SWINGCONTROL
MONITORING UNIT

Technical Brochure

Jeven

CONTENT

PRODUCT DESCRIPTION

SwingControl monitoring unit has been developed to indicate potential problems in the operation of the TurboSwing equipment. SwingControl produces an immediate alert upon failure. TurboSwing equipment failures can be identified locally or the building automation system may be notified.

SwingControl units are made for 1-10 or 1-20 TurboSwings.

JEVEN FLOW APPLICATION

Jeven Flow application can be connected with your SwingControl monitoring unit to see the status information of TurboSwing units.

FUNCTION

SwingControl monitors TurboSwing motors rotation speed. Rotation speed can be selected between 750 and 1100 rpm. The unit gives an alarm if TurboSwing's motor rotation speed falls below 200 rpm.

The status information of the TurboSwing equipment is always displayed also on the LED screen of SwingControl monitoring unit.

SwingControl supports the standard Modbus TCP/IP interface with which the monitoring unit can be attached to the building's automation system over the local area network.

SwingControl also includes potential free NO relay.

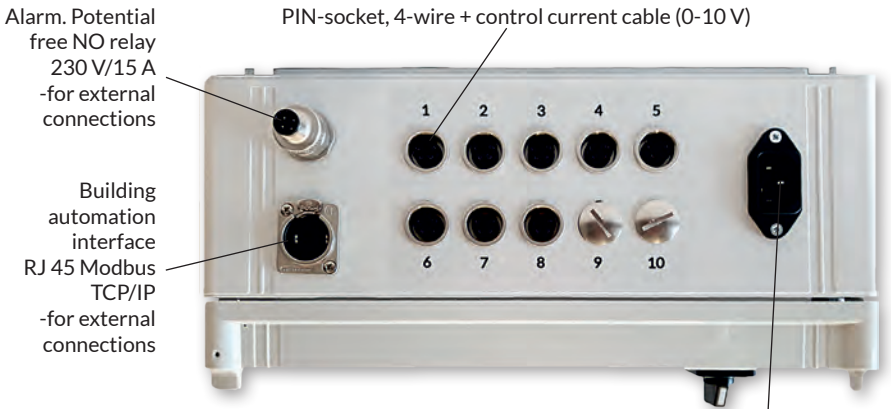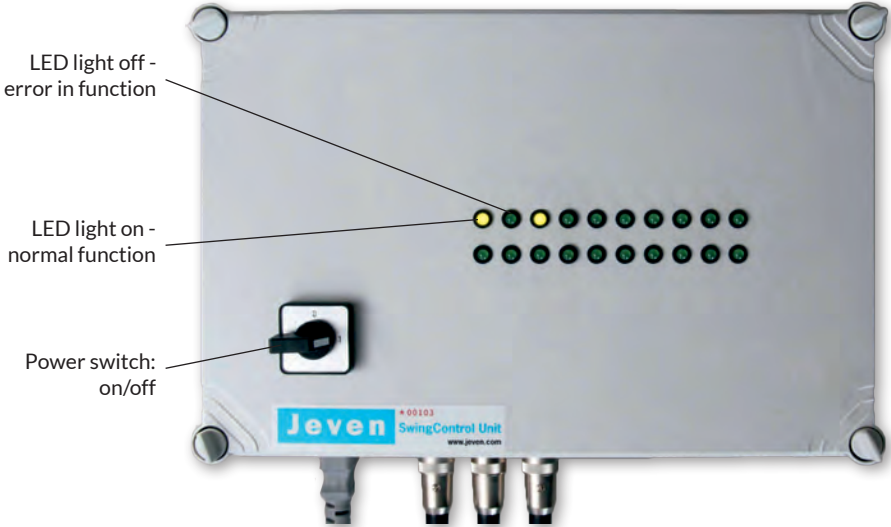SwingControl for 10 TurboSwings

PRODUCT CODE

JSI - R- Turbo - 3000 x 2600 x 540 - 6 x 250 - 5 x 315 + 750 l/s - 850 l/s - SC

SC=SwingControl

PARTS

Three TurboSwings connected to SwingControl unit.

LED light off -
error in function

LED light on -
normal function

Power switch:
on/off

Alarm. Potential
free NO relay
230 V/15 A
-for external
connections

PIN-socket, 4-wire + control current cable (0-10 V)

Building
automation
interface
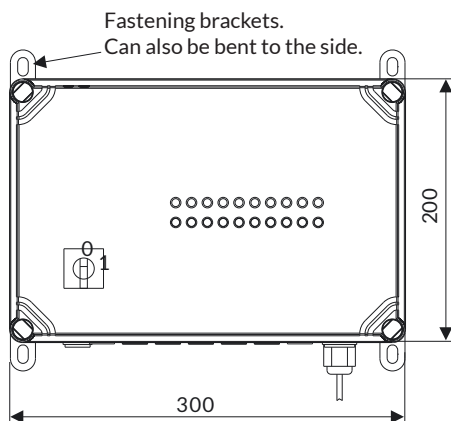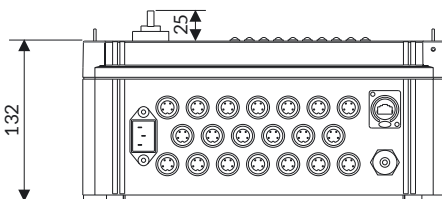RJ 45 Modbus
TCP/IP
-for external
connections

Female plug connector for relay
alarm. 4-pin, Binder series 713,
type 99 0430 14 04

Power connector (230 V, 10 A)
Cable length 2 metres

4

DIMENSIONS

160

230
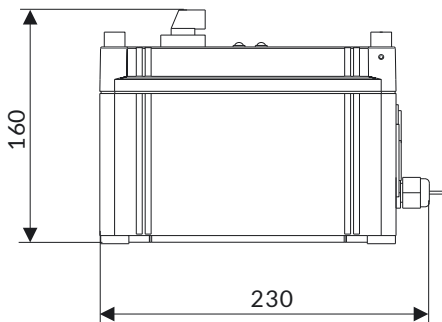
The box is made of polycarbonate
Standard EU62208,GOST.
Impact resistance IK 08.

25

132

Fastening brackets.
Can also be bent to the side.

0
1

200

300

CHANGING THE ROTATION SPEED OF TURBOSWING MOTOR

Open the cover of the monitoring unit and change the position of the dip switches.

ON position
rotation speed is 1100 rpm.

OFF position
rotation speed is 750 rpm.

Rotation speed is chosen separately for each TurboSwing motor unit.

The factory setting is the rotation speed according to plans.

DELIVERY

Check the delivery receipt for the consignee's name and address. Also inspect that the package is not damaged. When opening the package check the accuracy of the delivery. All defects must be immediately report to Jeven.

SwingControl delivery includes
- monitoring unit
- power cable (2 m)
- fastening brackets (4 pcs)
- relay alarms male plug connector
- installation guide

INSTALLATION

The unit must not be installed in a place where it is exposed to water. The ambient temperature should be below +30° C.

SwingControl monitoring unit can be mounted on a wall or pillar, horizontal or vertical position.
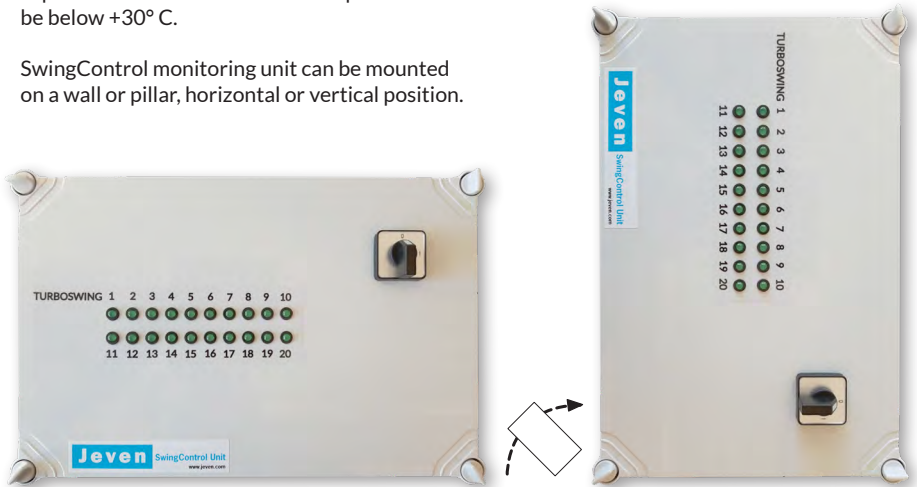
Cables that are on top of the hood, should be untied from cable ties and connected to SwingControl monitoring unit's numbered locations.

Connect monitoring unit to the building's automation system with Modbus TCP/IP interface, or use the Relay connection. Finally, connect the power.
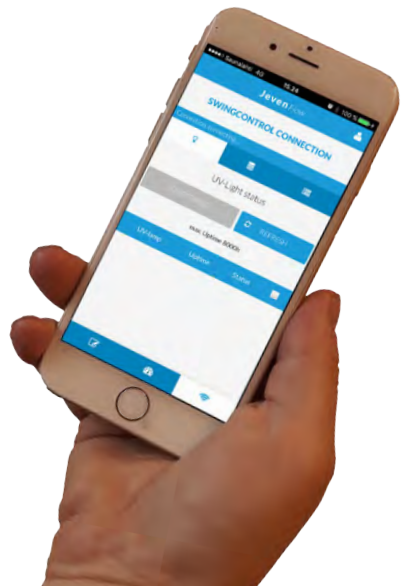
JEVEN FLOW APPLICATION

Jeven Flow can be connected with your SwingControl monitoring unit to see the status information of TurboSwing units.

Connect your phone or tablet using Jeven Flow application to SwingControl monitoring unit.

More information
http://www.jeven.fi/en/downloads
→ Jeven Flow manual

DESIGN GUIDELINES

HVAC designer

The HVAC designer defines the location of SwingControl monitoring unit.

The connection cables, included, will be connected from TurboSwing to SwingControl unit. One unit can monitor up to 20 TurboSwing motors.
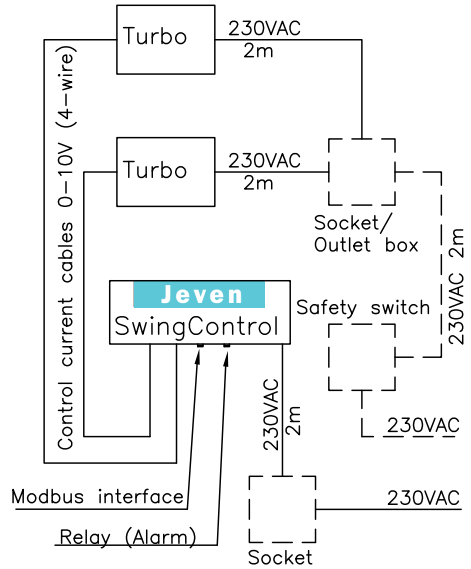
Electrical designer

Electrical designer defines place of safety switch and the necessary socket/outlet box. The alarm information will be obtained by relay or Modbus RJ 45 to the building automation.

The monitoring unit is connected as a separate input to a continuous AC power. The necessary wiring diagrams from the safety switch to the socket/outlet box are also shown in the plans.

The safety switch is mandatory and it must be installed in a visible place, close to TurboSwing.

The safety switch, socket/outlet box and the cables marked with a dashed line are not included.

Alarms

Wires 1-2   error in motors

The safety switch, socket/outlet box and the cables marked with a dashed line are not included.

AUTOMATION CONNECTION RELAY

In SwingControl monitoring unit there is a potential free relay, which provides alarm information to building automation system.

Connection of relay
At least 2-conductor wiring cord from building automation is connected by the Binder (part h) to SwingControl monitoring units relay interface (part d).

Relay alarm is so called general alarm. The LED screen of the SwingControl monitoring unit displays the fault condition unit.

AUTOMATION CONNECTION MODBUS TCP/IP

SwingControl monitoring unit can be connected to the building automation system using the Modbus TCP/IP interface (TCP/IP port 4433). The Modbus interface is available via the Ethernet interface.

The SwingControl monitoring unit uses in the first instance static IP address. If the connected Ethernet network allows automatic IP allocation, DHCP protocol will be used through web interface.

SwingControl uses the following settings:

IP	192.168.0.123
Gateway	192.168.0.1
Netmask	255.255.255.0

SwingControl operates as a so-called Modbus slave device. The current status of each TurboSwing device connected to SwingControl monitoring unit, can be read via the Modbus interface. The registers used by the Modbus interface are listed in the table below.

HOLDING REGISTER

Register	Data type	Meaning
0	-	Not used.
1-20	bool	Real-time connected TurboSwing on/off status information. Also other devices connected to the digital passive inputs of SwingControl are visible in these registers.

Controlling device alarms and building automation interfaces alarm registers are

25-44	bool	The alarm information of the connected TurboSwing device. Determining an alarm SwingControl monitoring unit takes into account the so-called normal operational conditions and seeks to minimize false alarms.

FALSE means that the TurboSwing device is functioning normally.

TRUE means that the TurboSwing device has an error in function. Motor has stopped or rotation speed is less than 200 rpm.

The register number is calculated by adding 24 to the order number of the connected TurboSwing device. For example, the TurboSwing is connected to interface 4, possible alarm information is found from the register number 28.

Example of reading Modbus register by CAS program: Use "Read holding registers" commands. |

CONFIGURING

SwingControl contains built-in tool for configuring device's LAN settings and Modbus TCP/IP port. Configuration tool can be used via standard web browser, such as Internet Explorer, Firefox or Chrome.

Configuration tool is accessible in standard http port of SwingControl device. In order to open configuration tool configurators computer must be configured to the same network as SwingControl.

Computer must be connected to SwingControl via crossover network cable or hub/router.

SwingControl default settings

Default factory settings for SwingControl network are:

IP   192.168.0.123
**Gateway**   192.168.0.1
Netmask   255.255.255.0

Network settings for Windows 7

Windows 7 local settings must be set so, that it is possible to access SwingControl configuration tool. To set up network for this purpose, the following steps need to be taken:
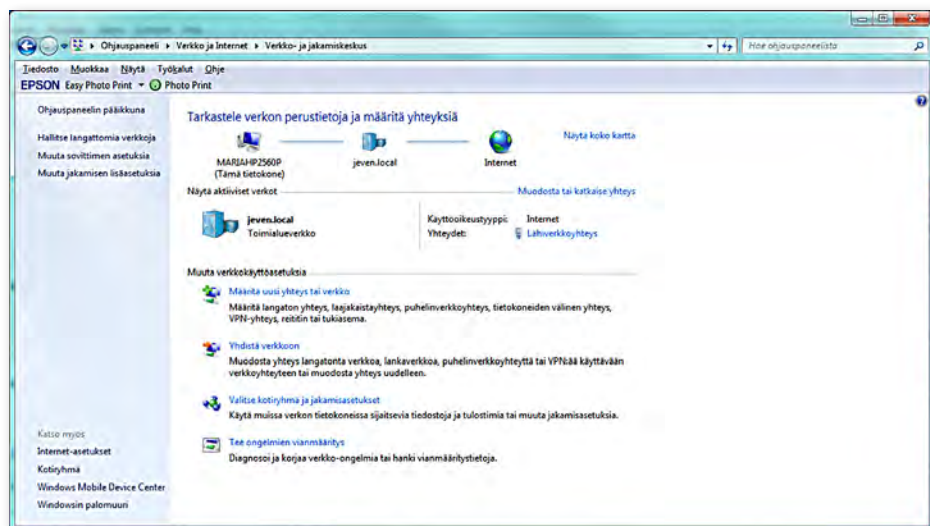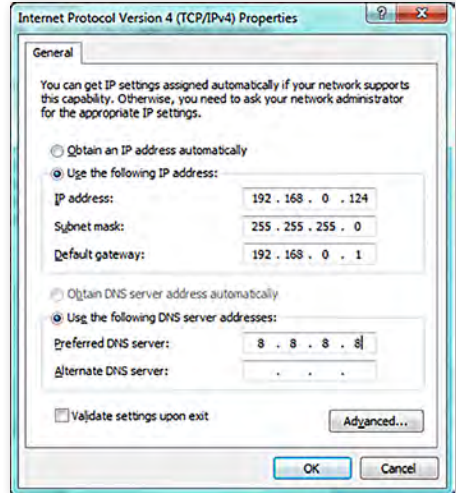

1. Open "Network and Sharing Center".
2. Choose "Local area connection", which will open a dialog named "Local area connection status".
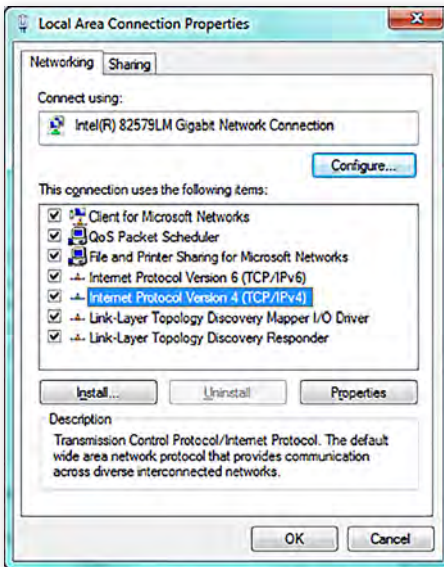
Network settings for Windows 7   Continue...
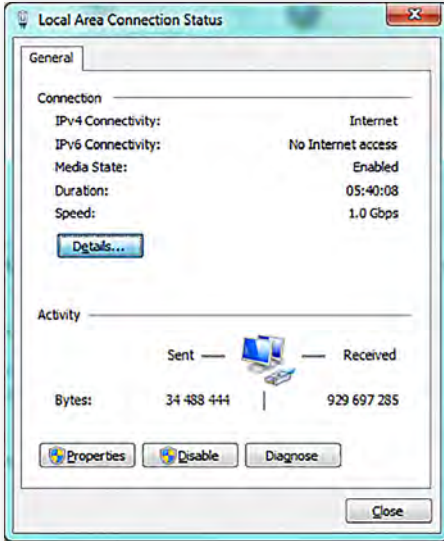
3. Choose "Properties"

4. In "Local area connection properties" choose "Internet Protocol Version 4(TCP/IPv4)" from the list and then choose "Properties".

5. Select "Use the following IP address" and input IP address, subnet mask and default gateway to match the settings of SwingControl.

If you are connecting to SwingControl device that has default factory settings, you can use the values shown in screenshots.

After saving the settings in your computer, provided that network cabling is done correctly, you should be able to open SwingControl configuration panel by pointing your web browser to address "http://192.168.0.123".

CHANGING NETWORK SETTINGS AND MODBUS PORT

From SwingControl configuration tool it is possible to change the device to either use DHCP addressing or static IP address.

1. Point your web browser to SwingControl's current IP address, by default:
http://192.168.0.123

2. Input the following user name and password: "admin", "J3V3NSC"

Authentication Required ✕

The server http://10.100.1.230:80 requires a username and password. The server says: Enter password.

User Name: admin

Password: J3V3NSC

3. Provided the user name and password are correct, configuration panel should open in your browser.

4. You can choose either DHCP or static IP address. If you choose static IP address, you must also provide valid IP address, gateway and netmask that match your network.

5. In modbus settings it is possible to configure SwingControl to use another port than the default 4433.

6. Finally changes are applied by selecting "SAVE/REBOOT". This saves your changes to SwingControl persistence memory and causes a reboot to the device. After reboot, new settings are applied.

NETWORK SETTINGS

○ DHCP

● Static

IP Address: 10.100.1.230
Gateway: 10.100.1.1
Netmask: 255.255.255.0

MODBUS SETTINGS

Modbus port: 4433

SAVE

SAVE/REBOOT

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Please do not hesitate to contact us
if You have any questions concerning
SwingControl unit!

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