ecodata GmbH
Heraklithstraße 1a
84359 Simbach/Inn

12.10.2023

Modbus Register

min Version
1.96-r2975

register	datatype	description	unit	extrainfo	energy suppliers UnitID=1	direct marketers UnitID=2	others UnitID=3
40000	Signed 32 Bit	actual power at feed in point UnitID=1 **Big Endian**	W	-1 = not available	read	read	read
40002	Signed 32 Bit	actual power produced **Big Endian**	W	-1 = not available	read	read	read
40004	Signed 32 Bit	maximum power allowed from direct marketer **Big Endian**	W	-1 = not available	read	read/write	read
40006	Signed 32 Bit	maximum power allowed from energy supplier **Big Endian**	W	-1 = not available	read/write	read	read
40008	Signed 32 Bit	setpoint cos Phi energy supplier **Big Endian**		-1 = not available 0 - 1000 = induct cos PHI 1000 - 2000 = cap. cos PHI	read/write	read	read
40010	Signed 32 Bit	actual cos Phi of the plant **Big Endian**		-1 = not available 0 - 1000 = induct. cos PHI 1000 - 2000 = cap. cos PHI	read	read	read
40012	Signed 32 Bit	rated power of the plant **Big Endian**	VA		read	read	read
40014	Signed 32 Bit	activate/deactivate power reduction direct marketer **Big Endian**		0 = deactivated 1 = activated 2 = Master/Slave Betrieb (Nur intern verwendbar)	read	read/write	read

ecodata GmbH
Heraklithstraße 1a
84359 Simbach/Inn

12.10.2023

register	datatype	description	unit	extrainfo	energy suppliers UnitID=1	direct marketers UnitID=2	others UnitID=3
40016	Signed 32 Bit	activate/deactivate power reduction energy supplier **Big Endian**		0 = deactivated 1 = activated 2 = master/slave mode (only for internal use)	read/write	read	read
40018	Signed 32 Bit	activate/deactivate cos PHI energy supplier **Big Endian**		0 = deactivated 1 = activated 2 = master/slave mode (only for internal use)	read/write	read	read
40020	Signed 32 Bit	actual available active power **Big Endian**	W	-1 = not available	read	read	read
40022	Signed 32 Bit	actual cos Phi at feed in point **Big Endian**		-1 = not available 0 - 1000 = induct. cos PHI 1000 - 2000 = cap. cos PHI	read	read	read
40024	Signed 32 Bit	import power **Big Endian**	W		read	read	read
40026	Signed 32 Bit	total usage **Big Endian**	W		read	read	read
40028	Signed 32 Bit	self consumption **Big Endian**	W		read	read	read
40030	Signed 32 Bit	self consumption quote day **Big Endian**	%		read	read	read
40032	Signed 32 Bit	self consumption quote month **Big Endian**	%		read	read	read
40034	Signed 32 Bit	self consumption quote year **Big Endian**	%		read	read	read
40036	Signed 32 Bit	battery charge **Big Endian**	W	< 0 = charge > 0 = discharge	read	read	read

ecodata GmbH
Heraklithstraße 1a
84359 Simbach/Inn

12.10.2023

register	datatype	description	unit	extrainfo	energy suppliers UnitID=1	direct marketers UnitID=2	others UnitID=3
40038	Signed 32 Bit	battery state of charge (SOC) **Big Endian**	%		read	read	read
40040	Signed 32 Bit	solar radiation **Big Endian**	W/m²		read	read	read
40042	Signed 32 Bit	brightness **Big Endian**	LUX		read	read	read
40044	Signed 32 Bit	Modul temperatur **Big Endian**	°C		read	read	read
40046	Signed 32 Bit	Outside temperature **Big Endian**	°C		read	read	read
40048	Signed 32 Bit	Reactive Power **Big Endian**	VAr	-1 = not available pos = get Q from grid (kap) neg = feed Q to grid (ind)	read	read	read
40050	Signed 32 Bit	Reactive Power at feed in point **Big Endian**	VAr	-1 = not available pos = get Q from grid (kap) neg = feed Q to grid (ind)	read	read	read
40052	Signed 32 Bit	Actual cosPhi at feed in point **Big Endian**	VAr	-1 = not available 0 - 1000 = induct cos PHI 1000 - 2000 = cap. cos PHI	read	read	read
40054	Signed 32 Bit	actual available reactive power underexcited **Big Endian**	VAr	-1 = not available pos = get Q from grid (kap) neg = feed Q to grid (ind)	read	read	read
40056	Signed 32 Bit	actual available reactive power overexcited **Big Endian**	VAr	-1 = not available pos = get Q from grid (kap) neg = feed Q to grid (ind)	read	read	read

ecodata GmbH
Heraklithstraße 1a
84359 Simbach/Inn

12.10.2023

register	datatype	description	unit	extrainfo	energy suppliers UnitID=1	direct marketers UnitID=2	others UnitID=3
40058	Signed 32 Bit	setpoint Q energy supplier **Big Endian**	VAr	-1 = not available pos = Q (underexcited) neg = Q (overexcited))	read/write	read	read
40060	Signed 32 Bit	activate/deactivate Q energy supplier **Big Endian**		0 = deactivated 1 = activated 2 = master/slave mode (only for internal use)	read/write	read	read
40062	Signed 32 Bit	Voltage U1N at feed in point **Big Endian** (only with Carlo Gavazzi EM24)	VAr	-1 = Nicht erfasst	read	read	read
40064	Signed 32 Bit	Voltage U2N at feed in point **Big Endian** (only with Carlo Gavazzi EM24)	VAr	-1 = Nicht erfasst	read	read	read
40066	Signed 32 Bit	Voltage U3N at feed in point **Big Endian** (only with Carlo Gavazzi EM24)	VAr	-1 = Nicht erfasst	read	read	read
40068	Signed 32 Bit	Voltage U12 at feed in point **Big Endian** (only with Carlo Gavazzi EM24)	VAr	-1 = Nicht erfasst	read	read	read
40070	Signed 32 Bit	Voltage U23 at feed in point **Big Endian** (only with Carlo Gavazzi EM24)	VAr	-1 = Nicht erfasst	read	read	read
40072	Signed 32 Bit	Voltage U31 at feed in point **Big Endian** (only with Carlo Gavazzi EM24)	VAr	-1 = Nicht erfasst	read	read	read
40074	Signed 32 Bit	Current L1 at feed in point **Big Endian** (only with Carlo Gavazzi EM24)	A	-1 = Nicht erfasst	read	read	read
40076	Signed 32 Bit	Current L2 at feed in point **Big Endian** (only with Carlo Gavazzi EM24)	A	-1 = Nicht erfasst	read	read	read
40078	Signed 32 Bit	Current L3 at feed in point **Big Endian** (only with Carlo Gavazzi EM24)	A	-1 = Nicht erfasst	read	read	read

ecodata GmbH
Heraklithstraße 1a
84359 Simbach/Inn

12.10.2023

register	datatype	description	unit	extrainfo	energy suppliers UnitID=1	direct marketers UnitID=2	others UnitID=3
40080	Signed 32 Bit	Frequency at feed in point **Big Endian** (only with Carlo Gavazzi EM24)	Hz	-1 = Nicht erfasst	read	read	read
40082	Signed 32 Bit	BHKW Active Power **Big Endian**	W	-1 = Nicht erfasst	read	read	read
40084	Signed 32 Bit	BHKW Reactive Power **Big Endian**	Var	-1 = Nicht erfasst	read	read	read
40086	Signed 32 Bit	Total-Rated Power Master/Slave **Big Endian**	VA	-1 = Nicht erfasst	read	read	read
40088	Signed 32 Bit	Veränderung der Wirkleistung **Big Endian**	W	-1 = Nicht erfasst	read	read	read
40090	Signed 32 Bit	Wirkleistung Übergabestation **Big Endian** (Erzeugerpfeilsystem)	W	-1 = Nicht erfasst	read	read	read

Funkionscodes: Read Holding Registers (0x03), Read Input Registers (0x04), Write Multiple Registers (0x10)

Register40004, 40006, 40008, 40014, 40016, 40018, 40058 and 40060 are connected to a timeout of 5 minutes. Is the communication from ModBus-Client to ModBus-Server inactive for more than 5 minutes, the registers are resetted.

example:

if an active power reduction is set, it is active as long the ModBus-Client communicates with ModBus-Server. Here is no difference if there is only data read or also written.

All values are given in the consumer arrow system

To set the reactive power, only either register 40008 (default cosPhi) OR 40058 (default Q) can be used!