

Optiflexiot

Advanced energy optimisation

The Ouman Optiflexiot is a product developed for energy optimization in electrically heated properties. The device uses electricity spot prices and weather forecasts, leveraging smart and advanced algorithms that generate predictions for future heating needs. Thanks to these forecasts, the most cost-effective hours for heating can be selected, significantly reducing heating costs. Heat can be stored in advance during cheaper hours, ensuring that heating is not needed during more expensive hours.



TECHNICAL SPECIFICATIONS

Product code	OMA0680
Dimensions	width 213,5 mm, height 97,5 mm, depth 100,5 mm
Weight	0.7 kg
Protection class	IP 20
Operating temperature	0 °C...+40 °C
Storing temperature	-20 °C...+70 °C
Power supply	24 Vac, 50 Hz (22 Vac - 33 Vac)
Operating voltage	(15 Vdc output = if not connected) 13 VA
Power requirement	(15 Vdc output = 750 mA) 34 VA In addition, the operating voltage of 24 Vac and the power requirement of the Triac outputs must be taken into attention.
Backup input	12 Vdc
Current consumption	500 mA / 6 W (relays in use) (in addition, the load of the 15 vdc output and the voltage drop must be taken into account)
Universal measurement input (can be configured) measurement types and measurements accuracy:	
Passive sensors (inputs 1...13)	- NTC10: $\pm 0,3$ °C between -20 °C...+130 °C, $\pm 1,0$ °C between -50°C...-20 °C - NTC 1.8 ja NTC 2.2: $\pm 0,4$ °C between -50 °C...+100 °C, $\pm 0,6$ °C between +100°C...+130 °C - NTC 20: $\pm 2,0$ °C between -50°C...-20 °C, $\pm 0,6$ °C between -20 °C...+130 °C - Ni1000LG, Ni1000/DIN and Pt1000: $\pm 0,3$ °C between -50 °C...+130 °C Also sensor tolerances and the effect of cables must be considered when calculating total accuracy.
Active sensors (inputs 1...16)	0...10 V voltage message, meas. accuracy $\pm 0,1$ mV Milliamp signal 0/4 to 20 mA with 250 Ω or 500 Ω shunt resistor. Accuracy 250 Ω : $\pm 0,2$ mA (measuring range 0/1 to 5 Vdc). Accuracy 500 Ω $\pm 1,3$ mA (measuring range 0/2 - 10 Vdc) In addition, the parallel resistance tolerance must be taken into account.
Contact information (inputs 1...16)	Contact voltage 3,3 Vdc. Contact current 1 mA Contact resistance max 1,9 k Ω (closed), min 50 k Ω (open)
Counter inputs (inputs 13...16)	Minimum pulse length 30 ms
Digital input measurement types:	
Contact information (inputs 21 and 22)	Contact voltage 15 Vdc. Contact current 1,5 mA Contact resistance max 500 Ω (closed), min 2 k Ω (open)
Counter inputs (inputs 21...22)	Minimum pulse length 30 ms

Analog outputs (61...66)	Output voltage range 0...10 V. Output current max 9 mA/output.
Relay output	
Change-over contact relay (71...76)	2 pcs, 230 V, resistive 5 A/ inductive 1A (cos Ø -0.8)
Normally open contact relay (77...84)	4 pcs, 230 V, resistive 5 A/ inductive 1A (cos Ø -0.8)
Triac outputs	
24 Vac (42...43 and )	Output current max 0,75 A per triac par
24 Vac (44...45 and )	Output current max 0,75 A per triac par
Operating voltage outputs	
5 pcs 24 Vac outputs (41 and )	Output current max 0,75 A/output
15 Vdc output (93 and )	Output current max 600 mA
Data transfer connections	
RS-485 bus (A1 and B1) COM2	Galvanically isolated, supported protocols Modbus-RTU (COM2, Modbus master)
RS-485 bus (A2 and B2) COM3	Galvanically isolated, supported protocols Modbus-RTU (COM3, Modbus slave)
RS-485 bus (RJ45 in the end of device) COM1	Ouflex A and Ouflex A XL: Non-isolated Modbus-RTU-master bus with fixed settings. Compatible with FLEX EXU: A3/B3.
RS-485 bus (RJ45 in the end of device) COM5	In Ouflex A XL: Galvanically isolated parameterizable Modbus-RTU-master bus.
USB-host connection	RS-232-modem, Ouman GSM modem
Ethernet	Full-duplex 10/100 Mbit/s, supported protocols Modbus-TCP/IP
Ouman Access	Intelligent remote connection built-in for use with Ounet and Ouflex Tool
Processor	Cortex-At 528 MHZ
SDRAM	512 MB
FLASH	512 MB
Standards	
Low voltage directive	2014/35/EU
EMC-directive	2014/30/EU
RoHS-directive	2011/65/EU+2015/863/EU
The following harmonised standards and technical specifications have been applied:	
EMC Emission	EN 61000-6-1:2016 (IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-11)
EMC Immunity	EN 61000-6-3:2020 (EN55022B)