



Fabro KNX

Touch Panel

Article number 71270



1. Safety and operating instructions	3
2. Description	3
3. Commissioning	4
3.1. Addressing the equipment	4
4. Operating the device via the touch display	5
4.1. Device settings	5
4.1.1. Display settings	5
4.1.2. Screen saver	6
4.1.3. Button tone	7
4.1.4. Service	7
5. Transmission protocol	8
5.1. List of all communication objects	8
6. Setting the parameters and functions	16
6.1. Behaviour on power failure/ restoration of power	16
6.2. General settings	16
6.3. Display	16
6.4. Date and time	18
6.5. Room brightness	18
6.6. Key tone	19
6.7. Service	19
6.8. Alarm	20
6.9. Page 1/2/3/4/5	20
6.9.1. Page 1...5, Channel 1...8	21
6.9.2. Symbol overview	33
6.10. Computer	37
6.10.1. Computers 1-8	37
6.11. Logic	41
6.11.1. AND logic 1-8 and OR logic outputs 1-8	41
6.11.2. AND logic connection inputs	43
6.11.3. OR LOGIC connection inputs	44

This manual is amended periodically and will be brought into line with new software releases. The change status (software version and date) can be found in the contents footer. If you have a device with a later software version, please check **www.elsner-elektronik.de** in the menu area "Service" to find out whether a more up-to-date version of the manual is available.

Clarification of signs used in this manual



Safety advice.



Safety advice for working on electrical connections, components, etc.

DANGER!

... indicates an immediately hazardous situation which will lead to death or severe injuries if it is not avoided.

WARNING!

... indicates a potentially hazardous situation which may lead to death or severe injuries if it is not avoided.

CAUTION!

... indicates a potentially hazardous situation which may lead to trivial or minor injuries if it is not avoided.



ATTENTION! ... indicates a situation which may lead to damage to property if it is not avoided.



"Control unit"

The symbol is followed by a menu path. In this menu the settings just described can be changed.



"Manual"

The symbol is followed by chapter information with a page number. In this chapter you will find additional information about the setting just described.

ETS

In the ETS tables, the parameter default settings are marked by underlining.

1. Safety and operating instructions



Installation, testing, operational start-up and troubleshooting should only be performed by an authorised electrician.



CAUTION! **Live voltage!**

There are unprotected live components inside the device.

- Inspect the device for damage before installation. Only put undamaged devices into operation.
 - Comply with the locally applicable directives, regulations and provisions for electrical installation.
 - Immediately take the device or system out of service and secure it against unintentional switch-on if risk-free operation is no longer guaranteed.
-

Use the device exclusively for building automation and observe the operating instructions. Improper use, modifications to the device or failure to observe the operating instructions will invalidate any warranty or guarantee claims.

Operate the device only as a fixed-site installation, i.e. only in assembled condition and after conclusion of all installation and operational start-up tasks, and only in the surroundings designated for it.

Elsner Elektronik is not liable for any changes in norms and standards which may occur after publication of these operating instructions.

For information on installation, maintenance, disposal, scope of delivery and technical data, please refer to the installation instructions.

2. Description

The **Fabro KNX Touch Panel** is an operating and display interface fulfilling protection class IP 66 for the KNX building bus system. A robust aluminium housing protects the 7 inch screen with real glass touch surface. 8 interfaces can be displayed on each of 5 display pages. Texts, values, an icon, and a coloured field are displayed on each interface. The interfaces are assigned functions with objects from 1 bit (switching) to 14 bytes (text).

8 AND and 8 OR logic operations are available in the application, along with 8 multi-functional modules for calculation, prerequisites and data conversion. 8 alarm input objects can trigger text displays or beeps on the **Fabro KNX**.

Functions:

- 7 inch **colour touch display** for manual operation and as a display in the KNX building bus system

- **5 display pages**, each of which have 8 different interfaces that can be configured for operation or display: Switch, button, display, input, universal interface
- **Screen saver** (clock, off) can be switched on or off
- **Automatic switch-off** can be turned on or off, integrated brightness sensor for switch off in case of darkness
- **Key tone** can be switched on or off
- **8 AND and 8 OR logic gates** each with 4 inputs. 16 logic inputs in the form of communication objects can be used as inputs for the logic gates. The output from each gate can be configured optionally as 1-bit or 2 x 8-bit
- **8 multi-function modules** (computers) for changing the input data by calculations, by querying a condition or by converting the data point type
- **8 alarm inputs**, alarm output as text, sound and/or flashing display lighting

3. Commissioning

Configuration is made using the KNX software as of ETS 5. The **product file** can be downloaded from the ETS online catalogue and the Elsner Elektronik website on www.elsner-elektronik.de in the "Service" menu. There you will also find the product manual.

After the bus voltage has been applied, the unit will enter an initialisation phase lasting approx. 4 seconds. During this period, no information can be received or transmitted via the bus.

3.1. Addressing the equipment

The equipment is delivered with the physical address 15.15.255. This can be changed via the ETS.

The programming mode can be activated under:

- Settings > Service > KNX programming mode

4. Operating the device via the touch display

The available display and operating options on the device are dependent on the ETS settings. Up to 5 pages can be activated there, each with 8 channels.


You can access the individual pages on the display by touching the 5 fields at the bottom edge of the screen.

Other display settings can be adjusted in the ETS in the "Display" and "Button tone" sections. However, you can also make changes directly on the device using the "Settings" menu at the top right of the display.

Press the ◀ button to move one menu level back, and the ○ button to access the Start page.

4.1. Device settings

The adaptation of display settings on the device is only possible if the "Menu navigation" has been activated in the ETS setting item "Page X".

Press the  symbol at the top right-hand side of the display to access the Settings menu. There, you can do the following:

- "Settings" display pages
- switch the button tone on or off
- Access service functions

4.1.1. Display settings

Tap "Screen" to access the screen settings.

Here you can adjust

- the display brightness
- decide if you want the display to switch off and/or switch to the start page if it has not been touched for a certain period of time.

Screen brightness control



Tap the "Brightness control" to access the display brightness control.

Choose whether the brightness should be defined as a fixed value, based on the brightness of the room, or by a communication object.

Display brightness



Tap "Brightness" to access the adjustment of the display brightness

Choose a brightness level between 1 and 100%.

Automatic switch-off



Tap the “Automatic switch-off” symbol to turn the automatic switch-off function of the display on or off.

Choose when the display should switch off automatically: Never (inactive), after the waiting time (active), or after the waiting time if the room is dark (if room dark).

waiting time



Tap the “Waiting time” symbol on the automatic switch-off to set the wait time after which the display should automatically switch off if automatic switch-off is active.

Choose a waiting time between 5 seconds and 2 hours.

Inverted display



Touch the “inverted display” function to switch between a white on black display to a black on white display.

Start page



Tap the start page symbol to define the start page.

The start page is the menu displayed after booting up. One may also set the display screen to jump back to the start screen by itself if the screen has not been touched for a certain period of time (see next setting).

To start page after 5 minutes



Touch “To start page after 5 minutes” to switch back to the set start page after 5 minutes, or deactivate this function.

4.1.2. Screen saver



Tap the screen saver symbol to select the type of screen saver or switch the screen saver off.

Select the desired screen saver function. The selected function is shown in blue.

- “do not use”: Screen saver is not used
- “Screen off”: The screen is switched off after the waiting time
- “Time display”: “Clock” screen saver is active after the waiting time, and the time is displayed

waiting time



Tap the “Waiting time” symbol on the screen to define the waiting time after which the screen saver is activated.

Choose a waiting time between 5 seconds and 2 hours.

4.1.3. Button tone



Tap on the loudspeaker symbol to activate or deactivate the button tone.

The button tone is emitted as an acoustic acknowledgement when a touch key is activated.

4.1.4. Service

Cleaning mode

Touching the "Cleaning mode" menu item switches off the touch function of the screen for 60 seconds. During this period, the screen can be wiped with a damp cloth. Please always use this function to clean the touch panel; otherwise, cleaning may trigger or adjust undesirable functions.

KNX programming mode

As long as programming mode is active, the physical address of the **Fabro KNX** can be changed in the ETS.

Reset

Executes a reset of the **Fabro KNX Touch Panel**.

Reset to the last ETS download

All settings modified manually on the display are irrevocably overwritten when the system is reset!

Reset the access code

All codes are reset to the level of the last ETS download via the menu.

Internal area



ATTENTION

Property damage due to incorrect use of the internal area function!

The internal area is not needed in the normal function of the touch panel.

The internal area is only needed by the manufacturer's service and offers the option to change basic properties of the device. The area is protected by an access card.

Device information

The current software version and serial number of the **Fabro KNX** are displayed.

5. Transmission protocol

Units:

Variables in %

5.1. List of all communication objects

Abbreviations Flags:

C Communication

R Read

W Write

T Transmit

A Update

No	Text	Function	Flags	DPT type	Size
1	Software version	Output	R-CT	[217.1] DPT_Version	2 Bytes
2	Device malfunction	Output	R-CT	[1.1] DPT_Switch	1 Bit
5	Reset access code	Input / Output	RWCT	[1.15] DPT_Reset	1 Bit
6	Reset to last loaded ETS parameters	Input / Output	RWCT	[1.15] DPT_Reset	1 Bit
7	Date / time	Input	-WCT	[19.1] DPT_DateTime	8 Bytes
8	Date	Input	-WCT	[11.1] DPT_Date	3 Bytes
9	Time	Input	-WCT	[10.1] DPT_TimeOfDay	3 Bytes
10	Date and time query	Input / Output	-WCT	[1.17] DPT_Trigger	1 Bit
12	Room brightness status (1 = dark)	Output	R-CT	[1.1] DPT_Switch	1 Bit
14	Display page selection	Input / Output	RWCT	[5.10] DPT_Value_1_Ucount	1 Byte
15	Touch lock	Input / Output	RWCT	[1.1] DPT_Switch	1 Bit
16	Touch lock for cleaning (lock at value = 1)	Input / Output	RWCT	[1.1] DPT_Switch	1 Bit
17	Screen saver	Input / Output	RWCT	[1.1] DPT_Switch	1 Bit
18	Inverted display	Input	-WC-	[1.1] DPT_Switch	1 Bit
21	Display lighting brightness in %	Input	-WC-	[5.1] DPT_Scaling	1 Byte
34	Button tone (1 = active 0 = inactive)	Input / Output	RWCT	[1.1] DPT_Switch	1 Bit
56	Alarm 1	Input	-WC-	[1.1] DPT_Switch	1 Bit

No	Text	Function	Flags	DPT type	Size
57	Alarm 1 Acknowledge	Input/Output	-WCT	[1.1] DPT_Switch	1 Bit
58	Alarm 2	Input	-WC-	[1.1] DPT_Switch	1 Bit
59	Alarm 2 Acknowledge	Input/Output	-WCT	[1.1] DPT_Switch	1 Bit
60	Alarm 3	Input	-WC-	[1.1] DPT_Switch	1 Bit
61	Alarm 3 Acknowledge	Input/Output	-WCT	[1.1] DPT_Switch	1 Bit
62	Alarm 4	Input	-WC-	[1.1] DPT_Switch	1 Bit
63	Alarm 4 Acknowledge	Input/Output	-WCT	[1.1] DPT_Switch	1 Bit
64	Alarm 5	Input	-WC-	[1.1] DPT_Switch	1 Bit
65	Alarm 5 Acknowledge	Input/Output	-WCT	[1.1] DPT_Switch	1 Bit
66	Alarm 6	Input	-WC-	[1.1] DPT_Switch	1 Bit
67	Alarm 6 Acknowledge	Input/Output	-WCT	[1.1] DPT_Switch	1 Bit
68	Alarm 7	Input	-WC-	[1.1] DPT_Switch	1 Bit
69	Alarm 7 Acknowledge	Input/Output	-WCT	[1.1] DPT_Switch	1 Bit
70	Alarm 8	Input	-WC-	[1.1] DPT_Switch	1 Bit
71	Alarm 8 Acknowledge	Input/Output	-WCT	[1.1] DPT_Switch	1 Bit

101-260 page 1...5, channel 1...8:

The **Fabro KNX Touch Panel** can display 8 interfaces (channels) on each of up to 5 pages.

Each channel has a maximum of 4 objects. Function, flags, DTP type and size depend on the respective setting.

Page- channel	Object no.		Page- channel	Object no.
1-1	101-104		2-1	133-136
1-2	105-108		2-2	137-140
1-3	109-112		2-3	141-144
1-4	113-116		2-4	145-148
1-5	117-120		2-5	149-152
1-6	121-124		2-6	153-156
1-7	125-128		2-7	157-160
1-8	129-132		2-8	161-164

Page- channel	Object no.		Page- channel	Object no.
3-1	165-168		4-1	197-200
3-2	169-172		4-2	201-204
3-3	173-176		4-3	205-208
3-4	177-180		4-4	209-212
3-5	181-184		4-5	213-216
3-6	185-188		4-6	217-220
3-7	189-192		4-7	221-224
3-8	193-196		4-8	225-228

Page- channel	Object no.
5-1	229-232
5-2	233-236
5-3	237-240
5-4	241-244
5-5	245-248
5-6	249-252
5-7	253-256
5-8	257-260

No	Text	Function	Flags	DPT type	Size
837	Computer 1: Input I1	Input	RWCT	depending on setting	4 Bytes
838	Computer 1: Input I2	Input	RWCT	depending on setting	4 Bytes
839	Computer 1: Input I3	Input	RWCT	depending on setting	4 Bytes
840	Computer 1: Output O1	Output	R-CT	depending on setting	4 Bytes
841	Computer 1: Output O2	Output	R-CT	depending on setting	4 Bytes
842	Computer 1: Condition text	Output	R-CT	[16.0] DPT_String_AS-CII	14 Bytes
843	Computer 1: Monitoring status	Output	R-CT	[1.1] DPT_Switch	1 Bit
844	Computer 1: Block (1: block)	Input	-WC-	[1.1] DPT_Switch	1 Bit
845	Computer 2: Input I1	Input	RWCT	depending on setting	4 Bytes
846	Computer 2: Input I2	Input	RWCT	depending on setting	4 Bytes
847	Computer 2: Input I3	Input	RWCT	depending on setting	4 Bytes
848	Computer 2: Output O1	Output	R-CT	depending on setting	4 Bytes

No	Text	Function	Flags	DPT type	Size
849	Computer 2: Output O2	Output	R-CT	depending on setting	4 Bytes
850	Computer 2: Condition text	Output	R-CT	[16.0] DPT_String_AS-CII	14 Bytes
851	Computer 2: Monitoring status	Output	R-CT	[1.1] DPT_Switch	1 Bit
852	Computer 2: Block (1: block)	Input	-WC-	[1.1] DPT_Switch	1 Bit
853	Computer 3: Input I1	Input	RWCT	depending on setting	4 Bytes
854	Computer 3: Input I2	Input	RWCT	depending on setting	4 Bytes
855	Computer 3: Input I3	Input	RWCT	depending on setting	4 Bytes
856	Computer 3: Output O1	Output	R-CT	depending on setting	4 Bytes
857	Computer 3: Output O2	Output	R-CT	depending on setting	4 Bytes
858	Computer 3: Condition text	Output	R-CT	[16.0] DPT_String_AS-CII	14 Bytes
859	Computer 3: Monitoring status	Output	R-CT	[1.1] DPT_Switch	1 Bit
860	Computer 3: Block (1: block)	Input	-WC-	[1.1] DPT_Switch	1 Bit
861	Computer 4: Input I1	Input	RWCT	depending on setting	4 Bytes
862	Computer 4: Input I2	Input	RWCT	depending on setting	4 Bytes
863	Computer 4: Input I3	Input	RWCT	depending on setting	4 Bytes
864	Computer 4: Output O1	Output	R-CT	depending on setting	4 Bytes
865	Computer 4: Output O2	Output	R-CT	depending on setting	4 Bytes
866	Computer 4: Condition text	Output	R-CT	[16.0] DPT_String_AS-CII	14 Bytes
867	Computer 4: Monitoring status	Output	R-CT	[1.1] DPT_Switch	1 Bit
868	Computer 4: Block (1: block)	Input	-WC-	[1.1] DPT_Switch	1 Bit
869	Computer 5: Input I1	Input	RWCT	depending on setting	4 Bytes
870	Computer 5: Input I2	Input	RWCT	depending on setting	4 Bytes
871	Computer 5: Input I3	Input	RWCT	depending on setting	4 Bytes

No	Text	Function	Flags	DPT type	Size
872	Computer 5: Output O1	Output	R-CT	depending on setting	4 Bytes
873	Computer 5: Output O2	Output	R-CT	depending on setting	4 Bytes
874	Computer 5: Condition text	Output	R-CT	[16.0] DPT_String_AS-CII	14 Bytes
875	Computer 5: Monitoring status	Output	R-CT	[1.1] DPT_Switch	1 Bit
876	Computer 5: Block (1: block)	Input	-WC-	[1.1] DPT_Switch	1 Bit
877	Computer 6: Input I1	Input	RWCT	depending on setting	4 Bytes
878	Computer 6: Input I2	Input	RWCT	depending on setting	4 Bytes
879	Computer 6: Input I3	Input	RWCT	depending on setting	4 Bytes
880	Computer 6: Output O1	Output	R-CT	depending on setting	4 Bytes
881	Computer 6: Output O2	Output	R-CT	depending on setting	4 Bytes
882	Computer 6: Condition text	Output	R-CT	[16.0] DPT_String_AS-CII	14 Bytes
883	Computer 6: Monitoring status	Output	R-CT	[1.1] DPT_Switch	1 Bit
884	Computer 6: Block (1: block)	Input	-WC-	[1.1] DPT_Switch	1 Bit
885	Computer 7: Input I1	Input	RWCT	depending on setting	4 Bytes
886	Computer 7: Input I2	Input	RWCT	depending on setting	4 Bytes
887	Computer 7: Input I3	Input	RWCT	depending on setting	4 Bytes
888	Computer 7: Output O1	Output	R-CT	depending on setting	4 Bytes
889	Computer 7: Output O2	Output	R-CT	depending on setting	4 Bytes
890	Computer 7: Condition text	Output	R-CT	[16.0] DPT_String_AS-CII	14 Bytes
891	Computer 7: Monitoring status	Output	R-CT	[1.1] DPT_Switch	1 Bit
892	Computer 7: Block (1: block)	Input	-WC-	[1.1] DPT_Switch	1 Bit
893	Computer 8: Input I1	Input	RWCT	depending on setting	4 Bytes
894	Computer 8: Input I2	Input	RWCT	depending on setting	4 Bytes

No	Text	Function	Flags	DPT type	Size
895	Computer 8: Input I3	Input	RWCT	depending on setting	4 Bytes
896	Computer 8: Output O1	Output	R-CT	depending on setting	4 Bytes
897	Computer 8: Output O2	Output	R-CT	depending on setting	4 Bytes
898	Computer 8: Condition text	Output	R-CT	[16.0] DPT_String_AS-CII	14 Bytes
899	Computer 8: Monitoring status	Output	R-CT	[1.1] DPT_Switch	1 Bit
900	Computer 8: Block (1: block)	Input	-WC-	[1.1] DPT_Switch	1 Bit
917	Logic input 1	Input	-WC-	[1.2] DPT_Bool	1 Bit
918	Logic input 2	Input	-WC-	[1.2] DPT_Bool	1 Bit
919	Logic input 3	Input	-WC-	[1.2] DPT_Bool	1 Bit
920	Logic input 4	Input	-WC-	[1.2] DPT_Bool	1 Bit
921	Logic input 5	Input	-WC-	[1.2] DPT_Bool	1 Bit
922	Logic input 6	Input	-WC-	[1.2] DPT_Bool	1 Bit
923	Logic input 7	Input	-WC-	[1.2] DPT_Bool	1 Bit
924	Logic input 8	Input	-WC-	[1.2] DPT_Bool	1 Bit
925	Logic input 9	Input	-WC-	[1.2] DPT_Bool	1 Bit
926	Logic input 10	Input	-WC-	[1.2] DPT_Bool	1 Bit
927	Logic input 11	Input	-WC-	[1.2] DPT_Bool	1 Bit
928	Logic input 12	Input	-WC-	[1.2] DPT_Bool	1 Bit
929	Logic input 13	Input	-WC-	[1.2] DPT_Bool	1 Bit
930	Logic input 14	Input	-WC-	[1.2] DPT_Bool	1 Bit
931	Logic input 15	Input	-WC-	[1.2] DPT_Bool	1 Bit
932	Logic input 16	Input	-WC-	[1.2] DPT_Bool	1 Bit
937	AND logic 1: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
938	AND logic 1: 8 bit output A	Output	R-CT	depending on setting	1 Byte
939	AND logic 1: 8 bit output B	Output	R-CT	depending on setting	1 Byte
940	AND logic 1: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
941	AND logic 2: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
942	AND logic 2: 8 bit output A	Output	R-CT	depending on setting	1 Byte
943	AND logic 2: 8 bit output B	Output	R-CT	depending on setting	1 Byte
944	AND logic 2: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
945	AND logic 3: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit

No	Text	Function	Flags	DPT type	Size
946	AND logic 3: 8 bit output A	Output	R-CT	depending on setting	1 Byte
947	AND logic 3: 8 bit output B	Output	R-CT	depending on setting	1 Byte
948	AND logic 3: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
949	AND logic 4: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
950	AND logic 4: 8 bit output A	Output	R-CT	depending on setting	1 Byte
951	AND logic 4: 8 bit output B	Output	R-CT	depending on setting	1 Byte
952	AND logic 4: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
953	AND logic 5: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
954	AND logic 5: 8 bit output A	Output	R-CT	depending on setting	1 Byte
955	AND logic 5: 8 bit output B	Output	R-CT	depending on setting	1 Byte
956	AND logic 5: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
957	AND logic 6: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
958	AND logic 6: 8 bit output A	Output	R-CT	depending on setting	1 Byte
959	AND logic 6: 8 bit output B	Output	R-CT	depending on setting	1 Byte
960	AND logic 6: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
961	AND logic 7: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
962	AND logic 7: 8 bit output A	Output	R-CT	depending on setting	1 Byte
963	AND logic 7: 8 bit output B	Output	R-CT	depending on setting	1 Byte
964	AND logic 7: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
965	AND logic 8: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
966	AND logic 8: 8 bit output A	Output	R-CT	depending on setting	1 Byte
967	AND logic 8: 8 bit output B	Output	R-CT	depending on setting	1 Byte
968	AND logic 8: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
969	OR logic 1: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
970	OR logic 1: 8 bit output A	Output	R-CT	depending on setting	1 Byte
971	OR logic 1: 8 bit output B	Output	R-CT	depending on setting	1 Byte
972	OR logic 1: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
973	OR logic 2: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit

No	Text	Function	Flags	DPT type	Size
974	OR logic 2: 8 bit output A	Output	R-CT	depending on setting	1 Byte
975	OR logic 2: 8 bit output B	Output	R-CT	depending on setting	1 Byte
976	OR logic 2: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
977	OR logic 3: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
978	OR logic 3: 8 bit output A	Output	R-CT	depending on setting	1 Byte
979	OR logic 3: 8 bit output B	Output	R-CT	depending on setting	1 Byte
980	OR logic 3: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
981	OR logic 4: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
982	OR logic 4: 8 bit output A	Output	R-CT	depending on setting	1 Byte
983	OR logic 4: 8 bit output B	Output	R-CT	depending on setting	1 Byte
984	OR logic 4: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
985	OR logic 5: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
986	OR logic 5: 8 bit output A	Output	R-CT	depending on setting	1 Byte
987	OR logic 5: 8 bit output B	Output	R-CT	depending on setting	1 Byte
988	OR logic 5: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
989	OR logic 6: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
990	OR logic 6: 8 bit output A	Output	R-CT	depending on setting	1 Byte
991	OR logic 6: 8 bit output B	Output	R-CT	depending on setting	1 Byte
992	OR logic 6: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
993	OR logic 7: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
994	OR logic 7: 8 bit output A	Output	R-CT	depending on setting	1 Byte
995	OR logic 7: 8 bit output B	Output	R-CT	depending on setting	1 Byte
996	OR logic 7: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit
997	OR logic 8: 1 bit switching output	Output	R-CT	[1.2] DPT_Bool	1 Bit
998	OR logic 8: 8 bit output A	Output	R-CT	depending on setting	1 Byte
999	OR logic 8: 8 bit output B	Output	R-CT	depending on setting	1 Byte
1000	OR logic 8: Block	Input	-WC-	[1.1] DPT_Switch	1 Bit

6. Setting the parameters and functions

6.1. Behaviour on power failure/ restoration of power

Behaviour following a failure of the bus power supply:

The device sends nothing.

Behaviour on bus restoration of power and following programming or reset:

The device sends all outputs according to their send behaviour set in the parameters with the delays established in the "General settings" parameter block.

6.2. General settings

Here you can make general settings for the ETS, including the basic properties of data transmission. A different transmission delay prevents an overload of the bus shortly after the reset.

System language	<ul style="list-style-type: none"> • <u>Deutsch</u> • English • Français • Italiano • Español
Device name	Fabro KNX [free text]
Maximum telegram rate	1 • 2 • 5 • <u>10</u> • 20 <u>telegrams per second</u>
Transmission delay in seconds after reset/restoration of bus for:	
General objects	<u>5 s</u> • 10 s • 30 s • 1 min • ... • 2 h
Computer objects	<u>5 s</u> • 10 s • 30 s • 1 min • ... • 2 h
Logic objects	<u>5 s</u> • 10 s • 30 s • 1 min • ... • 2 h

6.3. Display

The start page, screen save, brightness and automatic switch-off may be set for the display of the **Fabro KNX Touch Panel**. Display settings can be modified via objects, in the ETS menu or on the display.

Object control

For the display settings via objects, i.e. via the bus, objects 14-18 and 21 are available.

The display object may be activated in the ETS. The following parameters only appear when the objects are used ("yes").

Use objects for display	<u>No</u> • Yes
-------------------------	-----------------

Touch blocked at value <i>Object no. 15 "touch lock"</i>	0 • <u>1</u>
Value before first Communication	<u>0</u> • 1

The object no. 14 "display screen selection" allows the display to be switched over to any preconfigured display screen. After five minutes, however, the display switches back to the start screen if this is the generally set option (see parameter "if the display is not touched for 5 minutes, the display switches ..." below).

Adaptation on the display

The screen settings on the display are modified via the menu

Settings > Display > Screen/screen saver

and can be secured with an access code (set up in the ETS).

Modification via ETS

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

The screen menu on the display can be secured with an access code that is determined (or deleted) in the ETS.

Transfer the following parameters	No • <u>Yes</u>
Access code (8 digits from 0 to 9)	[Free text] <i>An empty field means that no code query is done</i>

The **screen brightness** can be set to a fixed value or adapt to the room brightness automatically (using the internal brightness sensor) or controlled via object no. 21 "screen illumination brightness in %".

This **automatic switch off** darkens the display after the pre-set waiting time. The deactivation can also be linked to the surrounding brightness via the setting "if room is dark".

Brightness <i>Object no. 21 "screen illumination" Brightness in %</i>	<ul style="list-style-type: none"> • has a fixed value • is adjusted to ambient light • controlled by means of an object (<i>only if display objects are used</i>)
(start) value in % <i>only for fixed value/object control</i>	[1...100; <u>100</u>]
Automatic switch-off <i>not when control is executed via object</i>	<ul style="list-style-type: none"> • On • Off • <u>If room dark</u>
waiting time	5 s • ... • <u>1 min</u> • ... • 2 h

In the default display, the font is white and the background is black. This can be changed using the inverted display (black font, white background).

Inverted display active before initial Communication	<u>No</u> • Yes
--	-----------------

The **start screen** sets the screen to which the display jumps after a reset. In addition, you can set the options for what is to happen if no setting is entered on the display for 5 minutes.

Start page	<ul style="list-style-type: none"> • <u>Screen 1</u> • ... • Screen 5
If the display is not touched for more than 5 minutes, the display	<ul style="list-style-type: none"> • doesn't switch • <u>switches to the start screen</u>

A custom **screen saver** can be set independent of the automatic switch off. The screen saver is activated after a waiting time.

Use screen saver <i>Object no. 17 "screen saver"</i>	<u>No</u> • Yes
waiting time	5 s • <u>10 s</u> • ... • 2 h
Screen saver type	<ul style="list-style-type: none"> • Screen off • <u>Time</u>

The screen saver can be switched on and off using object no. 17 "Screen saver" via the bus. The object no. 17 is input and output simultaneously, and thus may both receive a command or transmit the status to the bus autonomously.

6.4. Date and time

Stipulate whether the **Fabro KNX Touch Panel** date and time should be received as a single or two separate objects. The date and time are requested from the bus via object no. 10. As soon as the data is available on the bus, the query cycle is reset, regardless of whether the query was generated autonomously or arrived from another bus member. The query cycle of several cycles is therefore usually set to the same value.

Date and time will be received via	<ul style="list-style-type: none"> • <u>receive two separate objects</u> • receive one common object
Transmission cycle of the object "Date and time query" (in s) <i>Object no. 10</i>	[50...420; <u>120</u>]

6.5. Room brightness

The integrated brightness sensor on the **Fabro KNX** detects whether the room is bright or dark, and can transmit this value to the bus with communication object 12.

Object "Room brightness status" transmitting	<ul style="list-style-type: none"> • <u>not send</u> • on change • on change to 1 • on change to 0 • on change and periodically • on change to 1 and periodically • on change to 0 and periodically
--	--

6.6. Key tone

The **Fabro KNX Touch Panel** can output an acoustic signal as feedback if a key on the screen is activated. The button tone may be switched on or off via an object, in the ETS menu or on the display.

Object control

Settings via an object, for instance via the bus, are carried out using object 34. Activate the object controls as desired and set the value for the button tone.

Use object for button tone	<u>No</u> • Yes
Value for button tone active	0 • <u>1</u>

ETS

Select "Transmit the following parameters: Yes" to render the modifications valid. Previous settings are then overwritten - including modifications done on the display!

The button tone menu on the display can be secured with an access code that is determined (or deleted) in the ETS.

Transfer the following parameters	<u>No</u> • <u>Yes</u>
Access code (8 digits from 0 to 9)	[Free text] <i>An empty field means that no code query is done</i>

Switch the button tone on or off before initial communication.

Button tone active before 1st Communication	<u>No</u> • Yes
---	-----------------

Display

The possible settings on the device display are explained in the chapter *Device control on the touch display Device settings > Button tone*, Page 7.

6.7. Service

Stipulate whether you want to use access codes to load the last download version, or reset all access codes (to the last ETS settings) and whether you want to transfer these parameters.

Transfer the following parameters	<u>No</u> • <u>Yes</u>
Access code for:	
Load the last download version (8 digits from 0 to 9)	[Free text] <i>An empty field means that no code query is done</i>
Reset the access codes (8 digits from 0 to 9)	[Free text] <i>An empty field means that no code query is done</i>

6.8. Alarm

The eight alarm channels of the **Fabro KNX** show custom text notifications on the display. At the same time, the display may flash, and an alarm tone emitted. Alarm messages may be acknowledged with the button shown on the display or via the bus. For this purpose, decide whether to use a 1 or a 0 for the acknowledgement.

The alarm channels use objects no. 56- 71 (there is one input object per alarm channel and one input/output object for acknowledgement). They can be modified in the ETS menu.

ETS: Alarm

Use alarm	<ul style="list-style-type: none"> • <u>No</u> (no alarm channels, all subsequent parameters hidden) • <u>Yes</u> (alarm object active)
Object value for alarm acknowledgement	0 • <u>1</u>
Alarm action for inputs 1...8:	
Flashing back lighting (is spelt without capitals in the ETS!)	<u>No</u> • <u>Yes</u>
Alarm sound	<ul style="list-style-type: none"> • <u>No sound</u> • <u>Continuous tone</u> • <u>2x long tone, short pause</u> • <u>3x long tone, long pause</u>
Alarm text	[Free text]

6.9. Page 1/2/3/4/5

The **Fabro KNX Touch Panel** can display 8 interfaces (channels) on each of up to 5 pages.

Activate the required pages. The menus for the other page settings are shown on those pages.

You can assign a page name, allow menu navigation from any page (if “Yes” is checked, the settings menu is accessible from the page in question) and assign an access code.

Use page	<u>No</u> • <u>Yes</u>
Screen name	Page 1 [free text, 15 characters]
Allow menu navigation from this page	No • <u>Yes</u>
Transfer with download - Access code	No • <u>Yes</u>
Access code (8 digits from 0 to 9)	[Free text] <i>An empty field means that no code query is done</i>

6.9.1. Page 1...5, Channel 1...8

These 8 channels per page can be divided into 4 function groups:

1. Display: This function is used to show values on the touch panel display
2. Input: This function can be used to enter values, scenes, icons and symbols on the screen, e.g. in order to change the limit values set in the ETS.
3. Operation: Motors or lamps can be operated, for example, with these commands.
4. Universal interface: The 4 objects of the channel can be used to configure this interface via the KNX bus

Enter a name for the channel and select the desired function.

Name	Channel 1 [free text, 15 characters]
------	--------------------------------------

Function	<ul style="list-style-type: none"> • <u>No function</u> • Display 1/0 • Display date • Display time • Display 8bit value (0... 255) • Display 8bit value (0...100%) • Display 8bit value (0...360°) • Display 16bit counter without mathematical sign • Display 16bit counter with mathematical sign • Display 16bit floating point • Display 32bit counter without mathematical sign • Display 32bit counter with mathematical sign • Display 32bit floating point • Display text • Display energy [DPT 29.01X] • Input 1 • Input 0 • Press enter = 1, release = 0 • Press enter = 0, release = 1 • Input switch • Input date • Input time • Input 8-bit scene • Input 8-bit value (0...255) • Input 8-bit value (0...100%) • Input 8-bit value (0... 360°) • Input 16-bit counter without math. symbol • Input 16-bit counter with math. symbol • Input 16-bit counter floating point • Input 32-bit counter without math. symbol • Input 32-bit counter with math. symbol • Input 32-bit counter floating point • Input energy [DPT 29.01X] • Dim controls brighter • Dim controls darker • Dim controls brighter / darker • Controls long-term (0) / short-term • Controls long-term (1) / short-term • Universal interface
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Display

This section describes inputs which trigger the text, icon and colour displays on the screen.


The coloured field over the channel interface can be used for the following applications:

- Receive colour value via the bus, for instance feedback from an RGB light
- Define colour for 1/0
- Visual designation or highlighting of the interface


Function: Display 1/0

For object value 1	
Text	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
For object value 0	
Text	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF


Function: Display date

Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF


Function: Display time

Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF


Function: Display 8-bit value (0...255)

Text for unit	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF


Function: Display 8-bit value (0...100%)

Text for unit	% [Free text, 10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF


Function: Display 8-bit value (0... 360°)

Text for unit	° [Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF


Function: Display 16-bit counter without math. symbol

Text for unit	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF

Function: Display 16-bit counter with math. symbol

Text for unit	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF


Function: Display 16-bit counter floating point

Text for unit	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Conversion factor a	-0.0001 • 0.0001 ... -10000 • 10000; <u>1</u>
Conversion factor b	<u>1</u> ... 65535


Display value = Value of bus * a * b

Bus value = display value / a / b


Function: Display 32-bit counter without math. symbol

Text for unit	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF

Function: Display 32-bit counter with math. symbol

Text for unit	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF


Function: Display 32-bit counter floating point

Text for unit	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Conversion factor a	-0.0001 • 0.0001 ... -10000 • 10000; <u>1</u>
Conversion factor b	<u>1</u> ... 65535

Display value = Value of bus * a * b


Bus value = display value / a / b

Function: Display text

Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF

Function: Display energy [DPT 29.01X]


This function can be used to display the value of an energy counter connected via KNX on the **Fabro KNX**.

Text for unit	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF


Input

This section describes outputs for touch surfaces of input of values on the screen of the touch panel.



Function: Input 1

Text	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF


Function: Input 0


Text	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF

Function: Press enter = 1, release = 0



For object value 1	
Text	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
For object value 0	
Text	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF

Function: Press enter = 0, release = 1


For object value 1	
Text	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
For object value 0	
Text	[Free text,10 characters]

Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • <u>Symbol 1...221</u> (internal library, see  Table "Symbol overview" on page 33)
Colour	<u>#000000 ...#FFFFFF</u>


Function: Input switch

For object value 1	
Text	[Free text, 10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • <u>Symbol 1...221</u> (internal library, see  Table "Symbol overview" on page 33)
Colour	<u>#000000 ...#FFFFFF</u>
For object value 0	
Text	[Free text, 10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • <u>Symbol 1...221</u> (internal library, see  Table "Symbol overview" on page 33)
Colour	<u>#000000 ...#FFFFFF</u>
Use additional function for button held down	<u>No • Yes</u>
Time between tap and hold (in 0.1 sec)	1...50; <u>10</u>
Command when pressing the button	do not send message
Command when releasing before time expires	<ul style="list-style-type: none"> • <u>Changeover switching</u> • Do not send message
Command when pressing the button	<ul style="list-style-type: none"> • 0 send • 1 send • Switch • <u>Do not send message</u>
Command when releasing the button	<ul style="list-style-type: none"> • 0 send • 1 send • Switch • <u>Do not send message</u>


Function: Input date

Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • <u>Symbol 1...221</u> (internal library, see  Table "Symbol overview" on page 33)
Colour	<u>#000000 ...#FFFFFF</u>


Function: Input time

Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF


Function: Input 8-bit scene

Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Scene number	<u>0</u> ... 63 (corresponds to scene 1 ... 64)
Scenario function	<u>Call up</u> • Call up and storage
Press interface longer than (in 0.1s) --> Scene memory	1 ... 50; <u>10</u>


Function: Input 8-bit value (0...255)

Text for unit	[Free text, 10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Value can be adjusted via display	No • <u>Yes</u>
Start value	<u>0</u> ... 255
Minimum value (only if value can be set via display)	<u>0</u> ... 255
Maximum value (only if value can be set via display)	0 ... <u>255</u>


Function: Input 8-bit value (0...100%)

Text for unit	% [Free text, 10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Value can be adjusted via display	No • <u>Yes</u>
Start value	<u>0</u> ... 100
Minimum value (only if value can be set via display)	<u>0</u> ... 100
Maximum value (only if value can be set via display)	0 ... <u>100</u>


Function: Input 8-bit value (0... 360°)

Text for unit	° [Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Value can be adjusted via display	No • <u>Yes</u>
Start value	<u>0</u> ... 360
Minimum value (only if value can be set via display)	<u>0</u> ... 360
Maximum value (only if value can be set via display)	0 ... <u>360</u>

Function: Input 16-bit counter without math. symbol

Text for unit	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Value can be adjusted via display	No • <u>Yes</u>
Start value	<u>0</u> ... 65535
Minimum value (only if value can be set via display)	<u>0</u> ... 65535
Maximum value (only if value can be set via display)	0 ... <u>65535</u>


Function: Input 16-bit counter with math. symbol

Text for unit	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Value can be adjusted via display	No • <u>Yes</u>
Start value	-32768 ... 32767; <u>0</u>
Minimum value (only if value can be set via display)	- <u>32768</u> ... 32767
Maximum value (only if value can be set via display)	-32768 ... <u>32767</u>


Function: Input 16-bit floating point

Display value = Value of bus * a * b


Bus value = display value / a / b

Text for unit	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Conversion factor a	-0.0001 • 0.0001 ... -10000 • 10000; <u>1</u>
Conversion factor b	<u>1</u> ... 65535
Value can be adjusted via display	No • <u>Yes</u>
Start value (in 0.1)	-2147483648 ... 2147483647; <u>0</u>
Minimum value (in 0.1) (only if value can be set via display)	<u>-2147483648</u> ... 2147483647
Maximum value (in 0.1) (only if value can be set via display)	-2147483648 ... <u>2147483647</u>

Function: Input 32-bit counter without math. symbol

Text for unit	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Value can be adjusted via display	No • <u>Yes</u>
Start value	<u>0</u> ... 4294967295
Minimum value (only if value can be set via display)	<u>0</u> ... 4294967295
Maximum value (only if value can be set via display)	0 ... <u>4294967295</u>


Function: Input 32-bit counter with math. symbol

Text for unit	[Free text,10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Value can be adjusted via display	No • <u>Yes</u>
Start value	-2147483648 ... 2147483647; <u>0</u>
Minimum value (only if value can be set via display)	<u>-2147483648</u> ... 2147483647
Maximum value (only if value can be set via display)	-2147483648 ... <u>2147483647</u>


Function: Input 32-bit floating point

Display value = Value of bus * a * b

Bus value = display value / a / b

Text for unit	[Free text, 10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ... #FFFFFF
Conversion factor a	-0.0001 • 0.0001 ... -10000 • 10000; <u>1</u>
Conversion factor b	<u>1</u> ... 65535
Value can be adjusted via display	No • <u>Yes</u>
Start value (in 0.1)	-2147483648 ... 2147483647; <u>0</u>
Minimum value (in 0.1) (only if value can be set via display)	<u>-2147483648</u> ... 2147483647
Maximum value (in 0.1) (only if value can be set via display)	-2147483648 ... <u>2147483647</u>


Function: Input energy [DPT 29.01X]

Text for unit	[Free text, 10 characters]
Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ... #FFFFFF
Value can be adjusted via display	No • <u>Yes</u>
Start value	<u>0</u> ... 4294967295
Minimum value (only if value can be set via display)	<u>0</u> ... 4294967295
Maximum value (only if value can be set via display)	0 ... <u>4294967295</u>


Operation

This section describes inputs for commands from keys, rockers, switches


Function: Dim control brighter

Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ... #FFFFFF
Time between switching and dimming (in 0.1 sec.)	1...50; <u>10</u>
Display brightness n	<u>No</u> • Yes

Function: Dim controls darker


Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Time between switching and dimming (in 0.1 sec.)	1...50; <u>10</u>
Display brightness n	<u>No</u> • Yes

Function: Dim controls brighter / darker

Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Time between switching and dimming (in 0.1 sec.)	1...50; <u>10</u>
Display brightness n	<u>No</u> • Yes


Function: Controls long-term (0) / short-term

If you use the actuation or slat position, the display on the **Fabro KNX Touch Panel** shows the current actuation and slat position.

Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Time between tap and hold (in 0.1 sec)	1...50; <u>10</u>
Use actuation position	<u>No</u> • Yes
Use slat position	<u>No</u> • Yes

Function: Controls long-term (1) / short-term

If you use the actuation or slat position, the display on the **Fabro KNX Touch Panel** shows the current actuation and slat position.

Symbol	<ul style="list-style-type: none"> • <u>No symbol</u> • Symbol 1...221 (internal library, see  Table "Symbol overview" on page 33)
Colour	#000000 ...#FFFFFF
Time between tap and hold (in 0.1 sec)	1...50; <u>10</u>
Use actuation position	<u>No</u> • Yes
Use slat position	<u>No</u> • Yes

Function: Universal interface

Use operating function	<u>No</u> • Yes
Use long keystroke	<u>No</u> • Yes
Time between tap and hold (in 0.1 sec) (If hold is used)	1...50; <u>10</u>
Send periodically following keystroke	<u>No</u> • Yes
Time between telegram repetitions (in 0.1s) (If send periodically is used)	1...50; <u>10</u>

6.9.2. Symbol overview

The following icons are stored in the internal library of the **Fabro KNX**:

Lighting

0001
Ceiling lights
on



0002
Ceiling lights
off



0003
Direct lights
on



0004
Direct lights
off



0005
Wall lights
on



0006
Wall lights
off



0007
Spot on



0008
Spot off



0009
Suspended
lights on



0010
Suspended
lights off



0011
Floor lights
on



0012
Floor lights
off



0013
Standard lamp
on



0014
Standard lamp
off



0015
Table lamp o



0016
Table lamp off



0017
Light bulb
on



0018
Light bulb
off

Motors

0031
Blind
extended



0032
Blind
retracted



0033
Shutters
extended



0034
Shutters
retracted



0035
Awning
extended



0036
Awning
retracted



0037
Windows
open



0038
Windows
closed



0039
Sliding door
open



0040
Sliding door
closed



0041
Garage door
open



0042
Garage door
closed



0043
Door
open



0044
Door
closed



0045
Lock
unlocked



0046
Lock
locked



0047
Roof window
open



0048
Roof window
closed



0049
Light dome
open



0050
Light dome
closed

Operation

0095
Operating ar-
row



0096
Operating ar-
row



0097
Operating ar-
row



0098
Operating ar-
row



0101
plus



0102
minus



0104
Switch
on



0105
Switch
off



0106
On/off



0108
Time



0109
Manual



0110
Automatic



0112
Ramp 1
ascending



0113
Ramp 1
descending



0116
Bell



0117
Bin



0123
Scene

climate



0126
Heater
on



0127
Heater
off



0128
Underfloor
heating



0129
Wall
heating



0130
Ceiling
heating



0131
Underfloor
cooling



0132
Wall
cooling



0133
Ceiling
cooling



0134
Night
cooling



0135
Absent



0136
Present



0138
Fans
on



0139
Fans
off



0140
Fans
Level 1



0141
Fans
Level 2



0142
Fans
Level 3



0143
Fans
Level 4



0144
Heating



0145
Heating
plus



0146
Heating
minus



0147
Cooling

Sensors



0156
Sun



0157
Precipitation



0158
Tank



0159
Pyranometer



0160
Humidity



0161
Ground damp



0162
Outdoor
temperature



0163
Indoor
temperature



0168
Frost



0169
Wind
direction



0170
Wind intensity
strong



0171
Wind intensity
weak



0172
CO2

Multimedia



0186
TV



0187
Projector



0188
Projector
screen



0189
Socket



0190
Music



0191
Play



0192
Pause



0193
Reverse
run



0194
Forward
run



0195
Stop

**0196**
Forward**0197**
Back**0198**
Loudspeaker**0199**
Volume
louder**0200**
Volume
quieter**Safety****0218**
Caution**0219**
Key**0220**
Intruder
in the house**0221**
Intruder
outside the

6.10. Computer

Activate the multi-functional computer, with which the input data can be changed by calculation, querying a condition or converting the data point type. The menus for the further setting of the computer are then displayed.

Computer 1/2/3/4/5/6/7/8

No • Yes

6.10.1. Computers 1-8

Set, in which cases input values received are to be kept per object. Please note that the setting "After power restoration and programming" should not be used for the initial start-up, as the factory settings are always used until the first call (setting via objects is ignored).

The nominal values and delay times	
should	<ul style="list-style-type: none"> • <u>not send</u> • after restoration of power • after power restoration and programming
.	

Select the function set the input mode and starting values for input 1 and input 2.

Function (I = Input)	<ul style="list-style-type: none"> • Prerequisite: $E1 = E2$ • Prerequisite: $E1 > E2$ • Prerequisite: $E1 \geq E2$ • Prerequisite: $E1 < E2$ • Prerequisite: $E1 \leq E2$ • Prerequisite: $E1 - E2 \geq E3$ • Prerequisite: $E2 - E1 \geq E3$ • Prerequisite: $E1 - E2 \text{ amount} \geq E3$ • Calculation: $E1 + E2$ • Calculation: $E1 - E2$ • Calculation: $E2 - E1$ • Calculation: $E1 - E2 \text{ Amount}$ • Calculation: Output 1 = $E1 \times X + Y$ Output 2 = $E2 \times X + Y$ • Transformation: General
Input type	<p>[Selection options depending on the function]</p> <ul style="list-style-type: none"> • 1 bit • 1 byte (0...255) • 1 byte (0%...100%) • 1 byte (0°...360°) • 2 byte counter without math. symbol • 2 byte counter with math. symbol • 2 byte floating point • 4 byte counter without math. symbol • 4 byte counter with math. symbol • 4 byte floating point
Starting value E1 / E2 / E3	[Input range depending on the type of input]

Prerequisites

When querying the prerequisites set the output type and output values at different statuses:

Output type	<ul style="list-style-type: none"> • 1 bit • 1 byte (0...255) • 1 byte (0%...100%) • 1 byte (0°...360°) • 1 byte (0...63) scene call-up • 2 byte counter without math. symbol • 2 byte counter with math. symbol • 2 byte floating point • 4 byte counter without math. symbol • 4 byte counter with math. symbol • 4 byte floating point
Output value (if applicable output value A1 / A2)	
if the condition is met	<u>0</u> [Input range depending on the type of output]

if the condition is not met	<u>0</u> [Input range depending on the type of output]
if the monitoring time period is exceeded	<u>0</u> [Input range depending on the type of output]
if blocked	<u>0</u> [Input range depending on the type of output]

Set the output send behaviour.

Output sends	<ul style="list-style-type: none"> • <u>If there is a change</u> • on change and after reset • on change and periodically • when receiving an input object • when receiving an input object and cyclically
Type of change (is only sent if "on change" is selected)	<ul style="list-style-type: none"> • <u>on each change</u> • on change to condition met • on change to condition not met
Send cycle (if sent periodically)	5 s ... 2 h; <u>10 s</u>

Set the text to be displayed for conditions met / not met.

Text if the condition is met	[Free text max. 14 chars.]
Text if the condition is not met	[Free text max. 14 chars.]

If applicable set the send delays.

Send delay in the event of change to the condition is met	<u>none</u> • 1 s • ... • 2 h
Send delay in the event of change to the condition is not met	<u>none</u> • 1 s • ... • 2 h

Calculations and transformation

For calculations and transformations set the output values to the various conditions:

Output value (if applicable A1 / A2)	
if the monitoring time period is exceeded	<u>0</u> [Input range depending on the type of output]
if blocked	<u>0</u> [Input range depending on the type of output]

Set the output send behaviour.

Output sends	<ul style="list-style-type: none"> • <u>If there is a change</u> • on change and after reset • on change and periodically • when receiving an input object • when receiving an input object and cyclically
on change of <i>(only if calculations are transmitted for changes)</i>	1 ... [Input range depending on the type of input]
Send cycle <i>(if sent periodically)</i>	5 s ... 2 h; <u>10 s</u>

For **Calculations of the form output 1 = E1 × X + Y | output 2 = E2 × X + Y** define the variables X and Y. The variables can have a positive or negative sign, 9 digits before and 9 digits after the decimal point.

Formula for output A1: $A1 = E1 \times X + Y$	
X	<u>1.00</u> [free input]
Y	<u>0.00</u> [free input]
Formula for output A2: $A2 = E2 \times X + Y$	
X	<u>1.00</u> [free input]
Y	<u>0.00</u> [free input]

Further settings for all formulas

If necessary, activate the input monitoring. Set which inputs are to be monitored, at which intervals the inputs are to be monitored and what value the "monitoring status" should have, if the monitoring period is exceeded without feedback.

Use input monitoring	<u>No</u> • Yes
Monitoring of	<ul style="list-style-type: none"> • <u>E1</u> • E2 • E3 • E1 and E2 • E1 and E3 • E2 and E3 • E1 and E2 and E3 [depending on the function]
Monitoring period	5 s • ... • 2 h; <u>1 min</u>
Value of the object "monitoring status" if period is exceeded	0 • <u>1</u>

If necessary, activate the computer block and set what a 1 or 0 at the block entry means and what happens in the event of a block.

Use block	<u>No</u> • Yes
Assessment of the block object	<ul style="list-style-type: none"> • At value 1: block At value 0: release • At value 0: block At value 1: release

value before first Communication	<u>0</u> • 1
Output behaviour when blocking	<ul style="list-style-type: none"> • <u>not send anything</u> • Send value
when released	<ul style="list-style-type: none"> • as send behaviour [see above] • <u>send current value immediately</u>

6.11. Logic

The device has 16 logic inputs, eight AND and eight OR logic gates.

Activate the logic inputs and assign object values up to 1st communication.

Use logic inputs	Yes • <u>No</u>
Object value prior to 1st communication for	
- Logic input 1	<u>0</u> • 1
- Logic input ...	<u>0</u> • 1
- Logic input 16	<u>0</u> • 1

Activate the required logic outputs

AND logic

AND logic 1	<u>not active</u> • active
AND logic ...	<u>not active</u> • active
AND logic 8	<u>not active</u> • active

OR logic

OR logic 1	<u>not active</u> • active
OR logic ...	<u>not active</u> • active
OR logic 8	<u>not active</u> • active

6.11.1. AND logic 1-8 and OR logic outputs 1-8

The same setting options are available for AND and OR logic.

Each logic output may transmit one 1-bit or two 8-bit objects. Determine what the output should send if logic = 1 and = 0.

1. / 2. / 3. / 4. Input	<ul style="list-style-type: none"> • <u>Do not use</u> - Logic inputs 1...16 - Logic inputs 1...16 inverted (see the chapter <i>Connection inputs for AND or OR logic</i>)
Output type	<ul style="list-style-type: none"> • <u>a 1-bit-object</u> • sends two 8-bit objects

If the **output type is a 1-bit object**, set the output values for the various conditions.

Output value if logic = 1	<u>1</u> • 0
Output value if logic = 0	1 • <u>0</u>
Output value if block active	1 • <u>0</u>
Output value if monitoring time exceeded	1 • <u>0</u>

If the **output type is two 8-bit objects**, set the type of object and the output values for the various conditions.

Object type	<ul style="list-style-type: none"> • <u>value (0...255)</u> • Percent (0...100%) • Angle (0...360°) • Scene call-up (0...127)
Output value object A if logic = 1	0 ... 255 / 100% / 360° / 127; <u>1</u>
Output value object B if logic = 1	0 ... 255 / 100% / 360° / 127; <u>1</u>
Output value object A if logic = 0	0 ... 255 / 100% / 360° / 127; <u>0</u>
Output value object B if logic = 0	0 ... 255 / 100% / 360° / 127; <u>0</u>
Output value object A if block active	0 ... 255 / 100% / 360° / 127; <u>0</u>
Output value object B if block active	0 ... 255 / 100% / 360° / 127; <u>0</u>
Output value object A if monitoring time exceeded	0 ... 255 / 100% / 360° / 127; <u>0</u>
Output value object B if monitoring time exceeded	0 ... 255 / 100% / 360° / 127; <u>0</u>

Set the output send behaviour.

Send behaviour	<ul style="list-style-type: none"> • <u>on change of logic</u> • on change of logic to 1 • on change of logic to 0 • on change of logic and periodically • on change of logic to 1 and periodically • on change of logic to 0 and periodically • on change of logic+object receipt • on change of logic+object receipt and cyclically
Send cycle (if sent periodically)	5 s • <u>10 s</u> • ... • 2 h

Blocking

If necessary, activate the block for the logic output and set what a 1 or 0 at the block input means and what happens in the event of a block.

Use block	<u>No</u> • Yes
Assessment of the block object	<ul style="list-style-type: none"> • At value 1: block At value 0: release • At value 0: block At value 1: release
Blocking object value before first Communication	<u>0</u> • 1
Output behaviour when blocking	<ul style="list-style-type: none"> • Do not send message • Send block value [see above, output value if block active]
when released (with 2 second release delay)	[send value for current logic status]

Monitoring

If necessary, activate the input monitoring. Set which inputs are to be monitored, at which intervals the inputs are to be monitored and what value the "monitoring status" should have, if the monitoring period is exceeded without a feedback being given.

Use input monitoring	<u>No</u> • Yes
Input monitoring	<ul style="list-style-type: none"> • 1 • 2 • 3 • 4 • 1 + 2 • 1 + 3 • 1 + 4 • 2 + 3 • 2 + 4 • 3 + 4 • 1 + 2 + 3 • 1 + 2 + 4 • 1 + 3 + 4 • 2 + 3 + 4 • <u>1 + 2 + 3 + 4</u>
Monitoring period	5 s • ... • 2 h; <u>1 min</u>
Output behaviour on exceeding the monitoring time	<ul style="list-style-type: none"> • <u>Do not send message</u> • Send value exceeding [= value of the parameter "Monitoring period"]

6.11.2.AND logic connection inputs

do not use

Logic input 1

Logic input 1 inverted

Logic input 2

Logic input 2 inverted

Logic input 3

Logic input 3 inverted

Logic input 4

Logic input 4 inverted

Logic input 5

Logic input 5 inverted

Logic input 6

Logic input 6 inverted

Logic input 7

Logic input 7 inverted
Logic input 8
Logic input 8 inverted
Logic input 9
Logic input 9 inverted
Logic input 10
Logic input 10 inverted
Logic input 11
Logic input 11 inverted
Logic input 12
Logic input 12 inverted
Logic input 13
Logic input 13 inverted
Logic input 14
Logic input 14 inverted
Logic input 15
Logic input 15 inverted
Logic input 16
Logic input 16 inverted

6.11.3. OR LOGIC connection inputs

The OR logic connection inputs are the same as those for the AND logic. Additionally, the following inputs are available for the OR logic:

Switching output AND logic 1
Switching output AND logic 1 inverted
Switching output AND logic 2
Switching output AND logic 2 inverted
Switching output AND logic 3
Switching output AND logic 3 inverted
Switching output AND logic 4
Switching output AND logic 4 inverted
Switching output AND logic 5
Switching output AND logic 5 inverted
Switching output AND logic 6
Switching output AND logic 6 inverted
Switching output AND logic 7
Switching output AND logic 7 inverted
Switching output AND logic 8
Switching output AND logic 8 inverted



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