# ELKA- Elektronik GmbH

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Subject: Module system e2i

## Module system - e2i

- **e2i** = <u>e</u>asy <u>to</u> integrate – into the architecture
  - into the planning
  - into the project.

LONWORKS®

LONWORKS®-Controller + Module 1 + Module 2 + Module 3 ...
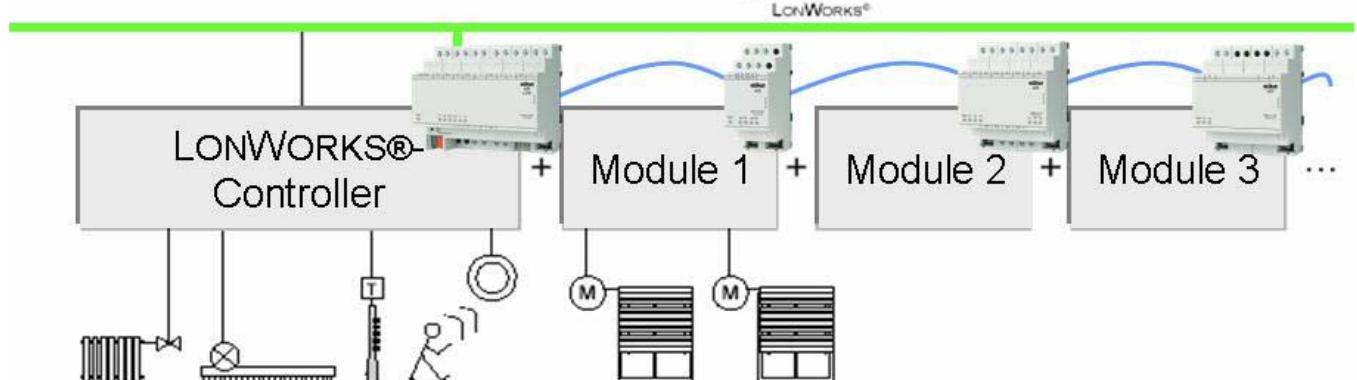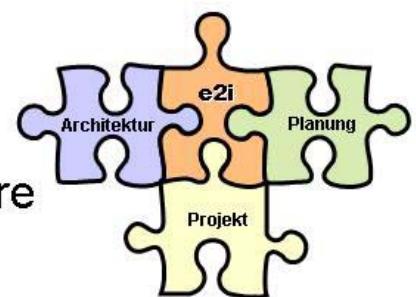
Module system - e2i

- e2i- system consists of one controller (LON or IP) and up to 6 modules.

- All LON-components are developed in accordance to ANSI/EIA-709 resp. EN 14908 and thus guarantee interoperability with products of other manufacturers.

- At LON with the flexible module system can be realized efficiently combinations which are minimizing the quantity of LON nodes.
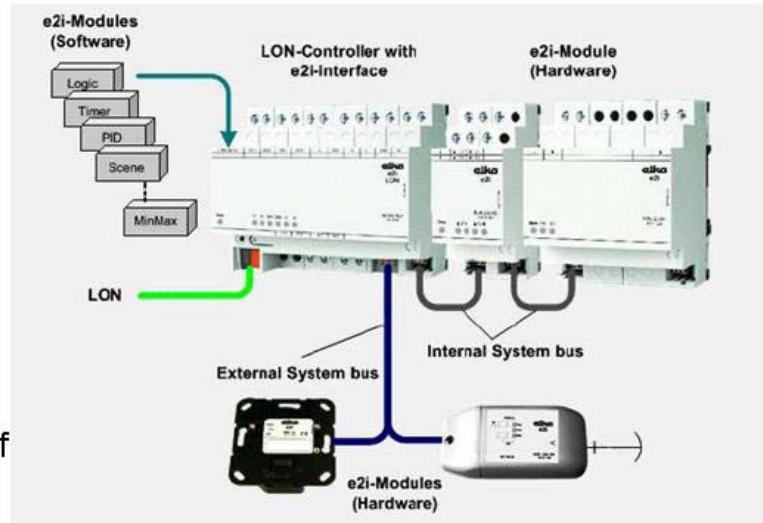
- Easy project planning:
  - Mutable network interface
  - Configuration and parameterisation of the installation is effected via LNS-PlugIn
  - Pre-defined application from a library
  - Combinations of function blocks

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Module system - e2i

e2i

e2i
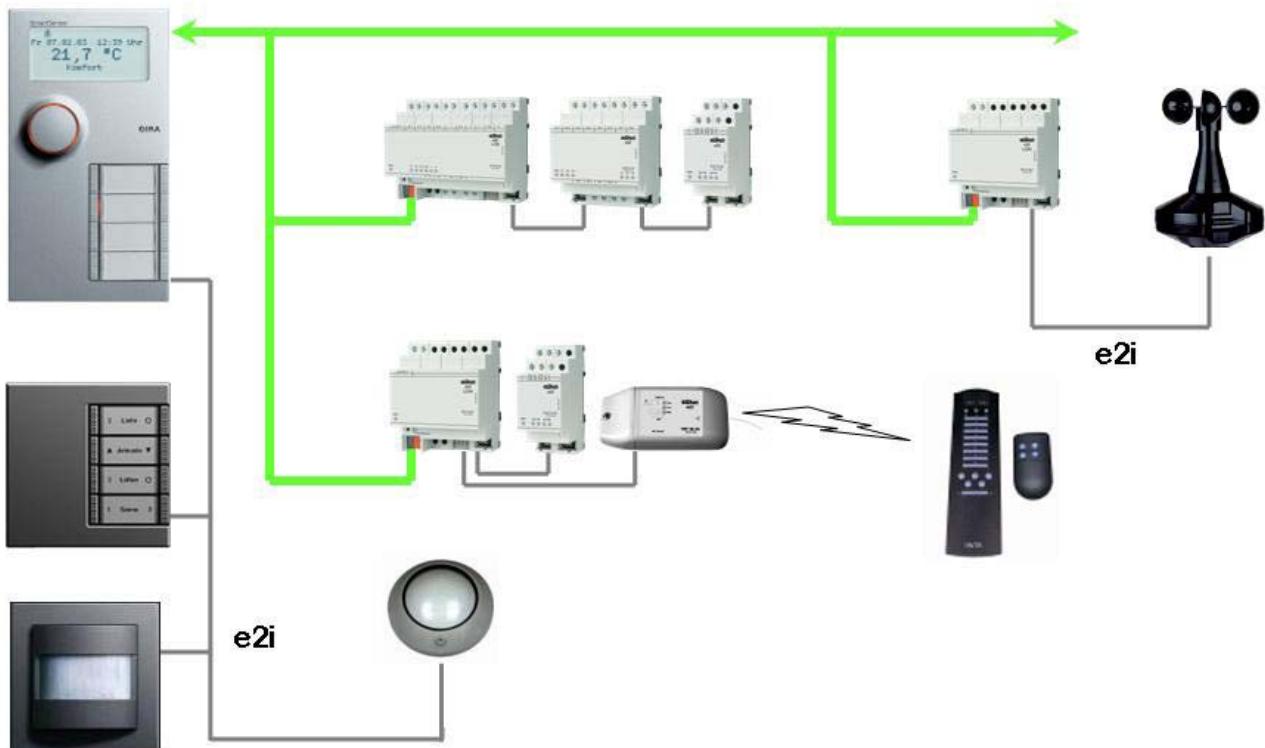
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Basic -controller
BC 10 RLF

- FTT, 230 V
- Basic-device for e2i modules
- Variable network- interface 34/23; 26/31
- Software modules:
  - Logic module
  - Temperature controller
  - Toggle module
  - Scene module
  - Timer module
  - Dimming- ramp- module

- **LNS-PlugIn**

Applikations- controller
AC 101 RLF

- FTT, 230 V
- Basic device for e2i- modules
- 2 bi-stable relay output 16 A
- 2 Digital output 230V
- 2 Digital input 24V

- Otherwise same functions like basic controller BC 10 RLF

- **LNS-PlugIn**

Room control panel SmartSensor RCP 773x ULF ...

- FTT, 24 V AC/DC
- Basic device for e2i- modules
- Double mounting box
- 1…4 rockers
- Navigation knob
- Integrated temperature sensor
- Variable network- interface 26/31

- Otherwise same functions like basic-controller BC 10 RLF

- **LNS-PlugIn**

Relay- module 6-fold ERO 6.16

- e2i- module
- 6 bi-stable relay outputs 16 A
- Switch ON/ OFF delay
- Stair case timer
- State LED's at housing

Digital output 4-fold
EDO 4.230 (230V)

EDO 4.24 (24V)

- e2i- modules
- Each with 4 digital outputs, switching voltage 230V AC and respectively 24V AC
- Max. switching interval 1sec.
- Cable length max. 100m
- Kind of loads: Thermal valve drive, 3-point drive, relay modules, Magnetic valve
- State LED's at housing

e2i – products – outputs

Sunblind- module 2-fold
EJA 2.6 AC

- e2i- module
- 2 mechanical interlocked sunblind channels for 230V motors
- Fixing point function
- Controlling of 1 channel with 24V motors
- State LED's at housing

e2i – products – outputs

Universal- dimming- module EDU 2.350

- e2i- module
- 2 x 350 VA or 1 x 450 VA
- For RC-/ RL loads
- Neutral conductor not neccessary
- Different phase conductors at each channel can be used
- Short circuit and overload protection
- Ramp function for UP- and DOWN dimming
- Memory function
- State LED's at housing

Universal- dimm- power extension ELZ 500U

- Power boosting of EDU 2.350
- Max. power 500 W (R,C), by 10x
- Max. power 350 W (R,L), by 5x

R,L: max. 5
R,C: max. 10

| e2i Universal-Dimmmodul | Universal-Leistungszusatz | Universal-Leistungszusatz |
| e2i Universal dim module | Universal power extention | Universal power extention |
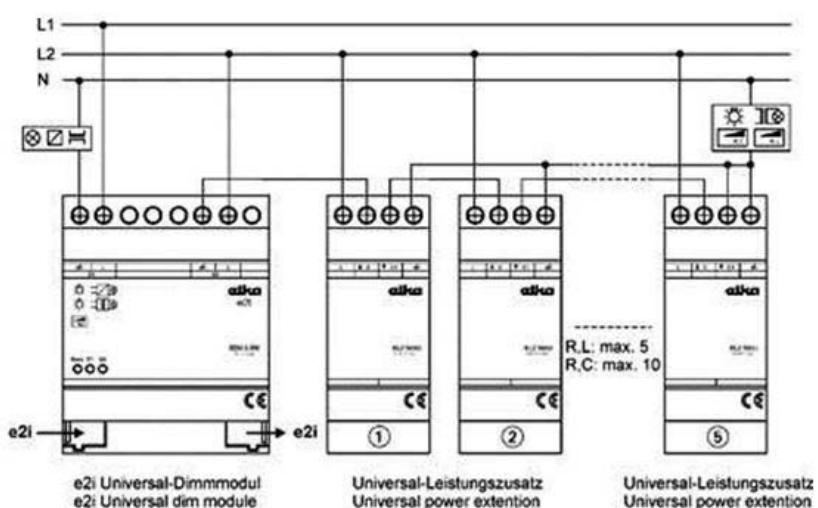
Analogue output- module 4-fold
EAO 4UI

- e2i- module
- 4 analogue current or voltage outputs
- External power supply: 24 V AC/DC
- Supply of sensors 24 V DC from module
- 0...1 V, 0...10 V
- 0...20 mA, 4...20 mA

Digital input- module 4-fold
EDI 4.230 (230V)

EDI 4.24 (24V)

- e2i- module
- 4 Digital inputs 230 V or
- 4 Digital inputs 24 V
- Cable length: max. 50 m
- State LED's at housing

Analogue input- module 4-fold
EAI 4UI

- e2i- module
- 4 analogue current or voltage inputs
- External power supply: 24 V AC/DC
- Supply of sensors with 24 V DC by module
- 0...1 V, 0...10 V
- 0...20 mA, 4...20 mA
- Detection of wire break for the current inputs

e2i – products – inputs

Analogue input -modul 4-fach
EAI 4UI mit verschiedenen Sensoren

Rain sensor

Air quality

Wind sensor

Brightness sensor
Twilight sensor

Temperature

Differential pressure

Humidity/ Temperature

e2i – products – sensors

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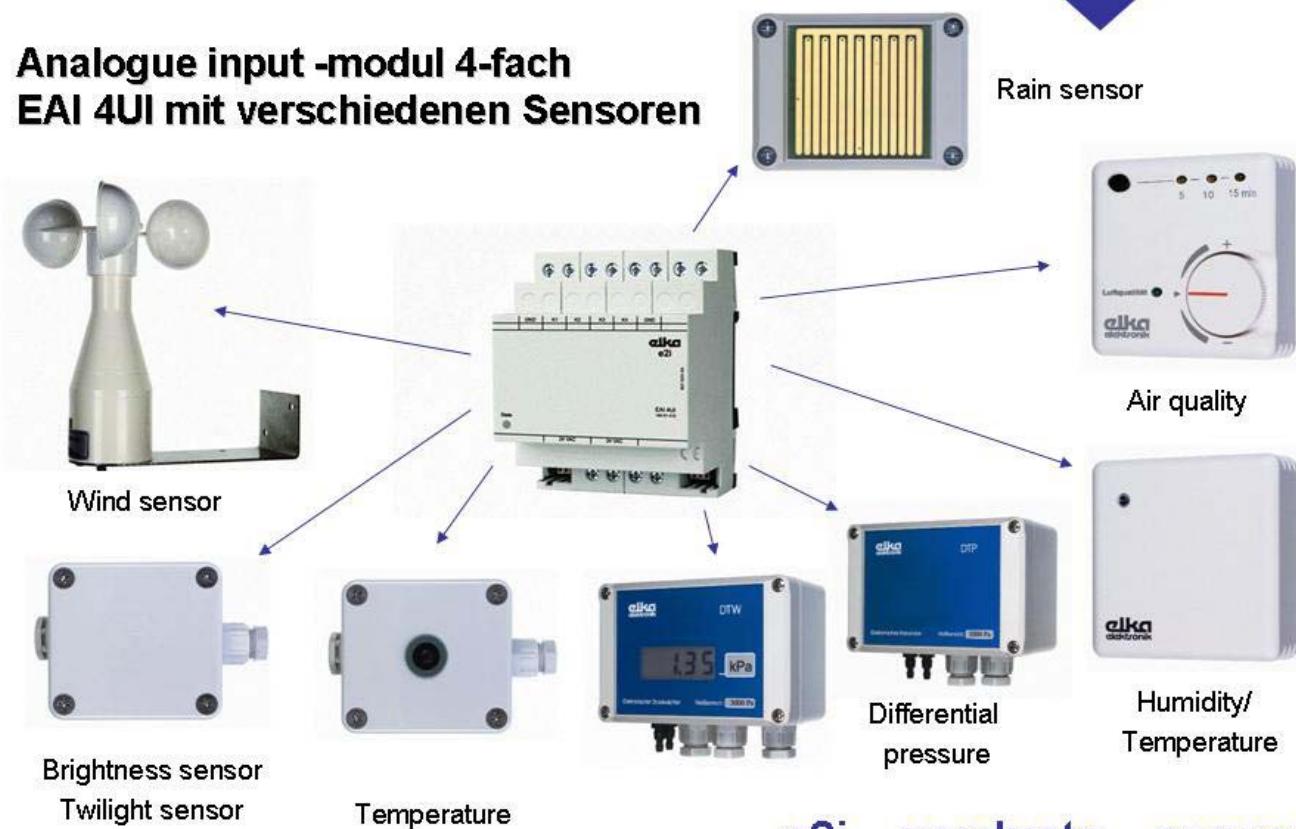
Operation panel SmartSensor light ITS30-RCP 8.8.LT ...

- e2i- module
- Connection via 4-core system BUS cable to LON- controller or IP- controller
- Up to 12 operation functions
- Integrated temperature sensor
- Efficient solution: one SmartSensor Basic controller connected with 3 SmartSensor light to handle up to 4 rooms
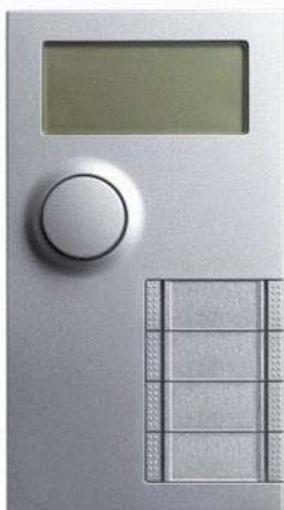
e2i – products – sensors

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BUS- coupling- unit EBA 1U, EBA-G 1U

- e2i- module
- Connection via 4-core system BUS cable
- Topology: Line, tree, star
- Design- modules: BERKER, GIRA, JUNG standard push button panels

e2i – products – sensors

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![elka elektronik logo]

Relay combi sensor EWS-Climate

- e2i- module
- External power supply: 24 V AC/DC
- Fixed connected 6-core cable 10 m (max. 50 m)
- Wind speed
- Precipitate
- 3-channel brithness
- Twilight sensor
- DCF77- receiver
- Integrated heater till –40°C
- IP 65
- Wall- or mast mounting

![elka elektronik logo]

Radio receiver module ERF 100 RX

- e2i- module
- Connection via 4-core system BUS cable
- Frequency: 433,42 MHz
- Radio coverage: 30 m / 100 m (open air)
- IP 20
- Log in up to 12 radio transmitter from INSTA radio range (BERKER, GIRA, JUNG)

![elka elektronik logo]

Remote control via instafunk with ERF 100 RX

Handheld transmitter Mini
IHS 2-M

Wall transmitter:
- BERKER 1...4fold
- GIRA 1...3fold
- JUNG 1, 2, 4fold
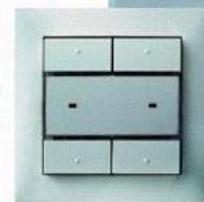
Handheld transmitter comfort
IHK 3.8-K

Multi functions-
Transmitter IMS 4

Universal transmitter
IUS 2.230

![elka elektronik logo]

Occupancy sensor PIR-K 360.5

- e2i- module
- 3 operation mode:
  - Mode occupancy sensor
  - Mode movement sensor
  - Alarm detector
- Detection angle 360°, 6 levels
- Coverage dependent on mounting height
  - Radius 5m by 0,8m
  - Radius 8m by 0m (ground)

Multi sensor system
LS-PIR.2

- BC10RL + e2i- modules
- Max. 6 occupancy sensors
- Max. length cable 50m (summarised)

LON   Raum 1   Raum 2   ...   Raum 6
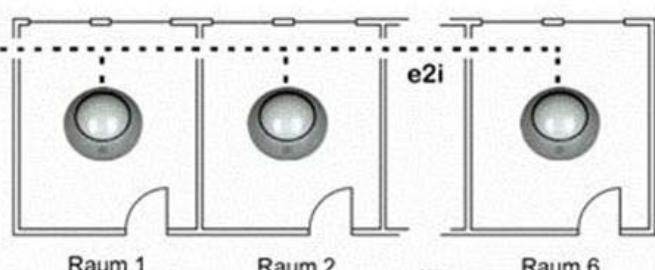
e2i – products – sensors

Manual operation module EHB 5

- e2i- module
- Manual operation for all actuators at same basic module controller
- ON / OFF / ALL OFF
- Permanent or temporary manual controlled
- No configuration by software necessary

System BUS- extension
EST460E

System connector
EST1

e2i – products – system devices

Power supply
SV 230-24.1 AC

SV 230-24.1500DC

- Prim.: 230V AC
- Sec.: 24V AC
- max. output current: 1A
- Short circuit proof by thermo fuse

- Nominal input voltage 100…240V AC
- Nominal output voltage 24V DC
- Nominal output current 1,5A

e2i – products – system devices

LON/e2i – I/O-components
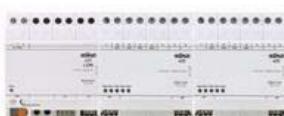
Digital output 8…24fold
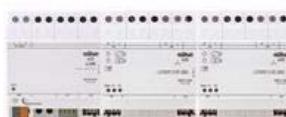
Dimming actuator 2…10fold
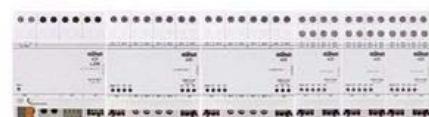
Combination-In-Output 12fold

Digital input 6…16fold

Analogue output 8…20fold

BL10 RL + ……
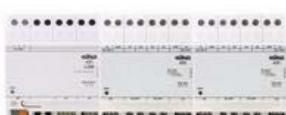
Analogue input 8…20fold
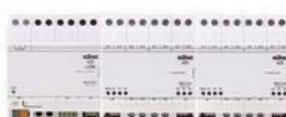
Switching actuator 6…24fold

Weather station

PS 24V

Radio receiver

Blind actuator 6…16fold

PlugIn „MidiSys"

Free configuration of network variables and creation of function blocks;
Output = actuators
Input = sensors

PlugIn „MidiSys"

Toolbar for easy creation own LON combinations modules with hard- and software modules, which are configured by own requirements.

Creation own master layouts for effective project realisation.
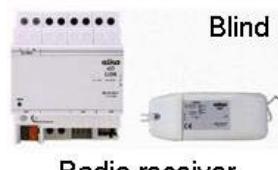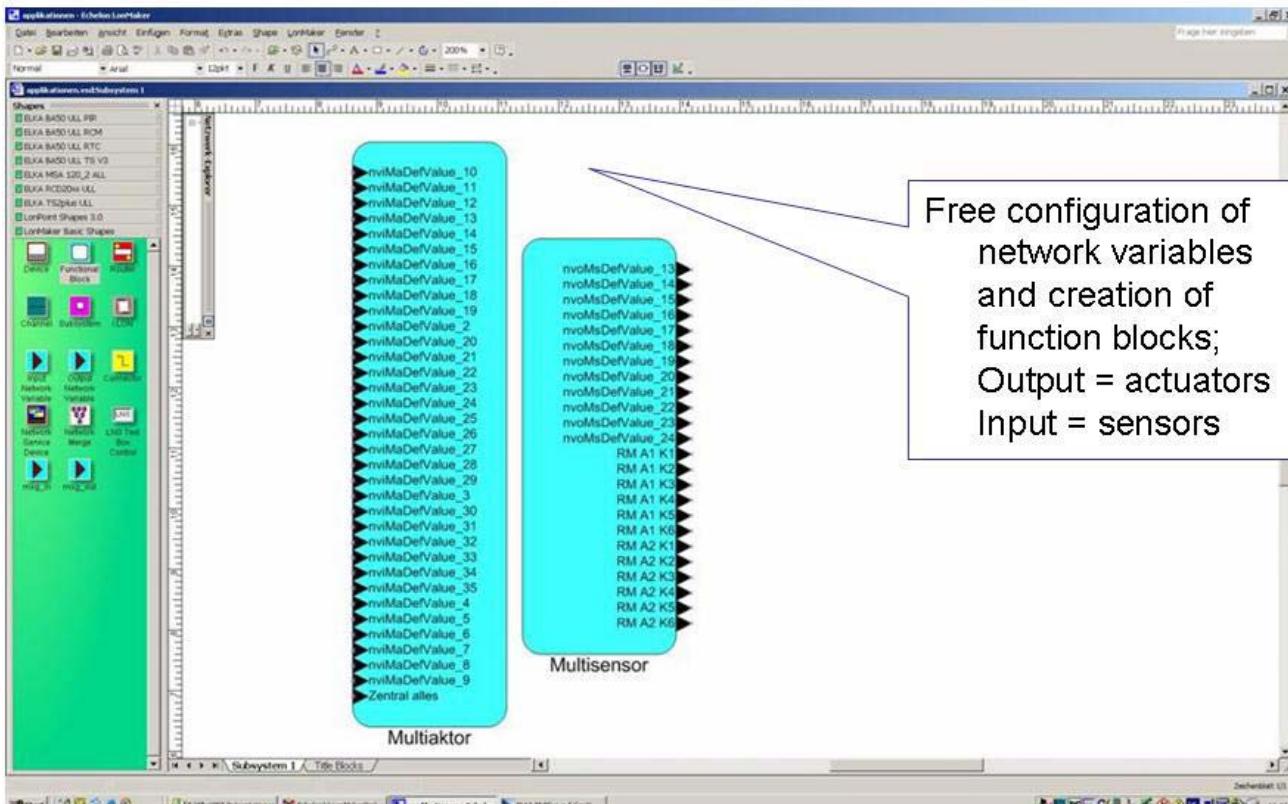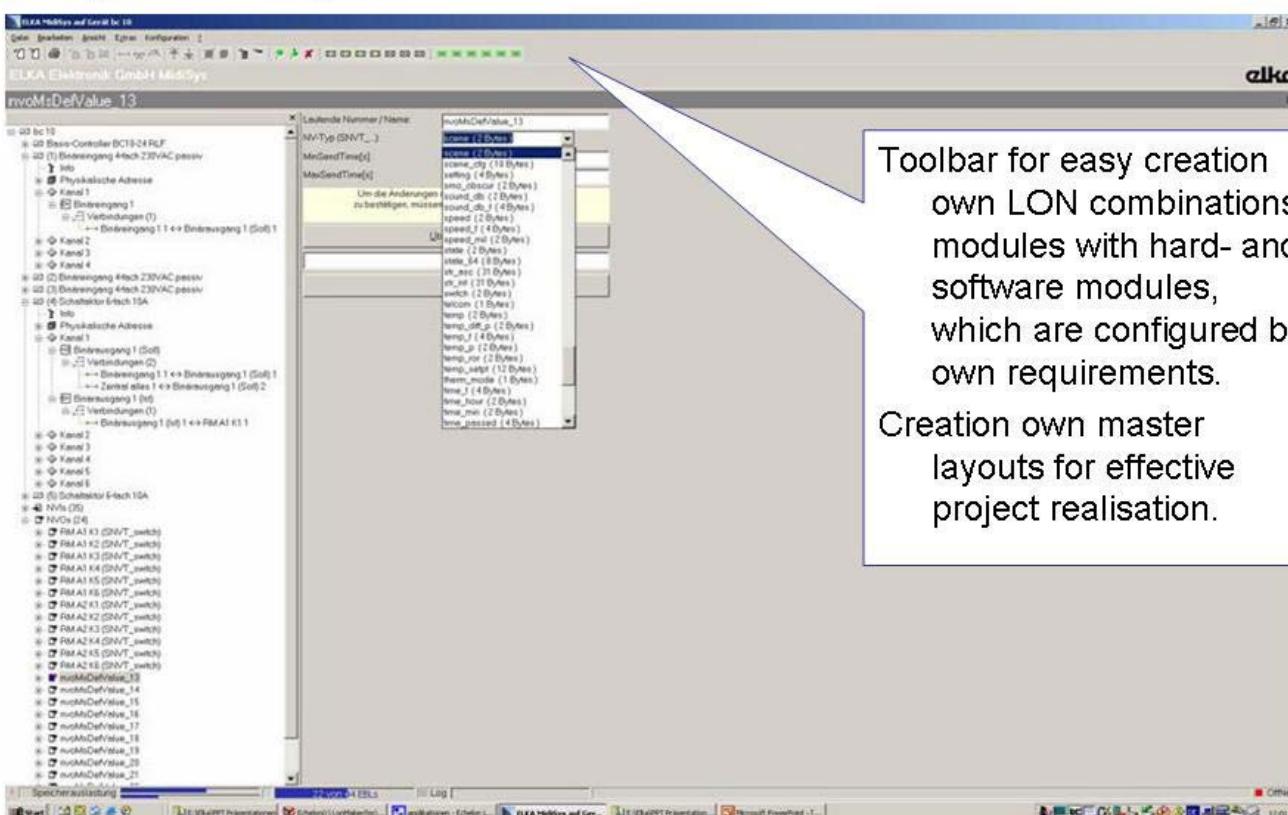
e2i with IP – applications-controller

AC800 RIE

The configuration is executed with the Tool MidiSys- IP