Swegon

Date: 10.01.2014

CASA Premium Modbus GW
REGISTERS Customer release
Security level

Modbus	User	Adv.	Register Name	Min	Max	Unit	Note(s)	Comment (EN)
Holding register 16 bits integer register R/W								
Identity registers								
4x0001	R	R	Component ID				7	
4x0002-3x0017	R	R	Component name (adapter's name)				ILTO MBUS	
Factory settings tool								
4x4000	W	W	Password					Password: 1234 Timeout 60 s.
4x4001-4x4020	R	R	Profile name				20 ASCII characters	
4x4021	R	R	FST sw-version				8bit Major, 8bit Minor	
4x4022	R	R	Unit sw-version				8bit Major, 8bit Minor	
4x4023	R	R	SecurityLevel				0=None, 1=User, 2=Adv., 3=Fac.	
General								
4x4100	R/W	R/W	Operating mode	0	2		0=Away, 1=Normal, 2=Boost	
Remote control for normal cases								
4x8000	R	R/W	Unit state	0	1		0=Stopped, 1=Running	
4x8001	R	R/W	Afterheater/Summercooling selection	0	2		0=Neither, 1=Afterheater, 2=Summercooling	
4x8002	R/W	R/W	Fan speed	1	5			
4x8003	R/W	R/W	Supply temperature setpoint	0	500	°C	scaling 1:10	Supply/Room temperature setpoint (x0,1°C)
4x8004	R/W	R/W	Fireplace impulse	0	1		0=Off, 1=On	Fireplace function activation
4x8005	-	R/W	SA speed 1	0	100	%	0-10V output signal	Supply fan speed setting for speed 1 (EC models only)
4x8006	-	R/W	SA speed 2	0	100	%		Supply fan speed setting for speed 2 (EC models only)
4x8007	-	R/W	SA speed 3	0	100	%		Supply fan speed setting for speed 3 (EC models only)
4x8008	-	R/W	SA speed 4	0	100	%		Supply fan speed setting for speed 4 (EC models only)
4x8009	-	R/W	SA speed 5	0	100	%		Supply fan speed setting for speed 5 (EC models only)
4x8010	-	R/W	EA speed 1	0	100	%		Exhaust fan speed setting for speed 1 (EC models only)
4x8011	-	R/W	EA speed 2	0	100	%		Exhaust fan speed setting for speed 2 (EC models only)
4x8012	-	R/W	EA speed 3	0	100	%		Exhaust fan speed setting for speed 3 (EC models only)
4x8013	-	R/W	EA speed 4	0	100	%		Exhaust fan speed setting for speed 4 (EC models only)
4x8014	-	R/W	EA speed 5	0	100	%		Exhaust fan speed setting for speed 5 (EC models only)
4x8015	-	R/W	Profile speed Away	1	5			Fan speed setting for "Away"
4x8016	-	R/W	Profile speed Home	1	5			Fan speed setting for "Home"
4x8017	-	R/W	Profile speed Boost	1	5			Fan speed setting for "Boost"
4x8018	-	R/W	Profile speed Heating	1	5			Fan speed setting for "Heating"
4x8019	-	R/W	Profile speed Cooling	1	5			Fan speed setting for "Summer night cooling"
4x8020	-	R/W	Profile speed Chilling	1	5			Fan speed setting for "Cooling" (N/A)
4x8021	-	R/W	Afterheater outside temperature limit	0	50	°C		Afterheating enabled when T1 < [value]
4x8022	-	R/W	Preheater outside start temperature	-100	50	°C		Preheater forced on when T1 < [value]
4x8023	-	R/W	Preheater outside temperature limit	0	50	°C		Preheater enabled when T1 < [value]
4x8024	-	R/W	Summer cooling room temperature limit	0	50	°C		HX bypass/stopped when T8 > [value]
4x8025	-	R/W	Summer cooling outside temperature limit	0	50	°C		HX bypass/stopped when T1 > [value]
4x8026	-	R/W	Summer cooling room/outside difference	0	50	°C		HX bypass/stopped when T1-T8 >= [value]
4x8027	-	R/W	Summer cooling fan speed	0	3		0=Unchanged, 1=Away, 2=Normal, 3=Boost	Fan speed setting when HX bypassed/stopped
4x8028	-	W	Clear alarms	0	11		1 = FreezingDanger 2 = ServiceReminderUser 3 = ServiceReminderService 4 = IRSensorFailure 5 =TemperatureDeviation 6 = Efficiency 7 = FanFailureSupply 8 = FanFailureExhaust 9 = OverheatProtection 10 = FilterGuard 11 = TempSensorError	
4x8029	R	R/W	Clock weekday	0	6		0 = Monday, 1 = Tuesday, etc..	
4x8030	R	R/W	Clock hour	0	23	hour		
4x8031	R	R/W	Clock min	0	59	min		

Input registers 16 bits integer register R only								
Unit information								
			Ilto MBUS information					
3x0001	R	R	Component ID				7	
3x0002-3x0017	R	R	Component name (adapter's name)				ILTO MBUS	
3x0018	R	R	Application ID				30	
3x0019	R	R	HW-key	0	15		for HW changes	
3x0050-3x0051	R	R	Serial number				32bit unique serial number	
3x0150	R	R	SW-Version				8bit Major, 8bit Minor	
3x0151	R	R	SW-Build					
3x0200	R	R	Uptime years	0	1000			
3x0201	R	R	Uptime hours	0	8760		If over 8760 Years count is increased	
3x0202	R	R	Uptime minutes	0	60		If over 60, Hours count is increased	
			Unit info					
3x0301	R	R	Unit Heat exchanger type	0	1		0=Fixed, 1=Rotating	HX type
3x0302	R	R	Unit SW version				8bit Major, 8bit Minor	AHU software version
3x0303	R	R	Unit HW Model	0	1		0=AC,1=DC	AHU HW type
3x0304	R	R	Unit Running	0	1		0=Stopped, 1=Running	AHU main status
3x0305	R	R	Unit State	0	7		0=RunDown, 1=CoolingDown, 2=RunDownDDC, 3=RunDownFD, 4=Stopped, 5=RunUp, 6=RunUpFD, 7=Started	Status
			Unit status					
3x0306	R	R	Heating	0	1		0=Inactive, 1=Active	Heating
3x0307	R	R	Cooling	0	1		0=Inactive, 1=Active	Cooling
3x0308	R	R	Summer cooling	0	1		0=Inactive, 1=Active	HX bypass/stopped
3x0309	R	R	Freeze protection	0	1		0=Inactive, 1=Active	Freeze protection
3x0310	R	R	Preheat	0	1		0=Inactive, 1=Active	Preheating
3x0311	R	R	Chilling	0	1		0=Inactive, 1=Active	Chilling/cooling (N/A)
3x0312	R	R	Preheat Overheat	0	1		0=Inactive, 1=Active	Preaheater overheat
3x0313	R	R	Fireplace Function	0	1		0=Inactive, 1=Active	Fireplace function active
3x0314	R	R	Pressure Compensation	0	1		0=Inactive, 1=Active	Underpressure compensation active
3x0315	R	R	External Boost	0	1		0=Inactive, 1=Active	External boost active
3x0316	R	R	RH boost	0	1		0=Inactive, 1=Active	RH boost active
3x0317	R	R	co2 boost	0	1		0=Inactive, 1=Active	CO2 boost active
3x0318	R	R	Heat recovery defrost	0	1		0=Inactive, 1=Active	HX defrosting
3x0319	R	R	Defrost starter	0	1		0=Inactive, 1=Active	HX defrost started according 0=IR / 1=temperature
3x0320	R	R	TF stop	0	1		0=Inactive, 1=Active	Supply fan stopped during HX defrost
			DDC control					
3x0321	R	R	DDC fan speed control	0	1		0=Off, 1=On	DDC fan speed control
3x0322	R	R	DDC temperature control	0	1		0=Off, 1=On	DDC temperature control
3x0323	R	R	DDC emergency stop	0	1		0=Off, 1=On	DDC emergency stop
			Afterheating					
3x0324	R	R	Afterheating effective set point	0	50	°C		Setpoint for afterheating
3x0325	R	R	Afterheating regulating mode	0	1		0=SA regulated, 1=Room regulated	Afterheating mode 0=supply air regulated / 1=room regulated
3x0326	R	R	Afterheating controller output	0	255		255=100% PI-value	Afterheater controller output value (supply air regulated)
3x0327	R	R	Afterheating room controller output	0	255		255=100% PI-value	Afterheater controller output value (room regulated)
3x0328	R	R	Afterheating outdoor limit	0	50	°C		Afterheater enabled when T1 < [value]
3x0329	R	R	Afterheater (resistor) enabled	0	1		0=Off, 1=On	Afterheater enabled/disabled
			Summer cooling					
3x0330	R	R	Summer cooling setpoint	0	50	°C		HX bypass/stopped when T8 > [value]
3x0331	R	R	Summer cooling outdoor limit	0	50	°C		HX bypass/stopped when T1 > [value]
3x0332	R	R	Summer cooling difference	0	50	°C		HX bypass/stopped when T1-T8 >= [value]
			Temperature measurements					
3x0333	R	R	Temperature T1	-570	1100	°C	scaling 1:10, 1100>Open, -570<Close	T1 = Outside air temperature
3x0334	R	R	Temperature T2	-570	1100	°C	scaling 1:10, 1100>Open, -570<Close	T2 = Supply air temperature before afterheater
3x0335	R	R	Temperature T3	-570	1100	°C	scaling 1:10, 1100>Open, -570<Close	T3 = Exhaust air temperature
3x0336	R	R	Temperature T4	-570	1100	°C	scaling 1:10, 1100>Open, -570<Close	T4 = Supply air temperature after afterheater
3x0337	R	R	Temperature T5	-570	1100	°C	scaling 1:10, 1100>Open, -570<Close	T5 = Waste air temperature
3x0338	R	R	Temperature T6	-570	1100	°C	scaling 1:10, 1100>Open, -570<Close	T6 = Afterheater overtemp. / Afterheater radiator freezing protect.
3x0339	R	R	Temperature T7	-570	1100	°C	scaling 1:10, 1100>Open, -570<Close	T7 = Preheater overtemperature
3x0340	R	R	Temperature T8	-570	1100	°C	scaling 1:10, 1100>Open, -570<Close	T8 = Room temperature
3x0341	R	R	HRE efficiency	0	100	%		HX efficiency

			Sensors					
3x0342	R	R	co2	0	2000	ppm		CO2 sensor value
3x0343	R	R	RH%	0	100	%		RH sensor value
3x0344	R	R	Pressure 1	0	1000	Pa		Pressure sensor 1 value
3x0345	R	R	Pressure 2	0	1000	Pa		Pressure sensor 2 value
3x0346	R	R	24V diagnostic	0	1000	V	scaling 1:10	AHU controller: 24 VDC diagnostics (x0,1V)
3x0347	R	R	5V diagnostic	0	1000	V	scaling 1:10	AHU controller: 5 VDC diagnostics (x0,1V)
3x0348	R	R	DDC Fan	1	5		Fan control input	DDC fan speed request
3x0349	R	R	DDC control active	0	1		0=Off, 1=On	DDC control active
3x0350	R	R	DDC Temperature	0	50	°C		DDC temperature request
			Other inputs					
3x0351	R	R	IR-sensor	0	1		0=Inactive, 1=Active	IR freezing protection status
3x0352	R	R	Filter	0	1		0=Inactive, 1=Active	Filter guard status
3x0353	R	R	Fireplace	0	1		0=Inactive, 1=Active	External fireplace function input
3x0354	R	R	Boost/Comp	0	1		0=Inactive, 1=Active	External boost function input
3x0355	R	R	Smoke Fire	0	1		0=Inactive, 1=Active	(N/A)
3x0356	R	R	Smoke Serv	0	1		0=Inactive, 1=Active	(N/A)
3x0357	R	R	DDC emergency	0	1		0=Inactive, 1=Active	DDC emergency stop input
3x0358	R	R	Supply tachometer	0	2550	RPM		Supply fan speed tachometer (EC models only)
3x0359	R	R	Exhaust tachometer	0	2550	RPM		Exhaust fan speed tachometer (EC models only)
3x0360	R	R	Afterheating overheat	0	1		0=Inactive, 1=Active	Afterheater overtemperature
			Actuators					
3x0361	R	R	Hre bypass	0	1		0=close, 1=open	HX bypass actuator status
3x0362	R	R	Recycle air	0	1		0=close, 1=open	Recycle air actuator status
3x0363	R	R	Ducts	0	1		0=close, 1=open	External duct actuator status
3x0364	R	R	Supply fan speed	0	5		virtual speed	Supply fan speed
3x0365	R	R	Exhaust fan speed	0	5		virtual speed	Exhaust fan speed
			Alarms					
3x0366	R	R	Alarm IR-sensor failure	0	1		0=Off, 1=On	Alarm: IR sensor failure
3x0367	R	R	Alarm temperature deviation	0	1		0=Off, 1=On	Alarm: Temperature deviation failure
3x0368	R	R	Alarm freezing danger	0	1		0=Off, 1=On	Alarm: Afterheating radiator freezing danger
3x0369	R	R	Alarm filter guard	0	1		0=Off, 1=On	Alarm: Filter guard
3x0370	R	R	Alarm overheat afterheater	0	1		0=Off, 1=On	Alarm: Afterheater overheat protection
3x0371	R	R	Alarm efficiency	0	1		0=Off, 1=On	Alarm: Efficiency failure
3x0372	R	R	Alarm fan failure SA	0	1		0=Off, 1=On	Alarm: Supply fan failure
3x0373	R	R	Alarm fan failure EA	0	1		0=Off, 1=On	Alarm: Exhaust fan failure
3x0374	R	R	Alarm service reminder	0	1		0=Off, 1=On	Service reminder
3x0375	R	R	Alarm temp sensor	0	255		0=Off, bit0=T1, bit1=T2, bit2=T3	Alarm: Temperature sensor failure
			Cooker hood					
3x0376	R	R	Cooker hood open	0	1		0=close, 1=open	Cooker hood damper open/closed
3x0377	R	R	Cooker hood set fan speed	0	1		0=Inactive, 1=Active	Cooker hood fan speed control