

Software Manual

**XSoft-Galileo, Funktionen and Limits**

01/05 AWB2776-1552GB

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1 GENERAL						
Galileo	V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>1.1 SYSTEM REQUIREMENTS</b>						
<b>Panel Design System</b>						
Operating System:	●	●	●	●	●	
- Windows 95	●	●	●	●	●	
- Windows 98	●	●	●	●	●	●
- Windows NT / 2000	●	●	●	●	●	●
- Windows XP				●	●	●
PCMCIA-Flash Card Drive	●	●	●	●	●	●
PC Processor	min 486	min 486	min Pent.	min Pent.	min Pent.	min Pent.
<b>1.2 PANEL MV4... / XV-...</b>						
<b>Panel Types</b>						
MV4... XV-400				●	●	●
				●	●	●
<b>Memory Size</b>						
MV4... XV-400				-1024	-1024	-1024
				-1024	-1024	-1024
<b>PLC Interface</b>						
XT-MPB1-TP		●	●	●	●	●
XT-MPB2-TP		●	●	●	●	●
XT-BCB-TP (BASIC CAN)		●	●	●	●	●
XT-PDP-TP (Profibus DP)		●	●	●	●	●
Serial Communication (without Communication card)		●	●	●	●	●
Ethernet (MV4... only)				●	●	●

<b>2 POSSIBILITIES AND LIMITS</b>						
Galileo	V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>2.1 PROJECT</b>						
Max. no. of masks per project	65000	65000	65000	65000	65000	65000
Max. no. of languages	100	100	100	100	100	100
Max. no. of texts	65000	65000	65000	65000	65000	65000
No. of different character sets	6	6	> 6	> 6	> 6	> 6
- Availability of Cyrillic characters			●	●	●	●
- Availability of Greek characters			●	●	●	●
- Availability of turkey characters			●	●	●	●
- Availability of hiragana/katakana characters			●	●	●	●
Availability of Unicode					●	●
Max. no. of messages	1000	1000	1000	1000	1000	1000
- errors / warnings / messages	●	●	●	●	●	●
Max. no of alarms in buffer	500	500	500	4096	4096	4096
<b>Max. no of communication interfaces (e.g. XT-MPB1/2, Ethernet and System Port)</b>						
- XV-400 Panels					4	4
- MV4... Panels				4	4	4
Max. number of data blocks of the communication (≥ V4.0: addressed tags/arrays/structs)	65000	65000	65000	65000	65000	65000
Max. number of bytes per data block (≥ V4.0: max. size of array resp. struct)	64	64	128	128	128	128
Max. number of tags	65000	65000	65000	65000	65000	65000
- Tag type: Bit	●	●	●	●	●	●
Byte	●	●	●	●	●	●
Word	●	●	●	●	●	●
Double	●	●	●	●	●	●
Word	●	●	●	●	●	●
Error	●	●	●	●	●	●
Float				●	●	●
Structures				●	●	●
- Tag display Bin, Hex, Dec, Dec +/-, Octal	●	●	●	●	●	●
- Limit 2 upper, 2 lower, default value	●	●	●	●	●	●
- max. number of nestings of the dynamic limit values	1	1	1	∞	∞	∞
- Scaling and units	●	●	●	●	●	●
- Switchable value convert (i.e. meter - inch)	●	●	●	●	●	●
<b>Password Management:</b>						
- max. no. of user levels		200	200	200	200	200
- max. no. of users		500	500	500	500	500

Galileo	V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>Recipe Management:</b>						
- max. no. of recipe management's	32	32	32	32	32	32
- max. file size (XV-400 Panels) *					5 MB	5 MB
- max. file size (MV4... Panels) *				5 MB	5 MB	5 MB
- max. no. of recipe entries (data sets)	1000	1000	1000	1000	1000	1000
- max. no. of tags	2000	2000	2000	2000	2000	2000
<b>Graph:</b>						
- max. no. of graph blocks (1 block / graphical diagram)		100	100	100	100	100
- max. no. of tags each graph object		32	32	32	32	32
- shortest sample rate		1 Sec	1 Sec	1 Sec	1 Sec	1 Sec
<b>2.2 MASK</b>						
Max. no. of static and dynamic Objects each mask	256	256	256	4096	4096	4096
Max. no. of Error Window Objects each mask	1	1	1	1	1	1
Max. no. of Help Window Objects each mask	1	1	1	1	1	1
Max. no. of transfer blocks (each direction) each mask	32	32	32	∞	∞	∞
<b>2.3 PRINTING FUNCTIONS</b>						
Printing online errors	●	●	●	●	●	●
Printing error history	●	●	●	●	●	●
Printing forms (text mode)		●	●	●	●	●
Printing report (graphic mode)			●	●	●	●

**Legend**

\* The file size of recipe management depends on the number of data records, the number of variables and used variable types. Within Galileo the exact file size is displayed.

Note: The specification of the 'Maximum Data' relate to the limiting values which are managed by the software. The number of available amounts used in the different panels depends on the free memory (depending upon type of device of the internal flash memory or of the PCMCIA card).

3 PROJECT HANDLING						
Galileo	V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>3.1 PROJECT HANDLING</b>						
Backup and restore (ZIP file)		●	●	●	●	●
<b>3.2 PROJECT DOCUMENTATION</b>						
Project notes	●	●	●	●	●	●
Tag information:						
- selectable information on screen	●	●	●	●	●	●
- print (non selectable)	●	●	●			
- selectable export				●	●	●
Data block information (≥ V4.0 contained in tag information):						
- selectable information on screen	●	●	●			
- print (non selectable)	●	●	●			
<b>3.3 PROJECT SETTINGS</b>						
System colors for background, frame, button	●	●	●	●	●	●
Mask numbers	●	●	●	●	●	●
Password management		●	●	●	●	●
- max. no. of levels		200	200	200	200	200
- max. no. of users		500	500	500	500	500
Alarm colors for errors, messages, warnings	●	●	●	●	●	●
Touch delay time, double click time adjustable	●	●	●	●	●	●
- Acoustic message when touch / carry		●	●	●	●	●
- Touch disable acc. time and commendable by PLC		●	●	●	●	●
Keyboard settings, colors and font styles	●	●	●	●	●	●
Project language selection	●	●	●	●	●	●

4 MASK HANDLING						
Galileo	V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
4.1 MASK HANDLING						
New, open, close, save, ... as, ... all masks, close all masks	•	•	•	•	•	•
Delete					•	•
4.2 SUB MASK						
Using of sub masks					•	•
4.3 MASK DOCUMENTATION						
Mask information and print	•	•	•	•	•	•
- selectable information on screen (position, size, style, ...)	•	•	•			
- print (non selectable)						
- selectable export				•	•	•
Print of mask	•	•	•	•	•	•
4.4 MASK SETTINGS						
Mask background colored or transparent	•	•	•	•	•	•
Backlight reducing after n minutes	•	•	•	•	•	•
Touch disable after n minutes		•	•	•	•	•
User defined keyboard masks (f.e. Numeric Keyboard)				•	•	•

Galileo	V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>4.5 OBJECT HANDLING</b>						
Undo		●	●	●	●	●
Redo					●	●
Cut	●	●	●	●	●	●
Copy	●	●	●	●	●	●
Paste	●	●	●	●	●	●
Object adjusting	●	●	●	●	●	●
- into foreground	●	●	●	●	●	●
- into background	●	●	●	●	●	●
- one level forward	●	●	●	●	●	●
- one level backward	●	●	●	●	●	●
- to the left		●	●	●	●	●
- to the right		●	●	●	●	●
- up		●	●	●	●	●
- down		●	●	●	●	●
Setting of the object size		●	●	●	●	●
- same width		●	●	●	●	●
- same height		●	●	●	●	●
Grid functions	●	●	●	●	●	●
- Show grid	●	●	●	●	●	●
- Snap grid		●	●	●	●	●
Object groups			●	●	●	●
Search of objects			●	●	●	●
Go to... (change to another mask)				●	●	●

5 STATIC OBJECTS						
Galileo	V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>5.1 DRAWING OBJECTS</b>						
Line	●	●	●	●	●	●
Rectangle	●	●	●	●	●	●
Rounded Rectangle	●	●	●	●	●	●
Ellipse	●	●	●	●	●	●
Polygon	●	●	●	●	●	●
- Setting of line size	●	●	●	●	●	●
- Selection of none or 1 of 16 colors	●					
- Selection of none or 1 of 256 colors		●	●	●	●	●
Standard Text	●	●	●	●	●	●
- Selection of at least 6 font styles	●	●	●	●	●	●
- Selection of 7 font sizes (depending on style)	●	●	●	●	●	●
<b>5.2 BACKGROUND AND IMAGES</b>						
Bitmaps with 256 colors	●	●	●	●	●	●
- Conversion to a standard color palette	●	●	●	●	●	●
- Import of BMP format	●	●	●	●	●	●
- Import of other formats (PCX, DIB, WMF, ...)		●	●	●	●	●
- Display in original size	●	●	●	●	●	●
- Display in reduced or expanded size	●	●	●	●	●	●
Bitmap mit 65535 Fräben						●

6 DYNAMIC OBJECTS						
Galileo	V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>6.1 BASIC OBJECTS</b>						
Mask Change	●	●	●	●	●	●
Button (Streamer)	●	●	●	●	●	●
Switch	●	●	●	●	●	●
Flag Display	●	●	●	●	●	●
- 3D display, 2D display or without frame	●	●	●	●	●	●
- Display with text, color, bitmap	●	●	●	●	●	●
- Display inverse or transparent (depending on object)	●	●	●	●	●	●
- Bit depending conditions (Flag Display)	●	●	●	●	●	●
- Value depending conditions (Flag Display)		●	●	●	●	●
Value Display	●	●	●	●	●	●
Value Entry	●	●	●	●	●	●
- Connection: accessibility	●	●	●	●	●	●
- 3D display, 2D display or without frame	●	●	●	●	●	●
- Display with units	●	●	●	●	●	●
- different font sizes	●	●	●	●	●	●
- selectable keyboards	●	●	●	●	●	●
<b>6.2 GRAPHICAL PRESENTATION OF OBJECTS</b>						
Bargraph	●	●	●	●	●	●
- Connection: accessibility	●	●	●	●	●	●
- Color change at limits	●	●	●	●	●	●
Graph	●	●	●	●	●	●
- Color change at limits	●	●	●	●	●	●
- Recording of graphs (depending on the panel type)		●	●	●	●	●
- Trending (depending upon type of panel the data can be also resistant stored)			●	●	●	●
Camera						●
- Connection: accessibility						●
<b>6.3 KEYBOARDS</b>						
Numeric	●	●	●	●	●	●
Numeric with min/max display	●	●	●	●	●	●
Increment/decrement (1-step)	●	●	●	●	●	●
Increment/decrement (1-step / 10-step)	●	●	●	●	●	●
Alphanumeric	●	●	●	●	●	●
Keyboards for password management		●	●	●	●	●
User defined keyboards				●	●	●

Galileo	V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>6.4 FUNCTION OBJECTS</b>						
Recipe	●	●	●	●	●	●
- max. no. of tags	2000	2000	2000	2000	2000	2000
- max. no. of ingredient entries (data sets)	1000	1000	1000	1000	1000	1000
- enhanced recipe management			●	●	●	●
Alarm handling	●	●	●	●	●	●
Date/Time in 7 different formats	●	●	●	●	●	●
Message texts from PLC		●	●	●	●	●
Help Window and Help Button (to build online help systems)	●	●	●	●	●	●
Parameter list (display several values of tags within a list)				●	●	●
<b>6.5 SPECIAL FUNCTION OBJECTS</b>						
Internal functions	●	●	●	●	●	●
- brightness reducing, buttons for various functions	●	●	●	●	●	●
Keyboards	●	●	●	●	●	●
Language selection	●	●	●	●	●	●
Printer functions		●	●	●	●	●
Character input		●	●	●	●	●
Password management functions		●	●	●	●	●
Unit of measurement functions	●	●	●	●	●	●
Functions for the enhanced recipe management			●	●	●	●
Functions for the communication with the PLC			●	●	●	●
Functions for the parameter list				●	●	●
Functions for the camera object						●
<b>6.6 GENERAL FUNCTIONS OF DYNAMIC OBJECTS</b>						
Blinking of text/background		●	●	●	●	●
Blinking of bitmaps		●	●	●	●	●
Objects not accessible, depending on tags	●	●	●	●	●	●
Objects not visible, depending on tags	●	●	●	●	●	●

<b>7 SCRIPT</b>						
Galileo	V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>7.1 LOOP-SCRIPT</b>						
Max. no. of "compiled" script lines (per project):						
- MV4...				100	100	100
- XV-400				100	100	100
<b>7.2 EVENT-SCRIPT</b>						
Max. no. of "compiled" script lines (per script):						
- MV4...				500	500	500
- XV-400				500	500	500

8 PLC, PANEL SELECTION AND DATA DEFINITION						
Galileo	V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>8.1 PLC SELECTION</b>						
PLC Model selection (see protocol list)	●	●	●	●	●	●
- Settings baudrate, participant	●	●	●	●	●	●
- Settings station, mode, parameter	●	●	●	●	●	●
- Communication with Ethernet (depending on the panel type)				●	●	●
<b>8.2 DEFINITION OF TAGS</b>						
Values in Byte, Word, Double Word, Float (> V4.0)	●	●	●	●	●	●
- Data direction read & write, write (MMI->PLC)	●	●	●	●	●	●
- Presentation Dec +/-, Dec, Hex, Bin, Oct	●	●	●	●	●	●
- Setting preset value, 2 upper, 2 lower limiting values	●	●	●	●	●	●
- Scaling of values	●	●	●	●	●	●
- Decimal point selectable	●	●	●	●	●	●
- Group related switching of scaling	●	●	●	●	●	●
- Group related switching of units	●	●	●	●	●	●
Error Texts	●	●	●	●	●	●
- Data direction read (MMI<-PLC)	●	●	●	●	●	●
Conditions, bit	●	●	●	●	●	●
- Data direction read & write, write (MMI->PLC)	●	●	●	●	●	●
- Setting preset value	●	●	●	●	●	●
<b>8.3 ASSIGN TAGS</b>						
Data blocks (< V4.0):	●	●	●			
- Start address	●	●	●			
- Data direction and polling rate	●	●	●			
- Block length (no. of tags)	●	●	●			
- free arrangement of tags in a block (type dependently)	●	●	●			
Addressed tags/arrays/structs (≥ V4.0):				●	●	●
- Start address				●	●	●
- Data direction and polling rate				●	●	●
- Size of array respectively struct (depending on selected PLC protocol)				●	●	●
- free arrangement of tags in structs (type independently)				●	●	●
<b>8.4 HANDLING</b>						
Search for tag names	●	●	●	●	●	●
Search/replace of PLC addresses				●	●	●
Search of objects				●	●	●
Search of scripts				●	●	●
Search of Texts					●	●

Galileo	V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>8.5 PANEL CONFIGURATION</b>						
Selection of type and memory size	●	●	●	●	●	●
<b>8.6 TEXT EDITING</b>						
Definition of texts	●	●	●	●	●	●
Definition of help texts	●	●	●	●	●	●
Definition of error texts	●	●	●	●	●	●
Definition of description texts (for parameter list objects)				●	●	●
Import/export of texts		●	●	●	●	●
<b>8.7 FURTHER SETTINGS AND HANDLING</b>						
Selection of GALILEO language (English / German)	●	●	●	●	●	●
Selection of limit colors	●	●	●	●	●	●
Selection of color palette for bitmaps	●	●	●	●	●	●
Mask grid for easy positioning of objects	●	●	●	●	●	●
Display of object sizes, positions and types	●	●	●	●	●	●
Mask arrange, cascade	●	●	●	●	●	●
Selection of actual mask	●	●	●	●	●	●

9 TESTING AND OPERATING						
Galileo	V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>9.1 SIMULATION OF OBJECTS</b>						
Simulation of conditions on object selection	•	•	•	•	•	•
- Preview of bitmaps while selection of the file	•	•	•	•	•	•
- Display of conditions in preview window	•	•	•	•	•	•
<b>9.2 OPTIMIZING</b>						
- Optimizing of tags in masks	•	•	•			
- Display of unused tags				•	•	•
- Conversion of all bitmaps to selected palette	•	•	•	•	•	•
<b>9.3 COMPILING</b>						
- Checking the project	•	•	•	•	•	•
- Display of errors and warnings	•	•	•	•	•	•
- Display of effectively required memory	•	•	•	•	•	•
- Creation of optimized runtime program	•	•	•	•	•	•
<b>9.4 DOWNLOAD AND UPLOAD</b>						
- Compiled project	•	•	•	•	•	•
- Source of the project	•	•	•	•	•	•
- Compiled project and source	•	•	•	•	•	•
MV4...:down/upload with Ethernet (Windows 98 / NT / 2000 / XP)				•	•	•
GMV4...:down/upload by PCMCIA card in PC				•	•	•
XV-400:down/upload with Ethernet (Windows 98 / NT / 2000 / XP)					•	•
XV-400:down/upload by PCMCIA card in PC					•	•
<b>9.5 ONLINE TESTING AND OPERATING FROM PC</b>						
- Simulation in DOS mode on the PC (online)	•	•				
- Simulation on Windows 98 / NT / 2000 / XP			•	•	•	•
- Communication with connected PLC - by UCG connected to serial port in PC			•			
- Testing with connected PLC - by MPB in PC	•	•				



PLC Protocols

10 PLC PROTOCOLS								
Galileo			V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>10.1 XT-MPB1-TP / XT-MPB2-TP</b>								
alle Protokolle von XT-MPB1/2-TP			●	●	●	●	●	●
ABB	Comli		●	●	●	●	●	●
Atlas	STN				●	●	●	●
GE Fanuc	SNPx					●	●	●
Hapa	110 - SPIO Mode			●	●	●	●	●
Hapa	110 - SPS Mode			●	●	●	●	●
HIMA	H51/H41/A1					●	●	●
HIMA	HIMatrix Modbus RTU					●	●	●
Hapa 110	SPIO, SPS Mode		●	●	●	●	●	●
Mininet	SPIO, SPS Mode		●	●	●	●	●	●
Modbus	RTU2(MP)		●	●	●	●	●	●
Modbus	WAGO - RTU					●	●	●
Moeller	PS4-141 PRG, Suconet K		●	●	●	●	●	●
Moeller	PS4-151 PRG, Suconet K		●	●	●	●	●	●
Moeller	PS4-201 PRG, Suconet K		●	●	●	●	●	●
Moeller	PS4-341 PRG, Suconet K		●	●	●	●	●	●
Moeller	PS416 PRG, Suconet K		●	●	●	●	●	●
Omron	CS1				●	●	●	●
Omron	Generic				●	●	●	●
SAIA	S-Bus		●	●	●	●	●	●
SAIA	MPI				●	●	●	●
Sensotec	1799						●	●
Siemens (nur XT-MPB2-TP)	MPI		●	●	●	●	●	●
SoundWeb	AMX		●	●	●	●	●	●
Telemecanique	Telway-Slave NEW		●	●	●	●	●	●
weitere		on demand	on demand	on demand	on demand	on demand	on demand	on demand
<b>10.2 XT-PDP-TP</b>								
Profibus	DP		●	●	●	●	●	●
Moeller	XC-CPU601-ExM Profibus DP				●	●	●	●
ELAU Max4	DP				●	●	●	●

Galileo		V1.0	V2.0	V3.0	V4.0	V4.2	V5.0
<b>10.3 XT-BCB-TP</b>							
Allen Bradley	Device Net				●	●	●
Basic CAN		●	●	●	●	●	●
CAN Open	DSP403				●	●	●
CAN Open	IEC1131				●	●	●
CAN RAW (Onboard)						●	●
CAN	SDO - polling					●	●
CAN Open	Moeller XCxxx					●	●
Parvex CAN					●	●	●
<b>10.4 PANEL SYSTEM PORT (WITHOUT A COMMUNICATION CARD)</b>							
Baldor	PMAC		●	●	●	●	●
Moeller	SUCOM-A			●	●	●	●
Micro Innovation	UCG			●	●	●	●
Sensotec 1799	COM					●	●
Universal protocol	TP3 Intel (COM)					●	●
Universal protocol	TP3 Motorola (COM)					●	●
Sensotec	1799 (OnBoard)						●
<b>10.5 ETHERNET (DEPENDING ON THE PANEL TYPE)</b>							
Allen Bradley	ControlLogix				●	●	●
HIMA	OPC Remote					●	●
HIMA	HiMatrix Modbus TCP						●
Modbus	TCP						●





