



Damietta University
Faculty of Engineering
Electrical Power Engineering Department

Graduation Project

Design and Implementation of Smart Home System

Prepared by

Leqaa Taha Fayed

Abeer Alaa El-seidy

Zahraa Abd-Elnasir Ashour

Aya Refaat Al-Laban

Ghada Mahmoud Elfar

Karim Mohamed Eissa

Mohamed Ali Filfila

Ahmed Mohamed Refaat

Amr Tarek Rakha

Menna Allah Saleh

Under Supervisor of
Dr. Mohamed Osman Atallah

Academic Year: 2023 - 2024

Eudaimonia villa design team

Personal information			
No.	Name:	Phone No:	E-mail:
1	Leqaa Taha Ahmed Fayed	01030791231	leqaa.fayed5@gmail.com
2	Abeer Alaa Ibrahim Elseidy	01064153248	abeerelseady598@gmail.com
3	Ahmed Mohamed Refaat Abdo	01096516511	arefaat171@gmail.com
4	Karim Mohamed Ibrahim Eissa	01094547481	k3issa39@gmail.com
5	Ghada Mahmoud Elfar	01094101210	g.elfar4578@gmail.com
6	Amr Tarek Zakaria Rakha	01008239075	rakhaamr96@gmail.com
7	Zahraa Abd-Elnasir Ashour	01021657951	zahraa3shour@gmail.com
8	Mohamed Ali Filfila	01096512760	mohamedaliffla@gmail.com
9	Aya Refaat Al Laban	01097176638	ayaellban2@gmail.com
10	Menna Allah Mohamed Saleh	01277730833	mennaallahsaleh1@gmail.com

ACKNOWLEDGMENTS

First of all, we deeply thank "Allah" for helping us to accomplish this Project and we devote it to our families especially our parents, for their encouragement, patience, and assistance over the years.

We would like to thank **Dr. Mohamed Osman** for his support toward the completion of this work. for his supervision, continues guidance, encouragement and the support he always offers to us during the preparation of this work. He has provided us with the wise advice, useful discussions and comments.

We would like to offer our special thanks to **Eng. Mahmoud Seada** and his certified KNX training center, PORTO SMART for supporting our project with technical sessions and certified KNX devices for practical testing.





DESIGN & IMPLEMENTATION OF SMART HOME SYSTEME

ABSTRACT

Our project aims to design a Smart Home System to accomplish flexible, comfortable, and easy life to our client. We also integrate a Solar photovoltaic system to generate electricity through clean energy source to keep the environment clean and reduce the CO2 emission.

Eudaimonia villa Design team

Graduation Project

1. KNX Components

We make this Excel sheet to know the devices that we want to install in our building and how many piece of each device we need.

1.1 For Basement Floor

	Devices	Beauty salon	Body & personal care	Bathroom B-020	Shower, hand washing bath	Bathroom B-007	Lobby	chief	store	Laundry	Maid's B-011	Bathroom B-012	Bathroom B-013	Maid's B-014	Living	Kitchen B-016	Corridor	GYM	Stairs	Auto sum
Actuators	Switching lighting	4	1	2	4	2	1	4	1	1	3	1	1	3	2	1	1	5	1	38
	Dimming lighting	1													1					2
Push button	1-Gang push button		1				1		1				1				1			7
	2-Gang push button			1		1					1	1								5
	3-Gang push button				1				1											2
	4-Gang push button																			0
	Touch panel	1													1		1			4
HVAC	Gateway														1					1
	IR-Transmitte	1																1		2
Sensors	Siren						1													1
	Ventilation			1	1	1						1	1			1				6
	Shutter																			0
	Curtain	1							1											2
	Smart mirror	1	1		1														1	4
	KNX Energy Meter																		1	1
	Magnetic contact window/door security	3																4		7
	Stair light sensor																			1
	Presence sensor	1		1												1			1	4
	Motion sensor							1									1			1
Gas leakage sensor															1				1	
Smoke detector	1														1				2	
Glass break	2							1	1						1			2	7	
Weather station																				0
Water flood detector			1	1	1					1		1	1		1					7
KNX air quality sensor			1	1	1						1	1			1					6
Gas valve												1	1		1					2
water valve				1	1	1				1		1	1			1				7

1.2 For Ground Floor

	Devices	Bathroom G-001	Bathroom G-002	Hand washing	Bath corridor	Living	Dining	Stair	Foyer	Reception	Auto sum	
Actuators	Switching lighting	2	3	2	2	23	9	1	4	14	60	
	Dimming lighting					2	1				3	
Push button	1-Gang push button				1						1	
	2-Gang push button	1		1				1			3	
	3-Gang push button		1								1	
	4-Gang push button										0	
HVAC	Touch panel					2	1		1	2	6	
	Gateway					2					2	
Sensors	IR-Transmitte									2	2	
	Siren								1		1	
Sensors	Ventillation	1	1								2	
	Shutter	1	1			4	1			5	12	
	Curtain					4	1			5	10	
	Smart mirror			1							1	
	KNX Energy Meter							1			1	
	Magnetic contact window/door security					2	1			5	8	
	Stair light sensor							1			1	
	Presence sensor	1	1	1		2	2		1	2	10	
	Motion sensor				1				1			2
	Gas leakage sensor											0
Smoke detector											0	
Glass break					4	1			5	10		
Weather station											0	
Water flood detector	1	1	1								3	
KNX air quality sensor	1	1									2	
Gas Valve	1	1									2	
Water Valve	1	1	1								3	

1.3 For First Floor

Devices		Dressing	Bedroom S-008	Bathroom S-002	Bedroom S-003	Bathroom S-004	Lobby S-006	Bedroom S-005	Corridor S-007	Dressing room S-009	Stair S-018	Lobby S-019	Bedroom S-010	Lobby S-011	Bathroom S-012	Corridor S-013	Bedroom S-017	Bedroom S-016	Dressing room S-016a	Dressing room S-014	Bathroom S-015	Auto sum	
Actuators	Switching lighting	3	14	3	3	2	2	4	3	4	1	5	4	2	3	3	4	6	1	6	2	75	
	Dimming lighting		2		2			2					2				1	2				11	
Push button	1-Gang push button						1				1		1						1			4	
	2-Gang push button	1				1			1						1	1						6	
	3-Gang push button			1								1										2	
	4-Gang push button																					0	
ITVAC	Touch panel		1		1			1		1	1	1					1	1		1		9	
	Gateway		1		1			1		1		1					1	1		1		8	
	IR-Transmitte																					0	
Sensors	Siren																					0	
	Ventillation			1		1									1							1	4
	Shutter																					0	
	Curtain		3		1			1									1			1		7	
	Smart mirror																					0	
	KNX Energy Meter										1											1	
	Magnetic contact window/door security		1		1			1					1				1	1		1		7	
	Stair light sensor										1											1	
Sensors	Presence sensor		1	1	1			1		1		1					1	1		1		9	
	Motion sensor						1		1							1						3	
	Gas leakage sensor																					0	
	Smoke detector																					0	
	Glass break																					0	
	Weather station																					0	
	Water leakage			1		1																2	
	KNX air quality sensor			1		1									1						1	4	

1.4 For Second Floor

Devices		Bedroom F-001	Dressing room F-001a	Bathroom F-002	Bedroom F-003	Bathroom F-004	Bathroom F-005	Bedroom F-006	Bedroom F-007	Bathroom F-008	Corridor	Lobby F-009	Open to down	Stairs	Auto Sum
Actuators	Switching lighting	11	7	6	5	6	5	5	5	6	3	7	1	1	68
	Dimming lighting	4			2			2	2						10
Pushbutton	1-Gang push button												1		0
	2-Gang push button										1				1
	3-Gang push button														0
	4-Gang push button		1	1		1				1		1			5
HVA	Touch panel	2	1		1			1	1						6
	Gateway	2			1			1	1						5
	IR-Transmitte														0
Sensors	Siren											1			1
	Ventillation			1		1	1			1					4
	Shutter														0
	Curtain	1			1			1	3						6
	Smart mirror			1	1	1	1			1					4
	KNX Energy Meter													1	1
	Magnetic contact window/door security	5			2			2							9
	Stair light sensor													1	1
Sensors	Presence sensor	1	1	1	1	1		1	1	1					8
	Motion sensor										1	1			2
	Gas leakage sensor														0
	Smoke detector														0
	Glass break														0
	Weather station														0
	Water leakage			1		1									2

1.5 For Roof Floor

Devices		Bathroom R-006	Bathroom R-007	Reception R-005	Bedroom R-005	Auto sum
Actuators	Switching lighting	2	2	7	4	15
	Dimming lighting			3	2	5
Push button	1-Gang push button					
	2-Gang push button	1	1			2
	3-Gang push button					
	4-Gang push button					
	Touch panel			1	1	2
HVAC	Gateway			1	1	
	IR-Transmitte					0
Sensors	Siren			1		1
	Ventillation	1	1			2
	Shutter					
	Curtain			7	3	10
	Smart mirror			1	1	2
	KNX Energy Meter			1		1
	Magnetic contact window/door security			6	4	10
Sensors	Stair light sensor					
	Presence sensor			4		4
	Motion sensor					
	Gas leakage sensor					
	Smoke detector					
	Glass break					
	Weather station			1		1
	Water flood detector	1	1			2
	KNX air quality sensor	1	1			2
Gas Valve						
Water Valve	1	1			2	

2. Function list

We make this Excel sheets to define the load for each channel to make it easy when we are connecting these loads in real.

2.1 For the Basement floor

No	Devices	Control Devices	Application	No	Devices	Control devices	Application
	Combo actuator				Combo actuator		
	ch1	Touch panel (1)	Beauty salon (Light 1)		ch1	PB5-F1	Lobby (Light 1)
	ch2		Beauty salon (Light 2)		ch2	PB5-F2	Lobby (Siren)
	ch3		Beauty salon (Light 3)		ch3	PB6-F1	chief (Light 1)
	ch4		Beauty salon (Light 4)		ch4	PB6-F2	chief (Light 2)
	ch 5		Beauty salon (Smart mirror)		ch5	PB6-F3	chief (Light 3)
	ch6	PB1-F1	Body & personal care (Light1)		ch6	PB6-F4	chief (Light 4)
	ch7	PB1-F2	Body & personal care (Smart mirror)		ch7 ch 8	PB6-F5	chief (cutain 2)
	ch 8	PB2-F1	Bathroom B-020 (Light 1)		ch9	PB7-F1	store (Light 1)
	ch 9	PB2-F2	Bathroom B-020 (Light 2)		ch10	PB8-F1	Laundry (Light 1)
	ch 10	PB2-F3	Bathroom B-020 (Ventilation)		ch11	PB9-F1	Maid's B-011 (Light 1)
	ch 11	PB3-F1	Shower,hand washing bath (Light 1)		ch12	PB9-F2	Maid's B-011 (Light 2)
	ch 12	PB3-F2	Shower,hand washing bath (Light 2)		ch13	PB9-F3	Maid's B-011 (Light 3)
	ch 13	PB3-F3	Shower,hand washing bath (Light 3)		ch14	PB10-F1	Bathroom B-012 (Light1)
	ch 14	PB3-F4	Shower,hand washing bath (Light 4)		ch15	PB10-F2	Laundry (Water valve)
	ch 15	PB3-F5	Shower,hand washing bath (Ventilation)		ch16	PB10-F3	Bathroom B-012 (Ventilation)
	ch 16	PB3-F6	Shower,hand washing bath (Smart mirror)		ch17	PB11-F1	Bathroom B-013 (Light 1)
	ch 17	PB4-F1	Bathroom B-007 (Light 1)		ch18	PB11-F2	Bathroom B-013 (Gas valve)
	ch 18	PB4-F2	Bathroom B-007 (Light 2)		ch19	PB11-F3	Bathroom B-013 (Ventilation)
	ch 19	PB4-F3	Bathroom B-007 (Ventilation)		ch20	PB12-F1	Maid's B-014 (Light 1)
	ch 20	Water leakage sensor (1)	Bathroom B-007 (water valve 1)		ch21	PB12-F2	Maid's B-014 (Light 2)
	ch 21	Water leakage sensor 2	Bathroom B-020 (water valve 2)		ch22	PB12-F3	Maid's B-014 (Light 3)
	ch 22	water leakage sensor 3	Shower,hand washing (water valve 3)		ch23	water flood detector	Bathroom B-012 (water valve)
	ch 23 ch 24	Touch Panel (1)	Beauty salon (Curtain 1)		ch24	water flood detector	Bathroom B-013 (water valve)

No	Devices	Control devices	Application	No	Devices	Control Devices	Application	
								3
	ch1	Touch Panel (2)	Living (Light 1)		ch 1	Touch Panel (2)	Living (Dimming 1)	
	ch2		Living (Light 2)					
	ch3	PB13-F1	Kitchen B-016 (Light 1)		ch 2	Touch Panel (1)	Beauty salon (Dimming 2)	
	ch4	PB13-F2	Kitchen B-016 (Ventilation)					
	ch5	PB15-F1	Kitchen B-016 (Gas valve)		No	Devices	Control Devices	Application
	ch6	Touch Panel (3)	GYM (Light 1)					
	ch7		GYM (Light 2)					
	ch8		GYM (Light 3)					
	ch9		GYM (Light 4)					
	ch10		GYM (Light 5)					
	ch11		GYM (Smart mirror)					
	ch12	stair light sensor	Stairs (Light 1)		5	Binary input		
	ch13	water leakage sensor	Kitchen B-016 (Water valve)		ch1	—	Beauty Salon (Glass break sensor 1)	
	ch14	PB Motion sensor	Corridor (Light 1)		ch2	—	Beauty salon (Magnetic contact window/door security 1)	
	ch15	—	Spare		ch3	—	Beauty salon (Glass break sensor 2)	
	ch16	—	Spare		ch4	—	Beauty salon (Magnetic contact window/door security 2)	
					ch5	—	Beauty salon (Magnetic contact window/door security 3)	
					ch6	—	Beauty salon (Smoke detector)	

Line 1 (Basement)	No	Devices	Control devices	Application	Line 1 (Basement)	No	Devices	Control devices	Application
	6	Binary input					8	Binary input	
	ch1	–	Corridor (Motion sensor 1)			ch1	–	Laundry (Glass break sensor 5)	
	ch2	–	Stairs (Motion sensor 2)			ch2	–	Kitchen B-016 (Gas leakage sensor 1)	
	ch3	–	Lobby (Motion sensor 3)			ch3	–	Kitchen B-016 (Glass break sensor 6)	
	ch4	–	GYM (Magnetic contact window/door security 4)			ch4	–	Kitchen B-017 (Smoke detector)	
	ch5	–	GYM (Glass break sensor 3)			ch5	–	Spare	
	ch6	–	GYM (Magnetic contact window/door security 5)			ch6	–	store (Glass break sensor 7)	
Line 1 (Basement)	No	Devices	Control devices	Application					
	7	Binary input							
	ch1	–	Spare						
	ch2	–	Spare						
	ch3	–	Spare						
	ch4	–	GYM (Magnetic contact window/door security 6)						
	ch5	–	GYM (Glass break sensor 4)						
	ch6	–	GYM (Magnetic contact window/door security 7)						

2.2 For Ground Floor

No	Devices	Control Devices	Application	No	Devices	Control Devices	Application
1	Combo actuator			2	Combo actuator		
	ch1	PB1-F1 Presence Sensor 1	Bathroom G-001 (Light 1)		ch1	Touch Panel (1) & Touch Panel (2) & Presence sensor (5)	Living room (Lighth 8)
	ch2	PB1-F2 Presence Sensor 1	Bathroom G-001 (Light 2)		ch2		Living room (Light 9)
	ch3 ch4	PB1-F3	Bathroom G-001 (Shutter)		ch3		Living room (Light 10)
	ch5	PB1-F4	Bathroom G-001 (Ventilation)		ch4		Living room (Light 11)
	ch6	PB2-F1 Presence Sensor 2	Bathroom G-002 (Light 1)		ch5		Living room (Light 12)
	ch7	PB2-F2 Presence Sensor 2	Bathroom G-002 (Light 2)		ch6		Living room (Light 13)
	ch8	PB2-F3 Presence Sensor 2	Bathroom G-002 (Light 3)		ch7		Living room (Light 14)
	ch9 ch10	PB2-F4	Bathroom G-002 (Shutter)		ch8		Living room (Light 15)
	ch 11	PB2-F5	Bathroom G-002 (Ventilation)		ch9		Living room (Light 16)
	ch12	PB3-F1 Presence Sensor 3	Hand Washing (Light 1)		ch10		Living room (Light 17)
	ch13	PB3-F2 Presence Sensor 3	Hand Washing (Light 2)		ch11		Living room (Light 18)
	ch14	PB3-F3	Hand Washing (Smart Mirror)		ch12		Living room (Light 19)
	ch15	PB4-F1 Motion Sensor 1	Bath Corridor (Ligh 1)		ch13		Living room (Light 20)
	ch16	PB4-F2 Motion Sensor 1	Bath Corridor (Ligh 2)		ch14		Living room (Light 21)
	ch17	Touch Panel (1) & Touch Panel (2) & Presence sensor (4)	Living room (Ligh 1)		ch15		Living room (Light 22)
	ch18		Living room (Ligh 2)		ch16		Living room (Light 23)
	ch19		Living room (Light 3)		ch17 ch18		Living room (Shutter 1)
	ch20		Living room (Ligh 4)		ch19 ch20		Living room (Shutter 2)
	ch21		Living room (Ligh 5)		ch21 ch22		Living room (Shutter 3)
	ch22		Living room (Ligh 6)		ch23		Spare
	ch23		Living room (Ligh 7)		ch24		Spare
	ch24	—	spare				

Line 2 (Ground Floor)	No	Devices	Control Devices	Application	Line 2 (Ground Floor)	No	Devices	Control Devices	Application
	3	Combo actuator					4	Combo actuator	
		ch1 ch2	Touch Panel (1) & Touch Panel (2)	Living room (Shutter 4)			ch1	Stair light sensor	Stair (Light)
		ch3 ch4		Living room (Curtain 1)			ch2	PB5-F1	Foyer (Light 1)
		ch5 ch6		Living room (Curtain 2)			ch3	PB5-F2	Foyer (Light 2)
		ch7 ch8		Living room (Curtain 3)			ch4	PB5-F3	Foyer (Light 3)
		ch9 ch10		Living room (Curtain 4)			ch5	PB5-F4	Foyer (Light 4)
		ch11	Touch Panel (3) & Presence sensor (6)	Dining room (Light 1)			ch6	Air quality sensor Glass break sensor Water flood detector	Foyer (Siren)
		ch12		Dining room (Light 2)			ch7	Touch Panel (4) & Touch Panel (5) & Presence sensor (7)	Reception (Light 1)
		ch13		Dining room (Light 3)			ch8		Reception (Light 2)
		ch14		Dining room (Light 4)			ch9		Reception (Light 3)
		ch15		Dining room (Light 5)			ch10		Reception (Light 4)
		ch16		Dining room (Light 6)			ch11		Reception (Light 5)
		ch17		Dining room (Light 7)			ch12		Reception (Light 6)
		ch18		Dining room (Light 8)			ch13		Reception (Light 7)
		ch19 ch20		Dining room (Shutter)			ch14		Reception (Light 8)
		ch21 ch22		Dining room (Curtain)			ch15		Reception (Light 9)
		ch23	Dining room (Light 9)			ch16	Reception (Light 10)		
		ch24	—	Spare		ch17	Reception (Light 11)		
						ch18	Reception		
						ch19	Reception		
						ch20	Reception		
						ch21	Water flood detector	Bathroom G-001 (Water Valve)	
						ch22	Water flood detector	Bathroom G-002 (Water Valve)	
						ch23	Air quality sensor	Bathroom G-001 (Gas Valve)	
						ch24	Air quality sensor	Bathroom G-002 (Gas Valve)	

Line 2 (Ground Floor)	No	Devices	Control Devices	Application	Line 2 (Ground Floor)	No	Devices	Control Devices	Application
	5	Combo actuator					6	Binary Input	
	ch1 ch2	Touch Panel (4) & Touch Panel (5)		Reception (Shutter 1)		ch1	—		Villa Door (Door magnetic contact)
	ch3 ch4			Reception (Shutter 2)		ch2	—		Reception (window magnetic contact 4)
	ch5 ch6			Reception (Shutter 3)		ch3	—		Reception (Glass break sensor 6)
	ch7 ch8			Reception (Shutter 4)		ch4	—		Reception (window magnetic contact 5)
	ch9 ch10			Reception (Shutter 5)		ch5	—		Reception (window
	ch11 ch12			Reception (Curtain 1)		ch6	—		Reception (Glass break sensor 7)
	ch13 ch14			Reception (Curtain 2)					
	ch15 ch16			Reception (Curtain 3)		No	Devices	Control Devices	Application
	ch17 ch18			Reception (Curtain 4)					
	ch19 ch20			Reception (Curtain 5)		7	Binary Input		
	ch21	Water flood detector			ch1	—		Reception (Glass break sensor 8)	
	ch22	—			ch2	—		Reception (window magnetic contact 7)	
	ch23	—			ch3	—		Reception (Glass break sensor 9)	
	ch24	—			ch4	—		Reception (window magnetic contact 8)	
					ch5	—		spare	
					ch6	—		spare	

Line 2 (Ground Floor)	No	Devices	Control Devices	Application	Line 2 (Ground Floor)	No	Devices	Control Devices	Application	
	8	Dimming Actuator				9	Dimming Actuator			
		ch1	Touch Panel (1) & Touch Panel (2)	Living room (Dimming 1)			ch1 ch2 ch3 ch4	Touch panel (3)		Dinig room (RGBW Light strip)
		ch2	Touch Panel (1) & Touch Panel (2)	Living room (Dimming 2)						
		ch3	Touch Panel (3)	Dining room (Dimming 1)						
	ch4	—	Spare							
Line 2 (Ground Floor)	No	Devices	Control Devices	Application	Line 2 (Ground Floor)	No	Devices	Control Devices	Application	
	10	Binary Input				11	Binary Input			
		ch1	—	Bath corridor (Motion sensor)			ch1	Motion sensor		Stair (Stair light sensor)
		ch2	—	Living room (window magnetic contact 1)			ch2	—		Living room (Glass break sensor 4)
		ch3	—	Living room (Glass break sensor 1)			ch3	—		Dining room (Window magnetic contact 3)
		ch4	—	Living room (Glass break sensor 2)			ch4	—		Dining room (Glass break sensor 5)
		ch5	—	Living room (window magnetic contact 2)			ch5	—		spare
	ch6	—	Living room (Glass break sensor 3)		ch6	—		spare		

All devices can be controlled via a main touch panel in the foyer

2.3 First Floor

No	Devices	Control devices	Application	No	Devices	Control devices	Application
	Combo actuator				Combo actuator		
	ch1	Touch panel & Presence sensor	Bedroom F-001 (Light 1)		ch1	Push button 4 gang & Presence sensor	Bathroom/f-002 (Light 1)
	ch2		Bedroom F-001 (Light 2)		ch2		Bathroom/f-002 (Light 2)
	ch3		Bedroom F-001 (Light 3)		ch3		Bathroom/f-002 (Light 3)
	ch4		Bedroom F-001 (Light 4)		ch4		Bathroom/f-002 (Light 4)
	ch5		Bedroom F-001 (Light 5)		ch5		Bathroom/f-002 (Light 5)
	ch6		Bedroom F-001 (Light 6)		ch6		Bathroom/f-002 (Light 6)
	ch7		Bedroom F-001 (Light 7)		ch7		Bathroom/f-002 (Ventilation)
	ch8		Bedroom F-001 (Light 8)		ch8		Bathroom/f-002 (Smart mirror)
	ch9		Bedroom F-001 (Light 9)		ch9		Bedroom/f-003 (Light 1)
	ch10		Bedroom F-001 (Light 10)		ch10		Bedroom/f-003 (Light 2)
	ch11	Puch button 4 gang & Presence sensor	Bedroom F-001 (curtain 1)		ch11	toch panel & Presence sensor	Bedroom/f-003 (Light 3)
	ch12		Bedroom F-001 (Light 11)		ch12		Bedroom/f-003 (Light 4)
	ch13		Dressing F-001a (Light 1)		ch13		Bedroom/f-003 (Curtain)
	ch14	Puch button 4 gang & Presence sensor	Dressing F-001a (Light 2)		ch14	Puch button 4 gang & Presence sensor	Bedroom/f-003 (Light 5)
	ch15		Dressing F-001a (Light 3)		ch15		Bathroom/f-004 (Light 1)
	ch16		Dressing F-001a (Light 4)		ch16		Bathroom/f-004 (Light 2)
	ch17		Dressing F-001a (Light 5)		ch17		Bathroom/f-004 (Light 3)
	ch18		Dressing F-001a (Light 6)		ch18		Bathroom/f-004 (Light 4)
	ch19		Dressing F-001a (Light 7)		ch19		Bathroom/f-004 (Light 5)
	ch20		—	Spare			ch20
	ch21	—	Spare		ch21	Bathroom/f-004 (Ventilation)	
	ch22	—	Spare		ch22	Bathroom/f-004 (Smart mirror)	
	ch23	—	Spare		ch23	Bedroom/f-007 (Light 4)	
	ch24	—	Spare		ch24		

Line 3 (First)	No	Devices	Control devices	Application	Line 3 (First)	No	Devices	Control devices	Application
	3	Combo actuator					4	Combo actuator	
		ch1	Puch button 4 gang & Presence sensor	Bathroom/f-005 (Light 1)			ch1	Puch button 4 gang & Presence sensor	Bathroom/f-008 (Light 1)
		ch2		Bathroom/f-005 (Light 2)			ch2		Bathroom/f-008 (Light 2)
		ch3		Bathroom/f-005 (Light 3)			ch3		Bathroom/f-008 (Light 3)
		ch4		Bathroom/f-005 (Light 4)			ch4		Bathroom/f-008 (Light 4)
		ch5		Bathroom/f-005 (Light 5)			ch5		Bathroom/f-008 (Light 5)
		ch6		Bathroom/f-005 (Smart mirror)			ch6		Bathroom/f-008 (Light 6)
		ch7		Bathroom/f-005 (Ventilation)			ch7		Bathroom/f-008 (Ventilation)
		ch8	touch panel & Pressence sensor	Bedroom/f-006 (Light 1)			ch8	Puch button 2 gang & Motion sensor	Bathroom/f-008 (Smart mirror)
		ch9		Bedroom/f-006 (Light 2)			ch9		Corridor (Light 1)
		ch10		Bedroom/f-006 (Light 3)			ch10		Corridor (Light 2)
		ch11		Bedroom/f-006 (Light 4)			ch11		Corridor (Light 3)
		ch12		Bedroom/f-006 (curtain)			ch12		Lobby/f-009 (Light 1)
		ch13		Bedroom/f-006 (Light 5)			ch13		Lobby/f-009 (Light 2)
		ch14		Bedroom/f-006 (Light 5)			ch14		Lobby/f-009 (Light 3)
		ch15	Touch panel & Pressence sensor	Bedroom/f-007 (Light 1)			ch15	Puch button 4 gang & Motion sensor	Lobby/f-009 (Light 4)
		ch16		Bedroom/f-007 (Light 2)			ch16		Lobby/f-009 (Light 5)
		ch17		Bedroom/f-007 (Light 3)			ch17		Lobby/f-009 (Light 6)
		ch18		Bedroom/f-007 (Light 4)			ch18		Lobby/f-009 (Light 7)
		ch19		Bedroom/f-007 (Curtain1)			ch19		Lobby/f-009 (Siren)
		ch20		Bedroom/f-007 (Curtain2)			ch20		Push button 1 gang
		ch21		Bedroom/f-007 (Curtain3)			ch21		Stair light sensor
		ch22				ch22	—	Spare	
		ch23				ch23	—	Spare	
		ch24				ch24	—	Spare	

Line 3 (First)	No	Devices	Control Devices	Application	Line 3 (First)	No	Devices	Control Devices	Application	
	5	Dimming Actuator				6	Dimming Actuator			
		ch1	Touch Panel	lobby/f-001 (Dimming1)			ch1	Touch Panel	Bedroom/f-001 (Dimming3)	
		ch2	Touch Panel	lobby/f-001 (Dimming2)			ch2	Touch Panel	Bedroom/f-001 (Dimming4)	
		ch3	—	Spare			ch3	—	Spare	
	ch4	—	Spare		ch4	—	Spare			
Line 3 (First)	No	Devices	Control Devices	Application	Line 3 (First)	No	Devices	Control Devices	Application	
	7	Dimming Actuator				8	Dimming Actuator			
		ch1	Touch Panel	Bedroom/f-003 (Dimming 1)			ch1	Touch Panel	Bedroom/f-006 (Dimming 1)	
		ch2	Touch Panel	Bedroom/f-003 (Dimming 2)			ch2	Touch Panel	Bedroom/f-006 (Dimming 2)	
		ch3	—	Spare			ch3	—	Spare	
	ch4	—	Spare		ch4	—	Spare			
Line 3 (First)	No	Devices	Control Devices	Application	Line 3 (First)	No	Devices	Control Devices	Application	
	9	Dimming Actuator				11	Binary Input			
		ch1	Touch Panel	Bedroom/f-007 (Dimming 1)			ch1	—	Bedroom/f-003 (Glass break sensor 1)	
		ch2	Touch Panel	Bedroom/f-007 (Dimming 2)			ch2	—	Bedroom/f-003 (Glass break sensor 2)	
		ch3	—	Spare			ch3	—	Bedroom/f-006 (Glass break sensor 1)	
	ch4	—	Spare		ch4	—	Bedroom/f-006 (Glass break sensor 2)			
Line 3 (First)	No	Devices	Control Devices	Application	Line 3 (First)	No	Devices	Control Devices	Application	
	10	Binary Input				12	Binary Input			
		ch1	—	Bedroom/f-001 (Glass break sensor 1)			ch1	—	Corridor (Motion sensor)	
		ch2	—	Bedroom/f-001 (Glass break sensor 2)			ch2	—	Lobby/f-009 (Motion sensor)	
		ch3	—	Bedroom/f-001 (Glass break sensor 3)			ch3	—	Spare	
	ch4	—	Bedroom/f-001 (Glass break sensor 4)		ch4	—	Spare			
	ch5	—	Bedroom/f-001 (Glass break sensor 4)		ch5	—	Spare			
	ch6	—	Spare		ch6	—	Spare			

All devices can be controlled via a main touch panel in the foyer

2.4 Second Floor

No	Devices	Control Devices	Application	No	Devices	Control Devices	Application	
	1				Combo actuator			2
	ch1	PB1-F1	Dressing (Light 1)		ch1 ch2	Touch Panel (1)	Bedroom S-008 (Curtain 3)	
	ch2	PB1-F2	Dressing (Light 2)		ch3	PB2-F1 & Presence Sensor (2)	Bathroom S-002 (Light 1)	
	ch3	PB1-F3 PB1-F4 Spare	Dressing (Light 3)		ch4	PB2-F2 & Presence Sensor (2)	Bathroom S-002 (Light 2)	
	ch4	Touch Panel (1) & Presence Sensor (1)	Bedroom S-008 (Light 1)		ch5	PB2-F3 & Presence Sensor (2)	Bathroom S-002 (Light 3)	
	ch5		Bedroom S-008 (Light 2)		ch6	PB2-F4 PB2-F5 PB2-F6 (Spare)	Bathroom S-002 (Ventilation 1)	
	ch6		Bedroom S-008 (Light 3)		ch7	Touch Panel (2) & Presence Sensor (3)	Bedroom S-003 (Light 1)	
	ch7		Bedroom S-008 (Light 4)		ch8		Bedroom S-003 (Light 2)	
	ch8		Bedroom S-008 (Light 5)		ch9 ch10		Bedroom S-003 (Curtain 1)	
	ch9		Bedroom S-008 (Light 6)		ch11		Bedroom S-003 (Light 3)	
	ch10		Bedroom S-008 (Light 7)		ch12	PB3-F1	Bathroom S-004 (Light 1)	
	ch11		Bedroom S-008 (Light 8)		ch13	PB3-F2	Bathroom S-004 (Light 2)	
	ch12		Bedroom S-008 (Light 9)		ch14	PB3-F3 PB3-F4 spare	Bathroom S-004 (Ventilation 1)	
	ch13		Bedroom S-008 (Light 10)		ch15	PB4-F1 Motion Sensor (1)	Lobby S-006 (Light 1)	
	ch14		Bedroom S-008 (Light 11)		ch16	PB4-F2 Motion Sensor (1)	Lobby S-006 (Light 2)	
	ch15		Bedroom S-008 (Light 12)		ch17	Touch Panel (3) & Presence Sensor (4)	Bedroom S-005 (Light 1)	
	ch16		Bedroom S-008 (Light 13)		ch18		Bathroom S-005 (Light 2)	
	ch17		Bedroom S-008 (Light 14)		ch19		Bedroom S-005 (Light 3)	
	ch18		Bedroom S-008 (Light 15)		ch20		Bedroom S-005 (Light 4)	
	ch19 ch20		Bedroom S-008 (Curtain 1)		ch21 ch22		Bedroom S-005 (Curtain 1)	
	ch21 ch22		Bedroom S-008 (Curtain 2)		ch23		PB5-F1	Lobby S-011 (Light 1)
	ch23		Door Magnetic Contact Air Quality Sensor	Stairs S-018 (Siren)		ch24	PB5-F2	Lobby S-011 (Light 2)
	ch24		—	Spare				

No	Devices	Control Devices	Application	No	Devices	Control Devices	Application
	ch1	PB6-F1 Motion Sensor (2)	Corridor S-007 (Light 1)		ch1	Touch Panel (6)	Bedroom S-017 (Light 1)
	ch2	PB6-F2 Motion Sensor (2)	Corridor S-007 (Light 2)		ch2		Bedroom S-017 (Light 2)
	ch3	PB6-F3 PB6-F4 spare Motion Sensor (2)	Corridor S-007 (Light 3)		ch3		Bedroom S-017 (Light 3)
	ch4	Touch Panel (4) & Presence sensor (5)	Dressing roomS-009 (Light 1)		ch4		Bedroom S-017 (Light 4)
	ch5		Dressing room S-009 (Light 2)		ch5 ch6	Bedroom S-017 (curtain 1)	
	ch6		Dressing room S-009 (Light 3)		ch7	Bedroom S-016 (Light 1)	
	ch7		Dressing room S-009 (Light 4)		ch8	Bedroom S-016 (Light 2)	
	ch8	PB7-F1 PB7-F2spare	Stair S-018 (Light 1)		ch9	Touch Panel (7) & Presence Sensor (7)	Bedroom S-016 (Light 3)
	ch9	PB8-F1	Lobby S-019 (Light 1)		ch10		Bedroom S-016 (Light 4)
	ch10	PB8-F2	Lobby S-019 (Light 2)		ch11		Bedroom S-016 (Light 5)
	ch11	PB8-F3	Lobby S-019 (Light 3)		ch12		Bedroom S-016 (Light 6)
	ch12	PB8-F4	Lobby S-019 (Light 4)		ch13	Touch Panel (8)	Dressing room S-014 (Light 1)
	ch13	PB8-F5 PB8-F6 spare	Lobby S-019 (Light 5)		ch14		Dressing room S-014 (Light 2)
	ch14	Touch Panel (5) & Presence sensor (6)	BedroomS-010 (Light 1)		ch15		Dressing room S-014 (Light 3)
	ch15		BedroomS-010 (Light 2)		ch16		Dressing room S-014 (Light 4)
	ch16		BedroomS-010 (Light 3)		ch17		Dressing room S-014 (Light 5)
	ch17		BedroomS-010 (Light 4)		ch18		Dressing room S-014 (Light 6)
	ch18	PB9-F1	Bathroom S-012 (Light 1)		ch19 ch20		Dressing room S-014 (curtain 1)
	ch19	PB9-F2	Bathroom S-012 (Light 2)		ch21		PB11-F1 precence sensor (8)
	ch20	PB9-F3	Bathroom S-012 (Light 3)		ch22	PB11-F2 precence sensor (8)	Bathroom S-015 (Light 2)
	ch21	PB9-F4	Bathroom S-012 (ventilation 1)		ch23	PB11-F3 PB11-F4 Spare precence sensor (8)	Bathroom S-015 (ventilation 1)
	ch22	PB10-F1 motion sensor (3)	Corridor S-013 (Light 1)		ch24	PB12-F1 PB12-F2 spare Precence sensor (9)	Dressing room S-016a (Light 1)
	ch23	PB10-F2 motion sensor (3)	Corridor S-013 (Light 2)				
	ch24	PB10-F3 PB10-F4 spare motion sensor (3)	Corridor S-013 (Light 3)				

Line 4 (Second)	No	Devices	Control Devices	Application	Line 4 (Second)	No	Devices	Control Devices	Application	
	5	Combo actuator				6	Dimming Actuator			
		ch1	Water Flood Detector	Bathroom S-002 Water Valve Control			ch1	Touch Panel(1)		Bedroom -S008 (Dimming 1)
		ch2		Bathroom S-004 Water Valve Control			ch2		Bedroom -S008 (Dimming 2)	
		ch3	Air Quality Sensor	bathroom S-002 Gas Valve Control			ch3	Touch Panel(2)		Bedroom -S003 (Dimming 1)
		ch4		bathroom S-004 Gas Valve Control			ch4		Bedroom -S003 (Dimming 2)	
		ch5		bathroom S-012 Gas Valve Control			No Devices Control Devices Application			
		ch6		bathroom S-015 Gas Valve Control						
		ch7	—	Spare						
		ch8	—	Spare			7	Dimming Actuator		
		ch9	—	Spare			ch1	Touch Panel(3)		Bedroom -S005 (Dimming 1)
		ch10	—	Spare			ch2		Bedroom -S005 (Dimming 2)	
	ch11	—	Spare		ch3	Touch Panel(5)		Bedroom S-010 (Dimming 1)		
	ch12	—	Spare		ch4		Bedroom S-010 (Dimming 2)			
Line 4 (Second)	No	Devices	Control Devices	Application						
	8	Dimming Actuator								
		ch1	Touch Panel (6)	Bedroom S-017 (Dimming1)						
		ch2	Touch Panel(7)	Bedroom S-016 (Dimming 1)						
		ch3		Bedroom S-016 (Dimming 2)						
	ch4	—	Spare							

Line 5 (Roof)	No	Devices	Control Devices	Application	Line 5 (Roof)	No	Devices	Control Devices	Application
	1	Combo actuator					2	Combo actuator	
	ch1	PB1-F1 Presence Sensor 1	Bathroom R-006 (Light 1)			ch1	Touch Panel & Presence sensor (4)		Reception R-005 (Ligh 1)
	ch2	PB1-F2 Presence Sensor 1	Bathroom R-006 (Light 2)			ch2		Reception R-005 (Light 2)	
	ch3	PB1-F3	Bathroom R-006 (Ventillation)			ch3		Reception R-005 (Light 3)	
	ch4	PB1-F1 Presence Sensor 1	Bathroom R-007 (Light 1)			ch4		Reception R-005 (Light 4)	
	ch5	PB1-F2 Presence Sensor 1	Bathroom R-007 (Light 2)			ch5		Reception R-005 (Light 5)	
	ch6	PB1-F3	Bathroom R-006 (Ventillation)			ch6		Reception R-005 (Light 6)	
	ch7	Touch Panel & Presence sensor(4)	Reception R-005 (Curtain1)			ch7		Reception R-005 (Light 7)	
	ch8		Reception R-005 (Curtain2)			ch8	Touch Panel	Bedroom R-005 (Light 1)	
	ch9		Reception R-005 (Curtain3)			ch9		Bedroom R-005 (Light 2)	
	ch10		Reception R-005 (Curtain4)			ch10		Bedroom R-005 (Light 3)	
	ch11		Reception R-005 (Curtain5)			ch11		Bedroom R-005 (Curtain1)	
	ch12		Reception R-005 (Curtain6)			ch12		Bedroom R-005 (Curtain2)	
	ch13		Reception R-005 (Curtain7)			ch13		Bedroom R-005 (Curtain3)	
	ch14		Reception R-005 (Smart mirror)			ch14		Bedroom R-005 (Light 4)	
	ch15		Reception R-005 (Siren)			ch15		Bedroom R-005 (Smart mirror)	
	ch16		—	Spare		ch16		Spare	
	ch17		—	Spare		ch17		Spare	
	ch18		—	Spare		ch18	Spare		
	ch19		—	Spare		ch19	Spare		
	ch20		—	Spare		ch20	Spare		
	ch21	—	Spare		ch21	Spare			
	ch22	—	Spare		ch22	Spare			
	ch23	—	Spare		ch23	Spare			
	ch24	—	Spare		ch24	Spare			

2.5 For Roof Floor

Line 5 (Roof)	No	Devices	Control Devices	Application	Line 5 (Roof)	No	Devices	Control Devices	Application
	3	Dimming Actuator				4	Dimming Actuator		
		ch1	Touch Panel	Reception R-005 (Dimming 1)			ch1	Touch Panel	Reception R-005 (Dimming 3)
		ch2		Reception R-005 (Dimming 2)			ch2		Spare
		ch3	—	Spare			ch3	—	Spare
	ch4	—	Spare		ch4	—	Spare		
Line 5 (Roof)	No	Devices	Control Devices	Application	Line 5 (Roof)	No	Devices	Control Devices	Application
	5	Dimming Actuator				6	Binary Input		
		ch1	Touch Panel	Bedroom R-005 (Dimming 1)			ch1	—	Bathroom R-006 (Gas leakage sensor)
		ch2		Bedroom R-005 (Dimming 2)			ch2	—	Bathroom R-006 (Water leakage)
		ch3	—	Spare			ch3	—	Bathroom R-006 (KNX air quality sensor)
	ch4	—	Spare		ch4	—	Bathroom R-007 (Gas leakage sensor)		
Line 5 (Roof)	No	Devices	Control Devices	Application		ch5	—	Bathroom R-007 (Water leakage)	
	5	Dimming Actuator				ch6	—	Bathroom R-007 (KNX air quality sensor)	
		ch3	—	Reception R-005 (Magnetic contact window/door security2)					
		ch4	—	Spare					
		ch5	—	Spare					
	ch6	—	Spare						

3. Individual address sheets

We write this Excel sheet to make it easy to know the individual address for each device and insert it in ETS5.

3.1 For Basement Floor

Device	Individual Address	Bus current(mA)
Line coupler	1.1.0	20
Combo Actuator 24 channel (1)	1.1.1	20
Combo Actuator 24 channel (2)	1.1.2	20
Combo Actuator 16 channel (3)	1.1.3	20
Dimming Actuator (1)	1.1.4	10
Binary input (1)	1.1.5	2
Binary input (2)	1.1.6	2
Binary input (3)	1.1.7	2
Binary input (4)	1.1.8	2
Push Button (1)	1.1.9	10
Push Button (2)	1.1.10	10
Push Button (3)	1.1.11	10
Push Button (4)	1.1.12	10
Push Button (5)	1.1.13	10
Push Button (6)	1.1.14	10
Push Button (7)	1.1.15	10
Push Button (8)	1.1.16	10
Push Button (9)	1.1.17	10
Push Button (10)	1.1.18	10
Push Button (11)	1.1.19	10
Push Button (12)	1.1.20	10
Push Button (13)	1.1.21	10
Push Button (14)	1.1.22	10
Touch Panel (1)	1.1.23	12
Touch Panel (2)	1.1.24	12
Touch Panel (3)	1.1.25	12
Touch Panel (4)	1.1.26	12
Presence sensor (1)	1.1.27	5
Presence sensor (2)	1.1.28	5
Presence sensor (3)	1.1.29	5
Presence sensor (4)	1.1.30	5
IR Transmitter (1)	1.1.31	8
IR Transmitter (2)	1.1.32	8
Gateway (1)	1.1.33	8
KNX Energy Meter	1.1.34	10
Water flood detector (1)	1.1.35	10
Water flood detector (2)	1.1.36	10
Water flood detector (3)	1.1.37	10
Water flood detector (4)	1.1.38	10
Water flood detector (5)	1.1.39	10
Water flood detector (6)	1.1.40	10
Water flood detector (7)	1.1.41	10
KNX Air quality sensor (1)	1.1.42	12
KNX Air quality sensor (2)	1.1.43	12
KNX Air quality sensor (3)	1.1.44	12
KNX Air quality sensor (4)	1.1.45	12
KNX Air quality sensor (5)	1.1.46	12
KNX Air quality sensor (6)	1.1.47	12

3.2 For Ground Floor

Device	Individual Address	Bus Current (mA)
Line coupler	1.2.0	20
Combo Actuator 24 channel (1)	1.2.1	20
Combo Actuator 24 channel (2)	1.2.2	20
Combo Actuator 24 channel (3)	1.2.3	20
Combo Actuator 24 channel (4)	1.2.4	20
Combo Actuator 24 channel (5)	1.2.5	20
Dimming Actuator (1)	1.2.6	10
Dimming Actuator (2)	1.2.7	10
Binary input (1)	1.2.8	2
Binary input (2)	1.2.9	2
Binary input (3)	1.2.10	2
Binary input (4)	1.2.11	2
Push Button (1)	1.2.12	10
Push Button (2)	1.2.13	10
Push Button (3)	1.2.14	10
Push Button (4)	1.2.15	10
Push Button (5)	1.2.16	10
Touch Panel (1)	1.2.17	12
Touch Panel (2)	1.2.18	12
Touch Panel (3)	1.2.19	12
Touch Panel (4)	1.2.20	12
Touch Panel (5)	1.2.21	12
Touch Panel (6)	1.2.22	12
Presence sensor (1)	1.2.23	5
Presence sensor (2)	1.2.24	5
Presence sensor (3)	1.2.25	5
Presence sensor (4)	1.2.26	5
Presence sensor (5)	1.2.27	5
Presence sensor (6)	1.2.28	5
Presence sensor (7)	1.2.29	5
Presence sensor (8)	1.2.30	5
Presence sensor (9)	1.2.31	5
Presence sensor (10)	1.2.32	5
Gateway (1)	1.2.33	8
Gateway (2)	1.2.34	8
IR Transmitter (1)	1.2.35	8
IR Transmitter (2)	1.2.36	8
KNX Energy Meter	1.2.37	10
Water flood detector (1)	1.2.38	10
Water flood detector (2)	1.2.39	10
Water flood detector (3)	1.2.40	10
KNX Air quality sensor (1)	1.2.41	12
KNX Air quality sensor (2)	1.2.42	12

3.3 For First Floor

Device	Individual Address	Bus Current (mA)
Line coupler	1.3.0	10
Combo Actuator 24 channel (1)	1.3.1	20
Combo Actuator 24 channel (2)	1.3.2	20
Combo Actuator 24 channel (3)	1.3.3	20
Combo Actuator 24 channel (4)	1.3.4	20
Dimming Actuator 1	1.3.5	10
Dimming Actuator 2	1.3.6	10
Dimming Actuator 3	1.3.7	10
Dimming Actuator 4	1.3.8	10
Dimming Actuator 5	1.3.9	10
Binary input 1	1.3.10	2
Binary input 2	1.3.11	2
Binary input 3	1.3.12	2
Push Button (1)	1.3.13	10
Push Button (2)	1.3.14	10
Push Button (3)	1.3.15	10
Push Button (4)	1.3.16	10
Push Button (5)	1.3.17	10
Push Button (6)	1.3.18	10
Touch Panel (1)	1.3.19	12
Touch Panel (2)	1.3.20	12
Touch Panel (3)	1.3.21	12
Touch Panel (4)	1.3.22	12
Touch Panel (5)	1.3.23	12
Touch Panel (6)	1.3.24	12
Presence sensor (1)	1.3.25	5
Presence sensor (2)	1.3.26	5
Presence sensor (3)	1.3.27	5
Presence sensor (4)	1.3.28	5
Presence sensor (5)	1.3.29	5
Presence sensor (6)	1.3.30	5
Presence sensor (7)	1.3.31	5
Presence sensor (8)	1.3.32	5
Presence sensor (9)	1.3.33	5
Gateway (1)	1.3.34	7
Gateway (2)	1.3.35	7
Gateway (3)	1.3.36	7
Gateway (4)	1.3.37	7
Gateway (5)	1.3.38	7
KNX Energy Meter	1.3.39	12.5
Water leakage sensor (1)	1.3.40	10
Water leakage sensor (2)	1.3.41	10
Water leakage sensor (3)	1.3.42	10
KNX Air quality sensor (1)	1.3.43	3
KNX Air quality sensor (2)	1.3.44	3
KNX Air quality sensor (3)	1.3.45	3

3.4 For Second Floor

Device	Individual Address	Bus Current (mA)
Line coupler	1.4.0	10
Combo Actuator 24 channel (1)	1.4.1	20
Combo Actuator 24 channel (2)	1.4.2	20
Combo Actuator 24 channel (3)	1.4.3	20
Combo Actuator 24 channel (4)	1.4.4	20
Dimming Actuator (1)	1.4.5	10
Dimming Actuator (2)	1.4.6	10
Dimming Actuator (3)	1.4.7	10
Binary input (1)	1.4.8	2
Binary input (2)	1.4.9	2
Push Button (1)	1.4.10	10
Push Button (2)	1.4.11	10
Push Button (3)	1.4.12	10
Push Button (4)	1.4.13	10
Push Button (5)	1.4.14	10
Push Button (6)	1.4.15	10
Push Button (7)	1.4.16	10
Push Button (8)	1.4.17	10
Push Button (9)	1.4.18	10
Push Button (10)	1.4.19	10
Push Button (11)	1.4.20	10
Push Button (12)	1.4.21	10
Touch Panel (1)	1.4.22	12
Touch Panel (2)	1.4.23	12
Touch Panel (3)	1.4.24	12
Touch Panel (4)	1.4.25	12
Touch Panel (5)	1.4.26	12
Touch Panel (6)	1.4.27	12
Touch Panel (7)	1.4.28	12
Touch Panel (8)	1.4.29	12
Presence sensor (1)	1.4.30	5
Presence sensor (2)	1.4.31	5
Presence sensor (3)	1.4.32	5
Presence sensor (4)	1.4.33	5
Presence sensor (5)	1.4.34	5
Presence sensor (6)	1.4.35	5
Presence sensor (7)	1.4.36	5
Presence sensor (8)	1.4.37	5
Presence sensor (9)	1.4.38	5
Gateway (1)	1.4.39	7
Gateway (2)	1.4.40	7
Gateway (3)	1.4.41	7
Gateway (4)	1.4.42	7
Gateway (5)	1.4.43	7
Gateway (6)	1.4.44	7
Gateway (7)	1.4.45	7
Gateway (8)	1.4.46	7
Water leakage sensor (1)	1.4.47	10
Water leakage sensor (2)	1.4.48	10
KNX Air quality sensor (1)	1.4.49	3
KNX Air quality sensor (2)	1.4.50	3
KNX Air quality sensor (3)	1.4.51	3
KNX Air quality sensor (4)	1.4.52	3
KNX Energy Meter	1.4.53	10
Touch Panel (9)	1.4.54	12
Combo Actuator 12 channel (5)	1.4.55	20

3.5 For Roof Floor

Device	Individual Address	Bus Current (mA)
Line coupler	1.5.0	20
Combo Actuator 24 channel (1)	1.5.1	20
Combo Actuator 24 channel (2)	1.5.2	20
Dimming Actuator (1)	1.5.3	10
Dimming Actuator (2)	1.5.4	10
Dimming Actuator (3)	1.5.5	10
Binary input (1)	1.5.6	2
Binary input (2)	1.5.7	2
Push Button (1)	1.5.8	10
Push Button (2)	1.5.9	10
Touch Panel (1)	1.5.10	12
Touch Panel (2)	1.5.11	12
Presence sensor (1)	1.5.12	5
Presence sensor (2)	1.5.13	5
Presence sensor (3)	1.5.14	5
Presence sensor (4)	1.5.15	5
Presence sensor (5)	1.5.16	5
Presence sensor (6)	1.5.17	5
Gateway (1)	1.5.18	8
Gateway (2)	1.5.19	8
KNX Energy Meter	1.5.20	10
Weather station	1.5.21	10
Water flood detector (1)	1.5.22	10
Water flood detector (2)	1.5.23	10
KNX Air quality sensor (1)	1.5.24	3
KNX Air quality sensor (2)	1.5.25	3

4. Actuator wiring CAD Drawing

We draw this drawing to illustrate each Combo actuator channel load.

5. Binary input CAD Drawing

We draw this CAD drawing to illustrate each binary input channel load.

6. Binary input wiring CAD Drawing

We draw this CAD drawing to connect all the binary input load with its channel that illustrated in the function list Excel sheet.

7. KNX Devices wiring CAD Drawing

We draw this CAD Drawing to illustrate the place of each sensor, device and the automation panel in each floor.

8. Automation panel CAD Drawing

we draw this CAD drawing to illustrate the final configuration and arrangement of the KNX devices in the Automation panel.