

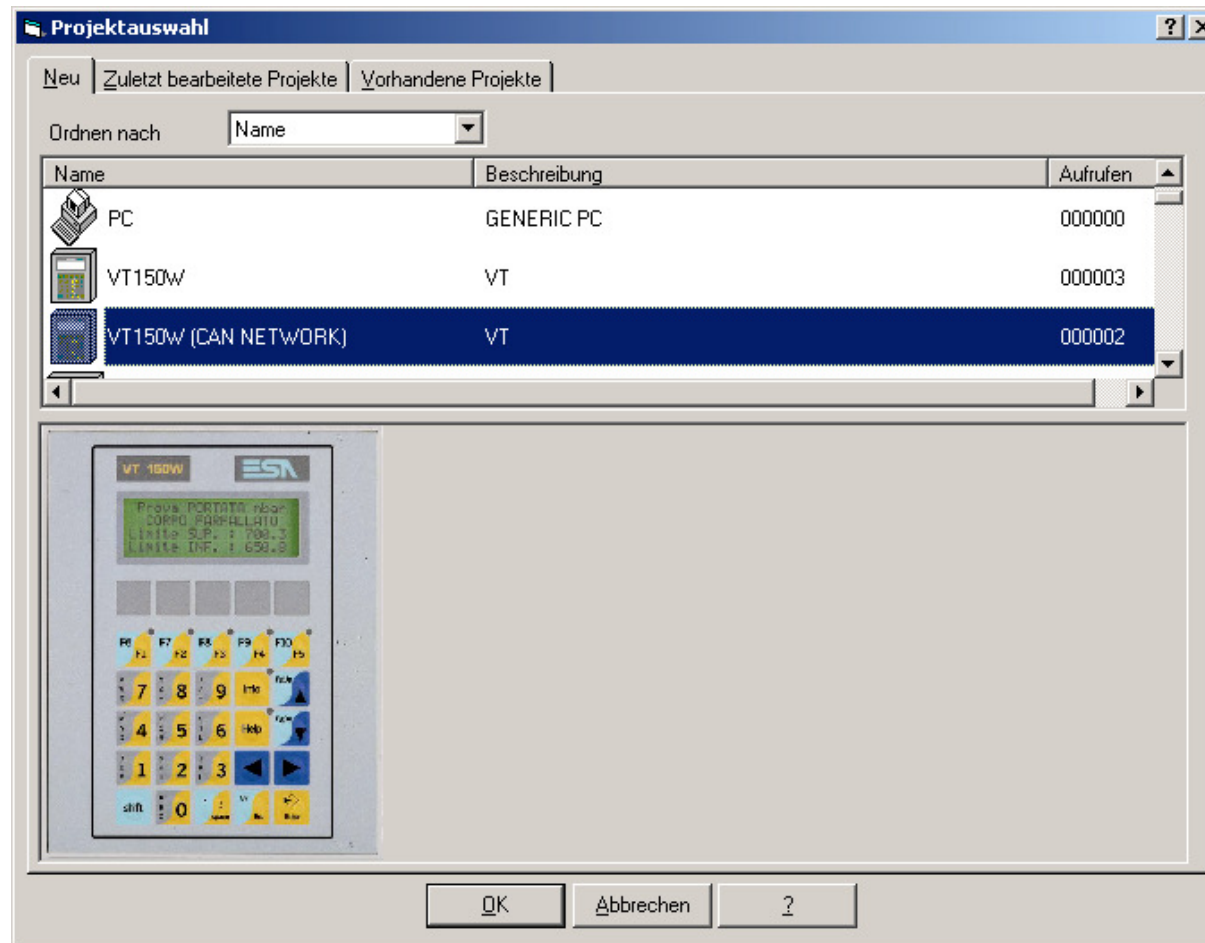
VTWIN - First Project CANopen

- Basic procedure at creating a project with connection via CANopen
- Example: VT150 with CDD3000, iMotion with CM-CAN2

VTWIN - erstes Projekt CANopen

VTWIN - First Steps

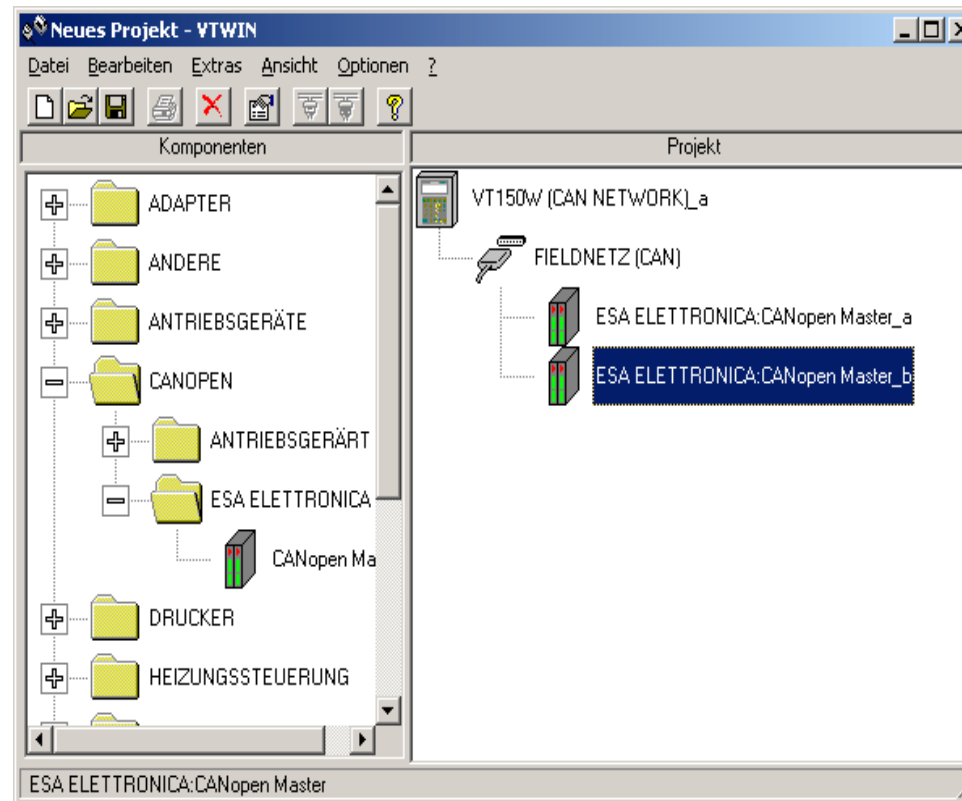
- Selection of Operator-Panels



VTWIN - erstes Projekt CANopen

VTWIN - Hardware Configuration

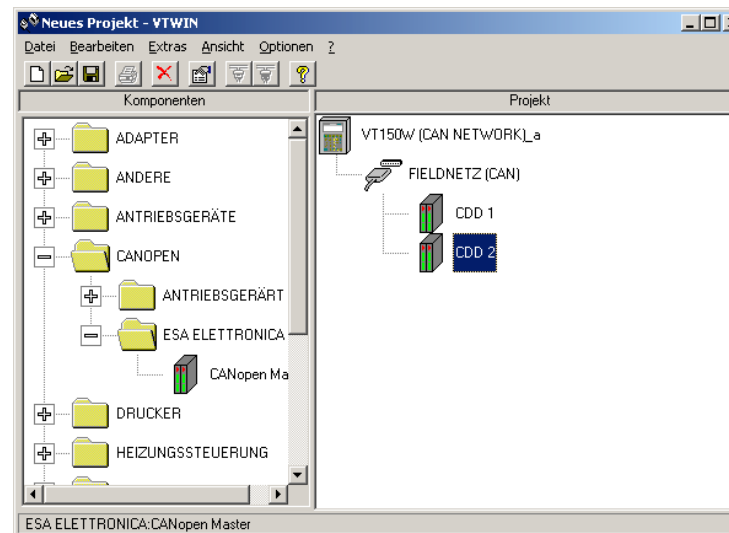
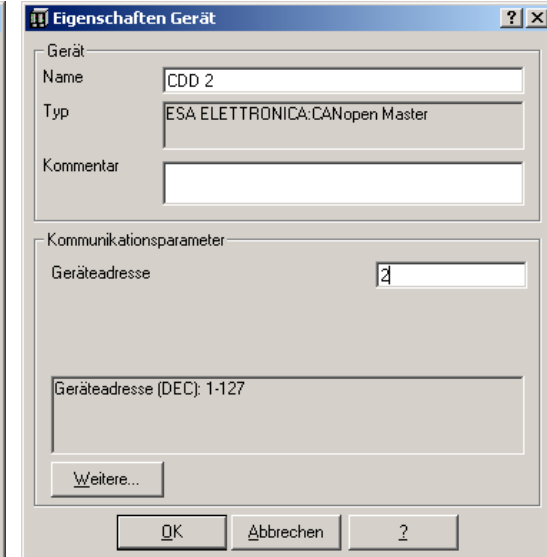
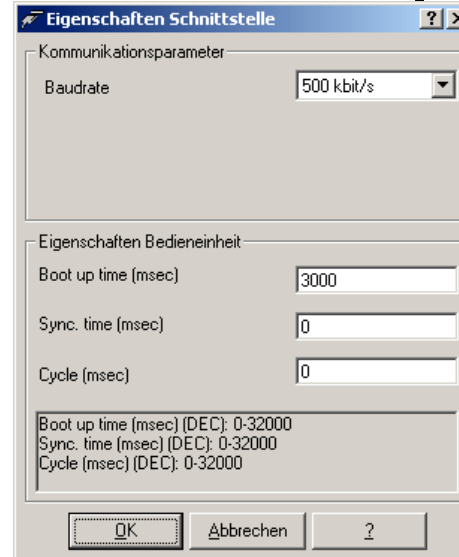
- Select CAN-driver via drag & drop
- Fieldnet(CAN) shows interface of the panel



VTWIN - erstes Projekt CANopen

VTWIN - Configuration of Participants

- Set Baud rate of interface
- Boot-up time is the time after initialising the panel and switching-on until all CAN participants are in the state „operational“
- Set the appropriate device address at all participants

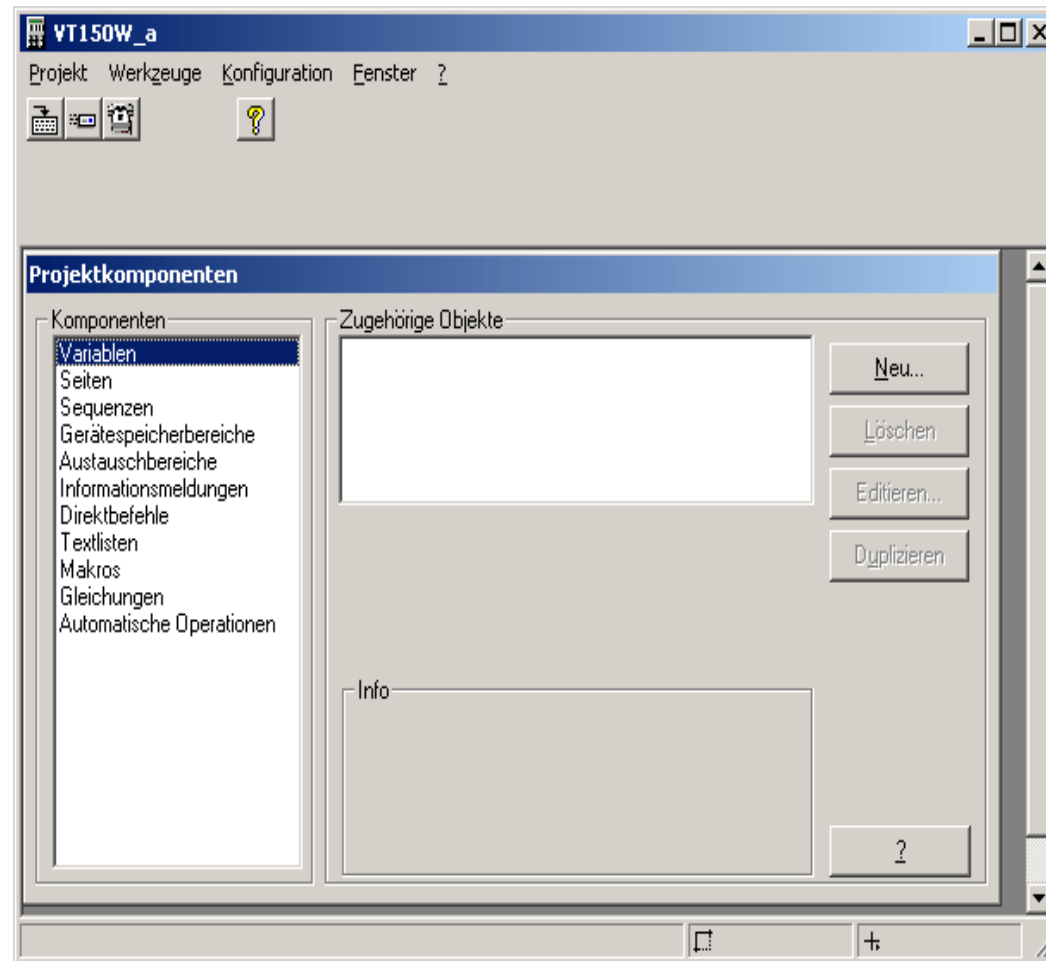


JUST

VTWIN - erstes Projekt CANopen

VTWIN - 3. Step

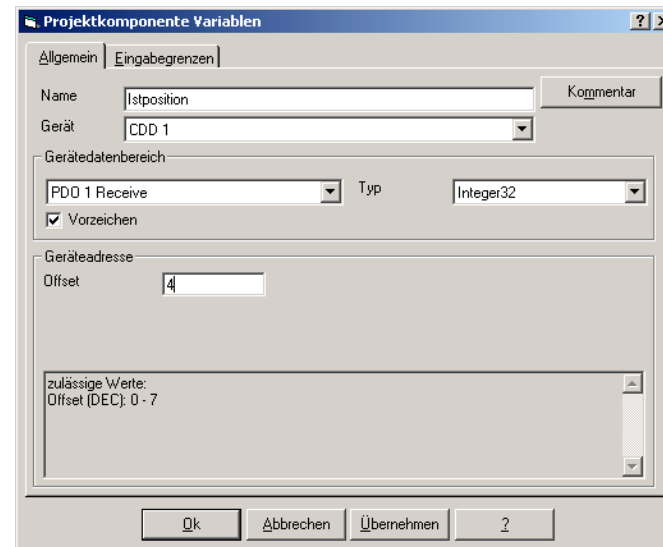
- Start program surface via double-click to Panel Icon



VTWIN - erstes Projekt CANopen

VTWIN - Definition of Variables

- Print parameter list via DriveManager with stating data types
- Fix names
- Select memory location of variables (CDx or internal index)
- Device data range: Enter parameter access and appropriate data
- Device address: depending on PDO or SDO-access



VTWIN - erstes Projekt CANopen

VTWIN - Variable declaration under CANopen

- Device data range:
Select kind of access -

PDO (control channel),
see definition of control
and status word of CAN-
slaves

VT -> device = Receive
Device -> VT = Transmit

or
SDO (Parameter
channel)

- Select type:
Consider data type at
device parameters
(see parameter list)

Projektkomponente Variablen

Allgemein | Eingabegrenzen

Name: Sollposition 1

Gerät: CDD 1

Gerätedatenbereich

SDO Integer32 Typ: Integer32

PDO 4 Receive Integer24
PDO 4 Transmit
PDO 4 Transmit Integer24
SDO Integer 8
SDO Integer16
SDO Integer24
SDO Integer32
Status variable

Vorzichen

zulässige Werte:
Index (HEX): 1 - FFFF
Subindex (HEX): 0 - FF

Projektkomponente Variablen

Allgemein | Eingabegrenzen

Name: Sollposition 1

Gerät: CDD 1

Gerätedatenbereich

SDO Integer32 Typ: Integer32

Vorzeichen

Geräteadresse

Index: 22D8 Subindex: A

zulässige Werte:
Index (HEX): 1 - FFFF
Subindex (HEX): 0 - FF

JUST

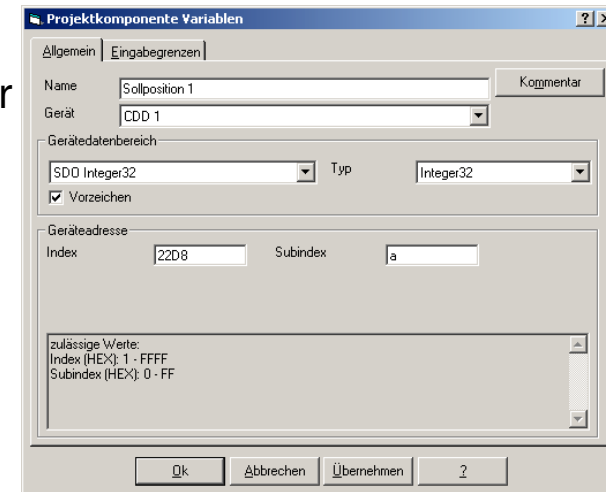
VTWIN - Definition of Variables

- Apply a field parameter as variable.
Use SDO (Parameter channel) at manufacturer specific parameters. Parameter number is built as follows:
2000hex + Parameter number

Example: CDD iMotion-Variable H10

-> Device parameter 728-POVAR, Element 10

-> Index=22D8, Sub index=A



Attention:

At CDA and CDD field parameters and indexes are the same.

At CDB/E/F offset of 1 must be taken into consideration:

Element 10 -> Index 11

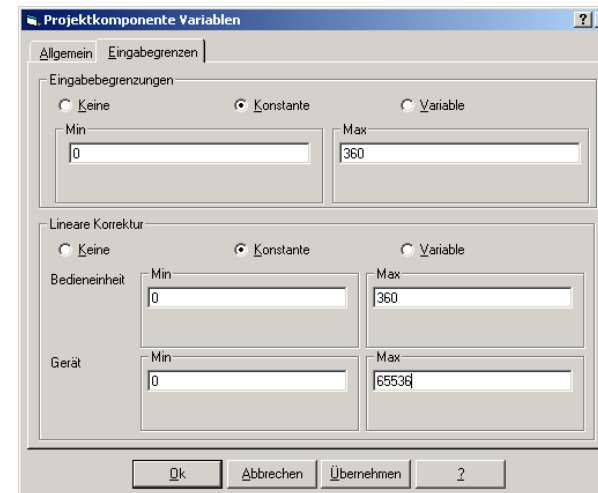
Reason: CANopen defines at field parameters, that element 0 includes always number of elements of parameters.

VTWIN - erstes Projekt CANopen

VTWIN - Definition of Variables

- Limits of input:
Limitation of value range
at input via Panel !

Linear correction:
Scaling of indication values
in the panel



VTWIN - erstes Projekt CANopen

VTWIN - Data types

○ Equivalent table:

VT:

Lust:

INTEGER32 -

INT8, INT16, INT32Q16,
USIGN16, FIXPT16,

Real32 -

FLOAT32

STRING -

STRING

INTEGER8 -

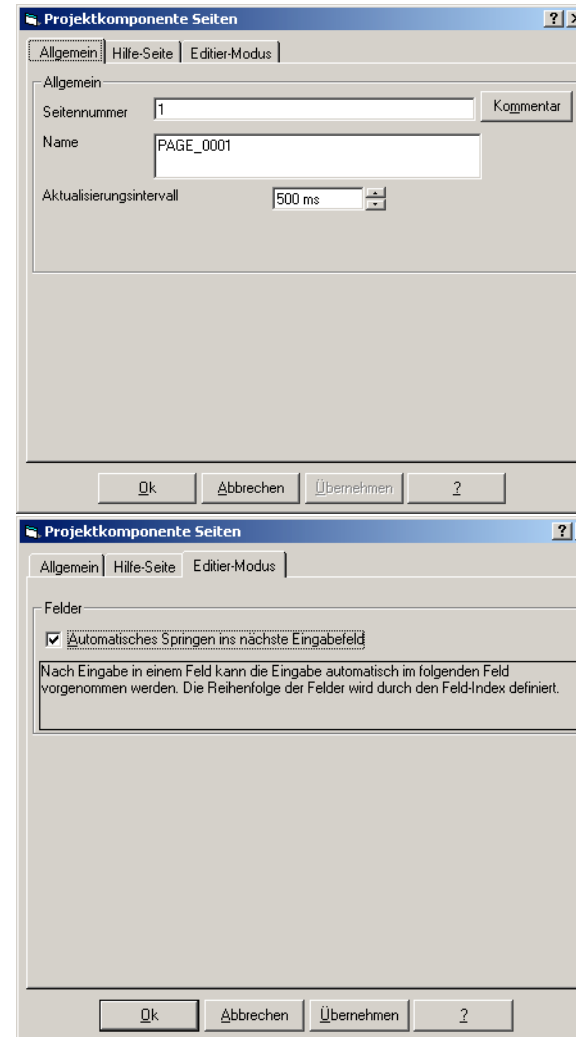
USIGN8

VTWIN - erstes Projekt CANopen

VTWIN - Setting of Pages

- Name issue
- Actualisation interval

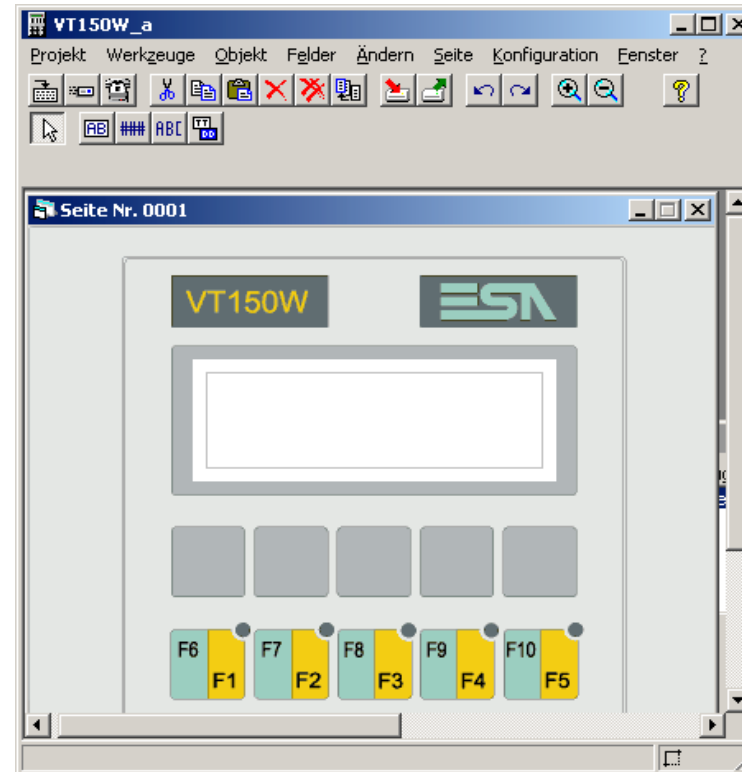
- Configuration of the behaviour in edit mode



VTWIN - erstes Projekt CANopen

VTWIN - Configuration of Pages

- **AB** - includes the text, multilingual projects ask for translation after input is made
- **###** - includes configured variables



VTWIN - erstes Projekt CANopen

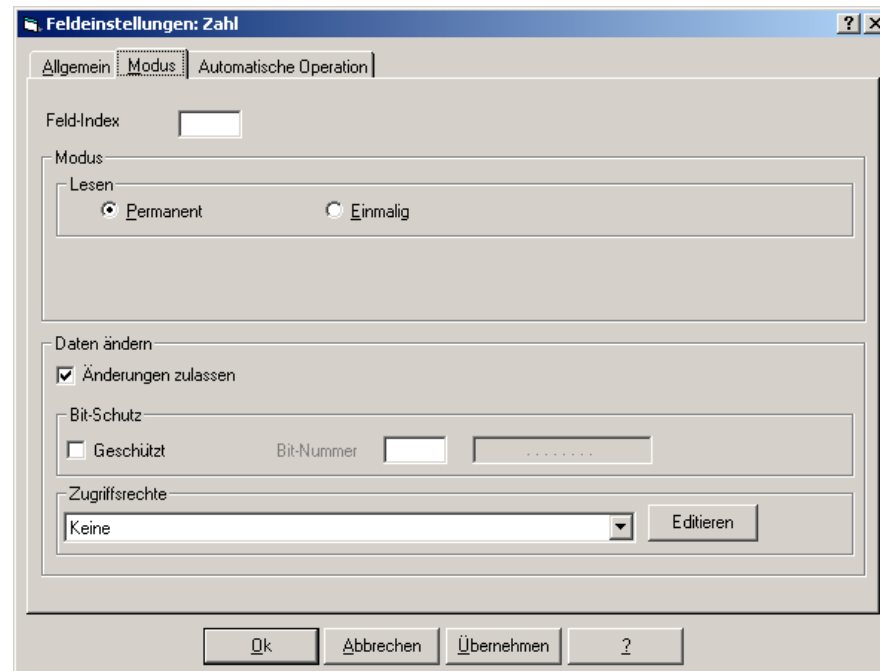
VTWIN - Set-up of Pages

- Name issue
- Select variable
- Configure indication form

The screenshot shows the 'Feldinstellungen: Zahl' dialog box. The 'Allgemein' tab is selected. The 'Name' field contains 'Istposition'. The 'Quelle' dropdown is set to 'Gerät'. The 'Variable' dropdown is set to 'Istposition'. The 'Sichtbare Ziffern' field is set to '5'. The 'Abgerundete Ziffern' field is set to '0'. The 'Format' field contains '#####'. The 'Numerisches Format' dropdown is set to 'integer'. The 'Vorschau' field displays '12345'. Buttons for 'Ok', 'Abbrechen', 'Übernehmen', and '?' are at the bottom.

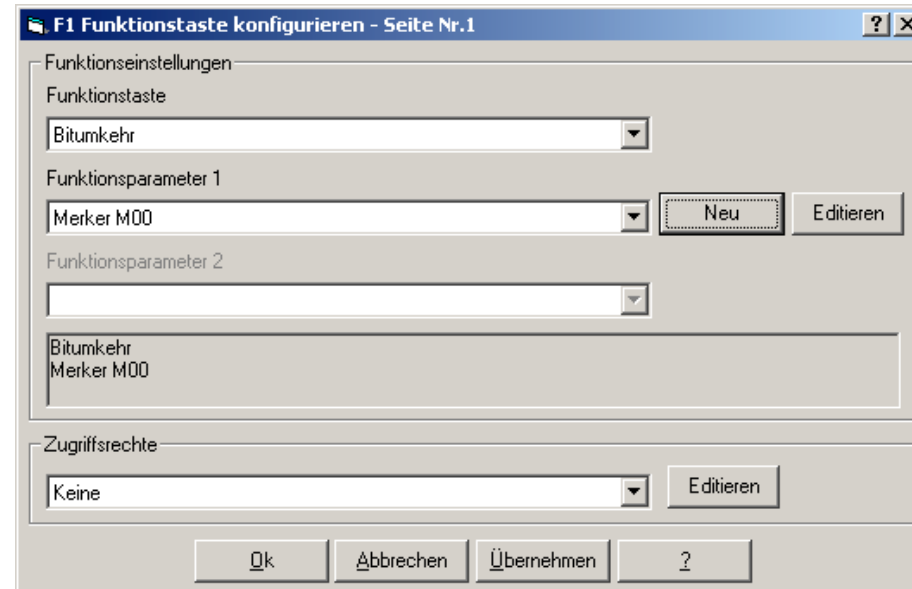
VTWIN - Set-up of Pages

- Mode
Important: set at
CHANGE DATA, if it
deals with an
indication or
changeable value



VTWIN - Function Buttons

- Selection of possible firmware functions
- apply new function parameters (Variable, changed by the function button)



VTWIN - erstes Projekt CANopen

VTWIN - Function Parameter

- Function parameter

The screenshot shows a dialog box titled "Projektkomponente Direktbefehle". It contains the following fields and controls:

- Name:** A text input field containing "Merker M00".
- Kommentar:** A button next to the Name field.
- Zugeordnete Variable:** A section containing:
 - Quelle:** A dropdown menu with "Gerät" selected.
 - Variable:** A dropdown menu with "Merker M00" selected.
 - Buttons:** "Neu" and "Editieren" buttons.
- Direktbefehl-Typ:** A section with two radio buttons: "Bit" (selected) and "Wert".
- Bit-Nr.:** A text input field containing "0", followed by a series of dots and an "X" indicating a range.
- Buttons:** "OK", "Abbrechen", "Übernehmen", and "?" buttons at the bottom.

VTWIN - erstes Projekt CANopen

VTWIN - Fix sequences

- Sequences collect configured pages, changing via button PgUp- and PgDn. Once sequence must be set.

Projektkomponente Sequenzen

Nr. 1

Name Sequenz 1

LED einschalten Keins

Seiten

Start-/Stop-Sequenz beliebige Sequenz

Startseite Seite Nr. 0001

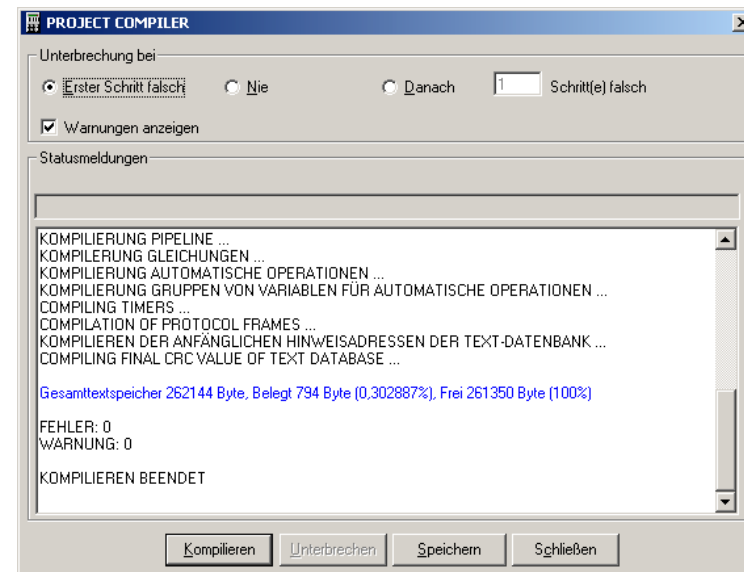
Endseite Seite Nr. 0002

Ok Abbrechen Übernehmen ?

VTWIN - erstes Projekt CANopen

Compile the Project

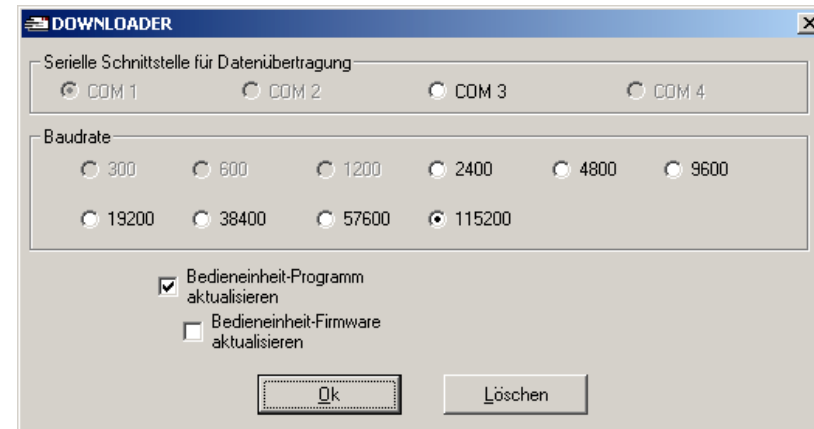
- Select in menu point tools - compile project - start
- Close compiler after successful finish



VTWIN - erstes Projekt CANopen

Download the project to the panel

- Select in menu point tools - transfer project
- connected panel has be be in program state from the hardware side before starting the download. Procedure depends on the panel, for details see hardware-manual
- Settings have not to be changed. Surface checks automatically if the firmware in the device suits for the project, if required download starts



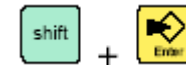
Preparing the panels for download

○ Text-Displays

VT050 - during switching-on the supply voltage press button until writing „Service page“ occurs.



VT150 - switch-on panel by pressed  or press at already switched-on panel
Wait for „BOOT FORCED“ indication in both cases



○ Graph-Displays

VT505 / 155 - two diagonal opposite edges, free of settable objects or buttons, press one after the other (one edge must be free in any case)

