Komfortwohnraumlüftung

GEBRAUCHS-ANWEISUNG

POLO-AIR 390 . POLO-AIR 1300 – MODBUSVERBINDUNG

PURE PROGRESS / poloplast

Allgemeine Hinweise

Die in diesem technischen Handbuch enthaltenen Informationen sollen Ihnen helfen, unsere Erzeugnisse für Ihre Anwendung auszuwählen. Bei der Zusammenstellung von Texten und Abbildungen wurde mit größter Sorgfalt vorgegangen. Trotzdem können Fehler nicht vollständig ausgeschlossen werden. POLOPLAST kann für fehlerhafte Angaben und deren Folgen keinerlei Haftung übernehmen. Für Verbesserungsvorschläge und Hinweise ist POLOPLAST dankbar.

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Oder kontaktieren Sie unsere Zentrale unter: +43 (0)732 / 38 86-0, office@poloplast.com

Gemäß WEEE Richtlinie (2002/96/EC) ist das Produkt nicht dem Hausmüll zuzuführen sondern in einem entsprechendem Altstoffsammelzentrum zu entsorgen. Das Produkt wurde unter der WEEE-Registrierungsnummer DE 40582051 registriert.

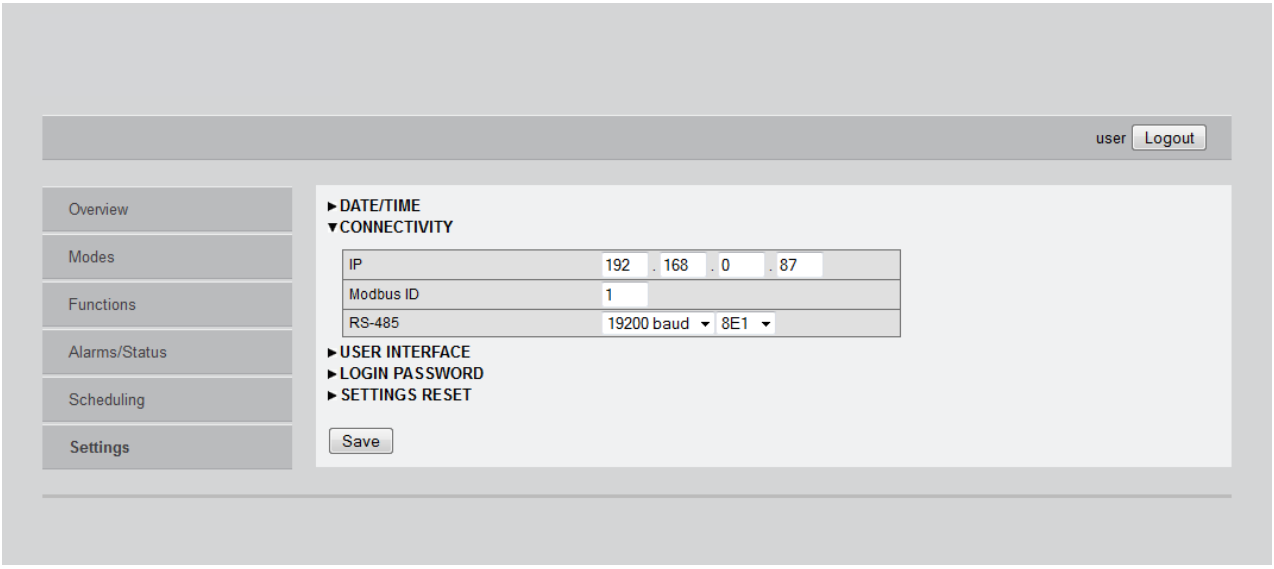
Modbus RTU und TCP

Das **Modbus RTU** Protokoll arbeitet über das RS485 Interface (Tabelle 1), die Verbindung wird über die Anschlüsse 1, 2 und 3 der Steuerung realisiert (Abb. 2). Die Interface Einstellungen können über die Internetseite (Abb. 1) geändert werden. Die Modubus RTU Protokoll ID kann im selben Fenster geändert werden. Zum anschließen wird ein verdrilltes Doppelkabel genutzt. Die maximale Kabellänge beträgt 150 m. Die GND Anschlüsse der Geräte sollten miteinander verbunden werden falls die Distanz der RS485 Interface größer als 10 m ist.

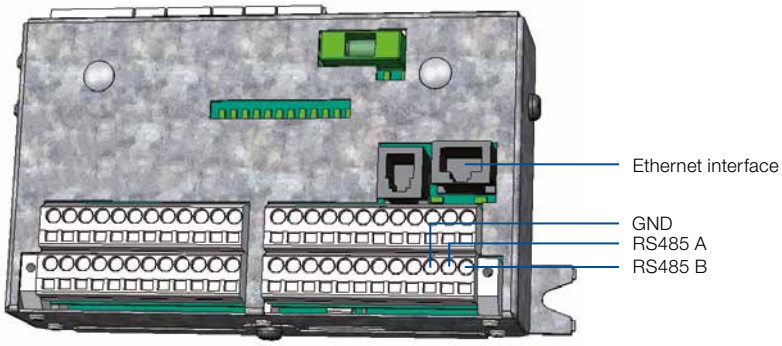
Baudrate	19200
Wortlänge	8
Parität	EVEN
Stop bits	1

Tabelle 1 . Grundeinstellung RS485 Interface

Das **Modbus TCP** Protokoll arbeitet über das Ethernet Interface, die Verbindung wird über den RJ45 Anschluss der Steuerung realisiert (Abb. 2). Standard IP-Adresse lautet 192.168.0.50, Port 502. Die IP-Adresse kann über die Webseite geändert werden (Abb. 1). Zur Verbindung sollte ein CAT5 Kabel genutzt werden. Die maximale Kabellänge zwischen Gerät und Steuerung beträgt 100 m.



1 . Einstellung Ethernet/RS485 Interface ändern.



2 . MODBUS Verbindung über Ethernet/RS485.

Modbus Tabellen

Modbus register		Data				Description	Data values
		Type	Access	Range	Default		
Modes	1	int	R/W	0–1	0	AHU On/Off control	0-Off, 1-On
	100	int	R/W	1–6	1	Operation mode selection	1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special, 6-Program
	101–102	int32	R/W	-	-	Comfort1: Supply flow	Auto-correction to be within allowed range (20–100 % of maximum supply flow or 0)
	103–104	int32	R/W	-	-	Comfort1: Extract flow	Auto-correction to be within allowed range (20–100 % of maximum Extract flow or 0)
	105	int	R/W	50–400	210	Comfort1: Setpoint temperature	200 → 20,0 C
	106–107	int32	R/W	-	-	Comfort2: Supply flow	Auto-correction to be within allowed range (20–100 % of maximum supply flow or 0)
	108–109	int32	R/W	-	-	Comfort2: Extract flow	Auto-correction to be within allowed range (20–100 % of maximum Extract flow or 0)
	110	int	R/W	50–400	210	Comfort2: Setpoint temperature	200 → 20,0 C
	111–112	int32	R/W	-	-	Economy1: Supply flow	Auto-correction to be within allowed range (20–100 % of maximum supply flow or 0)
	113–114	int32	R/W	-	-	Economy1: Extract flow	Auto-correction to be within allowed range (20–100 % of maximum Extract flow or 0)
	115	int	R/W	50–400	200	Economy1: Setpoint temperature	200 → 20,0 C
	116–117	int32	R/W	-	-	Economy2: Supply flow	Auto-correction to be within allowed range (20–100 % of maximum supply flow or 0)
	118–119	int32	R/W	-	-	Economy2: Extract flow	Auto-correction to be within allowed range (20–100 % of maximum Extract flow or 0)
	120	int	R/W	50–400	190	Economy2: Setpoint temperature	200 → 20,0 C
	121–122	int32	R/W	-	-	Special: Supply flow	Auto-correction to be within allowed range (20–100 % of maximum supply flow or 0)
	123–124	int32	R/W	-	-	Special: Extract flow	Auto-correction to be within allowed range (20–100 % of maximum Extract flow or 0)
	125	int	R/W	50400	210	Special: Setpoint temperature	200 → 20,0 C
	126	bin	R/W	-	31	Special: Configuration	b4-Dehumidifying, b3-Humidifying, b2-Recirculation, b1-Cooling, b0-Heating (1-Enable, 0-Disable)
	127	int	R/W	0–2	0	Flow control mode	0-Off/CAV, 1-VAV, 2-DCV
	128	int	R/W	0–2	0	Temp. control mode	0-Supply, 1-Extract, 2-Room, 3-Balance
	129	int	R/W	0–4	0	VAV status/calibration	0-Not calibrated, 1-Calibrating, 2-Supply, 3-Extract, 4-Double. Write 0×99C5 to start VAV calibration

Modbus register		Data				Description	Data values
		Type	Access	Range	Default		
Operation Program	200	bin	R/W	-	0	Event01: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	201	int8×2	R/W	0:00–23:59	0:00	Event01: Start time	0×0805 → 8:05
	202	int8×2	R/W	0:00–24:00	0:00	Event01: Stop time	0×0805 → 8:05
	203	int	R/W	0–5	0	Event01: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	204	bin	R/W	-	0	Event02: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	205	int8×2	R/W	0:00–23:59	0:00	Event02: Start time	0×0805 → 8:05
	206	int8×2	R/W	0:00–24:00	0:00	Event02: Stop time	0×0805 → 8:05
	207	int	R/W	0–5	0	Event02: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	208	bin	R/W	-	0	Event03: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	209	int8×2	R/W	0:00–23:59	0:00	Event03: Start time	0×0805 → 8:05
	210	int8×2	R/W	0:00–24:00	0:00	Event03: Stop time	0×0805 → 8:05
	211	int	R/W	0–5	0	Event03: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	212	bin	R/W	-	0	Event04: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	213	int8×2	R/W	0:00–23:59	0:00	Event04: Start time	0×0805 → 8:05
	214	int8×2	R/W	0:00–24:00	0:00	Event04: Stop time	0×0805 → 8:05
	215	int	R/W	0–5	0	Event04: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	216	bin	R/W	-	0	Event05: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	217	int8×2	R/W	0:00–23:59	0:00	Event05: Start time	0×0805 → 8:05
	218	int8×2	R/W	0:00–24:00	0:00	Event05: Stop time	0×0805 → 8:05
	219	int	R/W	0–5	0	Event05: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	220	bin	R/W	-	0	Event06: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	221	int8×2	R/W	0:00–23:59	0:00	Event06: Start time	0×0805 → 8:05
	222	int8×2	R/W	0:00–24:00	0:00	Event06: Stop time	0×0805 → 8:05
	223	int	R/W	0–5	0	Event06: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	224	bin	R/W	-	0	Event07: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	225	int8×2	R/W	0:00–23:59	0:00	Event07: Start time	0×0805 → 8:05
	226	int8×2	R/W	0:00–24:00	0:00	Event07: Stop time	0×0805 → 8:05
	227	int	R/W	0–5	0	Event07: Mode	0-Standby, 1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	228	bin	R/W	-	0	Event08: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	229	int8×2	R/W	0:00–23:59	0:00	Event08: Start time	0×0805 → 8:05
	230	int8×2	R/W	0:00–24:00	0:00	Event08: Stop time	0×0805 → 8:05
	231	int	R/W	0–5	0	Event08: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	232	bin	R/W	-	0	Event09: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	233	int8×2	R/W	0:00–23:59	0:00	Event09: Start time	0×0805 → 8:05

Modbus register		Data				Description	Data values
		Type	Access	Range	Default		
Operation Program	**234**	int8×2	R/W	0:00–24:00	0:00	Event09: Stop time	0×0805 → 8:05
	235	int	R/W	0–5	0	Event09: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	236	bin	R/W	-	0	Event10: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	237	int8×2	R/W	0:00–23:59	0:00	Event10: Start time	0×0805 → 8:05
	238	int8×2	R/W	0:00–24:00	0:00	Event10: Stop time	0×0805 → 8:05
	239	int	R/W	0–5	0	Event10: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	240	bin	R/W	-	0	Event11: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	241	int8×2	R/W	0:00–23:59	0:00	Event11: Start time	0×0805 → 8:05
	242	int8×2	R/W	0:00–24:00	0:00	Event11: Stop time	0×0805 → 8:05
	243	int	R/W	0–5	0	Event11: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	244	bin	R/W	-	0	Event12: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	245	int8×2	R/W	0:00–23:59	0:00	Event12: Start time	0×0805 → 8:05
	246	int8×2	R/W	0:00–24:00	0:00	Event12: Stop time	0×0805 → 8:05
	247	int	R/W	0–5	0	Event12: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	248	bin	R/W	-	0	Event13: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	249	int8×2	R/W	0:00–23:59	0:00	Event13: Start time	0×0805 → 8:05
	250	int8×2	R/W	0:00–24:00	0:00	Event13: Stop time	0×0805 → 8:05
	251	int	R/W	0–5	0	Event13: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	252	bin	R/W	-	0	Event14: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	253	int8×2	R/W	0:00–23:59	0:00	Event14: Start time	0×0805 → 8:05
	254	int8×2	R/W	0:00–24:00	0:00	Event14: Stop time	0×0805 → 8:05
	255	int	R/W	0–5	0	Event14: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	256	bin	R/W	-	0	Event15: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	257	int8×2	R/W	0:00–23:59	0:00	Event15: Start time	0×0805 → 8:05
	258	int8×2	R/W	0:00–24:00	0:00	Event15: Stop time	0×0805 → 8:05
	259	int	R/W	0–5	0	Event15: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	260	bin	R/W	-	0	Event16: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	261	int8×2	R/W	0:00–23:59	0:00	Event16: Start time	0×0805 → 8:05
	262	int8×2	R/W	0:00–24:00	0:00	Event16: Stop time	0×0805 → 8:05
	263	int	R/W	0–5	0	Event16: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	264	bin	R/W	-	0	Event17: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	265	int8×2	R/W	0:00–23:59	0:00	Event17: Start time	0×0805 → 8:05
	266	int8×2	R/W	0:00–24:00	0:00	Event17: Stop time	0×0805 → 8:05
	267	int	R/W	0–5	0	Event17: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	268	bin	R/W	-	0	Event18: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	269	int8×2	R/W	0:00–23:59	0:00	Event18: Start time	0×0805 → 8:05
	270	int8×2	R/W	0:00–24:00	0:00	Event18: Stop time	0×0805 → 8:05
	271	int	R/W	0–5	0	Event18: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	272	bin	R/W	-	0	Event19: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	273	int8×2	R/W	0:00–23:59	0:00	Event19: Start time	0×0805 → 8:05
	274	int8×2	R/W	0:00–24:00	0:00	Event19: Stop time	0×0805 → 8:05
	275	int	R/W	0–5	0	Event19: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	276	bin	R/W	-	0	Event20: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	277	int8×2	R/W	0:00–23:59	0:00	Event20: Start time	0×0805 → 8:05
	278	int8×2	R/W	0:00–24:00	0:00	Event20: Stop time	0×0805→ 8:05
	279	int	R/W	0–5	0	Event20: Mode	0-Standby,1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special

Modbus register		Data				Description	Data values
		Type	Access	Range	Default		
Holiday Schedule	300	int	R/W	2010–2250		Event01: Start year	
	301	int8×2	R/W	01.01–12.31		Event01: Start date	0×020C → Feb12
	302	int	R/W	2010–2250		Event01: Stop year	
	303	int8×2	R/W	01.01–12.31		Event01: Stop date	0×020C → Feb12
	304	int	R/W	0–6		Event01: Mode	0-Standby, 1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special, 6-Program
	305	int	R/W	2010–2250		Event02: Start year	
	306	int8×2	R/W	01.01–12.31		Event02: Start date	0×020C → Feb12
	307	int	R/W	2010–2250		Event02: Stop year	
	308	int8×2	R/W	01.01–12.31		Event02: Stop date	0×020C → Feb12
	309	int	R/W	0–6		Event02: Mode	0-Standby, 1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special, 6-Program
	310	int	R/W	2010–2250		Event03: Start year	
	311	int8×2	R/W	01.01–12.31		Event03: Start date	0×020C → Feb12
	312	int	R/W	2010–2250		Event03: Stop year	
	313	int8×2	R/W	01.01–12.31		Event03: Stop date	0×020C → Feb12
	314	int	R/W	0–6		Event03: Mode	0-Standby, 1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special, 6-Program
	315	int	R/W	2010–2250		Event04: Start year	
	316	int8×2	R/W	01.01–12.31		Event04: Start date	0×020C → Feb12
	317	int	R/W	2010–2250		Event04: Stop year	
	318	int8×2	R/W	01.01–12.31		Event04: Stop date	0×020C → Feb12
	319	int	R/W	0–6		Event04: Mode	0-Standby, 1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special, 6-Program
	320	int	R/W	2010–2250		Event05: Start year	
	321	int8×2	R/W	01.01–12.31		Event05: Start date	0×020C → Feb12
	322	int	R/W	2010–2250		Event05: Stop year	
	323	int8×2	R/W	01.01–12.31		Event05: Stop date	0×020C → Feb12
	324	int	R/W	0–6		Event05: Mode	0-Standby, 1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special, 6-Program
	325	int	R/W	2010–2250		Event06: Start year	
	326	int8×2	R/W	01.01–12.31		Event06: Start date	0×020C → Feb12
	327	int	R/W	2010–2250		Event06: Stop year	
	328	int8×2	R/W	01.01–12.31		Event06: Stop date	0×020C → Feb12
	329	int	R/W	0–6		Event06: Mode	0-Standby, 1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special, 6-Program
	330	int	R/W	2010–2250		Event07: Start year	
	331	int8×2	R/W	01.01–12.31		Event07: Start date	0×020C → Feb12
	332	int	R/W	2010–2250		Event07: Stop year	
	333	int8×2	R/W	01.01–12.31		Event07: Stop date	0×020C → Feb12
	334	int	R/W	0–6		Event07: Mode	0-Standby, 1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special, 6-Program
	335	int	R/W	2010–2250		Event08: Start year	
	336	int8×2	R/W	01.01–12.31		Event08: Start date	0×020C → Feb12
	337	int	R/W	2010–2250		Event08: Stop year	
	338	int8×2	R/W	01.01–12.31		Event08: Stop date	0×020C → Feb12
	339	int	R/W	0–6		Event08: Mode	0-Standby, 1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special, 6-Program
	340	int	R/W	2010–2250		Event09: Start year	
	341	int8×2	R/W	01.01–12.31		Event09: Start date	0×020C → Feb12
	342	int	R/W	2010–2250		Event09: Stop year	
	343	int8×2	R/W	01.01–12.31		Event09: Stop date	0×020C → Feb12
	344	int	R/W	0–6		Event09: Mode	0-Standby, 1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special, 6-Program
	345	int	R/W	2010–2250		Event10: Start year	
	346	int8×2	R/W	01.01–12.31		Event10: Start date	0×020C → Feb12
	347	int	R/W	2010–2250		Event10: Stop year	
	348	int8×2	R/W	01.01–12.31		Event10: Stop date	0×020C → Feb12
	349	int	R/W	0–6		Event10: Mode	0-Standby, 1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special, 6-Program

	Modbus register	Data				Description	Data values
		Type	Access	Range	Default		
Recirculation Schedule	**400**	bin	R/W	-	0	Event01: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	401	int8×2	R/W	0:00–23:59	0:00	Event01: Start time	0×0805 → 8:05
	402	int8×2	R/W	0:00–24:00	0:00	Event01: Stop time	0×0805 → 8:05
	403	int	R/W	0..100	0	Event01: Level	
	404	bin	R/W	-	0	Event02: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	405	int8×2	R/W	0:00–23:59	0:00	Event02: Start time	0×0805 → 8:05
	406	int8×2	R/W	0:00–24:00	0:00	Event02: Stop time	0×0805 → 8:05
	407	int	R/W	0..100	0	Event02: Level	
	408	bin	R/W	-	0	Event03: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	409	int8×2	R/W	0:00–23:59	0:00	Event03: Start time	0×0805 → 8:05
	410	int8×2	R/W	0:00–24:00	0:00	Event03: Stop time	0×0805 → 8:05
	411	int	R/W	0..100	0	Event03: Level	
	412	bin	R/W	-	0	Event04: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	413	int8×2	R/W	0:00–23:59	0:00	Event04: Start time	0×0805 → 8:05
	414	int8×2	R/W	0:00–24:00	0:00	Event04: Stop time	0×0805 → 8:05
	415	int	R/W	0..100	0	Event04: Level	
	416	bin	R/W	-	0	Event05: Days	b6-Sun, b5-Sat, b4-Fri, b3-Thu, b2-Wed, b1-Tue, b0-Mon (1-Select, 0-Deselect)
	417	int8×2	R/W	0:00–23:59	0:00	Event05: Start time	0×0805 → 8:05
	418	int8×2	R/W	0:00–24:00	0:00	Event05: Stop time	0×0805 → 8:05
	419	int	R/W	0..100	0	Event05: Level	

	Modbus register	Data				Description	Data values
		Type	Access	Range	Default		
Settings	**450**	int8×2	R/W	0:00–23:59	0:00	Time	0×0805 → 8:05
	451	int	R/W	0–59	0	Seconds	
	452	int	R	1-7	7	Day of week	1-Mon, 2-Tue, 3-Wed, 4-Thu, 5-Fri, 6-Sat, 7-Sun
	453	int8×2	R/W	01.01–12.31	01.01	Date	0×020C → Feb12
	454	int	R/W	2010–2250	2012	Year	
	455	int	R/W	0–3	0	Language	0-English,1-Lithuanian,2-Russian, 3-Polish
	456	int	R/W	1–247	1	Modbus address	
	457–458	int32	R/W	-	192.168.0.50	IP adress	
	459	int	R/W	0–3	0	Flow units	0-m^3/h, 1-l/s, 2-m^3/s, 3-PA
	460–467	int8×2	R	-		AHU S/N	
	468–479	int8×2	R	-		AHU name	

	Modbus register	Data				Description	Data values
		Type	Access	Range	Default		
Functions	**00**	int	R/W	0..1	0	Air quality control: Enable	0-Disable, 1-Enable
	501	int	R/W	200..1800	600	Air quality control: Setpoint 1	200..1800 ppm, 10..90 %, 10..90 % RH, 5..45C
	502	int	R/W	1..5	1	Air quality control: Mode 1	1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	503	int	R/W	200..1800	900	Air quality control: Setpoint 2	200..1800 ppm, 10..90 %, 10..90 % RH, 5..45C
	504	int	R/W	1..5	2	Air quality control: Mode 2	1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	505	int	R/W	0..1	0	Outdoor comp. ventilation: Enable/Disable	0-Disable, 1-Enable
	506	int	R/W	–400..500	-400	Outdoor comp. ventilation: Winter comp. stop	–150 → –15.0C
	507	int	R/W	–400..500	0	Outdoor comp. ventilation: Winter comp. start	–150 → –15.0C
	508	int	R/W	–400..500	200	Outdoor comp. ventilation: Summer comp. start	250 → 25.0C
	509	int	R/W	–400..500	500	Outdoor comp. ventilation: Summer comp. stop	250 → 25.0C
	510	int	R/W	0..1	500	Min. temperature control: Enable/Disable	250 → 25.0C
	511	int	R/W	–400..500	150	Min. temperature control: Setpoint	–150 → –15.0C
	512	int	R/W	0..1	1	Override function: Enable/Disable	0-Disable, 1-Enable
	513	int	R/W	0..2	0	Override function: Override type	0-All time, 1-If on, 2-If off
	514	int	R/W	0..6	2	Override function: Mode	0-Standby, 1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special, 6-Program
	515	int	R/W	0..1	0	Summer night cooling: Enable/Disable	0-Disable, 1-Enable

Modbus register		Data				Description	Data values
		Type	Access	Range	Default		
Functions	516	int	R/W	150..500	250	Summer night cooling: Start temperature	250 → 25.0C
	517	int	R/W	0..1	0	Operation on demand: Enable/Disable	0-Disable, 1-Enable
	518	int	R/W	200..1800	500	Operation on demand: Setpoint	200..1800 ppm, 10..90 %, 10..90 % RH, 5..45C
	519	int	R/W	0..1	0	Recirculation control: Enable/Disable	0-Disable, 1-Enable
	520	int	R/W	200..1800	600	Recirculation control: Setpoint 1	200..1800 ppm, 10..90 %, 10..90 % RH, 5..45C
	521	int	R/W	0..100	40	Recirculation control: Min. fresh air 1	
	522	int	R/W	–400..500	–400	Recirculation control: Winter recirculation end	–150 → –15.0C
	523	int	R/W	–400..500	0	Recirculation control: Winter recirculation start	–150 → –15.0C
	524	int	R/W	–400..500	200	Recirculation control: Summer recirculation start	250 → 25.0C
	525	int	R/W	–400..500	500	Recirculation control: Summer recirculation end	250 → 25.0C
	526	int	R/W	0..100	0	Recirculation control: Default recirculation	
	527	int	R/W	0..100	60	Recirculation control: Activated recirculation	
	528	int	R/W	0..1	0	Humidity control: Enable/Disable	0-Disable, 1-Enable
	529	int	R/W	10..90	55	Humidity control: Setpoint 1	10..90 % RH
	530	int	R/W	1..5	1	Humidity control: Mode 1	1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	531	int	R/W	10..90	65	Humidity control: Setpoint 2	10..90 % RH
	532	int	R/W	1..5	2	Humidity control: Mode 2	1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	533	int	R/W	1..5	1	Recirculation control: Mode 1	1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	534	int	R/W	200..1800	900	Recirculation control: Setpoint 2	200..1800 ppm, 10..90 %, 10..90 % RH, 5..45C
	535	int	R/W	1..5	2	Recirculation control: Mode 2	1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special
	536	int	R/W	0..100	20	Recirculation control: Min. fresh air 2	
	537	int	R/W	150..500	200	Summer night cooling: Stop temperature	200 → 20.0C
	538	bin	R/W	0..1	0	Inspection lighting: Enable/Disable	
	539	bin	R/W	0..1	0	Additional zone 1: Enable/Disable	
	540	int	R/W	–400..400	210	Additional zone 1: Setpoint	200 → 20,0C
	541	bin	R/W	0..1	0	Additional zone 2: Enable/Disable	
	542	int	R/W	–400..400	210	Additional zone 2: Setpoint	200 → 20,0C

Modbus register		Data				Description	Data values
		Type	Access	Range	Default		
Reset	900	bin	R/W		0	Modes reset to default	b4-Special, b3-Economy2, b2-Economy1, b1-Comfort2, b0-Comfort1
	901	bin	R/W		0	Functions reset to default	b9-ZN2, b8-ZN1, b7-HUM, b6-REC, b5-OOD, b4-SNC, b3-OVR, b2- MTC, b1-OCV,b0-AQC
	902	bin	R/W		0	Settings reset to default	b3-485_Config, b2-IP+Mask, b1-Flow_mode, b0-Temp_mode

	Modbus register	Data				Description	Data values
		Type	Access	Range	Default		
Alarms	**1000**	int	R/W	0..10	-	Active alarms count	Writing 0×99C5 – Active alarms reset and restore previous mode
	1001	he×	R	-	0	Active alarm 1 code (newest)	
	1002	he×	R	-	0	Active alarm 2 code	
	1003	he×	R	-		Active alarm 3 code	
	1004	he×	R	-		Active alarm 4 code	
	1005	he×	R	-		Active alarm 5 code	
	1006	he×	R	-		Active alarm 6 code	
	1007	he×	R	-		Active alarm 7 code	
	1008	he×	R	-		Active alarm 8 code	
	1009	he×	R	-		Active alarm 9 code	
	1010	he×	R	-		Active alarm 10 code	
	1100	int	R	0..50	-	Alarm history count	
	1101	int	R	2010..2250	-	Alarm1(newest) year	
	1102	int8×2	R	01.01–12.31	-	Alarm1(newest) month-day	0×020C → Feb12
	1103	int8×2	R	0:00–23:59	-	Alarm1(newest) time	0×0805 → 8:05
	1104	int	R	0..59	-	Alarm1(newest) seconds	
	1105	he×	R	-		Alarm1(newest) code	4B → 0×0104
	…	…	…	…	…	…	…
	1346	int	R	2010..2250	-	Alarm50 year	
	1347	int8×2	R	01.01…12.31	-	Alarm50 month-day	0×020C → Feb12
	1348	int8×2	R	0:00…23:59	-	Alarm50 time	0×0805 → 8:05
	1349	int	R	0..59	-	Alarm50 seconds	
	1350	he×	R	-		Alarm50 code	4B → 0×0104

	Modbus register	Data				Description	Data values
		Type	Access	Range	Default		
Monitoring Data	**2000**	int	R	0–2	-	C5 Start/Stop current status	0-Stop, 1-Enabled but fans are stopped, 2-Running
	2001	int	R	0–5	0	Current mode	0-Standby, 1-Comfort1, 2-Comfort2, 3-Economy1, 4-Economy2, 5-Special, 100-On
	2002–2003	int	R	-	-	Current supply flow	3500 → 3500 m^3/h, 3.500 m^3/s, 3500 l/s
	2004–2005	int	R	-	-	Current Extract flow	3500 → 3500 m^3/h, 3.500 m^3/s, 3500 l/s
	2006	int	R	–500..1200	-	Current supply temp., C	250 → 25.0C
	2007	int	R	–500..1200	-	Current Extract temp., C	250 → 25.0C
	2008	int	R	–500..1200	-	Current outdoor temp., C	250 → 25.0C
	2009	int	R	–500..1200	-	Current Exhaust temp., C	250 → 25.0C
	2010	int	R	–500..1200	-	Current return water temp., C	250 → 25.0C
	2011	int	R	0..1000	-	Supply air pressure	
	2012	int	R	0..1000	-	Extract air pressure	
	2013	int	R	0..4	-	Air quality sensor type	0-CO2, 1-VOCq, 2-VOCp, 3-RH, 4-TMP
	2014	int	R	0..2000	-	Current air quality level	CO2: 0..2000 ppm, VOC: 0..1000 (0..100 %), RH: 0..1000 (0..100 %), TMP: 0..500 (0..50C)
	2015	int		0..1000		Current supply air humidity	157 → 15.7 %
	2016	int	R	0..1000	-	Water heater level	
	2017	int	R	0..1000	-	Water cooler level	
	2018	int	R	–1000..1000	-	Humidity control level	–500 → Dehumidifying level 50 %, 800 → Humidifying level 80 %
	2019	int	R	0..1000	-	Heat exchanger level	
	2020	int	R	0..1000	-	Recirculation level	
	2021	int	R	0..1000	-	Supply fan level	
	2022	int	R	0..1000	-	Exhaust fan level	
	2023	int	R	0..1000	-	Outdoor air damper actuator level	
	2024	int	R	0..1000	-	Exhaust air damper actuator level	
	2025	int	R	0..1000		Electric heater level	
	2026	int	R	–1000..1000	-	Heat pump level	
	2027	int	R	–1000..1000		DX level	
	2028	bin	R	0..1	-	OVR input	
	2029	bin	R	0..1	-	Fire system input	
	2030	bin	R	0..1	-	External stop input	
	2031	bin	R	0..1	-	Control input	
	2032	int	R	50..400	-	Current temp. setpoint, C	250 → 25.0C

Modbus register		Data				Description	Data values
		Type	Access	Range	Default		
Monitoring Data	**2033**	int				Current supply air temp. setpoint, C	250 → 25.0C
	2034	bin	R	50..400	-	Water heater pump	
	2035	bin	R	0..1	-	Water cooler pump	
	2036–2037	int	R	0..1	-	Current supply flow setpoint	3500 → 3500 m^3/h, 3.500 m^3/s, 3500 l/s
	2038–2039	int	R	-	-	Current Extract flow setpoint	3500 → 3500 m^3/h, 3.500 m^3/s, 3500 l/s
	2200	bin	R	-	-	Counters/efficiencies configuration	b8-Exhaust fan units (0-h, 1-kWh), b7-Supply fan units (0-h, 1-kWh), b6-Exhaust fan counter, b5-Heater counter, b4-Extract filter, b3-Outdoor filter, b2-Exhaust SFP, b1-Supply SFP, b0-HX efficiency (0-Unavailable, 1-Available)
	2201	int			-	Heat exchanger thermal efficiency, %	255 – Unavailable
	2202	int			-	Energy saving, %	255 – Unavailable
	2203–2204	int	R	-	-	Heat exchanger recovery, W	2500 → 2.5 kW (0×FFFFFFFF – Unavailable)
	2205	int			-	Supply SFP	125 → 1.25
	2206	int	R	0..100, 255	-	Exhaust SFP	125 → 1.25
	2207	int	R	0..100, 255	-	Outdoor air filter impurity level, %	
	2208	int	R	-	-	Exhaust air filter impurity level, %	
	2209–2210	int	R	-	-	Air heater operation, hours	
	2211–2212	int	R	-	-	Supply fan operation, hours or kWh	
	2213–2214	int	R	0..50.000.00	-	Exhaust fan operation, hours or kWh	
	2215	int	R	0..100	-	Current supply fan power, W	
	2216	int	R	0..65535	-	Current Exhaust fan power, W	
	2217	int	R	0..65535	-	Active functions	b5-OOD,b4-AQC,b3-SNC,b2-MTC,b1-OVR,b0-OCV
	2218–2219	int	R	-	-	Air cooler operation, hours	
	2220–2221	int	R	0..1.000.000	-	Heat exchanger operation, kWh	
	2222–2223	int	R	0..4.000.000	-	Air heater operation, kWh	b5-OOD,b4-AQC,b3-SNC,b2-MTC,b1-OVR,b0-OCV

Modbus register		Data				Description	Data values
		Type	Access	Range	Default		
Services	**18000**	int	R/W	0	-	User password reset	Write 0×99C5 to reset
	18001	int	R/W	0	-	User settings reset	Write 0×99C5 to reset
	18002	int	R/W	0	-	Clean air filters calibration	Write 0×99C5 to start calibration
	18003	int	R/W	0	-	Counters reset	Write 0×??C5 to reset, ?? → b4-Heat exchanger, b3-Air cooler, b2-Exhaust fan, b1-Supply fan, b0-Air heater (1 - Reset). 0×01C5 → Reset air heater counter only, 0×07C5 → Reset both fans and air heater counters
	18004	int	R	0..9999	-	Controller firmware version	

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