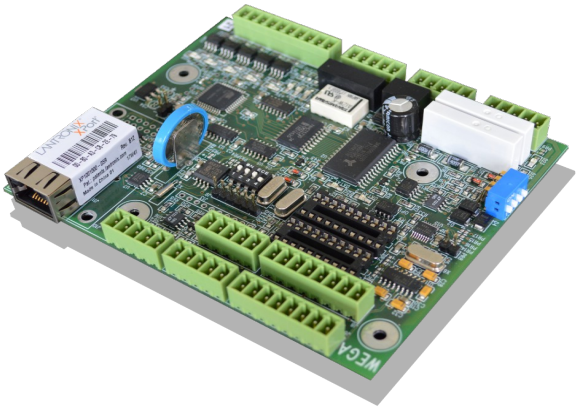
Control unit WBox_Rn-IP

This control unit is used for connection into the WIS access system. Its construction makes it designated for installation into the lower ceiling with an ability to connect two reading units. It supports the WIEGAND, I2C or RS 232 interfaces of the connected reading units. It is equipped with a controlling microprocessor x51 and two subordinate processors which ensure communication with external reader heads. When it comes to operation, it can work in an online mode, with the ability to switch offline in case communication problems appear.



Versions of the control unit WBox_R

WIST0213-IP	**Control unit WBox_R IP 65**	Plastic cover, IP 65 box

Functional options

Allowed cards chart capacity	5445 records, RAM backed up by accumulator
Chart of passages capacity	6556 records, RAM backed up by accumulator
Passage without giving a reason, automatic arrival/departure switching	Option of processing way – save/don't save the passage, open/close the door, set passage code, 8 switching times (hour, minute)
Passage time	Day, month, year, hour, minute, second, interruption code
Interruption codes	4 groups (arrival or departure, arrival, departure, system reports, each can contain 16384 different interruption codes
System reports	EZS activation, cover removal, door locking, PIN input error, quiet alarm, passage without opening the door, unproper door closing, opening the door by the key....
ONLINE watch of events	Option of ONLINE observing all events generated by the reader unit
Automatic door opening	8 time intervals of open doors (interval validity according to the weekday or calendar, hour and minute beginning and interval end)

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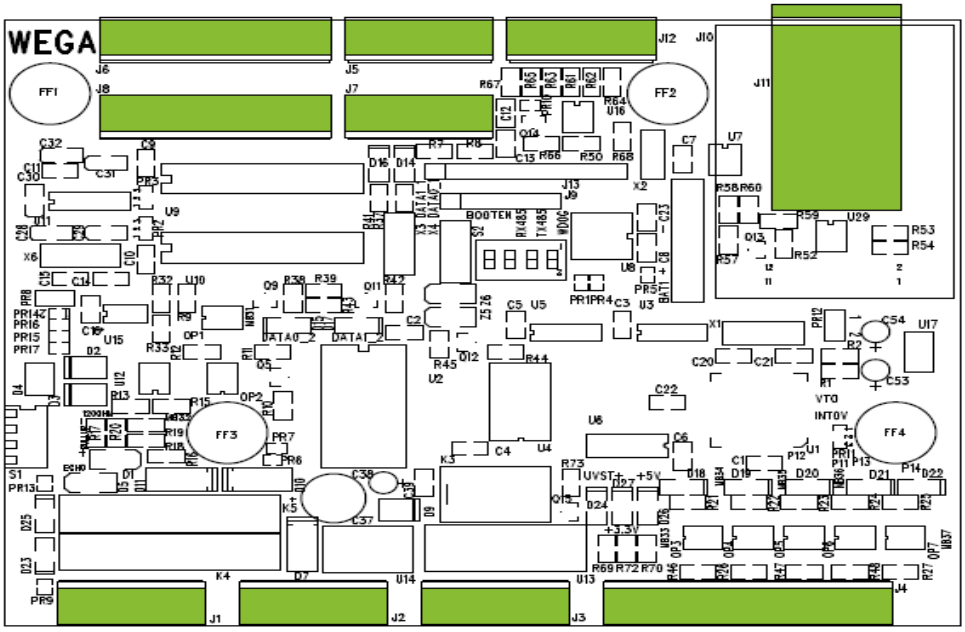
Time zones	31 time zones defined as a set of 1-32 time intervals, days of validity according to the weekday or work calendar
ON LINE terminal control from PC	Door opening, unit passage blocking

Technical parameters

Dimensions	195mm x 150 mm x 80 mm
Weight	400g
Voltage/Power supply	9-14 V DC
Max. consumption	150 mA
Data memory	SRAM 128 kB backed up by internal battery
Galvanic separation	Only bus RS 485
Communication interface	RS 485 / RS 232
Signalization	2x LED, 1x Buzzer
Number of all or nothing relays	2
Type of contacts	Choice between NO or NC
Max. switching power	50 W
Max. switched current	1 A DC
Inputs	4
Number of reading heads	1 or 2
Interface of connected reading heads	I2C, WIEGAND, RS 232
Display	no
Range of working temperatures	-25 ¸ +50ºC
IP coverage	IP 41, option to additionally purchase IP 65 version

Description of connectors



Connector	Pin	Meaning
J1	1	Contact relay 2 NO
	2	Contact relay 2 Common
	3	Contact relay 2 NC
	4	+ 12 VDC
	5	0 V
J2	1	Contact relay 1 NO
	2	Contact relay 1 Common
	3	Contact relay 1 C
	4	+ 12 VDC
	5	0 V
J3	1	GND ISO
	2	RS485 -
	3	RS 485 +
	4	0 V
	5	+ 12 V DC
J4	1	Input external sensor
	2	Input external sensor
	3	Input contact EZS
	4	Input contact EZS
	5	Input sensor of door locking
	6	Input sensor of door locking
	7	Input sensor of door opening
	8	Input sensor of door locking
	9	Input external button
	10	Input external button
J12	1	GND ISO
	2	RS485 - 2
	3	RS 485 + 2
	4	0 V
	5	+ 12 V DC

Connector	Pin	Meaning
J6	1	Rxd RS 232 1. reader head
	2	Txd RS 232 1. reader head
	3	DATA1 Wiegand 1. reader head
	4	DATA0 Wiegand 1 reader head
	5	Out – Output
	6	Red LED activ.log0
	7	Green LED activ.log. 0
	8	Buzzer activ.log. 0
J2	1	+ 5 V DC - feed 1. head
	2	+12 V DC - feed 1. head
	3	0 V
	4	SDA - I2C data 1. head
	5	SCLK - I2C clock 1. head
J3	1	Rxd RS 232 2. reader head
	2	Txd RS 232 2. reader head
	3	DATA1 Wiegand 2. reader head
	4	DATA0 Wiegand 2 reader head
	5	Out – Output
	6	Red LED activ.log0
	7	Green LED activ.log. 0
	8	Buzzer activ.log. 0
J4	1	+ 5 V DC - feed 2. head
	2	+12 V DC - feed 2. head
	3	0 V
	4	SDA - I2C data 2. head
	5	SCLK - I2C clock 2. head
J11	Ethernet 10/100 MB	

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Parameters of used TCP/OIP converter

Serial interface	CMOS (Asynchronous, 5 V tolerance)
Data rates	300 bps to 921 600 bps
Characters	7 or 8 data bits
Parity	odd, even, none
Stop Bits	1 or 2
Control signals	DTR/DCD, CTS, RTS
Flow Control	XON/XOFF, RTS/CTS
Programmable I/O	3 PIO pins (pick in SW)
Network interface	Ethernet 10Base-T or 100Base-TX (Auto-Sensing)
Connector	RJ45
Indicators (LED)	10Base-T connection
	100Base-TX connection
Link & activity indicator	Full/half duplex
Management	SNMP, Telnet, serial, internal Web server, Microsoft windows® based utility with settings
Security	Password protected

Bus RS 485

DIP switch	Meaning in ON state
Echo	Automatic recieve on
PullUp+	Line hold – pull up
PullDown-	Line hold – pull down
Terminator 120 Ω	End of bus integrated

While connecting the control unit to the RS 485 bus take care of impedance balance of the line, the 120 Ω must be connected at the beginning and the furthest connection point of the bus.
The terminators PullUp and PullDown of the link must be connected only to one of the connected devices on the RS 485 bus.

Inputs/Outputs

The control unit contains predefined inputs and outputs. Their function is apparent from the connector description J4. The active state of the inputs is given by the configuration of the control unit, and configuration can only be done from the configuration utility.
While using the outputs (relay contacts) and controlling the charge of an inductive character the contacts must be connected correctly to the control unit. **The positive pole of the controlled charge always must be connected to the NO or NC contacts.** While controlling the electromagnetic locks the safety diode must be connected in reverse direction.