

Service instructions

Fieldbus DWC-6

Type : DWC-6Ax
Serial No. : ----

Project : Fieldbus- Interface with AnyBus IC
ProfiBus DP / ProfiNet / DeviceNet / ModbusTCP

Pos. Nr. :

Software : > B1.41 / E1.41



***** SAFETY REGULATIONS *****

Being under voltage the device must not be opened. Danger of electric shock exists. Service works at the weighing equipment are permitted only for qualified personnel. In case of works at the weighing belt the drive has to be switched off.



The related device/system may only be set-up and operated in connection with this documentation. Start-up and operation of a devices/system may only be carried out by **qualified personnel** . Qualified personnel in terms of safety notes of this documentation are persons being authorized to take into operation, to ground and to label the devices, systems and circuits in accordance with the standards of safety engineering.

Index

1 PROFIBUS-DP	4
1.1 GENERAL.....	4
1.2 DATA TRANSFER RATE / CONNECTOR ASSIGNMENT.....	4
1.3 STATION ADDRESS.....	4
1.4 GSD-FILE.....	5
1.5 STATUS PROFIBUS-COMMUNICATION.....	5
2 DEVICE-NET	6
2.1 GENERAL.....	6
2.2 DATA TRANSFER RATE / CONNECTOR ASSIGNMENT.....	6
2.3 BAUDRATE.....	6
2.4 MAC- ID.....	6
2.5 EDS- FILE.....	6
2.6 STATUS DEVICE-NET-COMMUNICATION.....	6
3 MODBUSTCP	7
3.1 GENERAL.....	7
3.2 DATA TRANSFER RATE / RJ45 ETHERNET - STECKER.....	7
3.3 DATA TRANSFER SPEED	7
3.4 ACTIVATION BUS.....	7
3.5 IP-ADDRESS.....	8
3.6 EDS- DATEI.....	8
3.7 MODBUSTCP COMMANDS.....	9
3.8 STATUS MODBUSTCP - COMMUNICATION.....	9
4 GENERAL DATA STRUCTURE.....	10
4.1 NOMINAL-DATA TRANSFER SPS --> DWC.....	10
4.2 DATA TRANSFER DWC -->SPS.....	12
4.3 PARAMETER-NUMBERS.....	14
4.4 SPECIAL OPTION FOR GAUGED (STAMPED) BELT SCALES.....	14
4.5 TEST POSSIBILITIES OF THE FIELDBUS- INTERFACE.....	15

Revision list

Revision	Date	Author	Chapter	Description
Dwc6_Pbus01e	22.01.2007	ER	All	New issue
Dwc6_Fbus02e	14.01.2008	ER	All	Complete revision
Dwc6_Fbus02e	03.03.2008	AS	3.2	Revision of <i>Digital control commands to the scale computer</i>
Dwc6_Fbus02e	08.04.2008	AS	3.2	Revision of <i>Digital control commands to the scale computer</i>
Dwc6_Fbus03e	30.10.2008	ER	3.2	Revision of <i>Motor-driven test weight device added</i>
Dwc6_Fbus04e	04.02.2012	ER	3 3.5 3.3	correction of data word, Check Fieldbus fixed, Extension Tare
Dwc6_Fbus05e	12.03.2013	ER	3 4 3	Chapter 3 ModbusTCP added Extension Bus-Inputs Description Status message Graphic Screen
Dwc6_Fbus06e	21.07.2015	ER	2 ; 5 ; 7	Erweiterung Busabfragekommandos Erweiterung ProfiNet Beschreibung S7-Classic Bibliothek

Software indication

These instructions are based on following Software versions

B1.41

E1.41 LegalForTrade

In course of the technical progress changes can be carried out at the software. At subsequent software versions therefore deviations are possible compared to these instructions.

KUKLA WAAGENFABRIK GmbH & Co KG
Stefan-Fadingerstrasse 1-11
A-4840 VOECKLABRUCK

Tel. +43 (0)7672-26666-0

Homepage: www.kukla.co.at
email: office@kukla.co.at

1 PROFIBUS-DP

1.1 General

The scale computers of the series DWC-6A can be equipped with a Profibus DP Interface. This interface has to be indicated at the order. A subsequent installation on consultation with the manufacturer will also be possible. The interface is corresponding to Profibus Norm DIN 19245 and EN 50170. Beside Profibus optionally also Devicenet or Ethernet is possible.

1.2 Data transfer rate / Connector assignment

The Interface supports the usual standardized data transfer rates up to 12 MBaud. At higher transfer speeds in any case plugs permitted thereto have to be used.

Connector assignment Profibus-connector
1 Not connected
2 Not connected
3 B-Line Positive RxD/TxD
4 RTS Request To Send*
5 GND BUS Isolated GND from RS 485 side
6 +5 V BUS Isolated +5 V from RS 485 side *
7 Not connected -
8 A-Line Negative RxD/TxD nach RS485- Spezifikation
9 Not connected -

The case-screen is connected with PE

It is recommended to use normed Profibus DP plugs. The cable ends have to be provided with terminators. Optionally also the terminator installed in the interface can be used.

1.3 Station address

The station address is adjustable via the parameterizing of the scale computer.

Thereto, for device version DWC-6AF (for Switchboard installation) please, turn the small parametrizing switch at the rear wall of the device into switch position PA.

At the device version DWC-6AW (for wall fastening) the slide switch is located in the terminal room in order to ensure the high type of protection.

Generally it must be observed that no active address on the bus system is double-allocated.

In dispatch-condition the NEUTRAL ADDRESS 126 is adjusted.

For adjusting the Profibus-address, please move the cursor-arrow with <arrow keys> to the menu point t „DATA INPUT“ and press <OK> .

The most important are offered sequentially. With key „MODE“ the switch-over to the next parameter is done.

Now move the cursor-arrow to menu point „Bus-AddressDP“ and press <OK>.

Now with the help of the arrow-keys the address requested in the range of 1 up to 125 can be adjusted.

At last absolutely the number has to be taken over with <OK>.

+Bus-AdresseDP+	
	126
	^
.	
Act	126
Min	1
Max	126
EXIT->MODE	

If the field bus is not used, 126 should be adjusted.
In this case all Bus-routines are deactivated. .

Now by pressing twice key „MODE“ the menu can be left.

ATTENTION: AFTER CHANGING THE PROFIBUS-DP ADDRESS THE SCALE COMPUTER HAS TO BE TAKEN OFF THE VOLTAGE FOR ABOUT 5 SECONDS IN ORDER TO MAKE POSSIBLE TO OVERTAKE THE NEW ADDRESS !!!

1.4 GSD-file

The master data required can be obtained directly from the manufacturer or are available in the manufacturer's download domain under www.kukla.co.at . Other file sizes than the ones described are not possible.

1.5 Status Profibus-Communication

In case of a Profibus module being installed, the Graphic screen indicates as follows:

DPyyy	Module is ONLINE as a Slave on a Master with number yyy
xxyyy	Module is OFFLINE , Slave address yyy is set.

2 PROFINET - IO

2.1 Allgemein

Die Waagencomputer der Serie DWC-6A können mit einem ProfiNet Interface ausgestattet werden. Dieses Interface muss bei der Bestellung angegeben werden. Ein nachträglicher Einbau ist nicht möglich.

2.2 Datenübertragungsrate / Steckerbelegung

Das Interface unterstützt den definierten Profinet-Standard. Als Steckverbinder kommt ein für Ethernet üblicher RJ45-Stecker zur Anwendung welcher sich bei der Fronteinbauversion auf der untersten Fläche befindet. Bei der Wandversion ist er üblicherweise innen im Klemmenbereich ganz rechts angeordnet.

Für die einwandfreie Funktion ist eine entsprechende Verkabelung zu verwenden.

2.3 Stationsadresse

Die Stationsadresse wird wie bei ProfiNet üblich per „Taufe“ vom Master- Programmiersystem durchgeführt.

2.4 GSDML-Datei

Die notwendigen Gerätestammdaten können direkt vom Hersteller bezogen werden oder sind im Downloadbereich des Herstellers unter www.kukla.co.at verfügbar. Andere Datenformate als die beschriebenen sind nicht möglich.

The screenshot shows the HW Config software interface. The breadcrumb navigation at the top indicates the path: **S7_DWC6_PN** > **PLC_1 [CPU 315F-2 PN/DP]** > **Distributed I/O** > **PROFINET IO-System (100): PN/IE_1** > **DWC6A**.

Hardware Catalog: The left pane shows the hardware catalog with filters for 'Head module' and 'RT Standard'. A green circle highlights the 'Input 032 bytes' module, and a blue circle highlights the 'Output 032 bytes' module.

Device Overview: The central table lists the modules in the rack:

Module	Rack	Slot	I address	Q address	Type
DWC6A	0	0	2042*	2041*	RT Standard
Interface	0	1	2040*		ABIC-PT
RU45 100 Mbit/s	0	0 X1 P1	2040*		RU45 100 Mbit/s
OUT 32bytes PLC->DWC6	0	1	300...331		Output 032 bytes
IN 32bytes DWC6->PLC	0	2	400...431		Input 032 bytes

Properties Panel: The right pane shows the properties for the selected module. The 'Interface networked with' section shows the subnet as 'PN/IE_1'. The 'IP protocol' section has the 'Use IP protocol' checkbox checked. The 'PROFINET' section has the 'Generate PROFINET device name automatically' checkbox checked, with the device name 'dwc6a' and converted name 'dwc6a'.

2.5 Status ProfiNetIO-Kommunikation

Falls ein Profinetmodul eingebaut ist, erfolgt im Grafikbild folgende Anzeige:

PNyyy	Modul ist als Slave mit der IP (nur letzte Zahl) yyy auf einem Master ONLINE
xxyyy	Modul ist OFFLINE , Adresse yyy ist eingestellt.

3 Device-Net

3.1 General

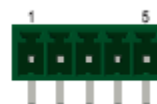
The scale computers of the series DWC-6A can be equipped with a DeviceNet DP Interface. This Interface has to be indicated when placing the order. A subsequent installation on consultation with the manufacturer is limitedly possible. The Interface is corresponding to the norm of ODVA.

3.2 Data transfer rate / Connector assignment

The Interface supports the usual normed standards for DeviceNet.

Connector assignment DeviceNet-plug as per ODVA

Pin	Signal	Description
1	V-	Negative supply voltage ^a
2	CAN_L	CAN_L bus line
3	SHIELD	Cable shield
4	CAN_H	CAN_H bus line
5	V+	Positive supply voltage ^a



3.3 BAUDRATE

The module supports as Data transfer speed

125 kbps / 250 kbps /500 kbps

The transmission speed is automatically detected and adjusted.

3.4 MAC- ID

The MAC-ID is adjusted in the parametrizing menu.

ATTENTION: AFTER CHANGING THE MAC-ID OR THE BAUDRATE THE SCALE COMPUTER HAS TO BE TAKEN OFF VOLTAGE FOR ABOUT 5 SECONDS IN ORDER TO MAKE POSSIBLE TO TAKE OVER THE NEW ADDRESS !!!

3.5 EDS- file

The EDS-files required are supplied on disc / CD along with the scale computer or can be directly obtained by the manufacturer. Other file sizes than the ones described are not possible.

3.6 Status DeviceNet-Communication

In case of a DeviceNet-Module being installed, the Graphic screen indicates as follows:

Devyy	Module is ONLINE on a Master as knot with number yy
xxYyy	Module is OFFLINE, xx is an internal Status info , knot address yy is set.

4 ModbusTCP

4.1 General

The scale computers of the series DWC-6A can be equipped with ModbusTCP Interface. This Interface has to be indicated when placing the order. A subsequent installation on consultation with the manufacturer is limitedly possible.

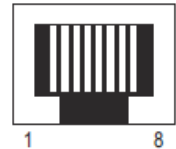
4.2 Data transfer rate / RJ45 Ethernet - Stecker

The Interface supports the usual standards for ModbusTCP.

In case of control cabinet-Front installation version DWC-6x**F** the Interface is arranged on the **BOTTOM** side of the housing. In the **Wall-mounted** version DWC-6x**W** the Ethernet interface is situated in the terminal area.

Connector assignment

Ethernet Connector (RJ45)		Anybus	
Pin	Signal	Pin	Signal
1	TX+	-	-
2	TX-	-	-
3	RX+	-	-
4	-	-	-
5	-	-	-
6	RX-	-	-
7	-	-	-
8	-	-	-
Housing	Cable Shield	-	-



4.3 Data transfer speed

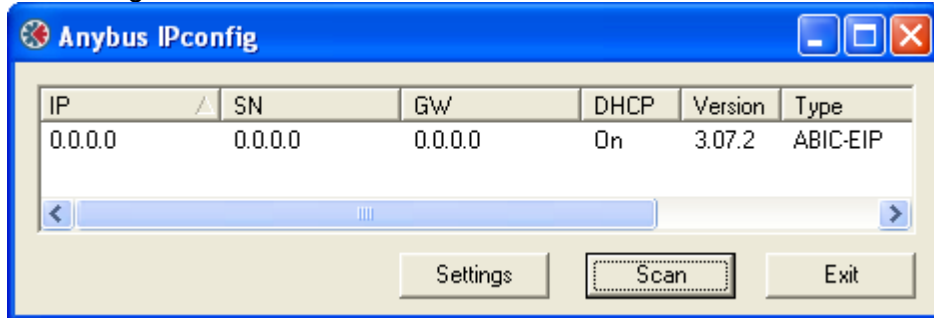
The data transfer speed is automatically detected and adjusted.

4.4 Activation Bus

-For internal reasons in parameter „Bus-AddressDP“ always the lowermost part of the IP-address is represented. However, a change has no effect, since this value is automatically reloaded from ModbusTCP-Module and overwritten. The effectively used address only can be adjusted as described in the chapter.

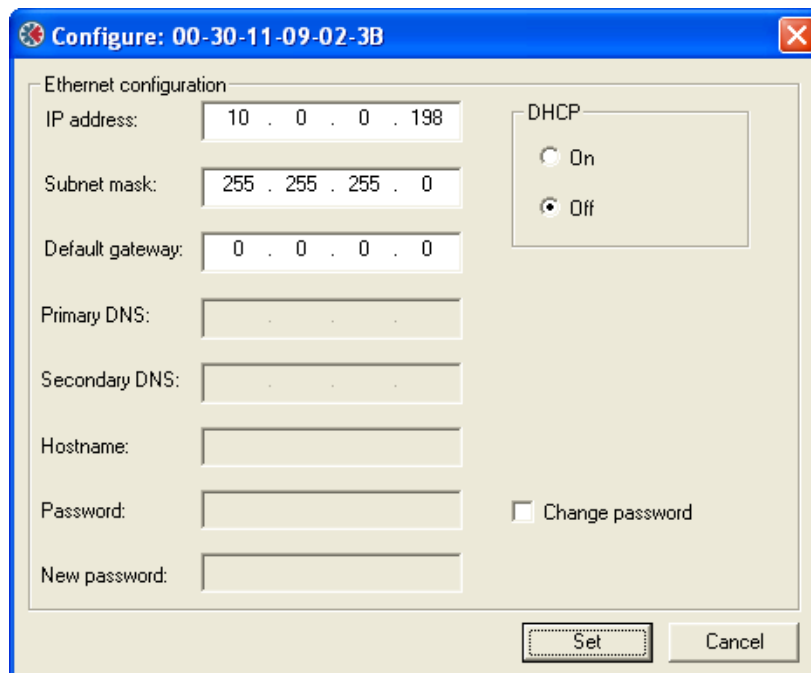
4.5 IP-Address

After a cold start the module is set to the address 0.0.0.0 with activated DHCP. The IP-address is set via the external Tool IP Config. The button „Scan“ scans the network for connected Fieldbus modules.



Attention: Via button „Settings“ only the active network interface can be set, but not the IP of the module.

A DOUBLE CLICK at the MODULE LINE opens the configuration dialog of the module. IP-address and correct Subnet mask have to be adjusted. It should also not be forgotten that the DHCP-selection has to be set correctly in order to prevent an overwriting of the address at the next start of the module.

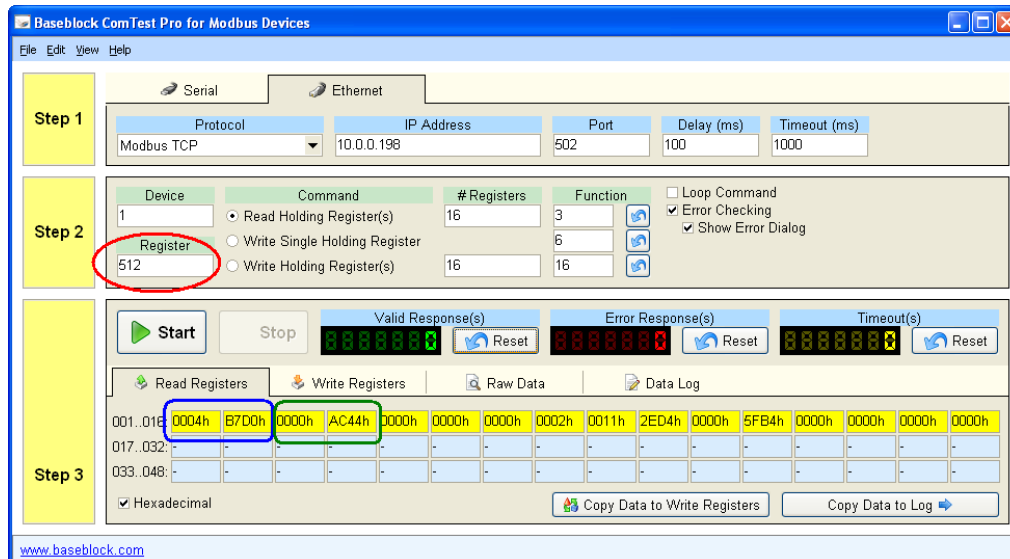


4.6 EDS- Datei

The EDS-files required are supplied on disc / CD along with the scale computer or can be directly obtained by the manufacturer. Other file sizes than the ones described are not possible.

4.7 ModbusTCP Commands

The actual user data are Fieldbus-independent and described in a later chapter. This item describes the specific implementation at ModbusTCP. After setting the IP-communication the DWC-Interface can easily be checked directly from PC. Appropriate query tools are available on the Internet.



For queries concerning **actual data (DWC-->PLC)** of the weigh feeder

the **ModbusTCP-command 3 (ReadHoldingRegister)** from registration number 512 on or
the **ModbusTCP-command 4 (ReadInputRegister)** from registration number 0 on

can be used. The data package length in both directions is always 32Byte which corresponds to 16ModbusTCP registers. The blue-framed 4-Byte-value of the actual capacity, thus, consists of TWO registers.

For **transmitting the set values (PLC-->DWC)** to the scale computer

the ModbusTCP-command 6 (PresetSingleRegister) with registration number 0-15 or
the **ModbusTCP-command 16 (PresetMultipleRegister)** from registration number 0 on

can be used. At command 6 at 4Byte set values the command has to be transmitted twice with the successive registration numbers.

4.8 Status ModbusTCP - Communication

In case of ModbusTCP-Module being installed, the Graphic screen indicates as follows:

IPyyy	Module is ONLINE on a remote station, the number yyy corresponds to the lowest Byte value of the set IP-adress
xxyyy	Module has no active communication partner

5 General data structure

FULL

Data Word	PLC → DWC	DWC → PLC
1. Word	reserved	Capacity
2. Word		ACTUAL VALUE
3. Word	Digital	Quantity counter
4. Word	Bus-Inputs	B
5. Word	Field1	Error/Status
6. Word		Double Word
7. Word	Field2	Digital
8. Word		Bus-Outputs
9. Word	CosPhi-Correction (angle)	Actual Field IL1
10. Word	reserved	Quantity counter A
11. Word	reserved	Actual Field IL2
12. Word		Quantity counter C
13. Word	Query	Parameter-
14. Word	Number	Number
15. Word	reserved	Parameter-
16. Word		value

The framed windows indicate the size of the consistent fields.

5.1 NOMINAL-DATA TRANSFER SPS --> DWC

Digital Bus-Inputs	Digital control commands to the scale computer	PLC 2 Words
	0x00000001 START TARE	
	0x00000002 reserved	
	0x00000004 reserved	
	0x00000008 MIS-RUN SENSOR	
	0x00000010 BELT RUNS MESSAGE	
	0x00000020 reserved	
	0x00000040 reserved	
	0x00000080 MOTOR FAILURE	
	0x00000100 reserved	
	0x00000200 reserved	
	0x00000400 reserved	
	0x00000800 reserved	
	0x00001000 reserved	
	0x00002000 reserved	
	0x00004000 reserved	
	0x00008000 Quantity counter B DELETE / PRINT	
	0x00010000 Quantity counter C DELETE / PRINT	
	0x00020000 reserved	
	0x00040000 reserved	
	0x00080000 reserved	
	0x00100000 reserved	
	0x00200000 reserved	
	0x00400000 reserved	
	0x00800000 reserved	
	0x01000000 FIELD_OPTO1	
	0x02000000 FIELD_OPTO2	
	0x04000000 START TEST ROUTINE	
	0x08000000 IL1+IL2 – A/C COUNTER IN COUNTING RESOLUTION	
	0x10000000 ACTIVATE COS-PHI CALCULATION	

Belt inclination-correction	<i>Actual angle of belt inclination in angular degrees (only required, if belt inclination is changed during operation)</i>	DWC 2 Words
(COS-correction)	The corresponding bit in the digital Bus-Inputs activates the correction calculation. Via the data field described here the actual belt inclination is given. The belt inclination can be pre-set as whole number in the range of max. -30 degrees up to +30 degrees. <i>This option is not contained in calibration scales !</i>	

5.2 DATA TRANSFER DWC -->SPS

Capacity ACTUAL VALUE	Actual capacity of the scale Resolution 1/10 kg/h (e.g. 2.45 t/h correspond to number 24500)	DWC 2 Words
Quantity counter B	Actual value of Quantity counter B Resolution 1/10 kg/h (e.g. 267 kg correspond to number 2670)	DWC 2 Words
Error /Status Double Word	<i>Digital control commands to the scale computer</i> 0x00000001 MIN-LOAD 0x00000002 MAX-LOAD 0x00000004 BELT EMPTY 0x00000008 UNPERMISSIBLE WEIGHING RANGE (*) 0x00000010 AD-ERROR AT WEIGHING CHANNEL 0x00000020 SCALE DRIVE STOPPED 0x00000040 MIS RUN RECOGNIZED 0x00000080 MOTOR ERROR 0x00000100 DRIVE/TACHO FAILURE 0x00000200 SLIP RECOGNIZED 0x00000400 ERROR AT TEST (*) 0x00000800 ERROR AT TARING (*) 0x00001000 TARA-Process is active 0x00002000 reserved 0x00004000 reserved 0x00008000 reserved 0x00010000 reserved 0x00020000 reserved 0x00040000 reserved 0x00080000 reserved 0x00100000 reserved	DWC 2 Words
Digital Bus- Outputs	<i>Digital messages (Status messages) from the scale computer</i> 0x00000001 FAILURE 0x00000002 READY TO OPERATE 0x00000004 reserved 0x00000008 reserved 0x00000010 LOAD LESS THAN MIN 0x00000020 LOAD WEIGHT GREATER THAN MAX 0x00000040 reserved 0x00000080 TEST OR TARE RUNS 0x00000100 BELT EMPTY 0x00000200 reserved 0x00000400 reserved 0x00000800 reserved 0x00001000 reserved 0x00002000 FIELD RELAY 1 0x00004000 FIELD RELAY 2 0x00008000 reserved 0x00010000 reserved 0x00020000 reserved 0x00040000 BELT STOPPED 0x00080000 UNPERMISSIBLE WEIGHING RANGE (*) 0x00100000 reserved 0x00200000 reserved 0x00400000 reserved 0x00800000 reserved 0x01000000 reserved 0x02000000 reserved 0x04000000 reserved 0x08000000 PERMANENT 1 for communication monitoring	DWC 2 Words

(*) ->only for gauged/stamped scales

Actual Field Counter A	<i>Counter Value of non resetable Counter A</i>	DWC	2 Words unsigned DINT
	The standard resolution for bus communication is 0,1kg. As result of this at beltscales with high capacitys an overflow can occure. Therefore, using the command 0x8000000 (see bus inputs) the counting resolution analogous to selected display unit of the counter output will be used. (e.g. display 153.4 t leads to the number of 1534000, with activated bit the number of 1534 is transfered only). An early overflow is avoided.		
Actual Field Counter C	<i>Counter Value of resetable Counter C</i>		2 Words unsigned DINT
	see IL1		
Query Programming Number	<i>Mailbox access possibilities to the internal parameters of the scale computer.</i> Via this field the parameter number requested has to be transferred to the scale computer. The scale computer then responds in the reply-mail box with this parameter code and the appertaining parameter value.. A list of possible query/parameter numbers is represented on the following pages. If to the parameter number the value 10000 is added, in the parameter value a new value for this scale computer parameter can be transferred. In this case the reply-mail box has to be checked, whether the value has been taken over.	PLC	2 Words unsigned DINT
Parameter Number	<i>Mailbox access possibilities to the internal parameters of the scale computer.</i> This field indicates which parameter is represented in the appertaining field at present. A list of possible parameter numbers is represented on the following pages.		
Parameter Value	<i>Mailbox access possibilities to the internal parameters of the scale computer.</i> This field indicates the numerical value of the parameter. Percentage values are always represented as numbers from 0-10000 for 0,00 up to 100,00%.	DWC and PLC	2 Words

5.3 PARAMETER-NUMBERS

Programming Number	Query Number	Parameter denomination	Unit
	19	Current batch number C-counter	Whole number
	45	Endless counter A	Absolute value
	46	Counter B	Absolute value
	47	Counter C	Absolute Value
	60	Actual capacity in per cent	Percentage
	66 67 68	Actual load of the conveyor belt	Percentage
	82	Actual speed of the conveyor belt	
	110	Belt Scale FN Number	Absolute value
	148	Result of last Test perfect Result is 10000 e.g. 20% Deviation is 8000 or 12000 acc to direction of deviation	Percentage
	501	current minute	00 - 59
	502	current hour	00 - 23
	510	current day	1 - 31
	511	current month	1 - 12
	512	current year	2012 - xxxx
	551	minute of last tare	00 - 59
	552	hour of last tare	00 - 23
	560	Day of last tare	1 - 31
	561	month of last tare	1 - 12
	562	year of last tare	2012 - xxxx
	570	number of last tare process	0 - 29999
	571	current tare-value absolute	Absolute value
	580	deviation tare to Zero offset / Beltscale	Absolute value
	581	Deviation tare to zero-offset / Beltscale scaled by measuring range	Percentage
	585	actual Tare / Test state number	Absolute value according to number at display (right top corner) during Tare / Test
	700	COMMUNICATION TEST COMMAND	12345678

Attention: The parameter value may be used in connection with the correct parameter number . In practice first the parameter number has to be compared with the requested number, before the parameter value may be used.

The reason is that in the meantime other values might have been transferred, too!

All numerical values are indicated in decimal number system. Percentage values are transferred as values with 1/100 per cent resolution (e.g. 74.83 % corresponds to numerical value 7483).

5.4 Special option for LegalForTrade (STAMPED) BELT SCALES

At gauged (stamped) belt scales always the actual batch number (Par-Code 19 / see above) has to be stored with the weight of the counter and where applicable to be indicated on paper outprints in order ensure traceability and test possibility of the results !

With this batch number a reference to the measured value in the ALIBI-memory of the weighing electronics can be established.

5.5 Test possibilities of the Fieldbus- Interface

```

MAIN MENU
  GRAPHIC SCREEN
  TEXT SCREEN
  Status
  Control
  Set clock
->Fieldbus
  
```

It is possible to control the data transfer of the fieldbus interface. Thereto in the main menu the point „Fieldbus“ has to be selected.

If this menu point is not visible, no valid bus address has been adjusted.

It is strongly recommended to use UTC-Time to avoid Summer/Wintertime switching problems.

```

Fieldbus
      T1      T2
      T3      T4
      L1      L2
      P1      P2
      R1      R2
      R3      R4
EXIT->MODE
  
```

Under „PB-DP DWC<-PLC“ the *Emitting* data of the *Master-station* are represented. In the upper part of both pictures general status information about the communication system is visible.

DATA PLC to DWC

T1	Actual capacity	Resolution 1/10 kg/h
T2	Quantity counter B	Resolution 1/10 kg/h
T3	Error / Status Double Word	hexadecimal
T4	Digital Bus-Outputs	hexadecimal
L1	Actual field IL1	depending on parameterizing /At present counter A
L2	Actual field IL2	depending on parameterizing /At present counter B
P1	Parameter number	depending on previous query code
P2	Parameter value	Actual parameter value

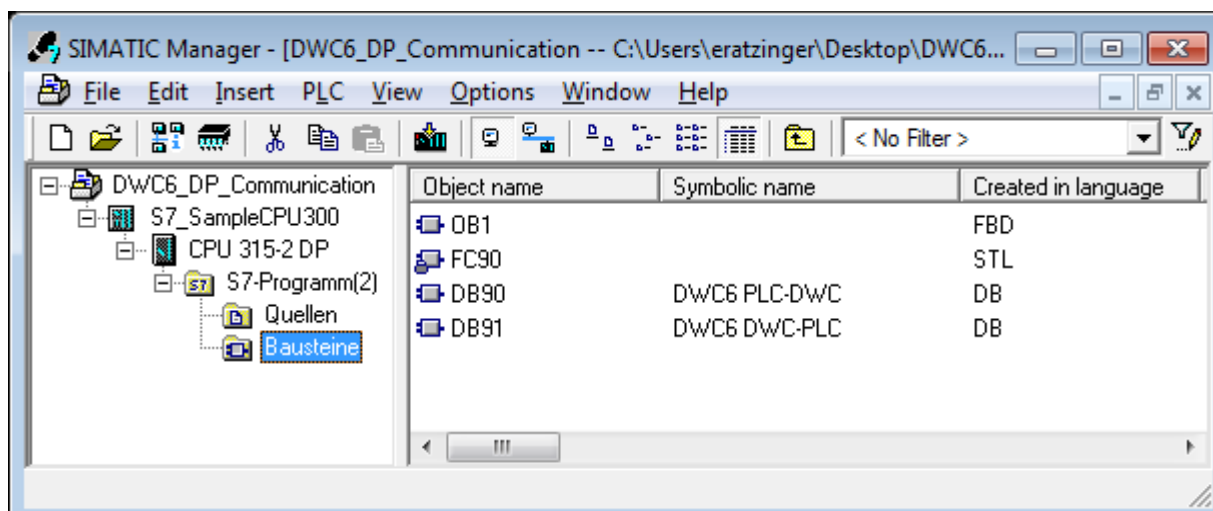
DATA DWC to PLC

R1	reserved	
R2	digital bus-inputs	hexadecimal
R3	reserved	
R4	angle correction for movable belts	Do not use in case of stiff belts !

6 Library für S7-Classic (Profibus / Profinet)

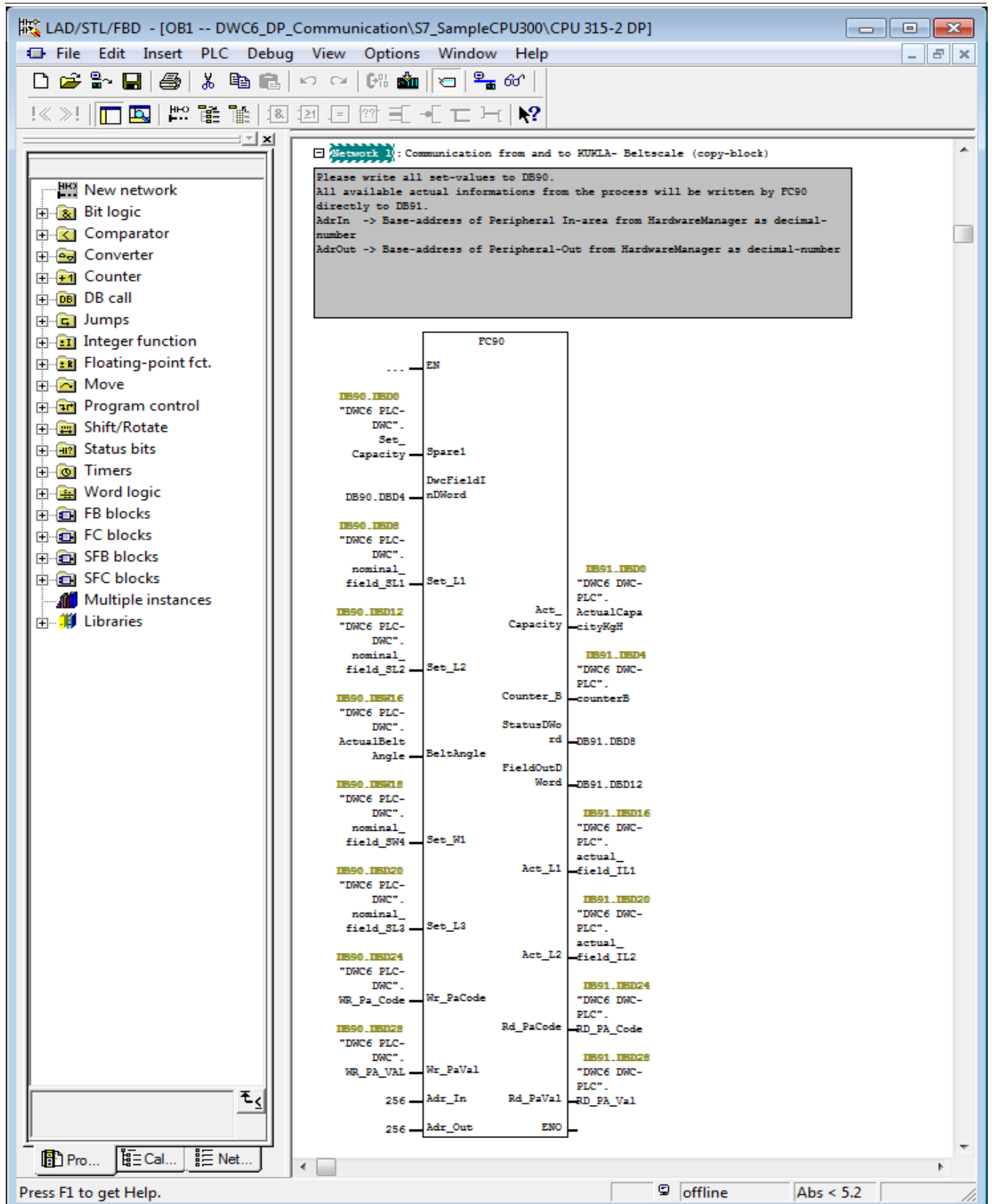
For easy integration of DWC-6 devices in a local S7 a suitable library can be requested by KUKLA.

Following blocks are relevant:



OB1 calls on the KUKLA prepared real communication block FC90.

Datablock DB90 covers all data exchange informations to the DWC-6 , DB91 covers all process datas from the beltscale controller to the PLC.

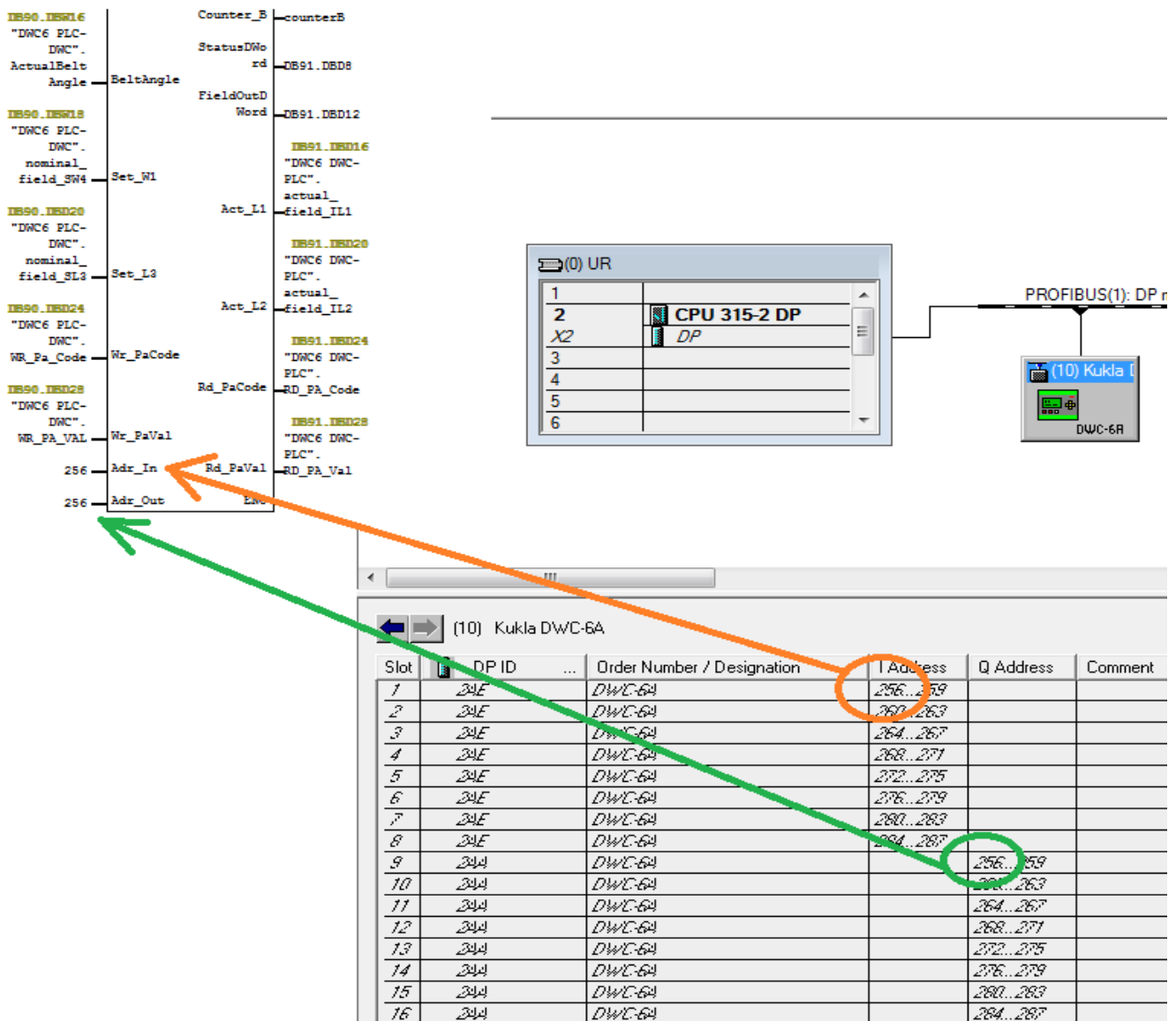


All nominal values, who will be sent from SPS to DWC-6, are connected on the left side. All process data values, who be sent from the scale to the central PLC, are connected on the right side of the block.

In this example the dates will be saved in data block DB70, the user can also connect other data blocks or flags.

6.1 Integration Hardware- Addresses

Very important is the right connection of the variables `Adr_In` and `Adr_Out` at the bottom of the block.



The basic addresses provide the connection between the decentralized peripherals and the communication block FC90. If more DWC-6 are connected to a single PLC necessarily a new address range for every new device is mandatory.

For each additionally DWC-6 on the same bus the FC90 must be called again in a new network. In this case of course new memory variables have to be connected (e.g. by copy DB90 to DB 9x and DB91 to DB10x)