40001
HW_FW_version	Hardware (MSB) and Firmware (LSB) Revision	unsigned short	R		40002
address	modbus address	unsigned short	R/W		1 40003
delay	answer delay expressed as cycles	unsigned short	R/W		1 40004
Baudrate	0 → 1200 1 → 2400 2 → 4800 3 → 9600 4 → 19200 5 → 38400 6 → 57600 7 → 115200	unsigned short	R/W		3 40005
Parity	0 → NONE 1 → ODD 2 → EVEN	unsigned short	R/W		0 40006
Configuration_Flag	Bit 0: Current Measurement type 0 → Input 1A/5A 1 → Input 333 mV/ Rogowski Bit 5: Reactive power calculation method 0 → Triangle method 1 → Budeanu Bit 6: RS-485 as Switch 0 → RS-485 1 → Switch Bit 7: Frequency detection Channel 0 → Voltage 1 → Current Bit 8: Voltage input type 0 → Normal load 1 → PWM modulated input (Inverter Load) Bit 9: Energy saving 0 → Disabled 1 → Enabled Bit 11..12: Measurement type 0 → Float 1 → Float Swapped 2 → Hundredth (Float * 100) 3 → Hundredth swapped (Float * 100 SW) Bit 13: Integrator condition 0 → Integrator disabled 1 → Integrator enabled (Rogowski input) Bit 10..14: Output switch initial condition 0 → Closed initial condition 1 → Windowed: closed contact between thresholds 2 → Open initial condition 3 → Windowed: closed contact outside thresholds Bit 15: Filtered measurement 0 → Filtering disabled 1 → Filtering enabled	unsigned short	R/W	16928: INPUT_1A_5A BUDEANU RS485_BEHAVIOUR FREQUENCY_DETECTION_ON_VOLTAGE NORMAL_INPUT ENERGY_SAVING_ENABLED FLOAT_TYPE INTEGRATOR_DISABLED OPEN_COND FILTERED_OUTPUT_DISABLED	40007
Led_settings	Set Fail LED Bit: 0 → Fail Eeprom (settings, calibration or Energy) 2 → I1 Over-range 3 → I1 Under-range 8 → V1 Over-range 9 → V1 Under-range	unsigned short	R/W	1: Fail Eeprom	40008
CT_Transducer_ratio	If Input 1A/5A → Current transformer ratio M/N (Ex: 600:5 → transducer_ratio = 120) If Input Rogowski / 333mV → (1 / Sensitivity) [A/V] (Ex: 100mV/1KA → transducer_ratio = 10000, 333mV/5A → transducer_ratio = 15)	float	R/W		1 40009
CT_Transducer_delay	Current transformer delay in [°] @ 50 Hz for accurate power calculation	float	R/W		0 40011
VT_Transducer_ratio	Voltage transformer ratio M/N - Default 1.0 (Ex: 1000:100 → transducer_ratio = 10)	float	R/W		1 40013
VT_Transducer_delay	Voltage transformer delay in [°] @ 50 Hz for accurate power calculation	float	R/W		0 40015
minimum_voltage_ripple	Minimum threshold under which the instrument reads 0 independent from the input value	float	R/W		0 40017
minimum_current_ripple	Minimum threshold under which the instrument reads 0 independent from the input value	float	R/W		0 40019
minimum_power_ripple	Minimum threshold under which the instrument reads 0 independent from the input value (P, Q, and S)	float	R/W		0 40021
DC Filter	Number of tenth seconds for I RMS value in DC	unsigned short	R/W		10 40023
AC Filter	Number of zero crossings for I RMS value in AC	unsigned short	R/W		50 40024
minute_for_Max_demand	Minute for Max demand calculation (0..45)	unsigned short	R/W		15 40025
seconds_for_mean_RMS	Register in seconds (0..30) for RMS average	unsigned short	R/W		0 40027
seconds_for_MAX_RMS	Seconds 1..30 for MAX RMS value. If the register is 0, then the absolute MAX RMS is given	unsigned short	R/W		0 40028
seconds_for_min_RMS	Seconds 1..30 for min RMS value. If the register is 0, then the absolute min RMS is given	unsigned short	R/W		0 40029
Energy_unit_factor	Variable for changing Energy measurement unit: 0 → [Wh/10] 1 → [Wh] 4 → [KWh]	unsigned short	R/W		0 40030
Alarm_Register_start_address	Float value Starting address for alarm (40361 V L1 N ₁ ecc)	unsigned short	R/W	40361	40036
Alarm_trip_value	Alarm Threshold for "closed" and "open" condition OR first alarm Threshold for "within threshold" and "Out	float	R/W		0 40037
Alarm_hysteresis	Alarm Hysteresis	float	R/W		1 40039
Alarm_trip_value_2	Second alarm Threshold for "within threshold" and "Outside threshold" condition	float	R/W		0 40041
Power_Threshold_for_exceed	Threshold for Power exceedings monitoring	float	R/W		0 40043



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Register Name	Description	Register Type	R/W	Default	Modbus Address
Status_1	bit 0: flash settings error; bit 1: flash calibration error; bit 2: Current I1 Over Range; bit 3: Current I1 Under Range; bit 4..7: don't care; bit 8: Current V1 Over Range; bit 9: Current V1 Under Range; bit10..14: don't care; bit 14: Zero crossing detecting; bit 15: Switch open; bit 16: Wh storing error; bit 17..18: don't care; bit 19: Alarm detection; bit 20..27: don't care; bit 28: Leading Power factor PF1; bit 29..30: don't care;	unsigned long	R		40239
Command	Flash settings save command = 0xC1C0; Reset command = 0xC1A0; Save energy command = 0xBABA Close Switch command = 0xDAAA (only if Digital Output is enabled) Open Switch command = 0xDAAB (only if Digital Output is enabled) Enter Bootloader command = 0xB000 Reset MAX Demand registers command = 0xF000	unsigned short	R/W		40244
KWh	Active energy [Wh tenth]	signed long long	R/W		40245
KWh_Plus	Positive Active energy [Wh tenth]	signed long long	R/W		40261
KWh_Neg	Negative Active energy [Wh tenth]	signed long long	R/W		40277
KVARh	Reactive energy [VARh tenth]	signed long long	R/W		40293
KVARh_Inductive	Inductive Reactive energy [VARh tenth]	signed long long	R/W		40309
KVARh_Capacitive	Capacitive Reactive energy [VARh tenth]	signed long long	R/W		40325
KVAh	Apparent energy [VAh tenth]	signed long long	R/W		40341
Wh_storage_count	Number of Wh flash savings (every 20 seconds)	unsigned long	R		40357
V	RMS star voltage [V]	float	R		40359
I	RMS line current [A]	float	R		40375
P	RMS active power [W]	float	R		40385
Q	RMS reactive power [VAR]	float	R		40393
S	RMS apparent power [VA]	float	R		40401
PF	Power Factor	float	R		40409
CF	Crest Factor	float	R		40417
Frequency	Frequency [Hz]	float	R		40425
V_peak	Star voltage peak [V]	float	R/W		40427
I_peak	current peak [A]	float	R/W		40439
DPF	Distortion Power Factor (+ inductive, - capacitive)	float	R		40467
TAN FI	Tangentθ (+ inductive, - capacitive)	float	R		40475
Internal temperature	Internal Temperature [°C]	float	R		40485
V_RMS_AVG	Star voltage RMS average [V] over "seconds_for mean RMS"	float	R		40487
V_RMS_MAX	Star voltage MAX RMS [V] over last "seconds_for MAX RMS"	float	R		40489
V_RMS_min	Star voltage Min RMS [V] over last "seconds_for min RMS"	float	R		40491
IRMS_AVG	RMS average [A] over "seconds_for mean RMS"	float	R		40535
IRMS_MAX	MAX RMS [A] over last "seconds_for MAX RMS"	float	R		40537
IRMS_min	Min RMS [A] over last "seconds_for min RMS"	float	R		40539
P_RMS_AVG	P RMS average [A] over "seconds_for mean RMS"	float	R		40565
P_RMS_MAX	P MAX RMS [A] over last "seconds_for MAX RMS"	float	R		40567
P_RMS_min	P Min RMS [A] over last "seconds_for min RMS"	float	R		40569
Q_RMS_AVG	Q RMS average [A] over "seconds_for mean RMS"	float	R		40589
Q_RMS_MAX	Q MAX RMS [A] over last "seconds_for MAX RMS"	float	R		40591
Q_RMS_min	Q Min RMS [A] over last "seconds_for min RMS"	float	R		40593
S_RMS_AVG	S RMS average [A] over "seconds_for mean RMS"	float	R		40613
S_RMS_MAX	S MAX RMS [A] over last "seconds_for MAX RMS"	float	R		40615
S_RMS_min	S Min RMS [A] over last "seconds_for min RMS"	float	R		40617
PF_RMS_AVG	PF RMS average [A] over "seconds_for mean RMS"	float	R		40637
PF_RMS_MAX	PF MAX RMS [A] over last "seconds_for MAX RMS"	float	R		40639
PF_RMS_min	PF Min RMS [A] over last "seconds_for min RMS"	float	R		40641
P_Time_over_threshold	Time above threshold specified in "Power_Threshold_for_exceedings" for Active Power P [min]	float	R		40661
P_MaxDemand	Max Demand over 15minutes for P for current month	float	R		40669
Time_of_P_MaxDemand	Time at which arises Max Demand over 15minutes for P for current month (month day hour minutes)	unsigned long	R		40677
K_factor	K-factor for I, see IEEE Standard 1100-1992	float	R		40685
Year	RTC : year (2000-2099)	unsigned short	R/W		40691
Month	RTC : month (1-12)	unsigned short	R/W		40692
Day	RTC : day month (1-31)	unsigned short	R/W		40693
Hour	RTC : hour (0-23)	unsigned short	R/W		40694
Minute	RTC : minute (0-59)	unsigned short	R/W		40695
Seconds	RTC : second (0-59)	unsigned short	R/W		40696
THD_V	THD Star Voltage	float	R		40697
THD_I	THD Line Current	float	R		40709
TDD_I	TDD Line Current	float	R		40717