

# 3PH - ENERGY METER - VER 3.3

## REGISTERS MODBUS - RTU:

### READ REGISTERS (INPUT REGISTERS)

ADDRESS	FORMAT	MULTIPLIER	UNIT	PARAMETERS
0000	USHORT	0.001	-	Cosφ actual L1
0001	USHORT	0.001	-	Cosφ actual L2
0002	USHORT	0.001	-	Cosφ actual L3
0003	ULONG	0.1	V	Effective tension L1-N
0005	ULONG	0.1	V	Effective tension L2-N
0007	ULONG	0.1	V	Effective tension L3-N
0009	ULONG	0.1	V	Effective tension L1-L2 (concatenated)
000B	ULONG	0.1	V	Effective tension L2-L3 (concatenated)
000D	ULONG	0.1	V	Effective tension L3-L1 (concatenated)
000F	ULONG	0.01	A	Effective current L1
0011	ULONG	0.01	A	Effective current L2
0013	ULONG	0.01	A	Effective current L3
0015	LONG	1	var	Real reactive power L1 (negative=capacitive)
0017	LONG	1	var	Real reactive power L2 (negative=capacitive)
0019	LONG	1	var	Real reactive power L3 (negative=capacitive)
001B	ULONG	1	W	Real active power L1
001D	ULONG	1	W	Real active power L2
001F	ULONG	1	W	Real active power L3
0021	ULONG	1	VA	Real apparent power L1
0023	ULONG	1	VA	Real apparent power L2
0025	ULONG	1	VA	Real apparent power L3
0027	USHORT	1	%	Tension THD L1
0028	USHORT	1	%	Tension THD L2
0029	USHORT	1	%	Tension THD L3
002A	USHORT	1	%	Current THD L1
002B	USHORT	1	%	Current THD L2
002C	USHORT	1	%	Current THD L3
002D	USHORT	-	bits	Various alarms: ( 0 = Disabled, 1 = Enabled )
				bit0 = A.HU - Tension too high
				bit1 = A.LU - Tension too low
				bit2 = A.HI - Current too high
				bit3 = A.OT - Over temperature
				bit4 = A.TH - High THD
				bit5 = A.CS - Cosφ min.
				bit6 = A.FR - Wrong frequency
000C	USHORT	-	bits	Eeprom alarms: ( 0 = Disabled, 1 = Enabled )
				bit0 = A.PS - Error parameters setup
				bit1 = A.PC - Calibration error parameters
				bit2 = A.PU - Various parameters eError
				bit3 = A.EE - Eeprom error cancellation
				bit4 = A.SS - Error parameter set
				bit5 = A.SC - Not used
				bit6 = A.SU - Calibration error
002F	USHORT	1	°C/°F	Temperature
0030	USHORT	-	-	Real quadrant L1 ( 1=IND-LOAD, 2=IND-GEN, 3=CAP-GEN, 4=CAP-LOAD )
0031	USHORT	-	-	Real quadrant L2 ( 1=IND-LOAD, 2=IND-GEN, 3=CAP-GEN, 4=CAP-LOAD )
0032	USHORT	-	-	Real quadrant L3 ( 1=IND-LOAD, 2=IND-GEN, 3=CAP-GEN, 4=CAP-LOAD )
0033	ULONG	1	h	Total work hours
0035	USHORT	1	V	Max effective tension L1
0036	USHORT	1	V	Max effective tension L2
0037	USHORT	1	V	Max effective tension L3
0038	ULONG	1	A	Max effective current L1
003A	ULONG	1	A	Max effective current L2
003C	ULONG	1	A	Max effective current L3
003E	USHORT	1	%	Max current THD L1
003F	USHORT	1	%	Max current THD L2
0040	USHORT	1	%	Max current THD L3
0041	USHORT	1	°C/°F	Max temperature
0042	USHORT	-	-	Firmware checksum

0043	USHORT	1	V	Max effective tension L1-L2 (concatenated)
0044	USHORT	1	V	Max effective tension L2-L3 (concatenated)
0045	USHORT	1	V	Max effective tension L3-L1 (concatenated)
0046	USHORT	0.01	Hz	Frequency

## READ / WRITE REGISTERS (HOLDING REGISTERS)

ADDRESS	FORMAT	MULTIPLIER	UNIT	RANGE	PARAMETERS
0000	ULONG	1	A	5...50000	P.01 - TA current
0002	ULONG	0.01	0.01%	40...10000	P.02 - Tension transformer ratio
0004	USHORT	0.01	-	60...360	P.03 - Power integration time in seconds
0005	USHORT	0.01	-	1...20	P.04 - Average filter in seconds
0006	USHORT	-	-	0 / 1	A.01 - 0 = Three-Phase, 1 = Single-Phase
0007	USHORT	1	V	220...440	A.02 - General rated tension
0008	USHORT	-	-	1...2	A.03 - Polarity TA L1 ( 1 = in phase, 2 = inverted )
0009	USHORT	-	-	1...2	A.03 - Polarity TA L2 ( 1 = in phase, 2 = inverted )
000A	USHORT	-	-	1...2	A.03 - Polarity TA L3 ( 1 = in phase, 2 = inverted )
000B	USHORT	-	-	1...2	A.04 - Frequency ( 1 = 50Hz, 2 = 60Hz )
000C	USHORT	-	-	0...247	A.05 - Serial address ( 0 = OFF, 1-99 = ON )
000D	USHORT	-	-	0...1	A.06 - Temperature scale ( 0 = °C, 1 = °F )
000E	USHORT	-	-	0...15	A.08 - Serial protocol type
000F	USHORT	-	%	0 / 110...150	A.HU - Alarm ( 0 = disable, >0 = enable )
0010	USHORT	-	%	0 / 80...95	A.LU - Alarm ( 0 = disable, >0 = enable )
0011	USHORT	-	A	0 / 50...50000	A.HI - Alarm ( 0 = disable, >0 = enable )
0012	USHORT	-	°C/°F	0 / 30...140	A.OT - Alarm ( 0 = disable, >0 = enable )
0013	USHORT	-	units	0 / 5...200	A.TH - Alarm ( 0 = disable, >0 = enable )
0014	USHORT	0.01	units	0 / 50...95	A.CS - Alarm ( 0 = disable, >0 = enable )
0015	USHORT	-	Hz	0 / 1...5	A.FR - Alarm ( 0 = disable, >0 = enable )
0016	USHORT	-	units	1...240	A.HU - Time delay alarm
0017	USHORT	-	units	1...240	A.LU - Time delay alarm
0018	USHORT	-	units	1...240	A.HI - Time delay alarm
0019	USHORT	-	units	1...240	A.OT - Time delay alarm
001A	USHORT	-	units	1...240	A.TH - Time delay alarm
001B	USHORT	-	units	1...240	A.CS - Time delay alarm
001C	USHORT	-	units	1...240	A.FR - Time delay alarm
001D	USHORT	-	bits	0...255	Alarm Scale ( 0 = seconds, 1 = minutes ) ( bit0 = A.HU, bit1 = A.LU, bit2 = A.HI, bit6 = A.OT ) ( bit7 = A.TH, bit9 = A.CS, bit10 = A.FR )
001E	-	-	-	-	Reserved
001F	-	-	-	-	Reserved
0020	-	-	-	-	Reserved
0021	-	-	-	-	Reserved
0022	-	-	-	-	Reserved
0023	-	-	-	-	Reserved
0024	-	-	-	-	Reserved
0025	USHORT	-	-	0...3	A.HI - Controlled phase for alarm ( 0 = ALL, 1 = L1, 2 = L2, 3 = L3 )
0026	ULONG	1	Wh	0 ...4294967295	Imported active energy L1
0028	ULONG	1	Wh	0 ...4294967295	Imported active energy L2
002A	ULONG	1	Wh	0 ...4294967295	Imported active energy L3
002C	ULONG	1	varh	0...4294967295	Imported lagging reactive power L1 (IND)
002E	ULONG	1	varh	0...4294967295	Imported lagging reactive power L2 (IND)
0030	ULONG	1	varh	0...4294967295	Imported lagging reactive power L3 (IND)
0032	ULONG	1	varh	0...4294967295	Imported leading reactive power L1 (CAP)
0034	ULONG	1	varh	0...4294967295	Imported leading reactive power L2 (CAP)
0036	ULONG	1	varh	0...4294967295	Imported leading reactive power L3 (CAP)
0038	ULONG	1	VAh	0...4294967295	Imported lagging apparent power L1 (IND)
003A	ULONG	1	VAh	0...4294967295	Imported lagging apparent power L2 (IND)
003C	ULONG	1	VAh	0...4294967295	Imported lagging apparent power L3 (IND)

003E	ULONG	1	VAh	0...4294967295	Imported leading apparent power L1 (CAP)
0040	ULONG	1	VAh	0...4294967295	Imported leading apparent power L2 (CAP)
0042	ULONG	1	VAh	0...4294967295	Imported leading apparent power L3 (CAP)
0044	ULONG	1	Wh	0...4294967295	Exported active energy L1
0046	ULONG	1	Wh	0...4294967295	Exported active energy L2
0048	ULONG	1	Wh	0...4294967295	Exported active energy L3
004A	ULONG	1	varh	0...4294967295	Exported lagging reactive power L1 (IND)
004C	ULONG	1	varh	0...4294967295	Exported lagging reactive power L2 (IND)
004E	ULONG	1	varh	0...4294967295	Exported lagging reactive power L3 (IND)
0050	ULONG	1	varh	0...4294967295	Exported leading reactive power L1 (CAP)
0052	ULONG	1	varh	0...4294967295	Exported leading reactive power L2 (CAP)
0054	ULONG	1	varh	0...4294967295	Exported leading reactive power L3 (CAP)
0056	ULONG	1	VAh	0...4294967295	Exported lagging apparent power L1 (IND)
0058	ULONG	1	VAh	0...4294967295	Exported lagging apparent power L2 (IND)
005A	ULONG	1	VAh	0...4294967295	Exported lagging apparent power L3 (IND)
005C	ULONG	1	VAh	0...4294967295	Exported leading apparent power L1 (CAP)
005E	ULONG	1	VAh	0...4294967295	Exported leading apparent power L2 (CAP)
0060	ULONG	1	VAh	0...4294967295	Exported leading apparent power L3 (CAP)
0062	USHORT	-	bits	0...2047	Reset counters and maximum values: - bit0 = Max tension Lx-N    - bit4 = Max THD V            - bit8 = Apparent power - bit1 = Max current            - bit5 = Max tension Lx-Lx    - bit9 = All import energy - bit2 = Max THD I            - bit6 = Active power           - bit10 = All export energy - bit3 = Max temperature    - bit7 = Reactive power

**Available optional communication module PC-USB / RS485 / TTL**

**Order Code: SCUSB485**