

OUMAN OUFLEX

Freely programmable automation system

TECHNICAL INFORMATION



www.ouman.fi

Key, Belimo hole diameter increased. Changes marked with 'A'

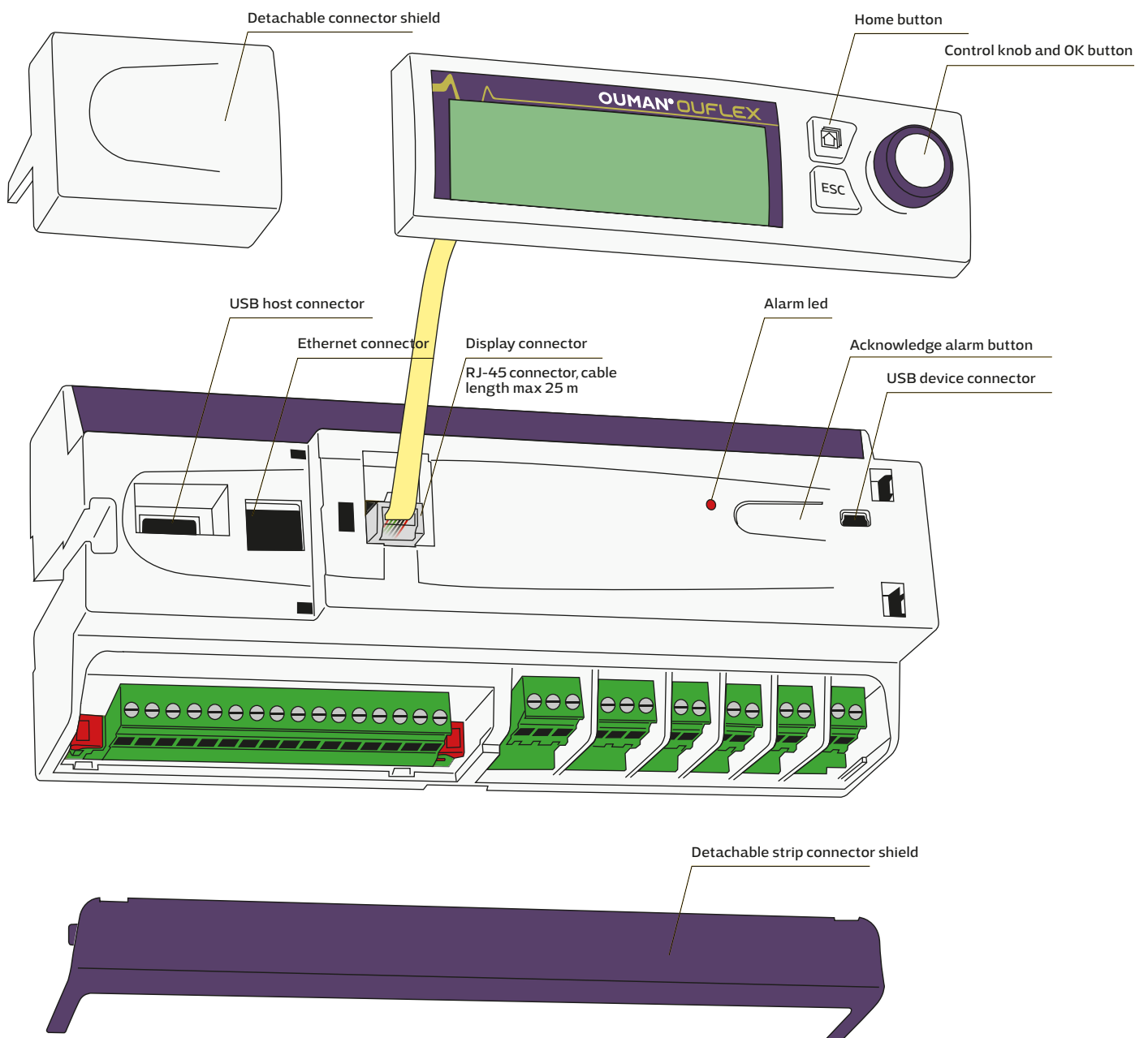
4.6.2010

TaKo

MATERIAL
ABS+PC
GENERAL TOLERANCE

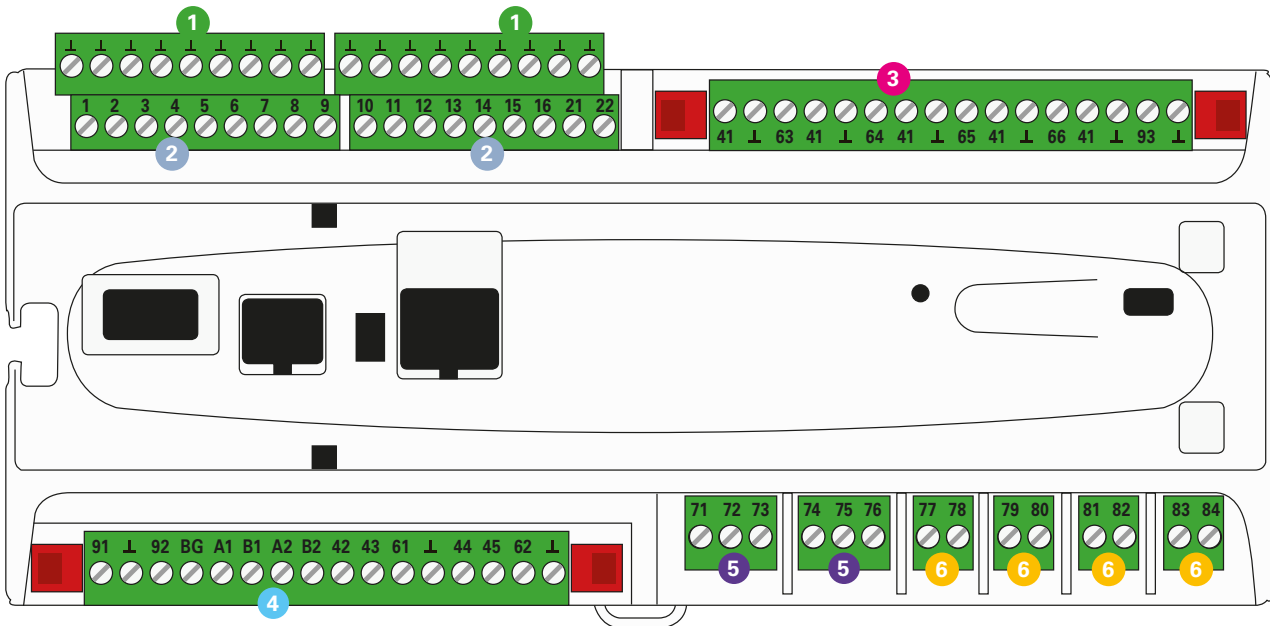
General description

Ouflex is a freely programmable and DIN-rail-attachable building automation system for control and monitoring. Ouflex includes 34 I/O-points, and also versatile data transfer and field bus connections. In addition, the device contains 24 Vac and 15 Vdc outputs. Display unit is detachable, and can be relocated. It is possible to increase the number of I/O-points with external I/O-modules via bus connections. The DIN-standard-compatible structure of the Ouflex device enables installation to most common cabinets. Detachable strip connectors make installation easier.



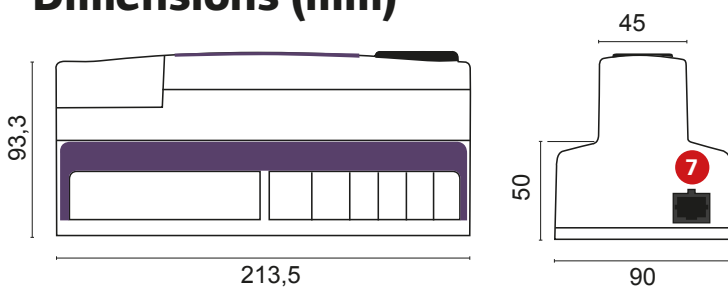
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- 1** Detachable strip connectors (measurements' ground)
Connector labels
┴...┴ Measurements' ground (16pcs)
- 2** Detachable strip connectors (universal measurement, digital and pulse counter inputs)
Connector markings:
1...12 Universal input
13...16 Universal input, pulse counter input
21...22 Digital input, pulse counter input
- 3** Detachable strip connector (operation voltage and outputs)
Connector markings:
41 24 Vac operating voltage output
┴ GND
63 0...10 V output
41 24 Vac operating voltage output
┴ GND
64 0...10 V output
41 24 Vac operating voltage output
┴ GND
65 0...10 V output
41 24 Vac operating voltage output
┴ GND
66 0...10 V output
41 24 Vac operating voltage output
┴ GND
93 15 Vdc operating voltage output
┴ GND
- 4** Detachable strip connectors (power supply, battery backup, RS-485 bus connections, outputs)
Connector markings:
91 24 Vac power supply
┴ GND
92 12 Vdc backup voltage input
BG RS-485 bus isolated ground
A1 and B1 RS-485 bus connection
A2 and B2 RS-485 bus connection
42 and 43 24 Vac output (Triac or continuous 24 Vac)
61 0...10 V output
┴ GND
44 and 45 24 Vac output (Triac or continuous 24 Vac)
62 0...10 V output
┴ GND
- 5** Detachable strip connectors (Change-over contact relays max 230 Vac, 6 A)
Connector markings:
71 Relay 1 NO
72 Relay 1 C
73 Relay 1 NC
74 Relay 2 NO
75 Relay 2 C
76 Relay 2 NC
- 6** Detachable strip connectors (relays with normally open contact max 230 Vac, 6 A)
Connector markings:
77 Relay 3 NO
78 Relay 3 C
79 Relay 4 NO
80 Relay 4 C
81 Relay 5 NO
82 Relay 5 C
83 Relay 6 NO
84 Relay 6 C

Dimensions (mm)



- 7** I/O extension connector
I/O extension modules can be connected to the Ouflex device with a male-to-male RJ45 adapter or an RJ45 cable.

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Technical information

Protection class	IP20
Operating temperature	0 °C...+40 °C
Storing temperature	-20 °C...+70 °C
Power supply	
Operating voltage	24 Vac, 50 Hz (22 Vac - 33 Vac)
Power required	(15 Vdc output = 0 A) 13 VA (15 Vdc output = 750 mA) 34 VA Notice! Please consider 24 Vac operating voltage and power required for Triac outputs.
Backup input	12 Vdc
Current consumption	300 mA/3,6W (relays not in use), 400mA /4,8W (relays in use)
Universal measurement input (can be configured) measurement types:	
Passive sensors (inputs 1...16)	Measurement channel accuracy: - NTC10 element: +0,1°C between -50 °C...+100 °C, 0,25 °C between +100 °C...+130 °C - Ni1000 element: +1,0 °C between -50 °C...+130 °C - PT1000 element: +1,0 °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 1 mV Milliampere signal with shunt resistor 0/4-20 mA
Contact information (inputs 1...16)	Contact voltage 5 Vdc Contact current 0,5 mA Contact resistance max 1,9 kΩ (closed), min 11 kΩ (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 1,6 kΩ (open)
Counter inputs (inputs 21...22)	Minimum pulse length 30 ms
Analog outputs (61...66)	Output voltage range 0...10 V Output current max 10 mA/output
Relay outputs	
Change-over contact relay (71...76)	2 pcs 230 V, 6 A
Normally open contact relay(77...84)	4 pcs 230 V, 6 A
Triac outputs	
24 Vac (42 and 43)	Output current together max 1 A
24 Vac (44 and 45)	Output current together max 1 A
Operating voltage outputs	
5 pcs 24 Vac outputs (41)	Output current max 1 A/output
15 Vdc output	Output current max 750 mA
Data transfer connections	
RS-485 bus (A1 and B1)	Galvanically isolated, supported protocols Modbus-RTU
RS-485 bus (A2 and B2)	Galvanically isolated, supported protocols Modbus-RTU
USB host connection	RS-232-modem (GSMMOD6)
USB device connection	
Ethernet	Full-duplex 10/100 Mbit/s, supported protocols Modbus-TCP/IP
Extension units	
FLEX COMBI 32	32 I/O points: - 16 pcs universal measurement inputs - 6 pcs 0-10 V universal outputs - 6 relay outputs (2 with change-over contact, 4 with normally open contact) - 4 pcs 24 Vac Triac outputs Operating voltage outputs: - 5 pcs 24Vac outputs and a 15 Vdc output
FLEX COMBI 21	21 I/O points: - 9 universal measurement inputs - 2 pcs 0-10 V universal outputs - 6 relay outputs (2 with change-over contact, 4 with normally open contact) - 4 pcs 24 Vac Triac outputs
FLEX UI-16	16 universal measurement inputs Operating voltage outputs: - 5 pcs 24Vac outputs and a 15 Vdc output
FLEX-EXU	Interface card for modem and local I/O extension - unisolated RS-485 bus, supported protocols Modbus-RTU - USB host connection for GSMMOD6 modem - 15 Vdc voltage output, max 750 mA (total capacity together with the Ouflex device) - 15 Vdc voltage output (strip connector 93)

We reserve the right to make changes to our products without a special notice.

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