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Imprint

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Original instructions

The German version of this document is the original instructions

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Imprint

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1 General

1.1 Aim and purpose of this document

This user manual provides the information required for connecting Eaton Automation automation components to «easy».

This user manual describes the installation and configuration. The operating system and application software are not described.

1.2 Comments about this user manual

Please send any comments, recommendations or suggestions relating to this user manual to automation@eaton.com.

1.3 Additional documentation

Further documents may be helpful in addition to this user manual.

The following documentation can be obtained from our website (www.eaton-automation.com):

- [1] MN05010007Z
System Description Windows CE

2 Communication overview

2.1 Operating principle easy 500 / 700

The communication uses the RS232 interface. The communication is implemented via a «PC-CAB» from a panel or PC with precisely one «easy component».

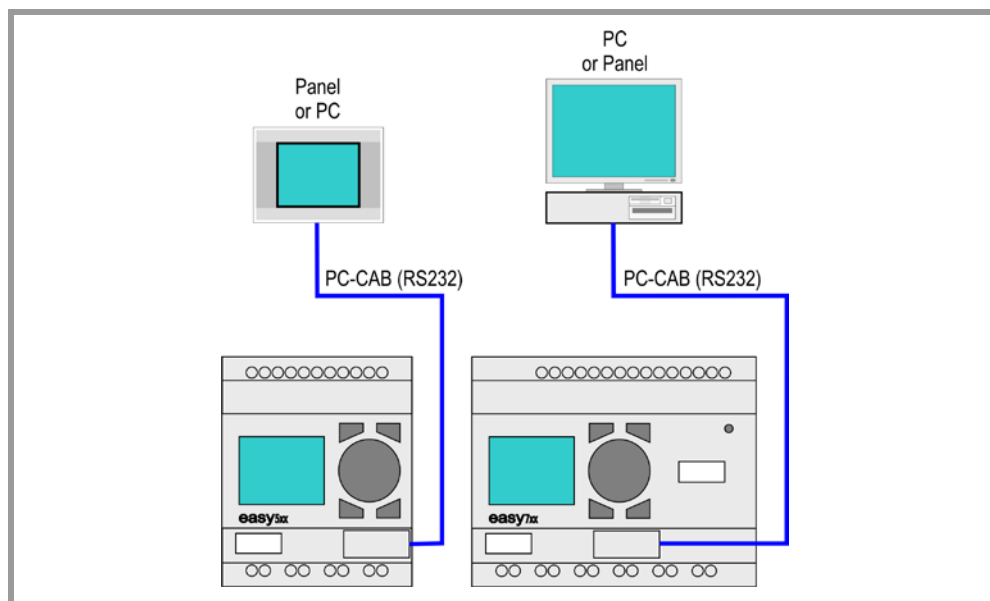


Fig. 1 Operating principle easy 500/700

2.2 Operating principle easy 800 / MFD

The communication uses the RS232 interface. The communication is implemented via a «**PC-CAB**», «**MO-CAB**» or «**EU4A-RJ45-CAB1**» from a panel or PC with all «**easy components**» on the «**easy NET**».

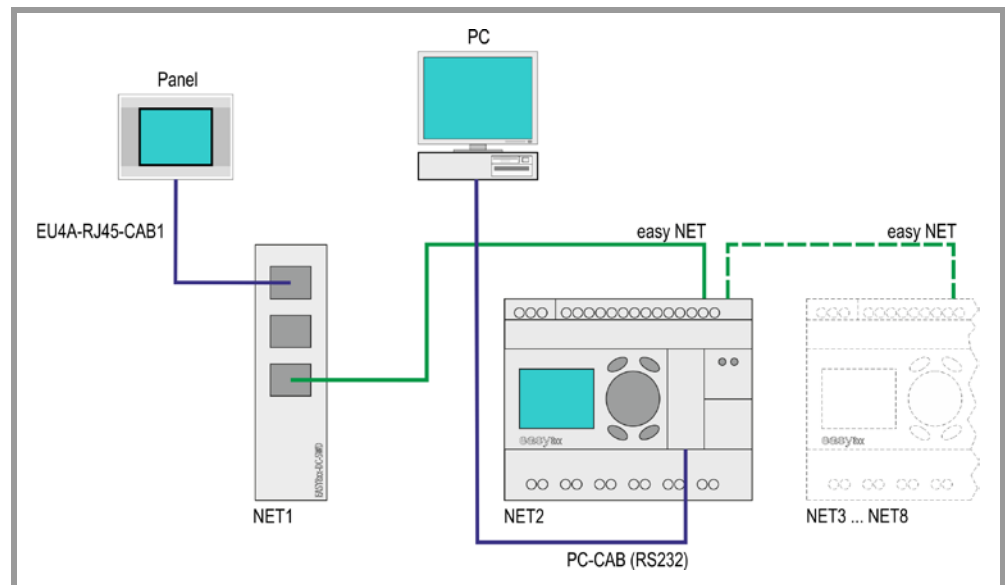


Fig. 2 Operating principle easy 800 / MFD

2.3 Supported systems

2.3.1 Client

The following devices control the communication to a «**easy 500 / 700 / 800 / MFD**»:

- PC with GALILEO Open and RS232 interface
- MICRO PANEL XV series with RS232 interface
- MICRO PANEL M series with RS232 interface
- MICRO PANEL GF2

The term «**Client**» in the following documentation stands for these devices and the software running on them.

2.3.2 Server

All «**easy 500 / 700 / 800 / MFD**» are supported.

The term «**easy**» in the following documentation stands for these devices.

2.4

Supported data

2.4.1

Addresses

Description		easy 500 / 700	easy 800 / MFD
Analog value comparator	A	✓	-
Text marker	D	✓	-
Week time switch	H	✓	-
Input terminal	I	✓	✓
Analog input	IA	✓	✓
Diagnostic	ID	-	✓
Marker	M	✓	✓
Marker Byte	MB	-	✓
Marker DWord	MD	-	✓
Marker Word	MW	-	✓
Marker	N	✓	-
Cursor button	P	✓	✓
Output	Q	✓	✓
Analog output	QA	-	✓
Input terminal	R	✓	✓
Output	S	✓	✓
Year time switch	Y	✓	-
Master reset	Z	✓	-
Real-time clock		✓	✓
LED		-	- / ✓

Tab. 1 Supported addresses

3 Hardware

Both «**Client**» and also «**easy**» are provided with an RS232 interface which can be used to connect them. Information on installation, wiring and commissioning is provided in the operating instructions of the devices.

3.1 MO-CAB

For a «**Client**», the modem cable must be made-up as follows.

D-Sub Pin	MO-CAB flex wire
2	white
3	brown
4	yellow
5	green
6	grey

Tab. 2 Cable termination MO-CAB

4 Network

4.1.1 easy 500 / 700

«easy 500 / 700» cannot be networked with each other.

4.1.2 easy 800 / MFD

Some «easy 800 / MFD» can be networked with «easy NET». The client can access all «easy components» on «easy NET» over these devices.

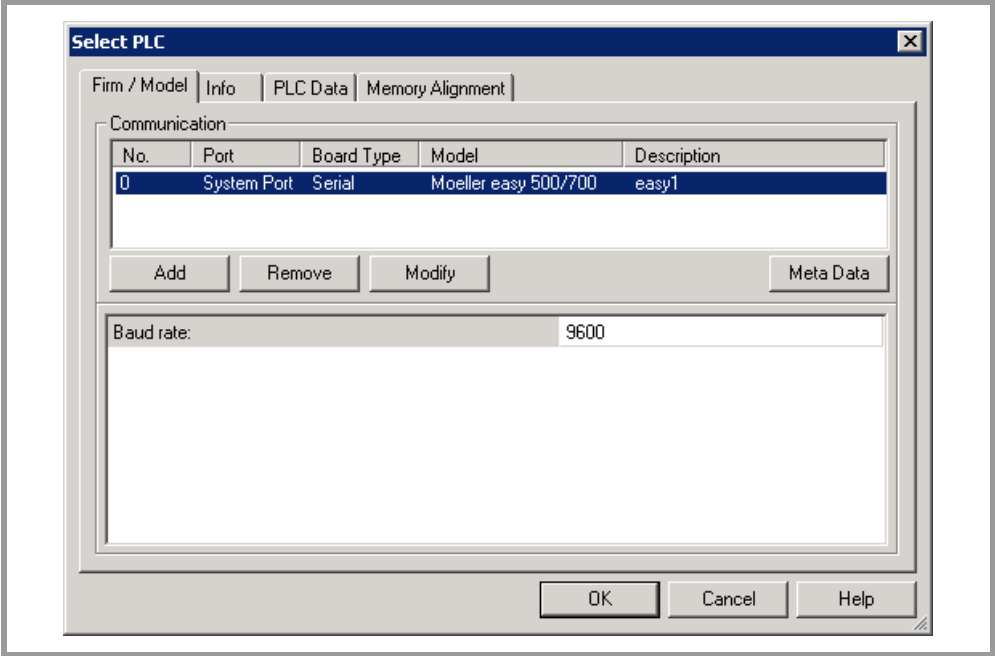
5 Software

5.1 GALILEO

The GALILEO visualization software supports several parallel communication channels. A communication channel is required for each «easy 500 / 700». A communication channel is required for one or several «easy 800 / MFD» on the same «easy NET». One communication channel is assigned exclusively to one serial interface. It is not possible to configure multiple communication channels to the same «easy 500 / 700 / 800 / MFD».

5.1.1 Configuring communication in GALILEO

Choose «Moeller easy 500/700» or «Moeller easy 800/MFD» and set the communication parameters.



1) Configuring communication in GALILEO – Moeller easy 500/700

Communication parameters	Comment
Baud rate	The baud rate of the «easy» is automatically set by the «Client».

Tab. 3 Baud rate easy 800 / MFD

☞ «easy 800 / MFD»: The PC-CAB is suitable for baud rates up to 19200 Kbit/s.

☞ Some easy-Soft versions cannot detect an «easy» with a baud rate of 115200 Kbit/s.

5.1.2

Addressing variables for easy 500 / 700 in GALILEO

The chapter 2.4 describes which variables of the «easy» you can access. GALILEO supports the following address forms and data types:

GALILEO	easy 500 / 700
A%d	Variables on the easy.
D%d	
H%d	
I%d	
IA%d	
M%d	
N%d	
P%d	
Q%d	
R%d	
RTC%d	
S%d	
Y%d	
Z%d	

Tab. 4 Address forms for «easy 500 / 700» in GALILEO

GALILEO	easy 500 / 700
Bit / Error bit	A, D, H, I, M, N, P, Q, R, S, Y, Z
Byte	not supported
Word	IA
dword	not supported
Float	not supported
String	not supported
Date_Time	RTC

Tab. 5 Data types for «easy 500 / 700» in GALILEO

5.1.3

Addressing communication specific data type-variables for easy 500 / 700 in GALILEO

GALILEO	easy 500 / 700
Analog Comparator	A
Counter	C
Operating Hours	O
Time	RTC1
Timer	T
Week Time Switch	H 1...8 A...D
Year Time Switch	Y 1...8 A...D

Tab. 6 Communication specific data types for «easy 500 / 700» in GALILEO

5.1.4

Addressing variables for easy 800 / MFD in GALILEO

The chapter 2.4 describes which variables of the «easy» you can access. GALILEO supports the following address forms and data types:

GALILEO	easy 800 / MFD
I%d	Variables on the easy.
IA%d	
ID%d	
LED%d	
M%d	
MB%d	
MD%d	
MW%d	
P%d	
Q%d	
QA%d	
R%d	
RTC%d	
S%d	
NET%d.I%d	Variables on the easy NET.
NET%d.IA%d	
NET%d.ID%d	
NET%d.LED%d	
NET%d.M%d	
NET%d.MB%d	
NET%d.MD%d	
NET%d.MW%d	
NET%d.P%d	
NET%d.Q%d	
NET%d.QA%d	
NET%d.R%d	
NET%d.RTC%d	
NET%d.S%d	

Tab. 7 Address forms for «easy 800 / MFD» in GALILEO

GALILEO	easy 800 / MFD
Bit / Error bit	M, I, Q; R, S; P, ID, LED
Byte	MB
Word	MW, IA, QA
dword	MD
Float	not supported
String	MB, MD, MW
Date_Time	RTC

Tab. 8 Data types for «easy 800 / MFD» in GALILEO

5.1.5

Addressing communication specific data type-variables for easy 800 / MFD in GALILEO

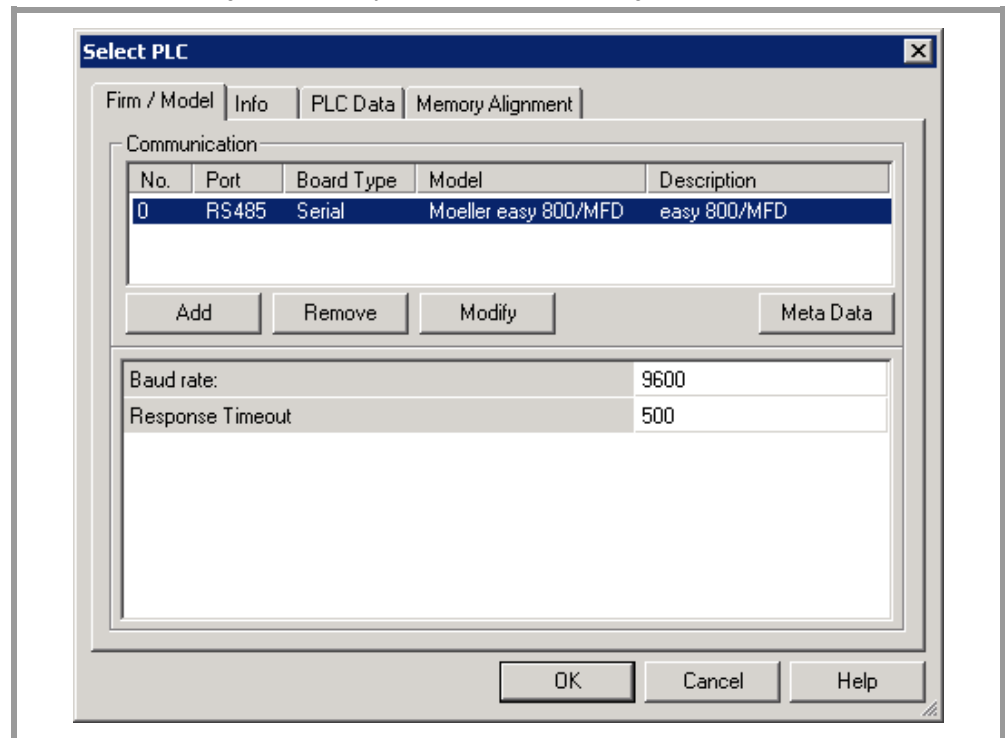
GALILEO	easy 800 / MFD
A, analog value comparator/threshold value switch	A
AR, Arithmetic	AR
BC, data block comparator	BC
BT, Data block Transformer	BT
BV, Boolean operation	BV
C, counter relay	C
CF, frequency counter	CF
CH, high-speed counter	CH
CI, High-speed incremental value counter	CI
CP, comparator	CP
DB, data block	DB
DC, PID controller	DC
FT, signal smoothing filter	FT
GT, get value from the NET	GT
HW, weekly timer	HW
HY – Year Time Switch	HY
JC, conditional jump	JC
LB, jump label	LB
LS, value scaling	LS
MR, master reset	MR
MX, data multiplexer	MX
NC, numerical converter	NC
OT, operating hours counter	OT
PO, pulse output	PO
PT – Put value to the NET	PT
PW, pulse with modulation	PW
RTC, Clock	RTC
SC, set date/time	SC
SP, serial protocol	SP
SR, shift register	SR
ST, Set cycle time	ST
T, timing delay	T
TB, table function	TB
VC, value limitation	VC

Tab. 9 Communication specific data types for «easy 800 / MFD» in GALILEO

5.1.6

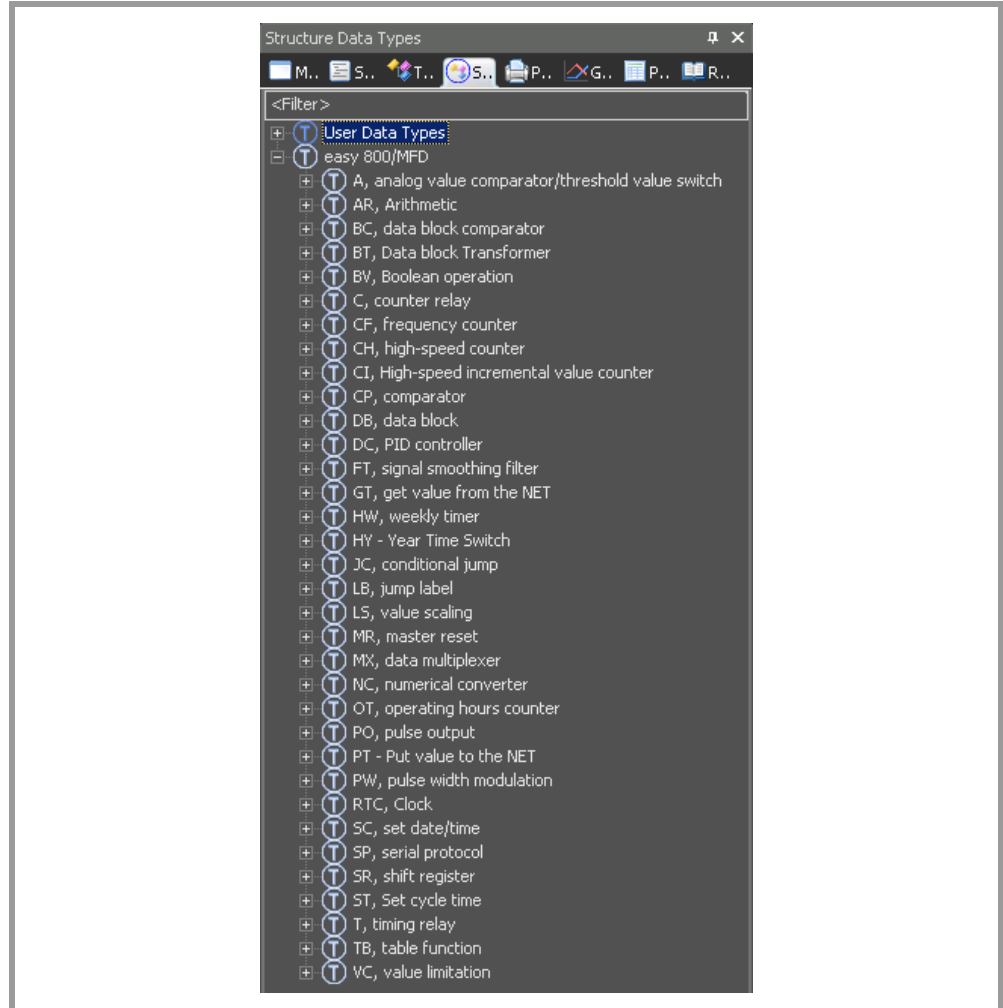
How to address communication specific data types

The communication specific data types are automatically loaded into the project as soon as you add the communication e.g. «Moeller easy 800/MFD» from the dialog «select PLC».



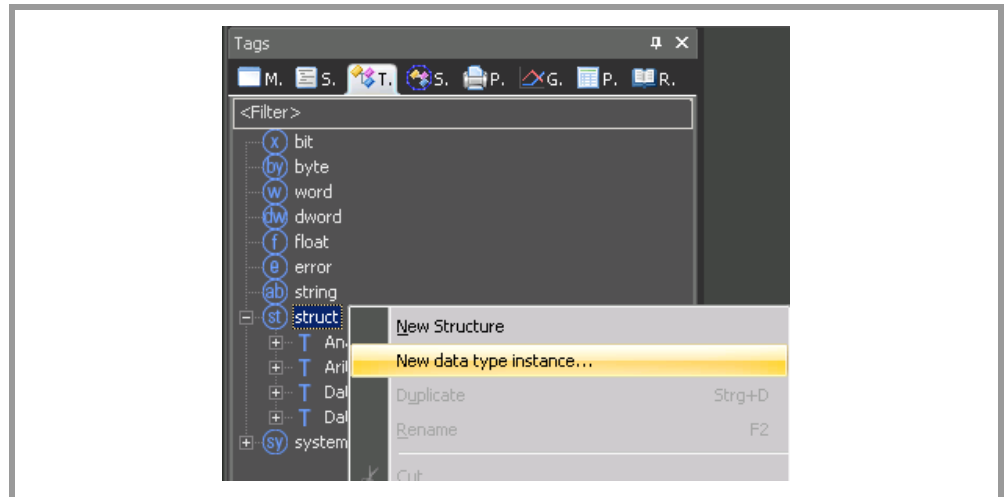
2) Configuring communication in GALILEO – Moeller easy 800/MFD

All existing entries for «easy 800/MFD» are now displayed in the «Structure Data Types».



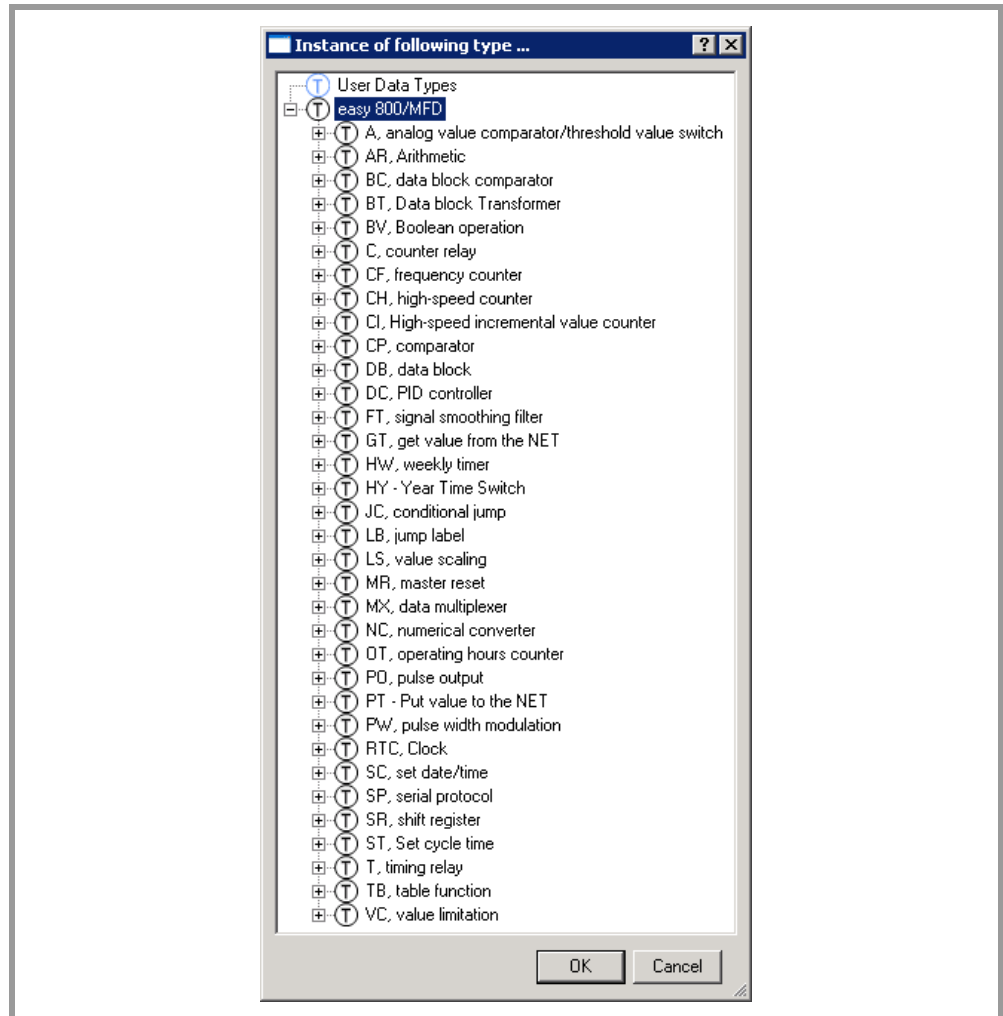
3) Structure Data Types for easy 800/MFD

To use the «Structure Data Types» from the «easy 800/MFD» use the right mouse button to create a new instance with «New» > «New data type instance...».



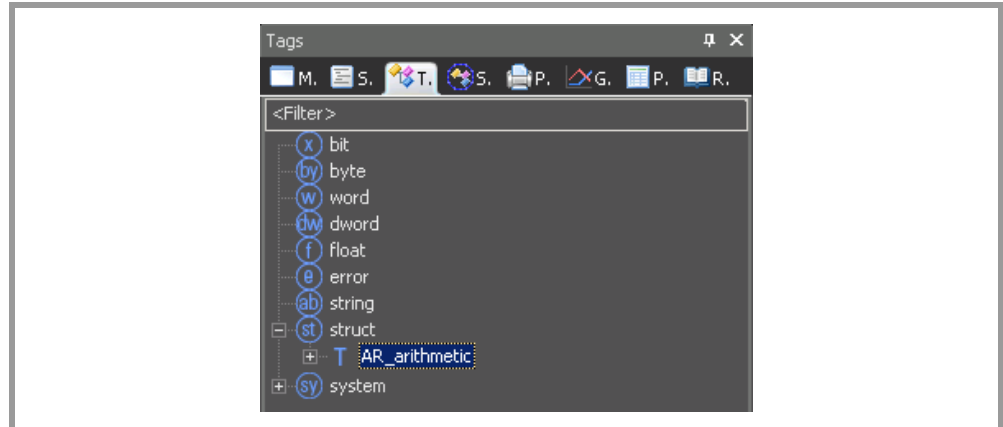
4) New data type instance

You can select the desired instance in the dialog window.



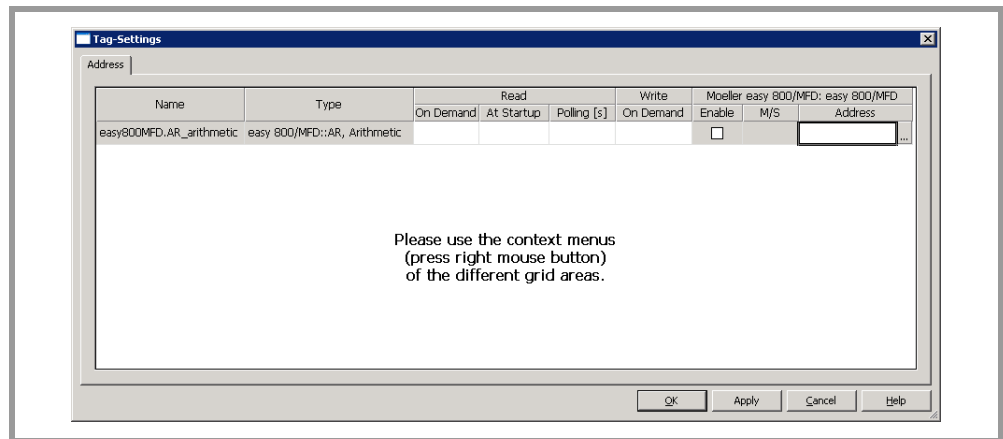
5) Choose instance

The «New data type instance» is created within the «Tags».



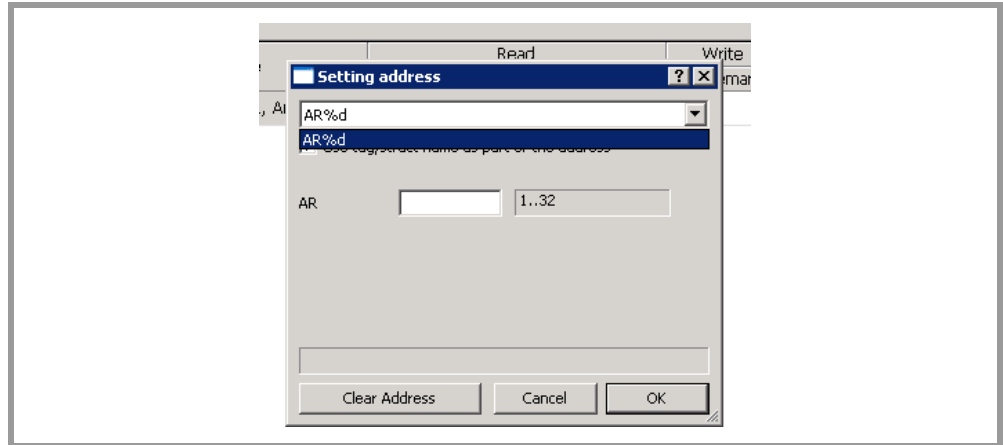
6) New data type instance

The «Tag Settings» of the «New data type instance» can be accessed by double-clicking.



7) Tag-Settings

Click on the field «...» of the «Address» to link the «New data type instance».



8) Setting address

More «Data type instances» can be added to the «Structure» in the same way.