Whitepaper

ModbusData Addressing Ranges

Rev. 6.31

Devices list:

- 1-8 button switch panels

Modbus Switch Panels:

GTD-1 Button	Register Address (Decimal)	Value Range (Decimal)	Default Value (Decimal)	Function	Read/Write	Value Description
B1-Touch	0	0-1	0	Input	RW	COR/Toggle
B1-LED touch	10	0-1	0	Output	RW	0=OFF, 1=ON
Panel Backlight	24	0-1	1	Output	RW	0=OFF, 1=ON
B1-LED Config	30	0-1	0	Setting	RW	0=Auto,1=Manual
Input mode config	47	0-1	1	Setting	RW	0=COR,1=Toggle
Button Led Notification	48	0-65535	1000	Setting	RW	Time in ms for button LED notification.
Device Address	49	0-200	111	Setting	RW	Panel Type ID
Baud Rate	50	0-2	2	Setting	RW	0=4800 1=9600 2=19200 3=38400

GTD-2 Button	Register Address (Decimal)	Value Range (Decimal)	Default Value (Decimal)	Function	Read/Write	Value Description
B1-Touch	0	0-1	0	Input	RW	COR/Toggle
B2-Touch	1	0-1	0	Input	RW	COR/Toggle
B1-LED touch	10	0-1	0	Output	RW	0=OFF, 1=ON
B2-LED touch	11	0-1	0	Output	RW	0=OFF, 1=ON
Panel Backlight	24	0-1	1	Output	RW	0=OFF, 1=ON
B1-LED Config	30	0-1	0	Setting	RW	0=Auto,1=Manual
B2-LED Config	31	0-1	0	Setting	RW	0=Auto,1=Manual
Input mode config	47	0-1	1	Setting	RW	0=COR,1=Toggle
Button Led Notification	48	0-65535	1000	Setting	RW	Time in ms for button LED notification.
Device Address	49	0-200	121	Setting	RW	Panel Type ID
Baud Rate	50	0-2	2	Setting	RW	0=4800 1=9600 2=19200 3=38400

GTD-3 Button	Register Address (Decimal)	Value Range (Decimal)	Default Value (Decimal)	Function	Read/Write	Value Description
B1-Touch	0	0-1	0	Input	RW	COR/Toggle
B2-Touch	1	0-1	0	Input	RW	COR/Toggle
B3-Touch	2	0-1	0	Input	RW	COR/Toggle
B1-LED touch	10	0-1	0	Output	RW	0=OFF, 1=ON
B2-LED touch	11	0-1	0	Output	RW	0=OFF, 1=ON
B3-LED touch	12	0-1	0	Output	RW	0=OFF, 1=ON
Panel Backlight	24	0-1	1	Output	RW	0=OFF, 1=ON
B1-LED Config	30	0-1	0	Setting	RW	0=Auto,1=Manual
B2-LED Config	31	0-1	0	Setting	RW	0=Auto,1=Manual
B3-LED Config	32	0-1	0	Setting	RW	0=Auto,1=Manual
Input mode config	47	0-1	1	Setting	RW	0=COR,1=Toggle
Button Led Notification	48	0-65535	1000	Setting	RW	Time in ms for button LED notification.
Device Address	49	0-200	131	Setting	RW	Panel Type ID
Baud Rate	50	0-2	2	Setting	RW	0=4800 1=9600 2=19200 3=38400

GTD-4 Button	Register Address (Decimal)	Value Range (Decimal)	Default Value (Decimal)	Function	Read/Write	Value Description
B1-Touch	0	0-1	0	Input	RW	COR/Toggle
B2-Touch	1	0-1	0	Input	RW	COR/Toggle
B3-Touch	2	0-1	0	Input	RW	COR/Toggle
B4-Touch	3	0-1	0	Input	RW	COR/Toggle
B1-LED touch	10	0-1	0	Output	RW	0=OFF, 1=ON
B2-LED touch	11	0-1	0	Output	RW	0=OFF, 1=ON
B3-LED touch	12	0-1	0	Output	RW	0=OFF, 1=ON
B4-LED touch	13	0-1	0	Output	RW	0=OFF, 1=ON
Panel Backlight	24	0-1	1	Output	RW	0=OFF, 1=ON
B1-LED Config	30	0-1	0	Setting	RW	0=Auto,1=Manual
B2-LED Config	31	0-1	0	Setting	RW	0=Auto,1=Manual
B3-LED Config	32	0-1	0	Setting	RW	0=Auto,1=Manual
B4-LED Config	33	0-1	0	Setting	RW	0=Auto,1=Manual
Input mode config	47	0-1	1	Setting	RW	0=COR,1=Toggle
Button Led Notification	48	0-65535	1000	Setting	RW	Time in ms for button LED notification
Device Address	49	0-200	141	Setting	RW	Panel Type ID
Baud Rate	50	0-2	2	Setting	RW	0=4800 1=9600 2=19200 3=38400

GTD-5 Button	Register Address (Decimal)	Value Range (Decimal)	Default Value (Decimal)	Function	Read/Write	Value Description
B1-Touch	0	0-1	0	Input	RW	COR/Toggle
B2-Touch	1	0-1	0	Input	RW	COR/Toggle
B3-Touch	2	0-1	0	Input	RW	COR/Toggle
B4-Touch	3	0-1	0	Input	RW	COR/Toggle
B5-Touch	4	0-1	0	Input	RW	COR/Toggle
B1-LED touch	10	0-1	0	Output	RW	0=OFF, 1=ON
B2-LED touch	11	0-1	0	Output	RW	0=OFF, 1=ON
B3-LED touch	12	0-1	0	Output	RW	0=OFF, 1=ON
B4-LED touch	13	0-1	0	Output	RW	0=OFF, 1=ON
B5-LED touch	14	0-1	0	Output	RW	0=OFF, 1=ON
Panel Backlight	24	0-1	1	Output	RW	0=OFF, 1=ON
B1-LED Config	30	0-1	0	Setting	RW	0=Auto,1=Manual
B2-LED Config	31	0-1	0	Setting	RW	0=Auto,1=Manual
B3-LED Config	32	0-1	0	Setting	RW	0=Auto,1=Manual
B4-LED Config	33	0-1	0	Setting	RW	0=Auto,1=Manual
B5-LED Config	34	0-1	0	Setting	RW	0=Auto,1=Manual
Input mode config	47	0-1	1	Setting	RW	0=COR,1=Toggle
Button Led Notification	48	0-65535	1000	Setting	RW	Time in mis for button LED notification
Device Address	49	0-200	151	Setting	RW	Panel Type ID
Baud Rate	50	0-2	2	Setting	RW	0=4800 1=9600 2=19200 3=38400

GTD-6 Button	Register Address (Decimal)	Value Range (Decimal)	Default Value (Decimal)	Function	Read/Write	Value Description
B1-Touch	0	0-1	0	Input	RW	COR/Toggle
B2-Touch	1	0-1	0	Input	RW	COR/Toggle
B3-Touch	2	0-1	0	Input	RW	COR/Toggle
B4-Touch	3	0-1	0	Input	RW	COR/Toggle
B5-Touch	4	0-1	0	Input	RW	COR/Toggle
B6-Touch	5	0-1	0	Input	RW	COR/Toggle
B1-LED touch	10	0-1	0	Output	RW	0=OFF, 1=ON
B2-LED touch	11	0-1	0	Output	RW	0=OFF, 1=ON
B3-LED touch	12	0-1	0	Output	RW	0=OFF, 1=ON
B4-LED touch	13	0-1	0	Output	RW	0=OFF, 1=ON
B5-LED touch	14	0-1	0	Output	RW	0=OFF, 1=ON
B6-LED touch	15	0-1	0	Output	RW	0=OFF, 1=ON
Panel Backlight	24	0-1	1	Output	RW	0=OFF, 1=ON
B1-LED Config	30	0-1	0	Setting	RW	0=Auto,1=Manual
B2-LED Config	31	0-1	0	Setting	RW	0=Auto,1=Manual
B3-LED Config	32	0-1	0	Setting	RW	0=Auto,1=Manual
B4-LED Config	33	0-1	0	Setting	RW	0=Auto,1=Manual
B5-LED Config	34	0-1	0	Setting	RW	0=Auto,1=Manual
B6-LED Config	35	0-1	0	Setting	RW	0=Auto,1=Manual
Input mode config	47	0-1	1	Setting	RW	0=COR,1=Toggle
Button Led Notification	48	0-65535	1000	Setting	RW	Time in ms for button led notification
Device Address	49	0-200	161	Setting	RW	Panel Type ID
Baud Rate	50	0-2	2	Setting	RW	0=4800 1=9600 2=19200 3=38400

GTD-8 Button	Register Address (Decimal)	Value Range (Decimal)	Default Value (Decimal)	Function	Read/Write	Value Description
B1-Touch	0	0-1	0	Input	RW	COR/Toggle
B2-Touch	1	0-1	0	Input	RW	COR/Toggle
B3-Touch	2	0-1	0	Input	RW	COR/Toggle
B4-Touch	3	0-1	0	Input	RW	COR/Toggle
B5-Touch	4	0-1	0	Input	RW	COR/Toggle
B6-Touch	5	0-1	0	Input	RW	COR/Toggle
B7-Touch	6	0-1	0	Input	RW	COR/Toggle
B8-Touch	7	0-1	0	Input	RW	COR/Toggle
B1-LED touch	10	0-1	0	Output	RW	0=OFF, 1=ON
B2-LED touch	11	0-1	0	Output	RW	0=OFF, 1=ON
B3-LED touch	12	0-1	0	Output	RW	0=OFF, 1=ON
B4-LED touch	13	0-1	0	Output	RW	0=OFF, 1=ON
B5-LED touch	14	0-1	0	Output	RW	0=OFF, 1=ON
B6-LED touch	15	0-1	0	Output	RW	0=OFF, 1=ON
B7-LED touch	16	0-1	0	Output	RW	0=OFF, 1=ON
B8-LED touch	17	0-1	0	Output	RW	0=OFF, 1=ON
Panel Backlight	24	0-1	1	Output	RW	0=OFF, 1=ON
B1-LED Config	30	0-1	0	Setting	RW	0=Auto,1=Manual
B2-LED Config	31	0-1	0	Setting	RW	0=Auto,1=Manual
B3-LED Config	32	0-1	0	Setting	RW	0=Auto,1=Manual
B4-LED Config	33	0-1	0	Setting	RW	0=Auto,1=Manual
B5-LED Config	34	0-1	0	Setting	RW	0=Auto,1=Manual
B6-LED Config	35	0-1	0	Setting	RW	0=Auto,1=Manual
B7-LED Config	36	0-1	0	Setting	RW	0=Auto,1=Manual
B8-LED Config	37	0-1	0	Setting	RW	0=Auto,1=Manual
Input mode config	47	0-1	1	Setting	RW	0=COR,1=Toggle
Button Led Notification	48	0-65535	1000	Setting	RW	Time in ms for button led notification
Device Address	49	0-200	181	Setting	RW	Panel Type ID
Baud Rate	50	0-2	2	Setting	RW	0=4800 1=9600 2=19200 3=38400

GTD-Corridor 1 86x86	Register Address (Decimal)	Value Range (Decimal)	Default Value (Decimal)	Function	Read/Write	Value Description
B1-BELL Touch	0	0-1	0	Input	RW	COR/Toggle
B1-LED (BELL)	10	0-1	0	Output	RW	0=OFF, 1=ON
Panel Backlight	24	0-1	1	Output	RW	0=OFF, 1=ON
B1 LED Config	30	0-1	0	Setting	RW	0=Auto,1=Manual
Input mode config	47	0-1	1	Setting	RW	0=COR,1=Toggle
Button Led Notification	48	0-65535	1000	Setting	RW	Time in ms for button LED notification
Device Address	49	0-200	112	Setting	RW	Panel Type ID
Baud Rate	50	0-2	2	Setting	RW	0=4800 1=9600 2=19200 3=38400

GTD-Corridor 2 86x86	Register Address (Decimal)	Value Range (Decimal)	Default Value (Decimal)	Function	Read/Write	Value Description
B1-LED (DND)	10	0-1	0	Output	RW	0=OFF, 1=ON
B2-LED (MUR)	11	0-1	0	Output	RW	0=OFF, 1=ON
Panel Backlight	24	0-1	1	Output	RW	0=OFF, 1=ON
Device Address	49	0-200	122	Setting	RW	Panel Type ID
Baud Rate	50	0-2	2	Setting	RW	0=4800 1=9600 2=19200 3=38400

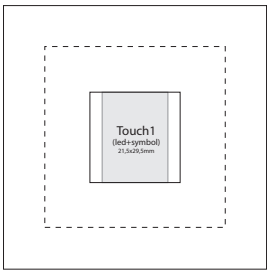
GTD-Corridor 3 86x86	Register Address (Decimal)	Value Range (Decimal)	Default Value (Decimal)	Function	Read/Write	Value Description
B1-BELL Touch	0	0-1	0	Input	RW	Toggle 0/1
B1-LED (BELL)	10	0-1	0	Output	RW	0=OFF, 1=ON
B2-LED (DND)	11	0-1	0	Output	RW	0=OFF, 1=ON
B3-LED (MUR)	12	0-1	0	Output	RW	0=OFF, 1=ON
Panel Backlight	24	0-1	1	Output	RW	0=OFF, 1=ON
B1-LED Config	30	0-1	0	Setting	RW	0=Auto,1=Manual
Input mode config	47	0-1	1	Setting	RW	0=COR,1=Toggle
Button Led Notification	48	0-65535	1000	Setting	RW	Time in ms for button LED notification
Device Address	49	0-200	132	Setting	RW	Panel Type ID
Baud Rate	50	0-2	2	Setting	RW	0=4800 1=9600 2=19200 3=38400

GTD-Corridor 4 140x210	Register Address (Decimal)	Value Range (Decimal)	Default Value (Decimal)	Function	Read/Write	Value Description
B1-BELL Touch	0	0-1	0	Input	RW	Toggle 0/1
B1-LED (BELL)	10	0-1	0	Output	RW	0=OFF, 1=ON
B2-LED (DND)	11	0-1	0	Output	RW	0=OFF, 1=ON
B3-LED(MUR)	12	0-1	0	Output	RW	0=OFF, 1=ON
B4-LED (ROOM)	13	0-1	0	Output	RW	0=OFF, 1=ON
Panel Backlight	24	0-1	1	Output	RW	0=OFF, 1=ON
B1-LED Config	30	0-1	0	Setting	RW	0=Auto,1=Manual
Input mode config	47	0-1	1	Setting	RW	0=COR,1=Toggle
Button Led Notification	48	0-65535	1000	Setting	RW	Time in ms for button LED notification
Device Address	49	0-200	17	Setting	RW	Panel Type ID
Baud Rate	50	0-2	2	Setting	RW	0=4800 1=9600 2=19200 3=38400

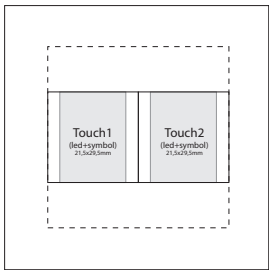
GTD-Key Card 86x86	Register Address (Decimal)	Value Range (Decimal)	Default Value (Decimal)	Function	Read/Write	Value Description
Card A	0	0-1	0	Input	RW	0=OFF, 1=ON
Card B	1	0-1	0	Output	RW	0=OFF, 1=ON
Card C	2	0-1	0	Output	RW	0=OFF, 1=ON
Card D	3	0-1	0	Output	RW	0=OFF, 1=ON
Device Address	49	0-200	18	Setting	RW	Panel Type ID
Baud Rate	50	0-2	2	Setting	RW	0=4800 1=9600 2=19200 3=38400

GTD-Speaker 86x86	Register Address (Decimal)	Value Range (Decimal)	Default Value (Decimal)	Function	Read/Write	Value Description
Speaker sound	10	0-1	0	Input	RW	0=OFF, 1=ON
Speaker volume	20	0-5	2	Output	RW	0=OFF, 5=MAX
Device Address	49	0-200	19	Setting	RW	Panel Type ID
Baud Rate	50	0-2	2	Setting	RW	0=4800 1=9600 2=19200 3=38400

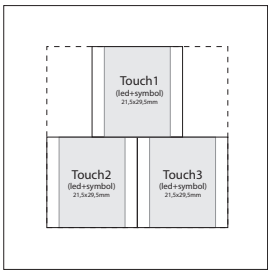
Modbus Switch Button/LED Location:



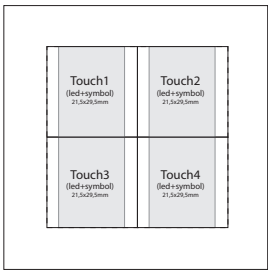
Ref.1: GTD-1Button



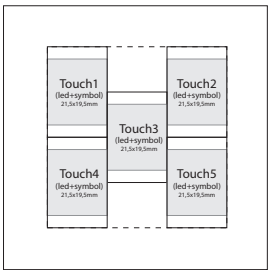
Ref.2: GTD2Button



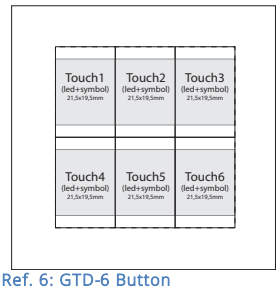
Ref. 3: GTD3 Button



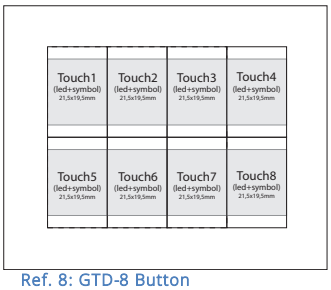
Ref. 4: GTD-4 Button



Ref. 5: GTD-5 Button



Ref. 6: GTD-6 Button



Ref. 8: GTD-8 Button

Device Functionality (E.g GTD-2 Button panel) :

1) Input Mode Config. (Reg. 47):

   The value in this register defines the mode of operation for all the input buttons of the device i.e.
   ZERO-Value: if the value is Zero then all the inputs of the device will work in the clear on read mode (0->1 on input detection, when value is read by external MCU then device itself should make it 1->0).
   ONE-Value: Whereas if the value is one then all the inputs of the device will work in the toggle mode i.e. all the value of the registers will toggle 0->1 or 1->0 on each input press for its input button.

2) B1-LED Config. (Reg. 30):

   This register is used for setting the button led notification mode for the first input button of the device. Note that each register is defined for setting the mode of the button led notification for a single input button only and not for the button led notification of the whole device.
   ZERO-Value: If the value is zero then the device will automatically glow the button led notification of the respective button only for the time mentioned in milliseconds in the Button Led Notification Register (48).
   ONE-value: If the value is one then the device will not control the button led notification on its own. Rather the button led notification for the button will be controlled by the external MCU.

3) B2-LED Config. (Reg. 31):

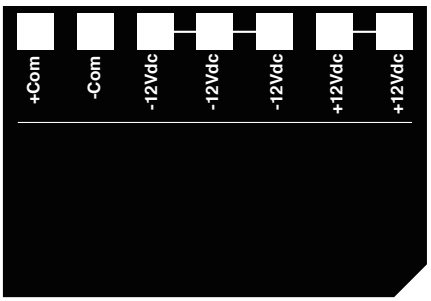
   This register is used for setting the button led notification mode for the second input button of the device. Note that each register is defined for setting the mode of the button led notification for a single input button only and not for the button led notification of the whole device.
   ZERO-Value: If the value is zero then the device will automatically glow the button led notification of the respective button only for the time mentioned in milliseconds in the Button Led Notification Register (48).
   ONE-value: If the value is one then the device will not control the button led notification on its own. Rather the button led notification for the button will be controlled by the external MCU.

4) Button LED Notification (Reg.: 48):

   This register consists of the time specified in the milliseconds. In the Auto mode this register defines the time for which the device should control the button led notification.

Note: On Power Failure all the inputs and outputs value should be initialized to their default values. Whereas all the values in the setting registers should be restored to their last known values.

Modbus Switch Connection:



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