



## Ready-for-use solutions to connect decentralized generators

**Reduce feed-in capacities, stabilize grids, act economical**

### **Solutions for decentralized generation in compliance with German law**

Ensure stable networks – anticipate, prevent and react.

The number of small-scale decentralized energy generators is steadily increasing. This affects power quality and poses ever bigger challenges to energy suppliers and system operators because faults must be localized and removed to quickly restore the balance between generation and consumption. Nowadays, especially plants generating 30kW to 100kW and those generating 100kW to 1000kW require computer logic for regulation.

And regulation only works properly if hardware and software interact perfectly.

**ACOS 730 EEG** is our preconfigured solution to optimally connect decentralized generators to grid control systems and regulate feed-in quantities.

We have a clear objective: detect risks within the grid as early as possible, prevent them or intervene quickly.

### **Modular solutions suitable for decentralization**

Changing requirements demand flexible solutions. Thus, we offer a pre-configured modular system ready for immediate use with corresponding secondary technology to integrate decentralized generation.

Our solution comprises: plastic housing, transfer terminals, power pack and as technological core the small and adaptable **ACOS 730**.

## IT security

In accordance with the requirements for secure control and communication systems published in white papers by the Federal Association of Energy and Water Industries (BDEW), we implemented the following functions:

- secure parametrization access and service interface
- integrity check of device parametrization
- authentication via username and password
- support of different user roles and user rights
- dynamic firewall
- encrypted transmission in accordance with IEC 62351-3 (TLS) or IPsec using certificate-based authentication
- port authentication IEEE 802.1X

## Benefits of ACOS 730 EEG

There are three reasons why our solution is both economic and efficient:

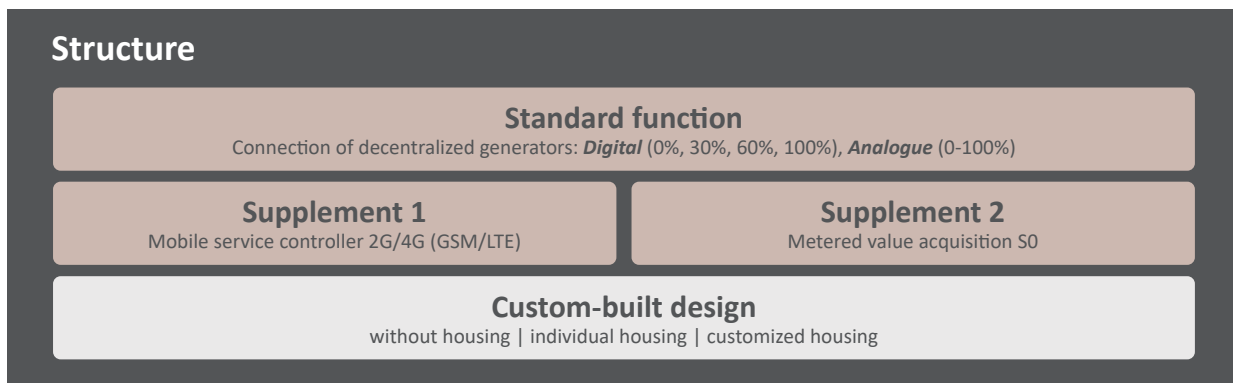
- first, independence – you can use any kind of control system
- second, universal application – standardized communication routes enable any kind of structures within grid operations
- third, pre-configuration – specific functions tuned to the scope of tasks enable immediate use

## Communication, transmission and security

Communication with the supervisory grid control level directly uses IEC 60870-5-104.

Depending on the variant, you can choose Network/LAN, GSM/LTE or CDMA for transmission.

For further details, please refer to the technical data.



### Standard function *Digital*

The digital version of **ACOS 730 EEG** provides four digital outputs. You can thus reduce the feed-in quantity to 0%, 30%, 60% or 100%. Return information is also transferred digitally.

Information provided by **ACOS 730 EEG** is transferred directly to the control system via the two measured values of the sub-assembly **CU33A**.

### Standard function *Analogue*

Alternatively, you can reduce the feed-in capacity also by means of an analogue set point (0-100%) transferred to the plant. The detected status related to the regulation request is returned via a measured value.

Furthermore, the analogue version provides the following special functions:

- network separation
- cos phi regulation

# ACOS 730 EEG - Technical data

## Standard function *Digital* (reduction of feed-in: 0%, 30%, 60%, 100%)

Plastic housing with integrated terminal strip; housing size: 300 x 300 x 132mm (H x B x T)

Voltage supply 100...240V AC

6 digital inputs 24V DC

4 digital outputs (coupling relay, isolated) 250V AC/DC at max.

2 analogue inputs  $\pm 25$  mA, 16 bit (configurable measuring range)

Predefined default parametrization; customizable if required

Note! Ambient conditions -20...50°C, relative humidity <95% (non-condensing)\*

## Standard function *Analogue* (feed-in regulation by means of analogue target value: 0-100%)

Plastic housing with integrated terminal strip; housing size: 300 x 300 x 132mm (H x B x T)

Voltage supply 100...240V AC

3 digital inputs 24V DC

1 digital output (coupling relay, isolated) 250V AC/DC at max., 6A AC

6 analogue inputs  $\pm 25$  mA, 16 bit (configurable measuring range)

2 analogue inputs 0...24mA, 16 bit (configurable output range)

Predefined default parametrization; customizable if required

Note! Ambient conditions -20...50°C, relative humidity <95% (non-condensing)\*

## Supplement 1 – mobile service controller 2G/4G (GSM/LTE); type CM33A

Indoor magnetic base antenna included, cable length 3m

Note! Appropriate lightning protection is required on site when using an outdoor antenna.

## Supplement 2 – metered value acquisition S0

1 S0 counter input in accordance with DIN 62053-31, pulses up to 10Hz

## Special design

Without housing (completely wired on mounting plate)

Individual housing size

Customized housing

*\*Indicated permissible ambient conditions are simplified and only serve for initial orientation.  
A detailed calculation of individual configurations can be provided upon request.*