Kukla Weighing Technology

www.kukla.co.at

kukla
since 1933
WEIGHING TECHNOLOGY

Tradition live!

- Founded in 1933 by Leopold Kukla
- Specialist manufacturer of weighing equipment
- Family owned company
- Production of weighing and dosing systems for the continuous weighing market.
- More than 70 employees
- Export rate of about 80%
- Our know-how combined with permanent innovation and high flexibility, our products are used in all industrial sectors, where bulk goods have to be dosed and weighed in motion
- Accurate and reliable products
- Flexible and customer-oriented solutions

Our bussines

Products

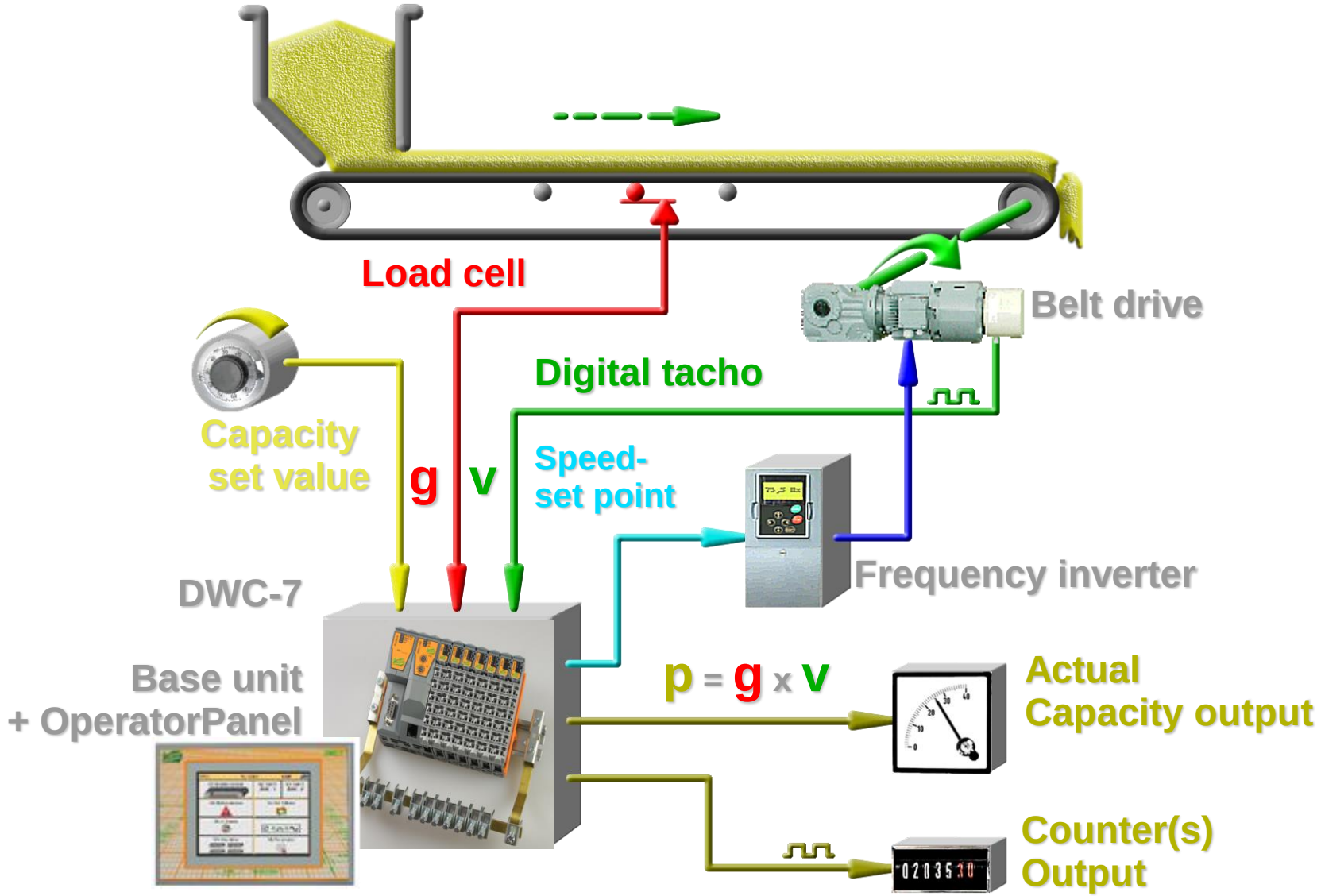
- Belt scales / weigh feeders
- Loss-in-weight-feeders
- Flow meters
- Bin scales
- Single piece check weigher
- Weighing screws
- Dosing belts
- Hopper weighing devices
- Rotary vane feeders
- Double pendulum sluices

Applications

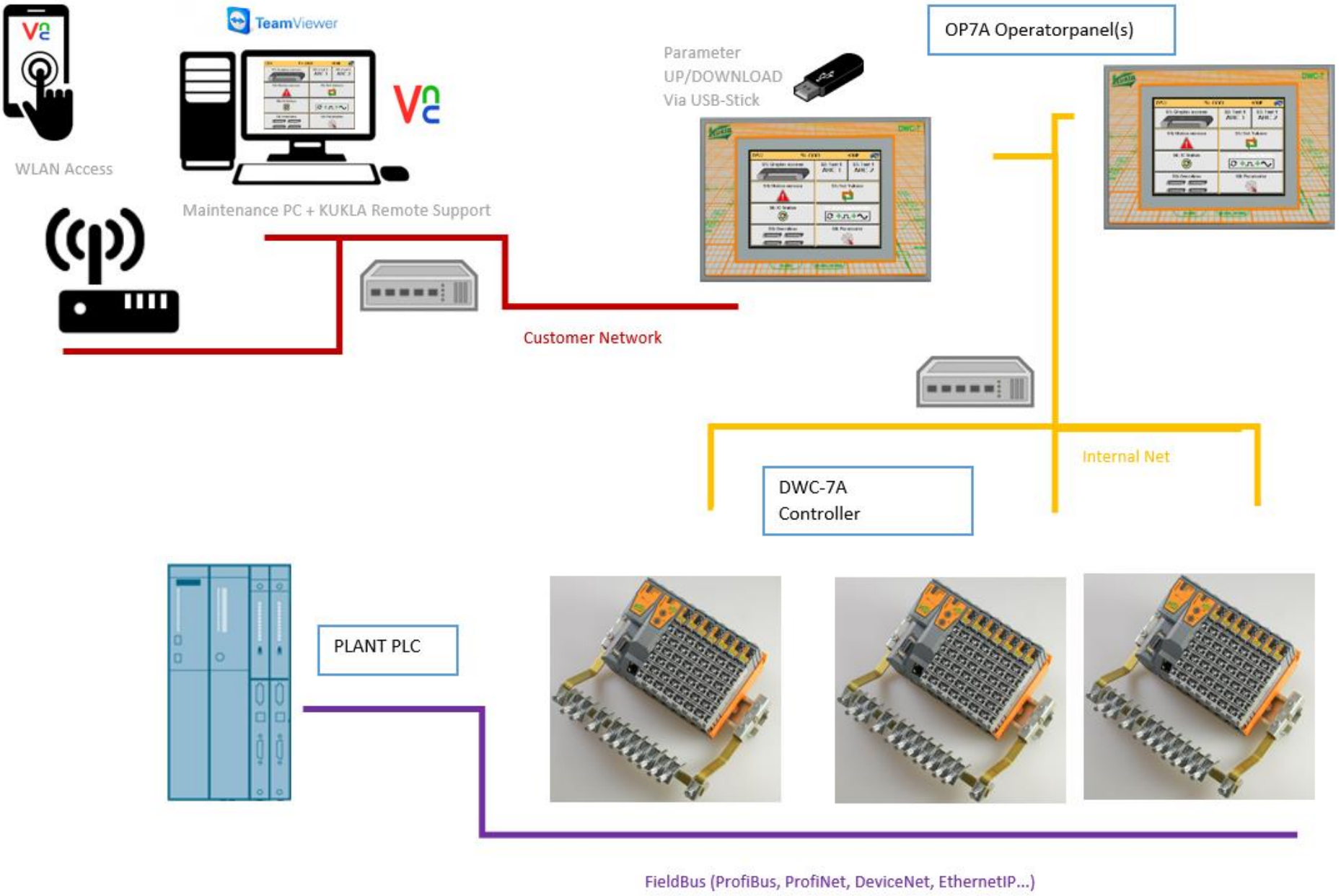
Wherever bulk materials have to be weighed and dosed continuosly:

- Cement- and steel industry
- Gypsum industry
- Mines
- Sand- and brash industry
- Salt and Sugar factories
- Chemical industry
- Textile industry
- Environmental technology, etc....

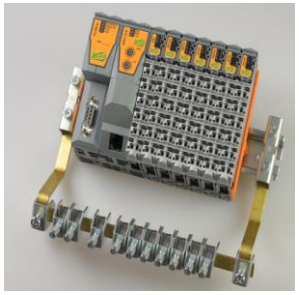
Functional diagram (symbolic)



DWC-7 System overview



DWC-7 Confguration / Minimaldesign



Base unit DWC-7

The base unit processes the inernal firmware of the scale system. It is designed as modular system and so it can look very different.

A base unit typically controls all analog and digital control signals belonging to the scale including a eventually installed fieldbus interface. A dedicated base unit is mandatory for each scale!

Operatorpanel OP-7

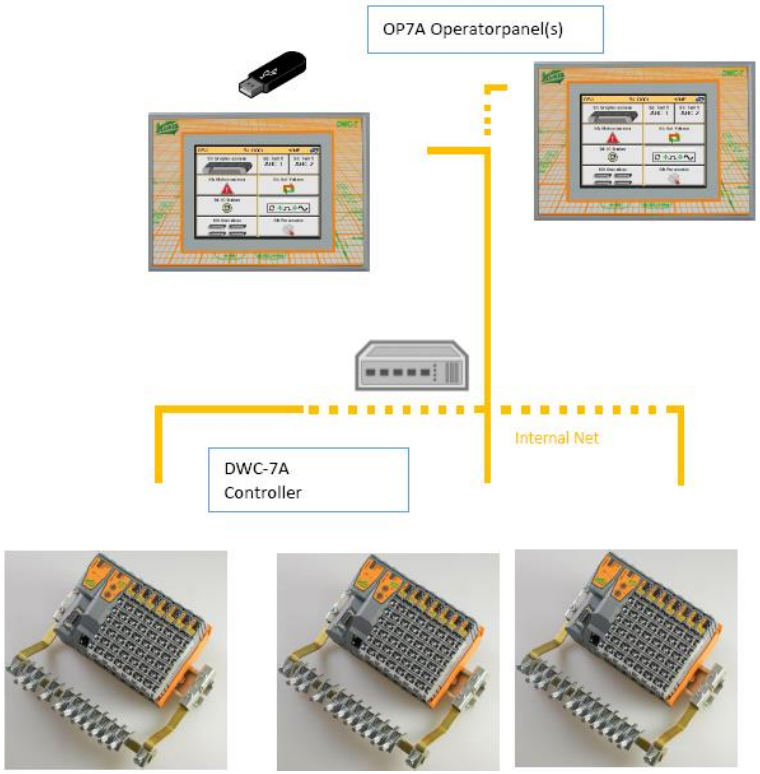
Via the operator panel the user can communicate with a (selected) base unit.

After successful commissioning, the operator panel is NOT necessary for the normal operation of a base unit in the process.

Attention:

The internal firmware of the base unit and the operator panel must fit to the same protocol generation for successful communication!

DWC-7 Network design



Internal net

A net controlled design can include

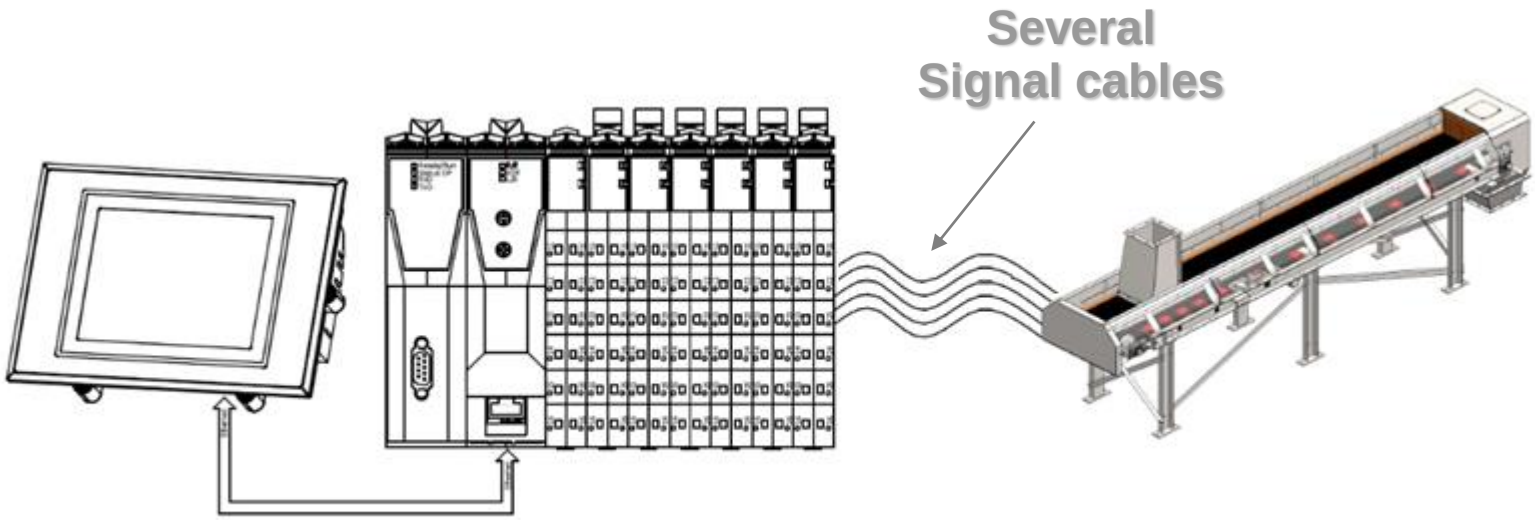
Up to 8 Base units
with 1-8 Operator panels

Linked via internal Businterface.

The internal Communication is based on Ethernet / UDP , for performance reasons no other nodes are allowed in the network.

At OP-7A connector IF4 must be used.

DWC-7 Central Solution



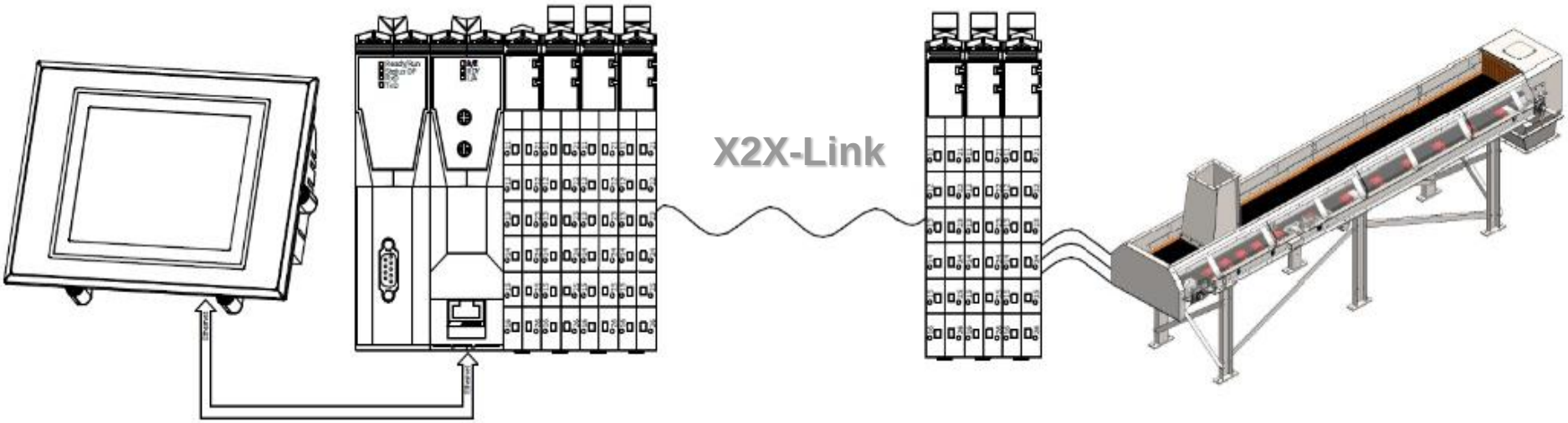
In a central solution

ALL SENSORS AND ACTUATORS installed directly on the scale
connected to the base unit via (MANY) CABLES.

The base unit can be installed directly in a local box on the scale as well.

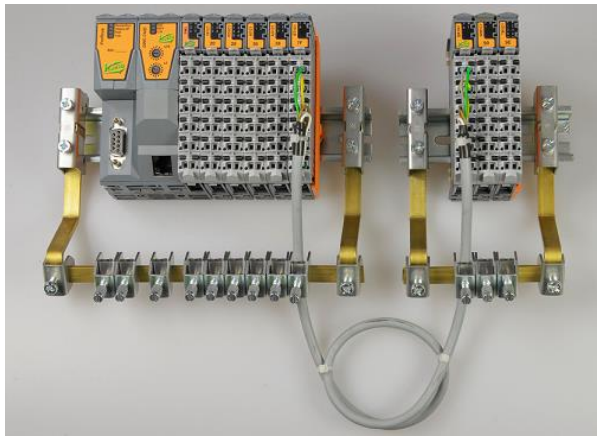
Alternatively, this traditional design can also be joined with a more remote control cabinet, in which case a higher cabling effort may arise.

DWC-7 Decentral Solution



In a decentralized system,
ALL SENSORS AND ACTUATORS connected to the SCALE are connected to intelligent terminal cards.
The connection to the base unit is realized via one or more X2X links (Up to 100m per segment)

The target is a massive reduction of control cables to typically ONE SINGLE cable



DWC-7 Frequency Inverter Integration

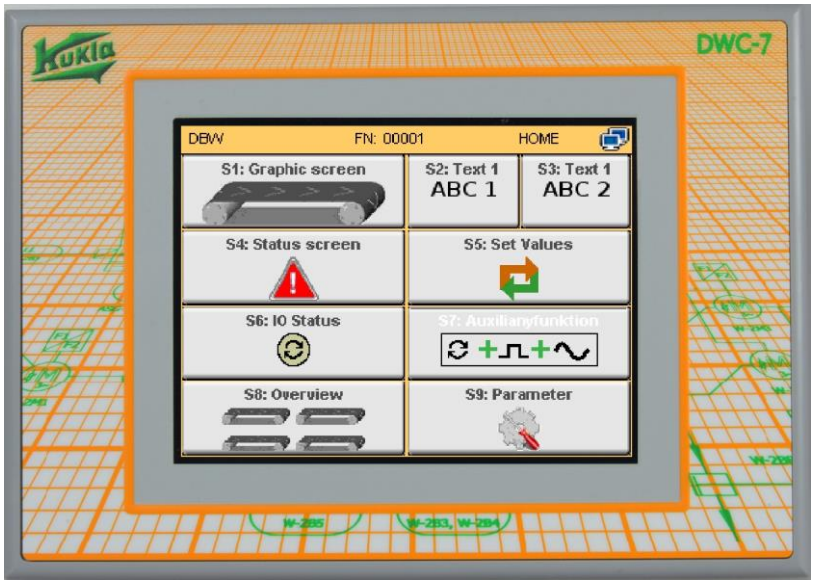
A weigh feeder needs at least one, but often sever frequency-regulated drives.

In a DWC-7 dosing system almost any type of frequency converter can be used according to customer requirements..

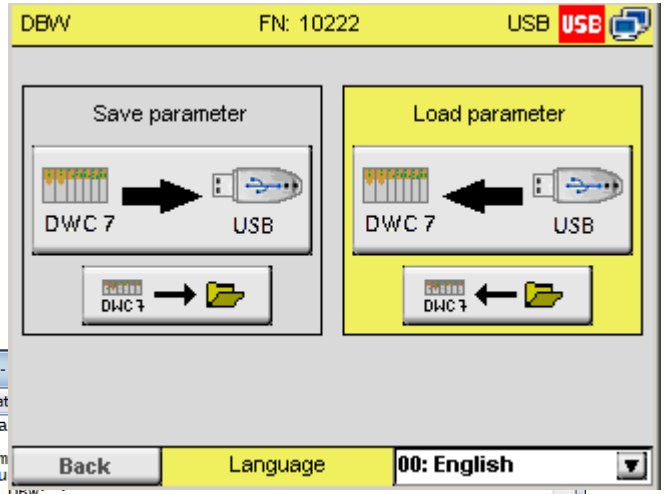
Frequency converters can be installed in a control cabinet but also in a small local control-box.

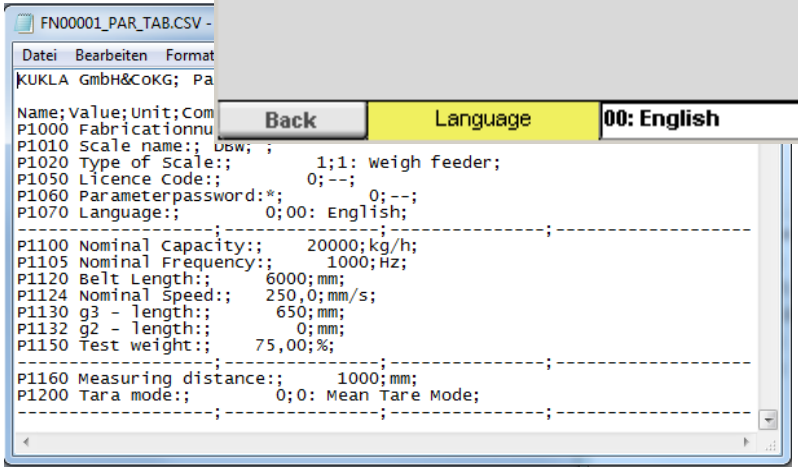
As an option, a DWC-7 base unit can control directly drive plugged-frequency converters of type SEW / MoviMot without any analog interface.

DWC-7 Operationsconcept / Parameter



A DWC-7 system does not need any external programming software.
Parameters are stored in plain text format in a text file (.csv)
and can be saved internally or on a USB memory stick.

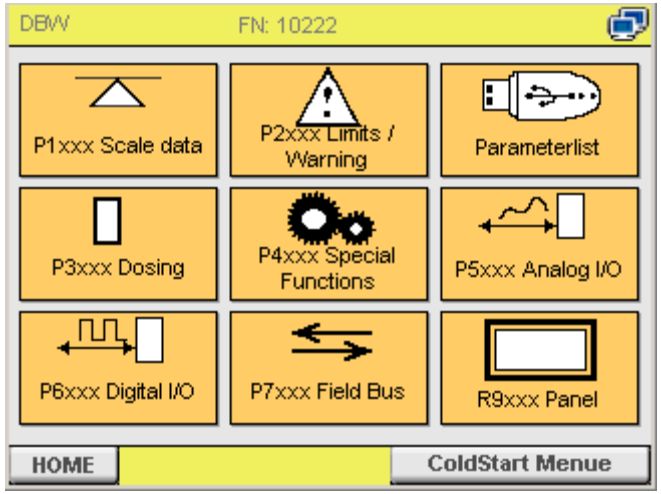




All operating steps are carried out directly at the operator panel OP-7.

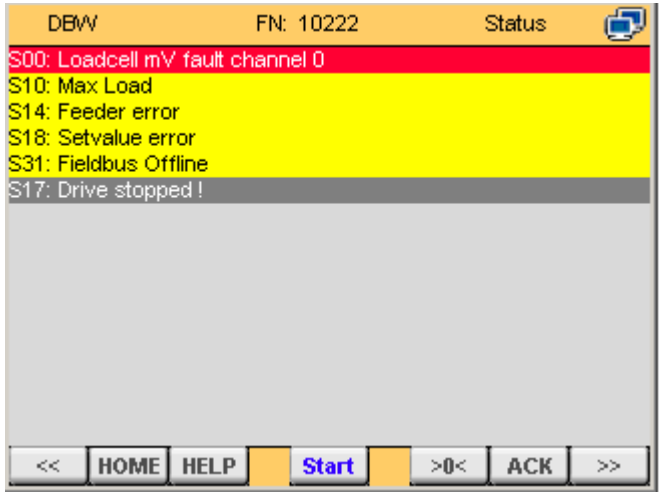
Parameters additionally have one Pxxxx number so that parameters are independent of of the currently active language.

DWC-7 User Interface / Status and Alarms



Parameters are structured in clearly defined groups.

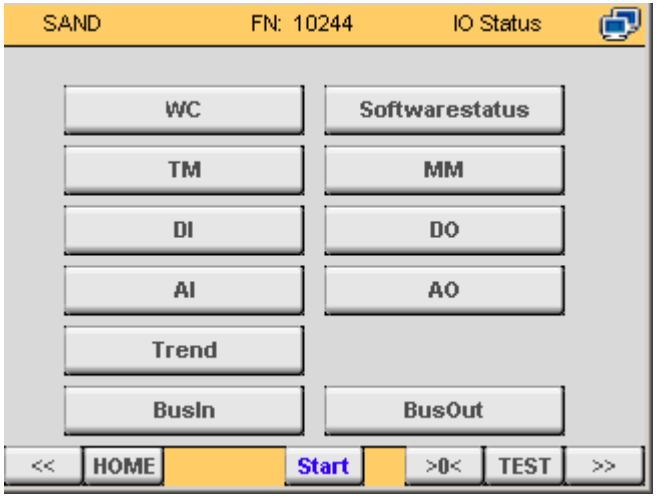
If, for example, parameters of a Analog output needs to be changed, the picture on the left clearly shows that this parameter must be located in 5000 group!



Status, warning and fault messages are also indicated in the plain text with an additional reference number Sxx

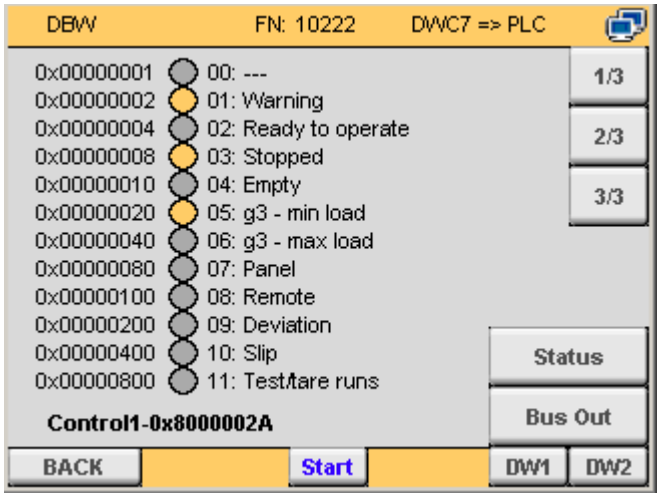
With this number the user can even be helped if the language is completely unreadable.

DWC-7 User Interface / IO-Status



All status messages
of analog, digital or fieldbus signals
are always indicated with the plain text according to the
currently selected parameters.

Thus, in the case of problems, it is not necessary to search
extensively for the paper documentation.



DWC-7 Fieldbus options

The following field bus systems can be implemented




The user data transfer layout is similar in all bus systems.

LEDs on the front side of the fieldbus interfaces indicate the current communication status.