

WIRING DIAGRAMS FOR GLOBAL / ESENSA AIR HANDLING UNITS

 This wiring diagram is only an addition to our installation and operation manuals, available on our website for download.

 All internal components (fans, controls, sensors, actuators...) to the control board are pre-wired.
The power supply must be connected to the safety isolating switch by a qualified electrician. Earthing is obligatory.

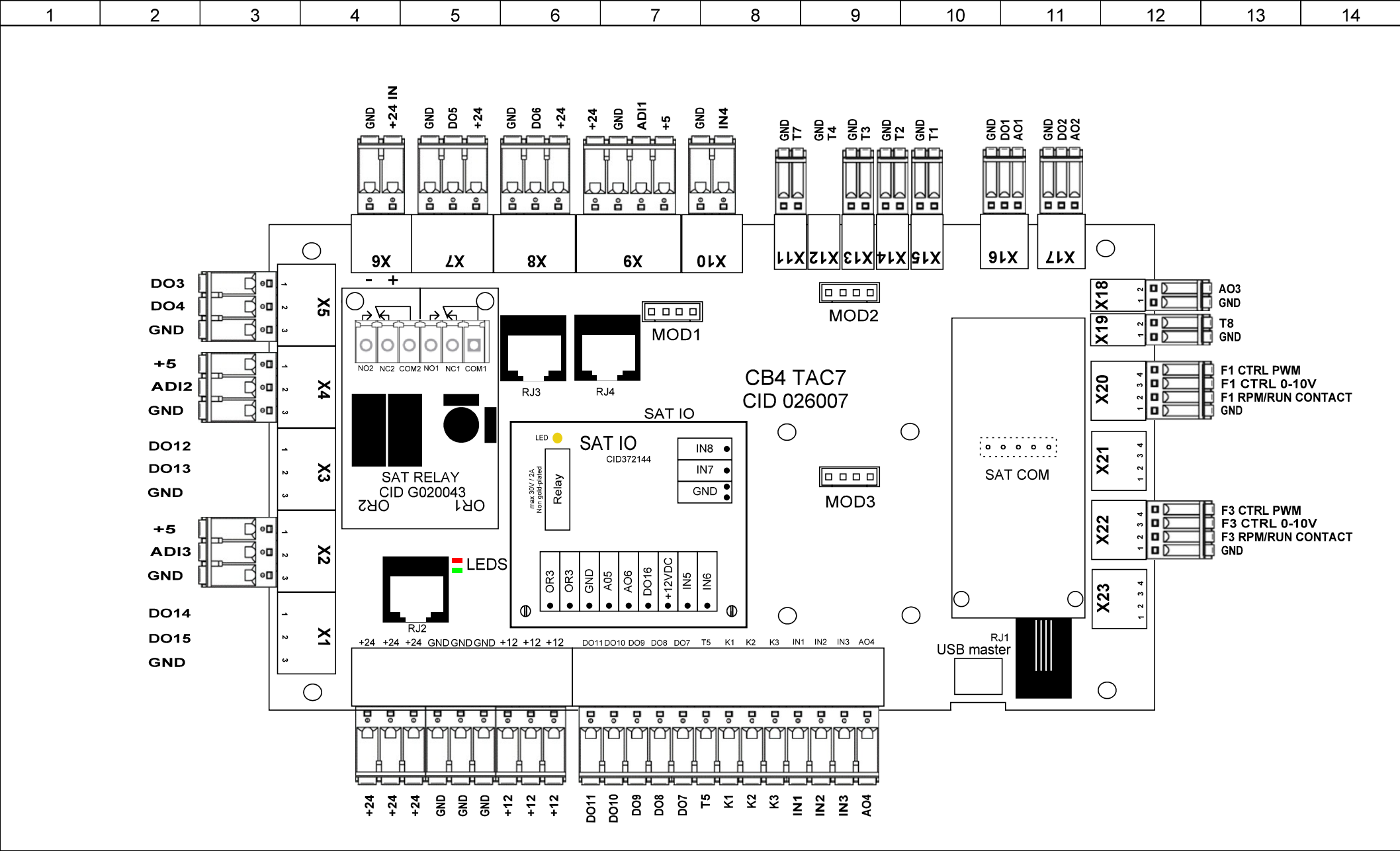
 All electrical connections must be made by a qualified electrician and in accordance with local rules and regulations.

 Residual current circuit breaker 300mA type B

 Fuse protection (D-type, “slow”) D – 10.000 A – AC3

 Electronic boards contains ESD sensitive components.
Use antistatic bracket connected to protective earth in case it is necessary to manipulate them.
In alternative, loose charges by touching the unit and handle boards at corners only.

Changes			Name	Date		Page
Name	Date	Draw.:	msg	17/10/2024		1
		check.:				
		Norm:				
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Application: General	of 73



Changes			Name	Date	TAC7	Page
Name	Date	Draw.:	msg	17/10/2024		2
		check.:				
		Norm:				
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Application: Controller	of 73

1

2

3

4

5

6

7

8

9

10

11

12

13

14

AO1 - BA+ = output 0-10V for external waterborne reheater (option)
DO1 - KWout = output PWM for electric reheater power regulation (option - prewired)
DO2 - KWIn- PX = output PWM for electric preheater power regulation (option - prewired)
| RX SPEED PWM - RX (prewired)
AO2 - RX SPEED 0-10V - RX (option)
AO3 - BA- = output 0-10V for external waterborne recooler or reversible Heat/Cool (option)
AO4 - NV = output 0-10V for internal hydraulic postheater (option - prewired)
DO3 - BYPASS OPEN- PX (with rotary actuator) (prewired)
DO4 - BYPASS CLOSE - PX (with rotary actuator) (prewired)
DO5 - DAMPER 1 (with or without spring return, I_{max} = 0,5 A DC) (option - prewired)
DO6 - DAMPER 2 (with or without spring return, I_{max} = 0,5 A DC) (option - prewired)
DO7 - HEAT CONTACT (open collector; V_{max}=24 VDC; I_{max}=0,1 A)
DO8 - COOL CONTACT (open collector; V_{max}=24 VDC; I_{max}=0,1 A)
DO9 - ALARM CONTACT (open collector; V_{max}=24 VDC; I_{max}=0,1 A)
DO10 - AL dPACONTACT (open collector; V_{max}=24 VDC; I_{max}=0,1 A)
DO11 - FAN ON CONTACT (open collector; V_{max}=24 VDC; I_{max}=0,1 A)
ADI1 - BYPASS POS - PX | RX SPEED FEEDBACK - RX (prewired)
ADI2 - FAN 1 dPa
ADI3 - FAN 3 dPa
T1 - outdoor air T° sensor (prewired)
T2 - extract air T° sensor (prewired)
T3 - exhaust T° sensor - PX (prewired)
T4 - BAin T° sensor
T5 - supply air T° (option)
T7 - BA+ frost protection T° sensor (option -prewired for internal battery)
T8 - BA- frost protection T° sensor (option)

IN1 + 12/24V - FIRE ALARM
IN2 + 12/24V - BOOST
IN3 + 12/24V - BYPASS ACTIVATION OVERRIDE
IN4 + GND - Drain pan full contact (for LP)

K1+ 12/24V - CA MODE: External speed 1 (N.O.)
LS / CP MODE: External start (N.O.)
K2+ 12/24V - CA MODE: External speed 2 (N.O.)
LS / CP MODE: 0-10V (Max. impedance: 1.500 Ohms)
K3+ 12/24V - CA MODE: External speed 3 (N.O.)
LS / CP MODE: 0-10V (Max. impedance: 1.500 Ohms)

NOT USED
GND
B-
A+
+24V DC
NOT USED
1 2 3 4 5 6

RJ12 PINOUT

F1 - FAN 1 (SUPPLY)
F2 - FAN 2 (additional fan for supply flow)
F3 - FAN 3 (EXHAUST)
F4 - FAN 4 (additional fan for exhaust flow)

RJ1: RJ12 connector for TACtouch (option)
RJ2: RJ12 connector for Modbus Pressure CP mode (option)
Modbus Air quality sensors for demand control mode (option)
Modbus Air quality sensors for BOOST in all modes (option)
RJ3: RJ12 connector for ESENSA or GLOBAL LP: free
for GLOBAL PX/RX: Modbus Pressure sensors kit CA (prewired)
and/or filters monitoring (option - prewired), on supply flow
RJ4: RJ12 connector for Modbus Pressure sensors kit CA (prewired)
and/or defrost detecting (option - prewired)
and/or filters monitoring (option - prewired)
NB: for GLOBAL PX/RX: sensor used for extract flow only

SAT IO OR3-OR3:BYPASS STATUS - (option)
SAT IO AO5: 0-10V OUTPUT (airflow / pressure) - (option)
SAT IO AO6: 0-10V OUTPUT (airflow / pressure) - (option)
SAT IO IN5: MASTER SELECTION - (option)
SAT IO IN6: HEAT OFF - (option)
SAT IO IN7: SUPPLY RUN IN FIRE ALARM (open) | dPa ALARM INPUT - (option)
SAT IO IN8: EXHAUST RUN IN FIRE ALARM (open) - (option)

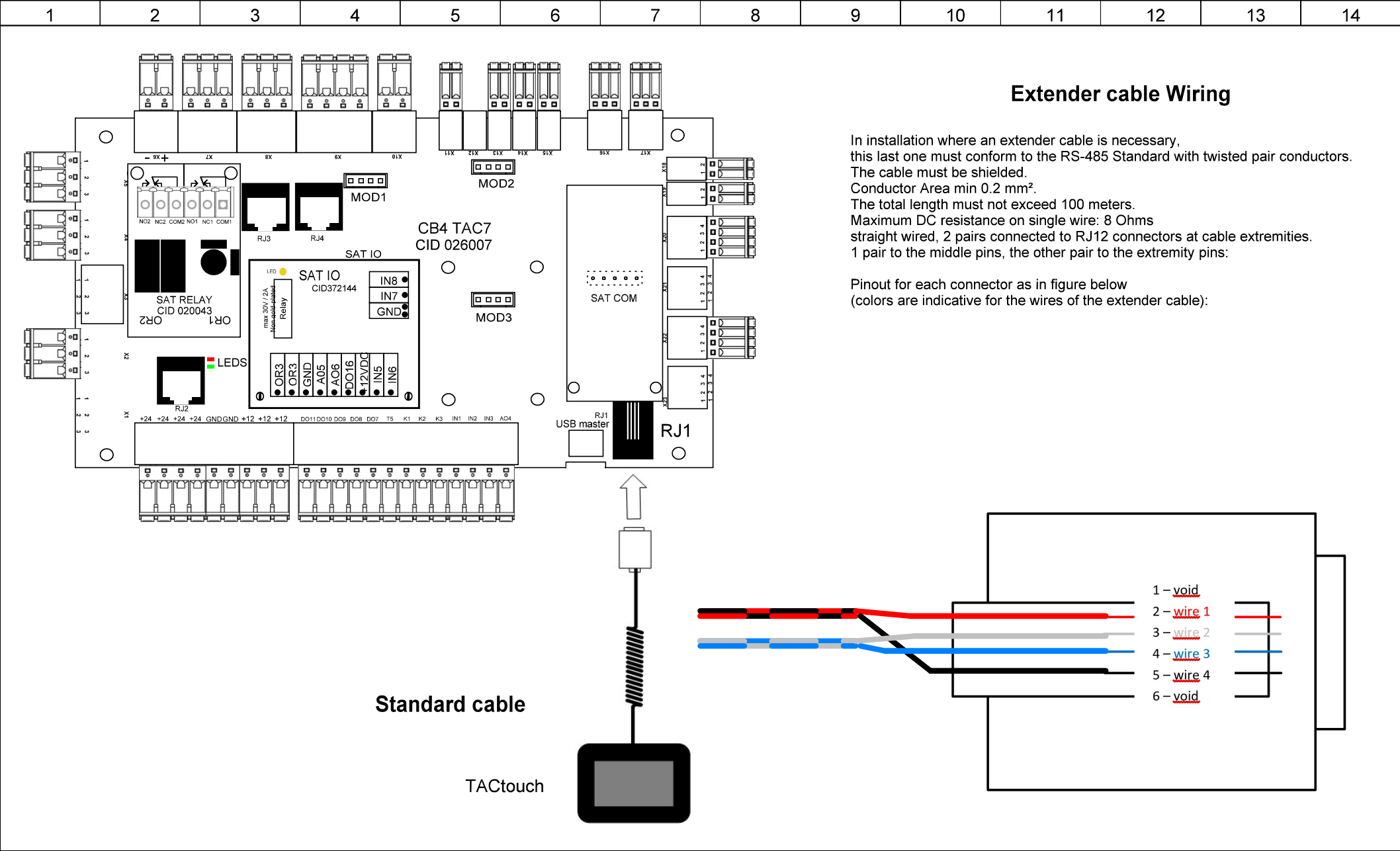
SAT COM - SAT MODBUS or SAT KNX or SAT SAT WIFI-ETHERNET or
SAT WIFI-ETHERNET-MQTT - (option)

SAT RELAY:
For GLOBAL LP, THEN PREMOUNTED AND PREWIRED.
SAT RELAY OR1 - LINEAR ACTUATOR FOR BYPASS - FORWARD (closed)
SAT RELAY OR2 - LINEAR ACTUATOR FOR BYPASS - BACKWARD (closed)
For other models, option,
SAT RELAY OR1 : Enable Heat Pump - (option)
SAT RELAY OR2 : Heat/Cool selection for Heat Pump/Chiller - (option)
relais SPDT (COM + NC/NO) – max 0,5A 30V AC/DC
In absence of a heat pump, these outputs can be configured as alternative for
a function assigned by default to DO7...DO11 thanks to dedicated function "IO mapping" on TACtouch.

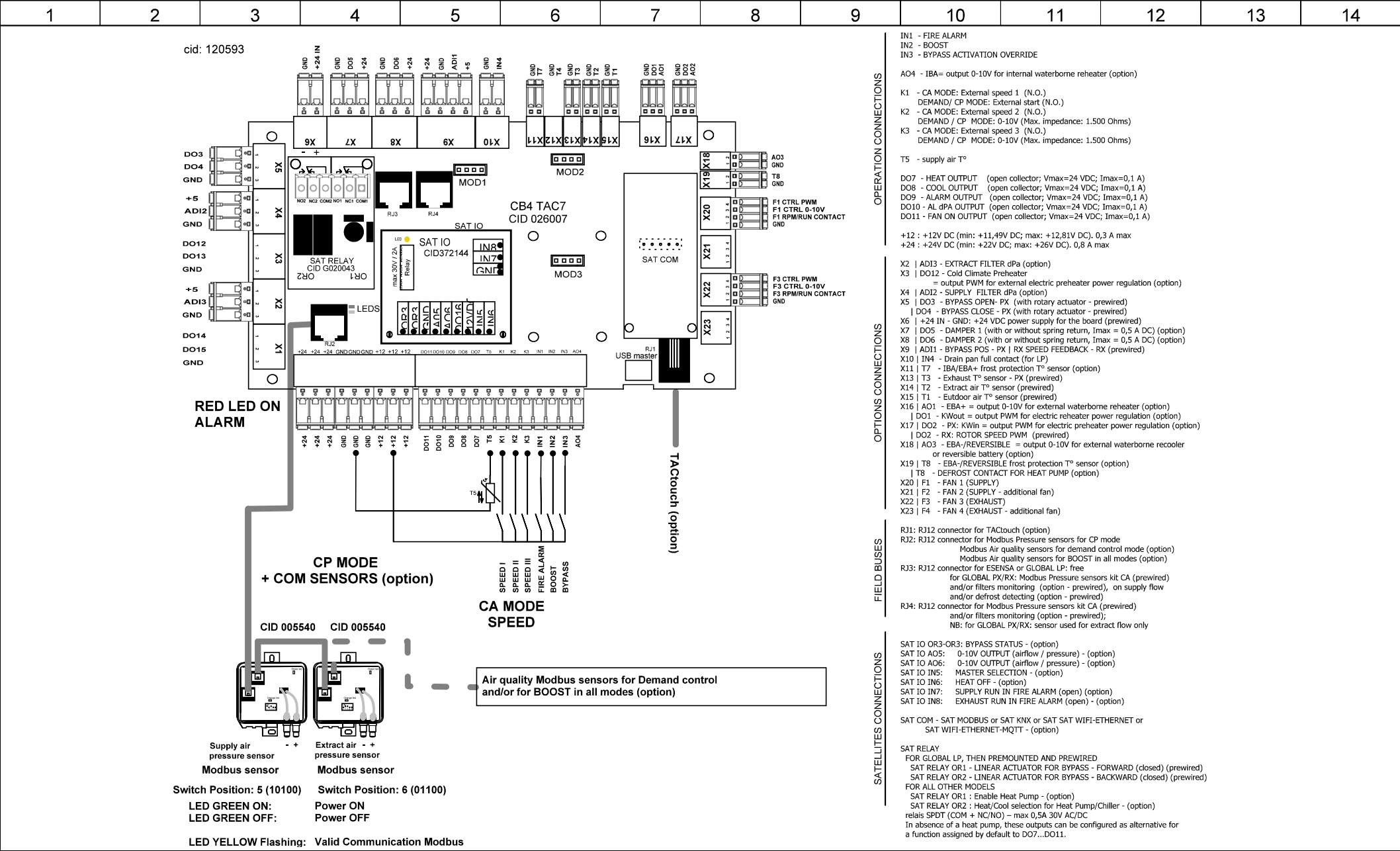
GREEN LED ON: POWERED ON
RED LED ON: ALARM

+24 : +24V DC (min: +22V DC; max: +26V DC). 0,8 A max
+12 : +12V DC (min: +11,49V DC; max: +12,81V DC). 0,3 A max

Changes		Name		Date	Page		
Name	Date	Draw.:	msg	17/10/2024			
		check.:					
		Norm.:			Application: IO TAC7		
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7						
					of 73		

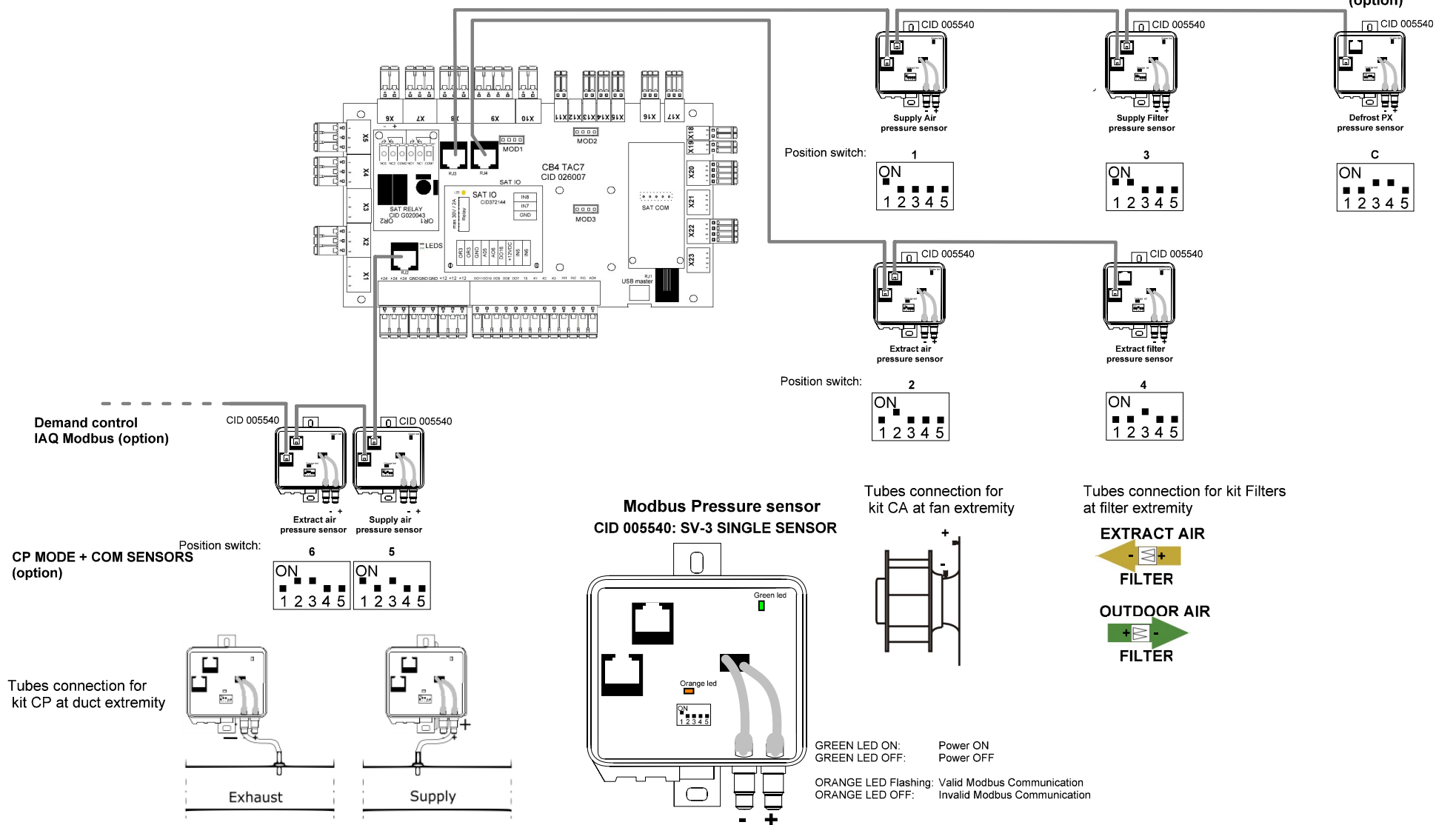


Changes			Name	Date		Page
Name	Date	Draw.:	msg	17/10/2024		4
		check.:				
		Norm:				of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Application: TACtouch	73



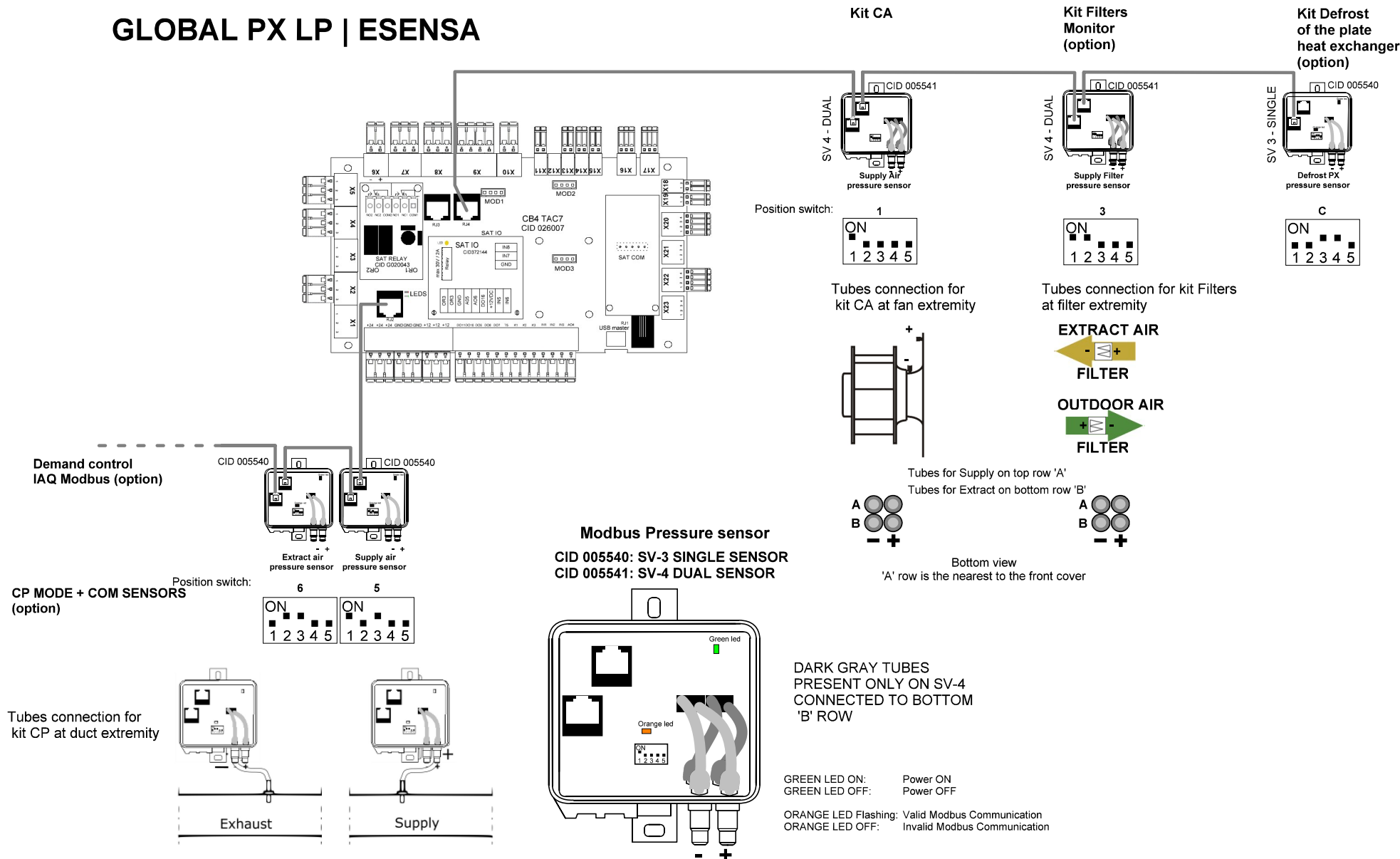
Changes		Name		Date	Page
Name	Date	Draw.:	msg	17/10/2024	5
		check.:			
		Norm.:			of 73
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7			Application: Product Label	

GLOBAL PX/RX (TOP)



Changes			Name	Date	Configuration of function:	Page
Name	Date	Draw.:	msg	29/05/2024	Refer to sheet "Modbus Pa Sensors - Setup 1"	6
		check.:				
		Norm.:			Application: Modbus Pa Sensors - Wiring 1	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					73

GLOBAL PX LP | ESENSA



Changes			Name	Date	Configuration of function: Refer to sheet "Modbus Pa Sensors - Setup 2"	Page
Name	Date	Draw.:	msg	29/05/2024		7
		check.:			Application: Modbus Pa Sensors - Wiring 2	of 73
		Norm:				
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					

GLOBAL PX / RX (TOP)

SENSORS CONFIGURATION KIT CA

Section Airflow/ Fan with backward curved blades / Parameters:				
Advanced settings for pressure sensors of kit CA			Yes	
Type - Supply			MODBUS INPUT	
Type - Extract			MODBUS INPUT	
Section Airflow / Settings - Constant Airflow Sensor - Type - Modbus / Serial Parameters:				
	BUS	ADDRESS	REGISTER	SCALE FACTOR
1	BUS#3: INT2 (RJ3)	86	4	0,1
2	BUS#2: INT1 (RJ4)	80	4	0,1

SENSORS CONFIGURATION KIT FILTERS

Section Filters/ Pressure alarm/ Parameters:				
Filter pressure monitoring with sensor			Yes	
Advanced settings for pressure sensors of kit FILTERS			Yes	
Section Filters/ Filters pressure sensors - Modbus / Serial Parameters:				
	BUS	ADDRESS	REGISTER	SCALE FACTOR
1	BUS#3: INT2 (RJ3)	81	4	0,1
2	BUS#2: INT1 (RJ4)	87	4	0,1

SENSORS CONFIGURATION KIT DEFROST

Section Heat / Cool recovery / Anti-freeze / Parameters:				
Defrost pressure sensor			Yes	
Section Heat / Cool recovery / Defrost pressure sensor / Parameters:				
	BUS	ADDRESS	REGISTER	SCALE FACTOR
1	BUS#3: INT2 (RJ3)	92	4	0,1

SENSORS CONFIGURATION MODE CP

Section Airflow/ Pressure sensors/ Parameters:				
Sensor for "Constant pressure" Advanced settings for pressure sensors of mode CP Type - Supply Type - Extract			Modbus	
			Yes	
			MODBUS INPUT	
			MODBUS INPUT	
Section Airflow / Pressure sensors - Modbus / Serial Parameters:				
	BUS	ADDRESS	REGISTER	SCALE FACTOR
Supply	BUS#4: EXT (RJ2)	82	4	0,1
Extract	BUS#4: EXT (RJ2)	88	4	0,1

GLOBAL PX LP / ESENSA

SENSORS CONFIGURATION KIT CA

Section Airflow/ Fan with backward curved blades / Parameters:				
Advanced settings for pressure sensors of kit CA			Yes	
Type - Supply			MODBUS INPUT	
Type - Extract			MODBUS INPUT	
Section Airflow / Settings - Constant Airflow Sensor - Type - Modbus / Serial Parameters:				
	BUS	ADDRESS	REGISTER	SCALE FACTOR
1	BUS#2: INT1 (RJ4)	86	4	0,1
2	BUS#2: INT1 (RJ4)	86	24	0,1

SENSORS CONFIGURATION KIT FILTERS

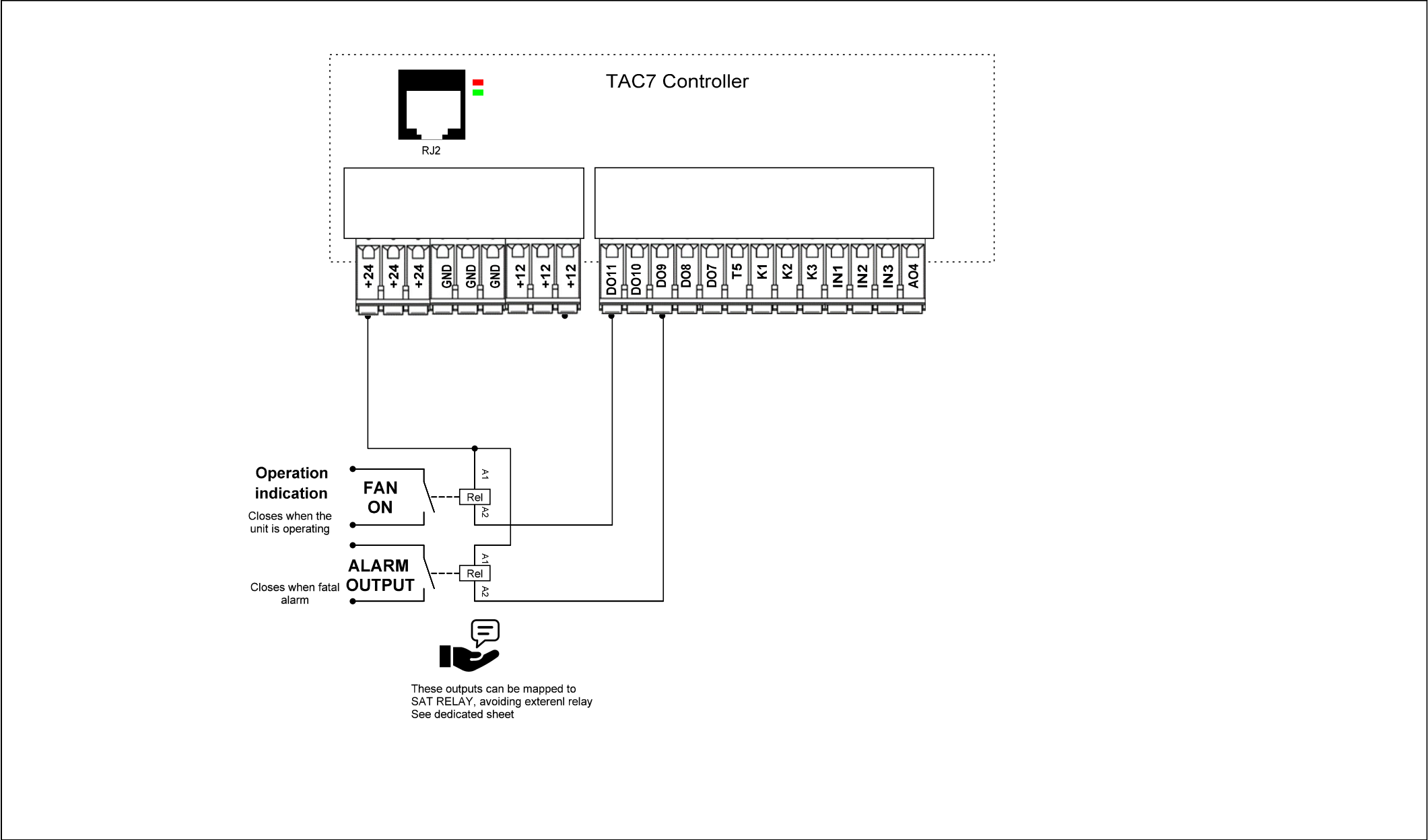
Section Filters/ Pressure alarm/ Parameters:				
Filter pressure monitoring with sensor			Yes	
Advanced settings for pressure sensors of kit FILTERS			Yes	
Section Filters/ Filters pressure sensors - Modbus / Serial Parameters:				
	BUS	ADDRESS	REGISTER	SCALE FACTOR
1	BUS#2: INT1 (RJ4)	81	4	0,1
2	BUS#2: INT1 (RJ4)	81	24	0,1

SENSORS CONFIGURATION KIT DEFROST

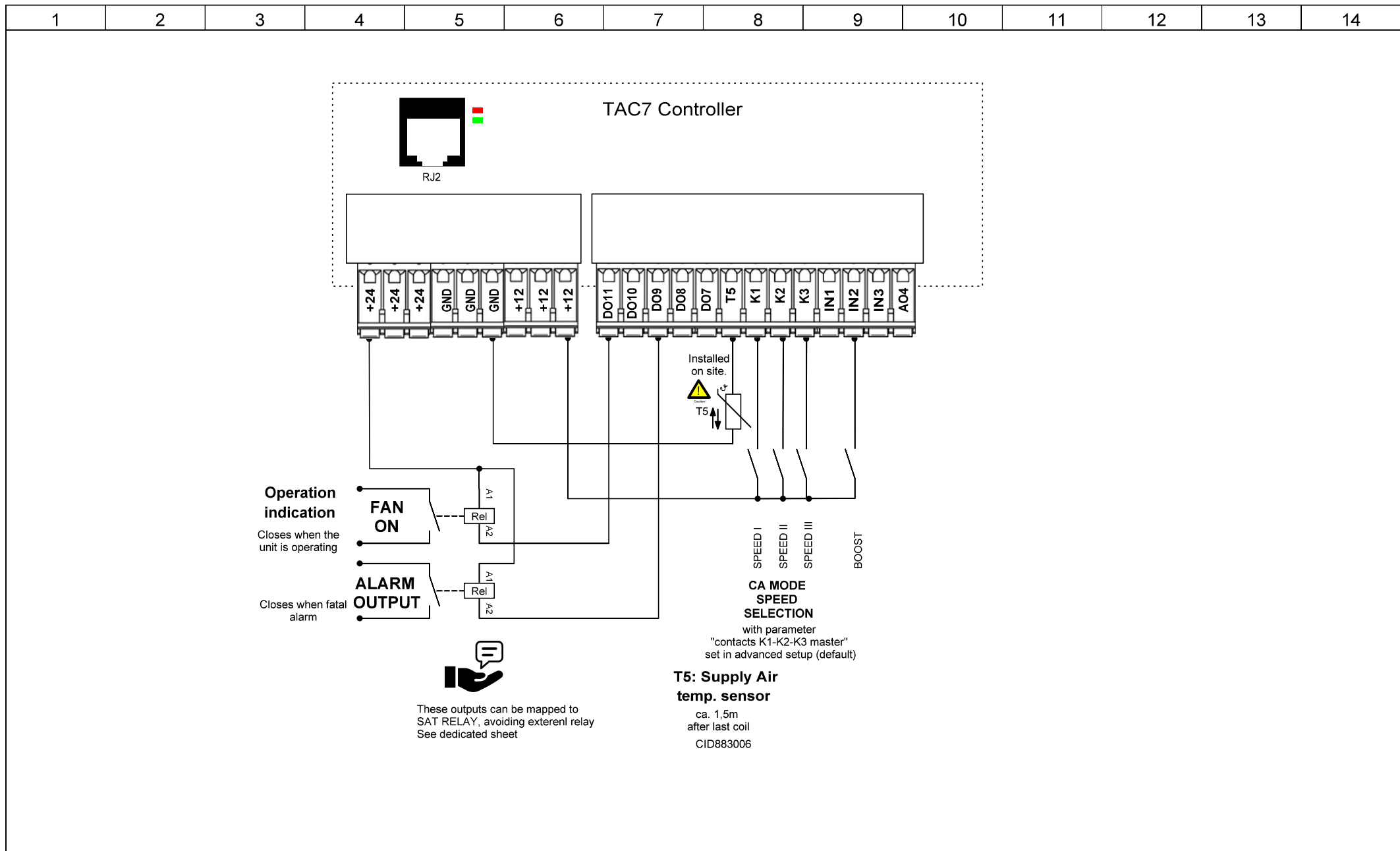
Section Heat / Cool recovery / Anti-freeze / Parameters:			
Defrost pressure sensor			Yes
Section Heat / Cool recovery / Defrost pressure sensor / Parameters:			
	BUS	ADDRESS	REGISTER
			SCALE FACTOR
1	BUS#2: INT1 (RJ4)	92	4
			0,1

SENSORS CONFIGURATION MODE CP

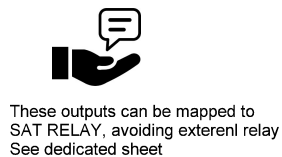
Section Airflow/ Pressure sensors/ Parameters:				
Sensor for "Constant pressure"			Modbus	
Advanced settings for pressure sensors of mode CP			Yes	
Type - Supply			MODBUS INPUT	
Type - Extract			MODBUS INPUT	
Section Airflow / Pressure sensors - Modbus / Serial Parameters:				
	BUS	ADDRESS	REGISTER	SCALE FACTOR
Supply	BUS#4: EXT (RJ2)	82	4	0,1
Extract	BUS#4: EXT (RJ2)	88	4	0,1



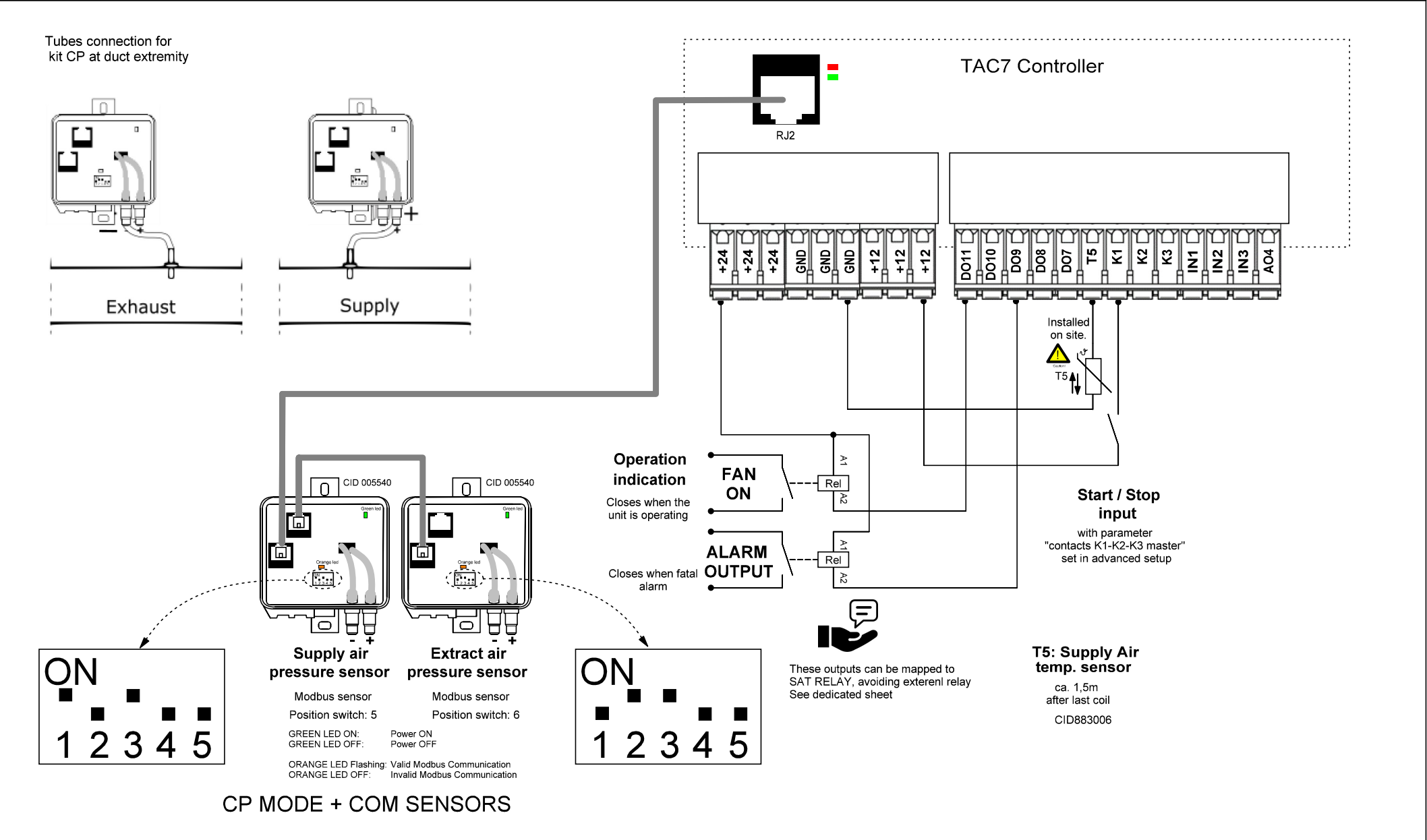
Changes			Name	Date	Configuration of function: Function Alarms	Page
Name	Date	Draw.:	msg	27/11/2024		10
		check.:			Application: ALARM OUTPUT	of 73
		Norm:				
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					

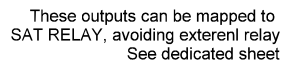


Changes			Name	Date	Configuration of function: Function Regulation mode/ Constant Airflow	Page
Name	Date	Draw.:	ola	27/09/2024		11
		check.:			Application: Constant airflow	of 73
		Norm:				
Subject:		GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				

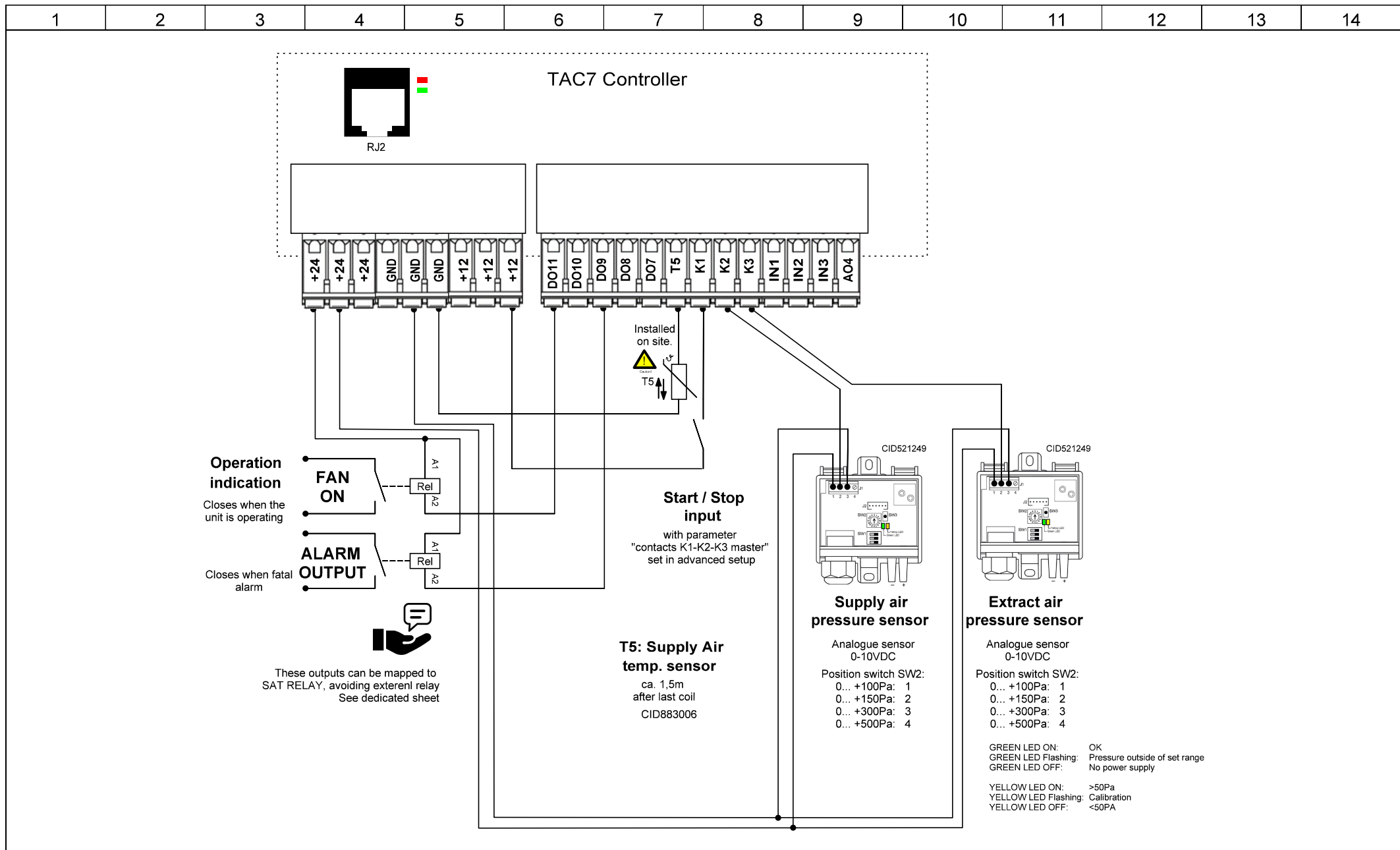


Changes			Name	Date	Configuration of function: Function Regulation mode/ Constant Airflow	Page
Name	Date	Draw.:	ola	27/09/2024		12
		check.:				
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Constant airflow - PIR	73

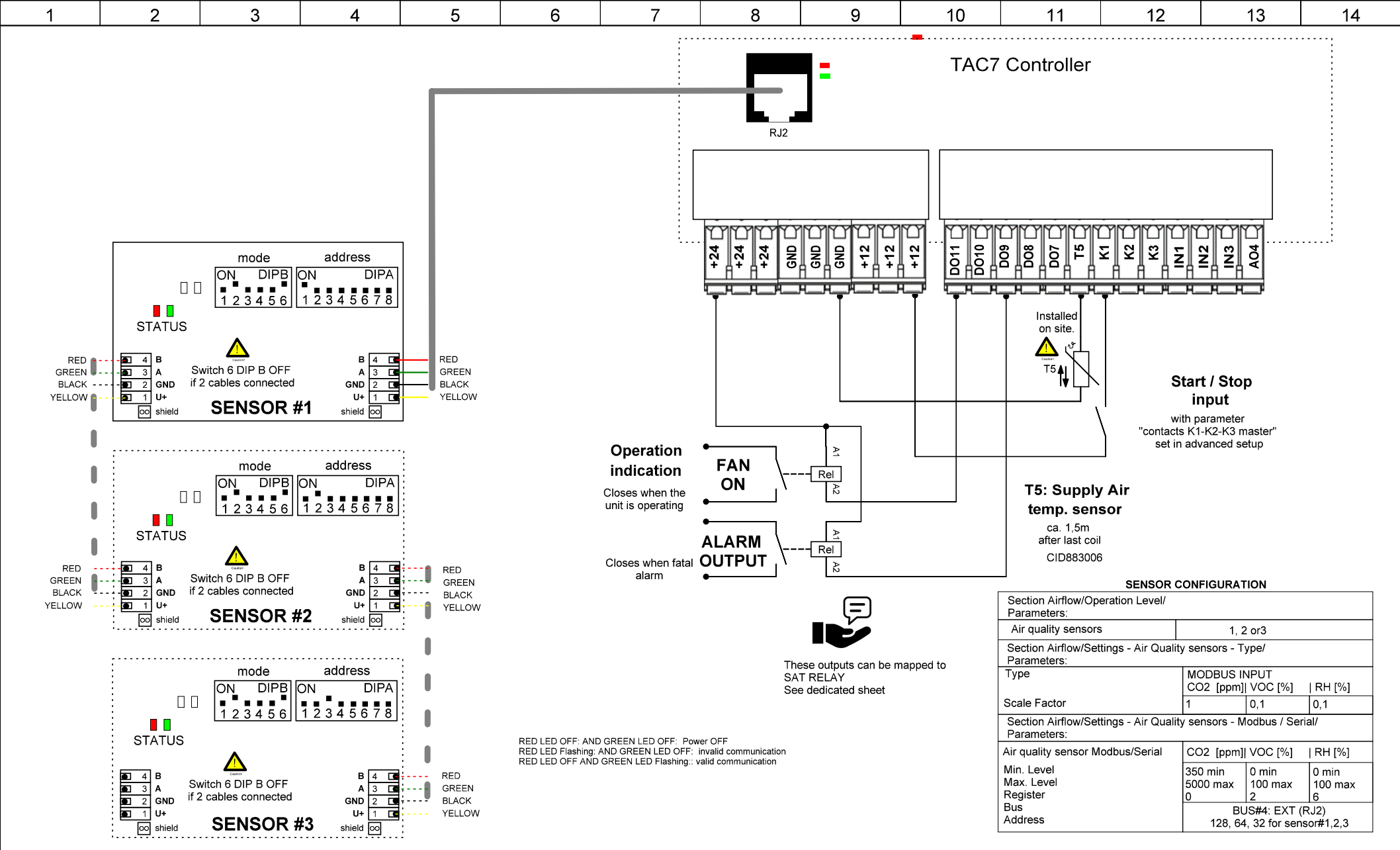




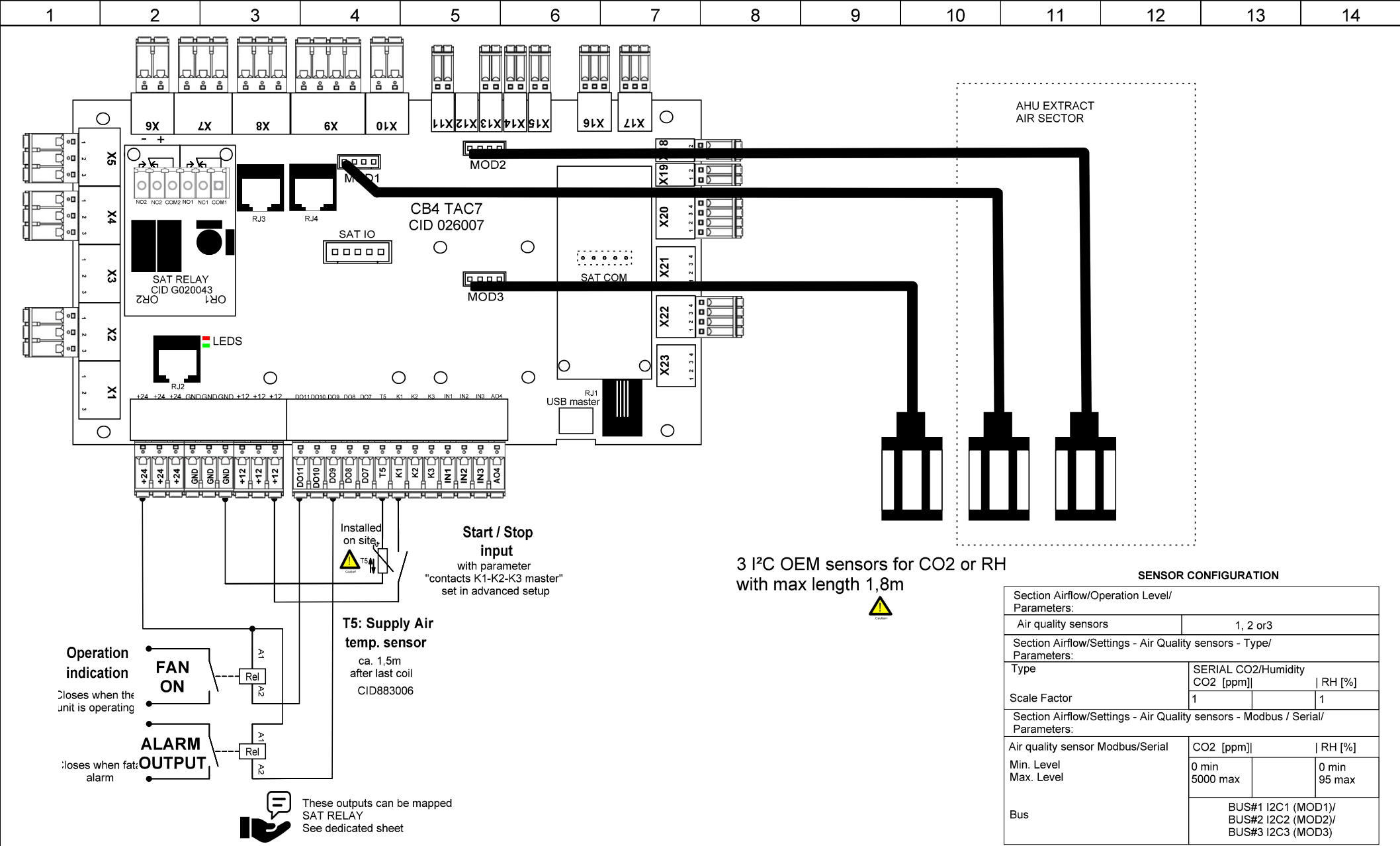
Changes			Name	Date	Configuration of function: Function Regulation mode/ Constant Pressure	Page
Name	Date	Draw.:	ola	27/09/2024		14
		check.:				
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Constant pressure 1x 0-10V	73



Changes			Name	Date	Configuration of function: Function Regulation mode/ Constant Pressure	Page
Name	Date	Draw.:	ola	27/09/2024		15
		check.:			Application: Constant pressure 2x 0-10V	of
		Norm.:				73
Subject:		GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				

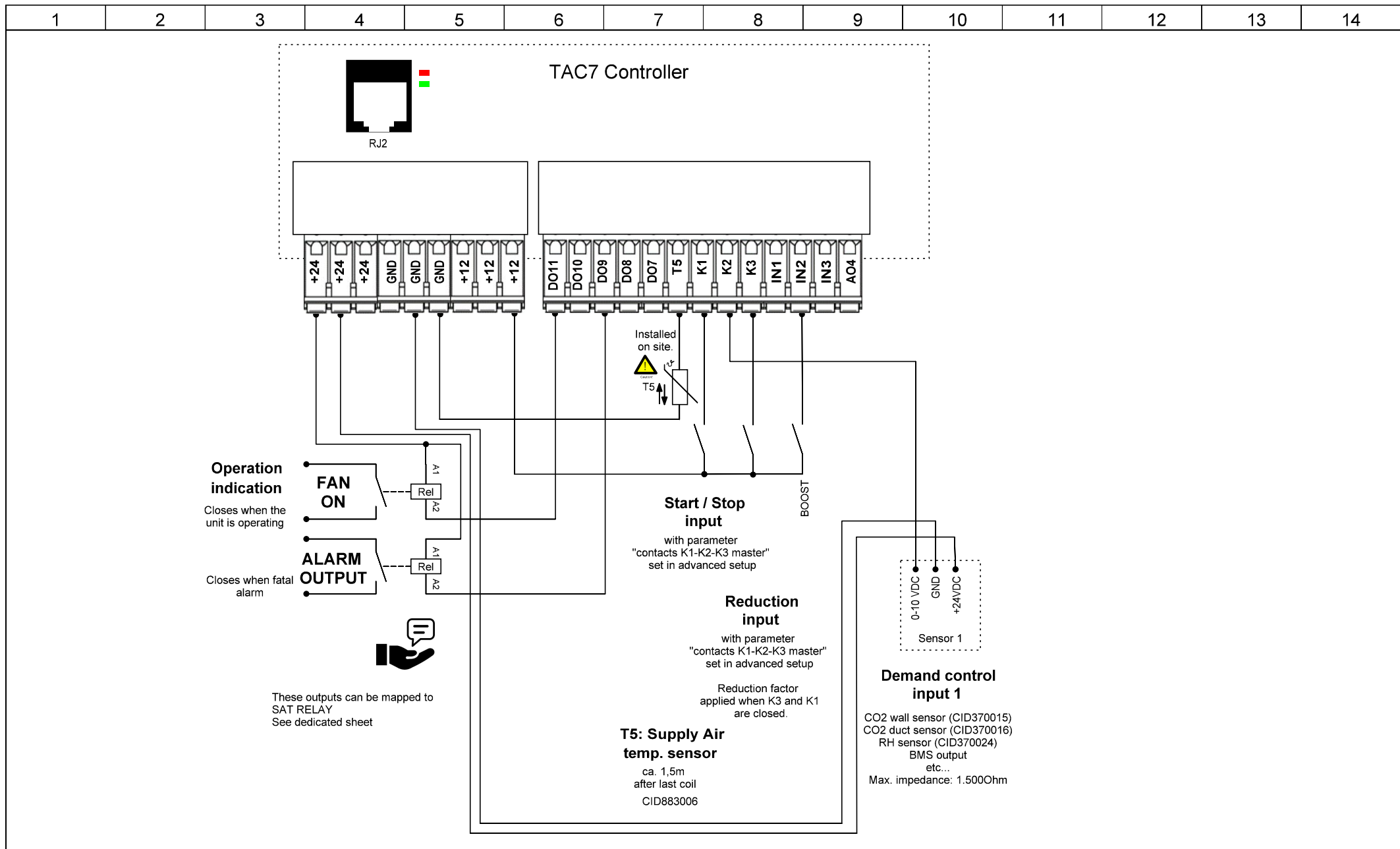


Changes		Name	Date	Configuration of function: Function Regulation mode/ Demand control	Page
Name	Date	Draw.:	ola		16
		check.:		Application: Demand control IAQ Modbus (Indoor Air Quality)	of
		Norm:			73
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				

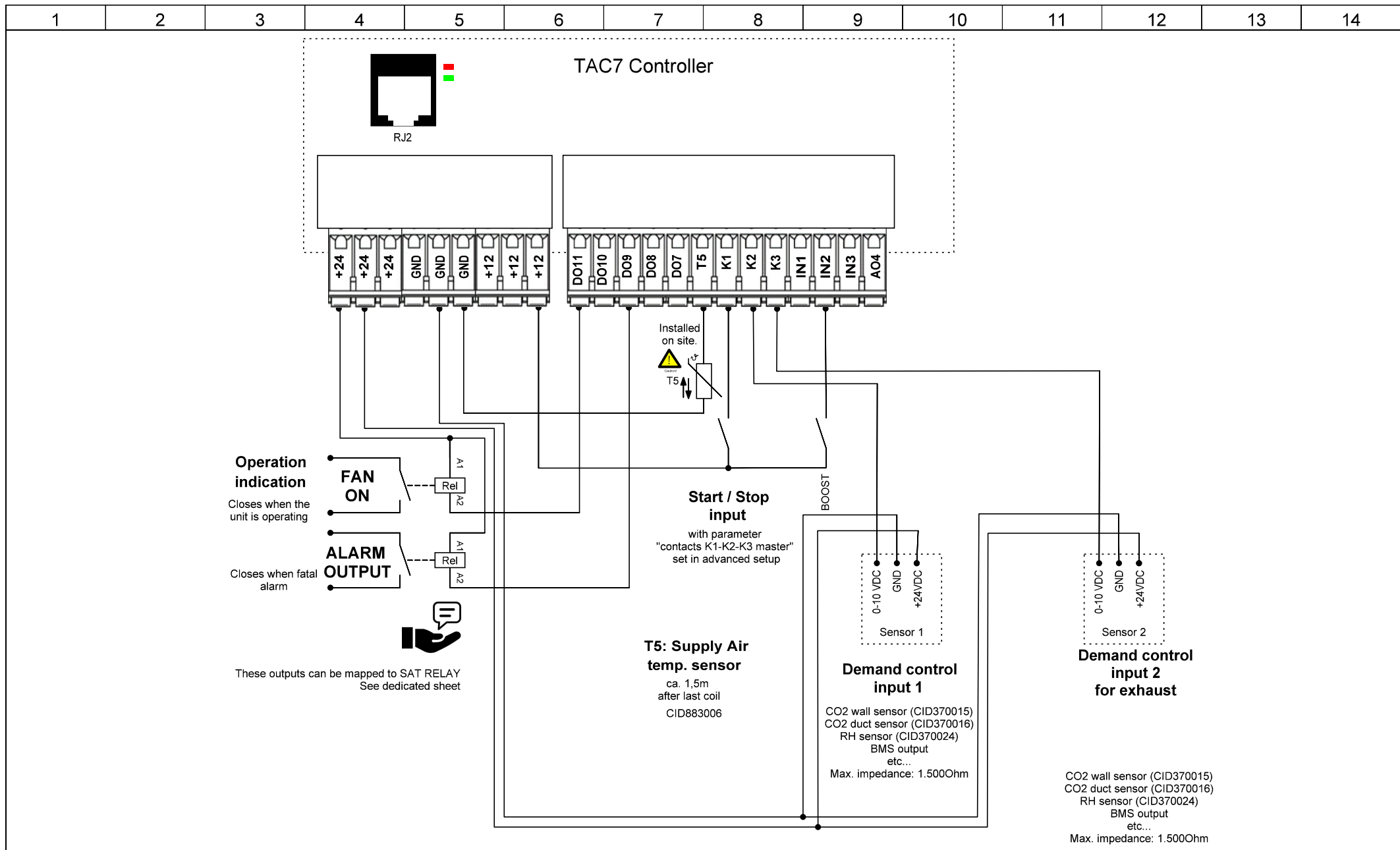


SENSOR CONFIGURATION			
Section Airflow/Operation Level/ Parameters:			
Air quality sensors		1, 2 or3	
Section Airflow/Settings - Air Quality sensors - Type/ Parameters:			
Type	SERIAL CO2/Humidity CO2 [ppm]		RH [%]
Scale Factor	1		1
Section Airflow/Settings - Air Quality sensors - Modbus / Serial/ Parameters:			
Air quality sensor Modbus/Serial	CO2 [ppm]		RH [%]
Min. Level	0 min		0 min
Max. Level	5000 max		95 max
Bus	BUS#1 I2C1 (MOD1)/ BUS#2 I2C2 (MOD2)/ BUS#3 I2C3 (MOD3)		

Changes		Name	Date	Configuration of function:		Page
Name	Date	Draw.:	ola	Function Regulation mode/ Demand control		17
		check.:				
		Norm.:				
Subject:		GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7		Application: Demand control Serial COM (Indoor Air Quality)		of 73

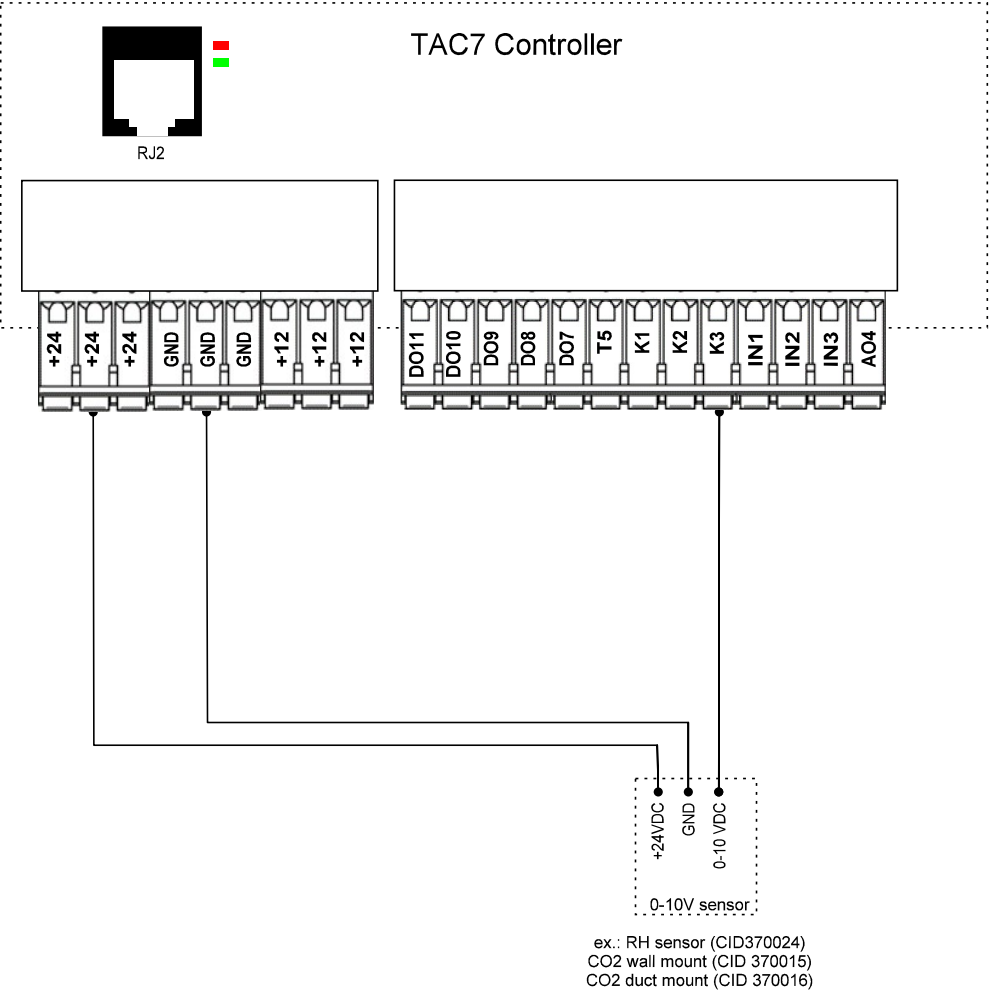


Changes			Name	Date	Configuration of function: Function Regulation mode/ Demand control	Page
Name	Date	Draw.:	ola	27/09/2024		19
		check.:				
		Norm:			Application: Demand control 1x 0-10V	of 73
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					

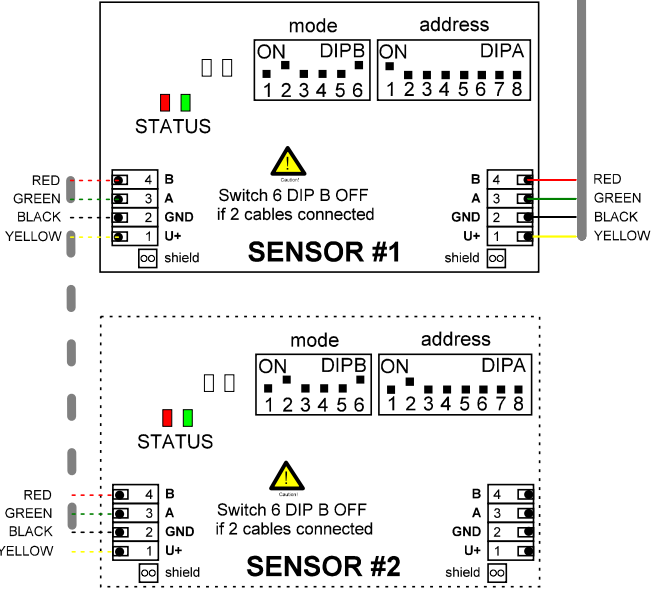


Changes			Name	Date	Configuration of function:	Page
Name	Date	Draw.:	ola	29/09/2024	Function Regulation mode/ Demand control	20
		check.:				
		Norm.:			Application: Demand control 2x 0-10V	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					73

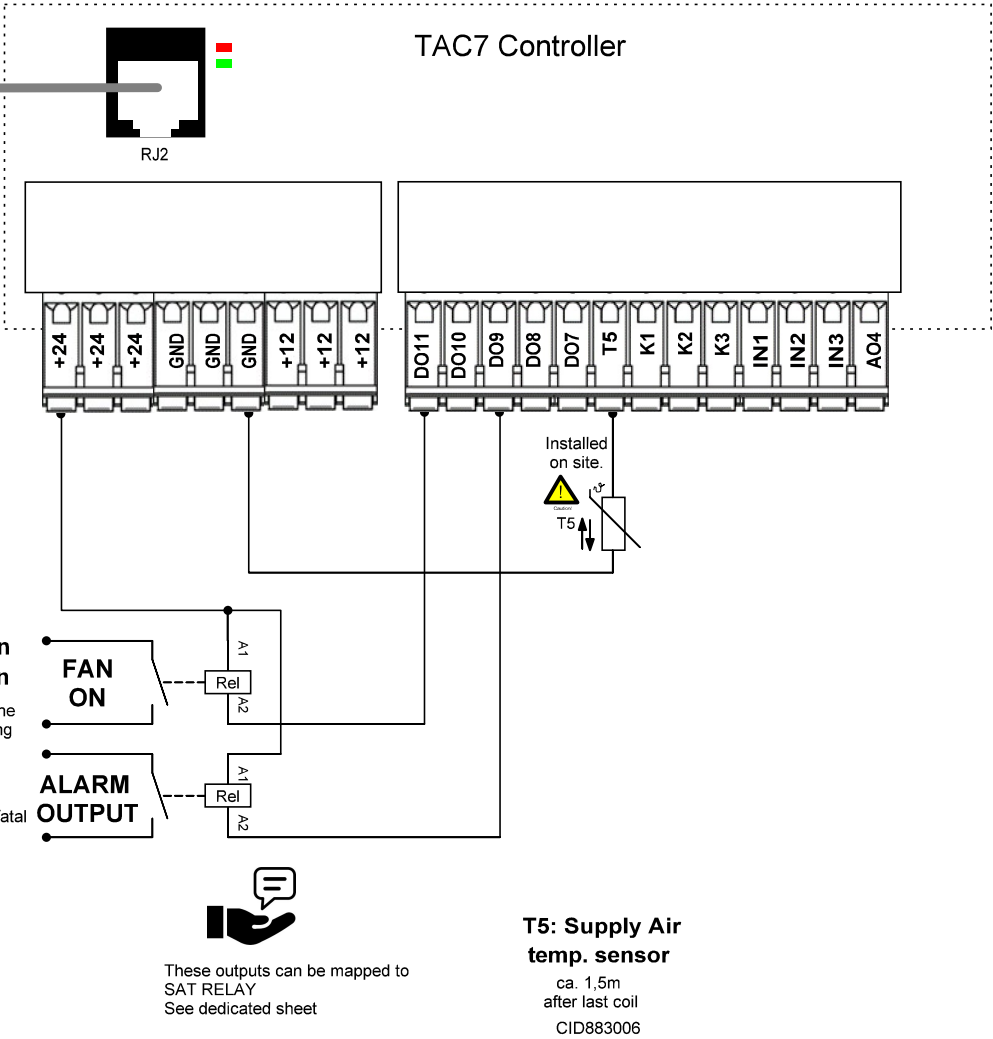
SENSOR CONFIGURATION			
Section Airflow/BOOST/ Parameters:			
Air quality sensors		1 or 2	
Section Airflow/BOOST - Air Quality sensors - Type/ Parameters:			
Type		Analogue 0-10V CO2 [ppm] RH [%]	
Scale Factor		20	1
Section Airflow/BOOST - Air Quality sensors -Analogue/ Parameters:			
I/O Vmin Vmax		K2 or K3 0 V 10 V	
		CO2 [ppm] RH [%]	
Low level BOOST off		100 min	5 min
High level BOOST on		1900 max	95 max



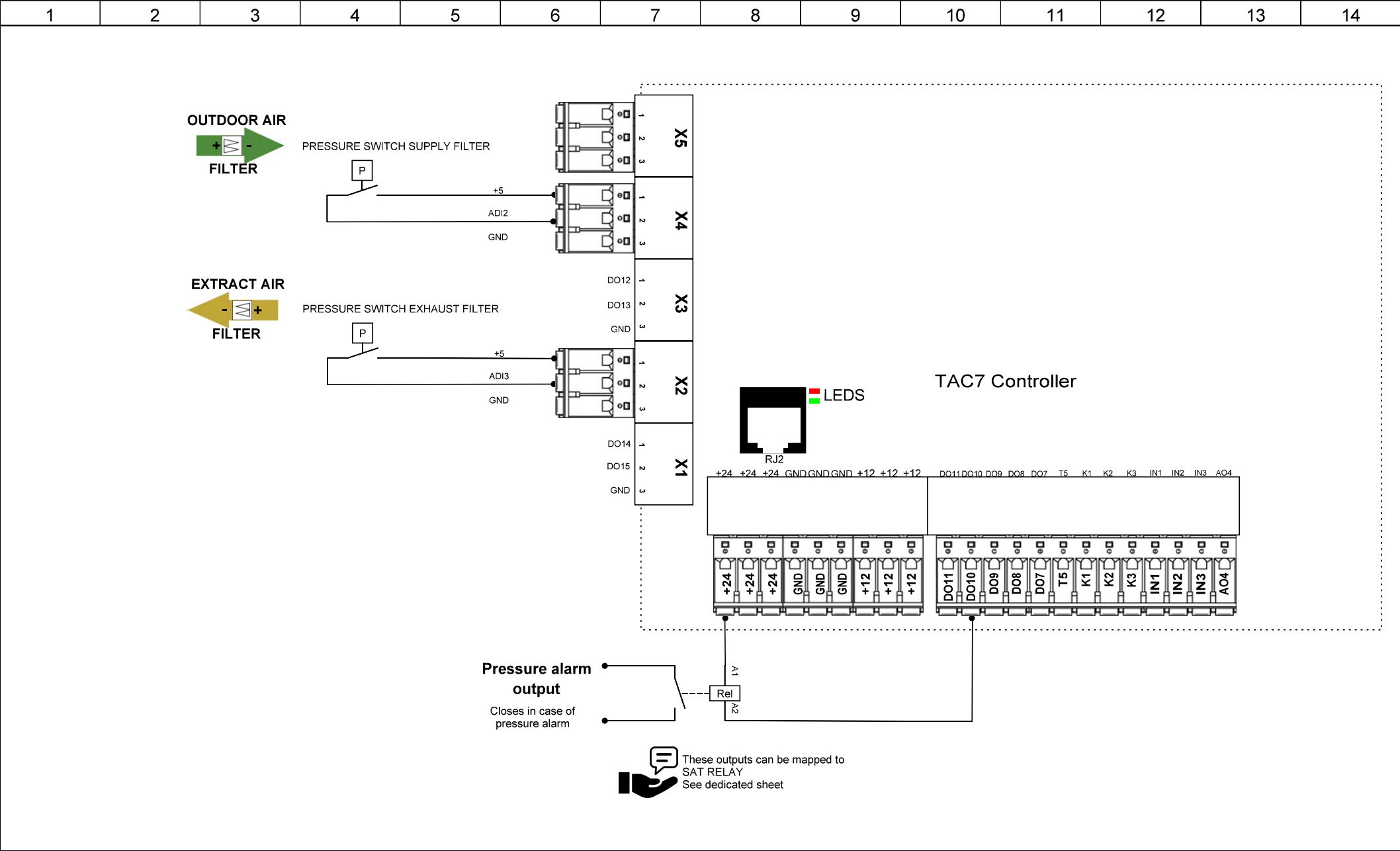
SENSOR CONFIGURATION			
Section Airflow/BOOST/ Parameters:			
Air quality sensors		1 or2	
Section Airflow/BOOST - Air Quality sensors - Type/ Parameters:			
Air quality sensor Type		MODBUS INPUT CO2 [ppm] VOC [%] RH [%]	
Scale Factor		1 0,1 0,1	
Low level BOOST off		350 min 0 min 0 min	
High level BOOST on		5000 max 100 max 100 max	
Section Airflow/BOOST - Air Quality sensors - Modbus / Serial/ Parameters:			
Air quality sensor Modbus/Serial		CO2 [ppm] VOC [%] RH [%]	
Min. Level		350 min 0 min 0 min	
Max. Level		5000 max 100 max 100 max	
Register		0 2 6	
Bus Address		BUS#4: EXT (RJ2) 128, 64, 32 for sensor#1,2,3	



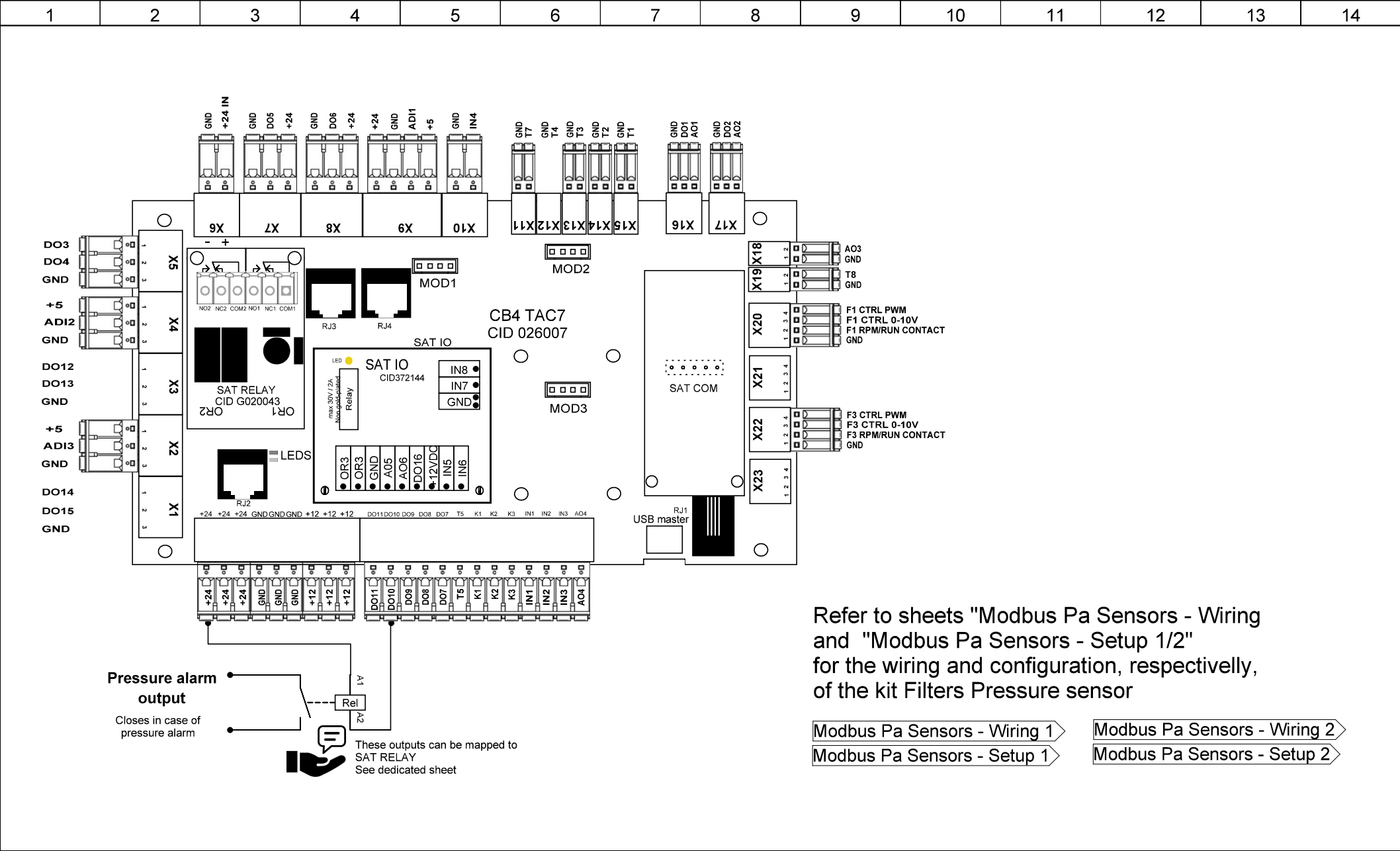
RED LED OFF: AND GREEN LED OFF: Power OFF
RED LED Flashing: AND GREEN LED OFF: invalid communication
RED LED OFF AND GREEN LED Flashing:: valid communication



Changes		Name		Date	Configuration of function:	Page
Name	Date	Draw.:	msg	12/05/2026	Function Air flow/BOOST	23
		check.:				
		Norm.:			Application: BOOST with IAQ sensors (Indoor Air Quality)	of 73
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					



Changes			Name	Date	Configuration of function:	Page
Name	Date	Draw.:	ola	27/09/2024		24
		check.:			Application: Filters alarm - Pa switch	of
		Norm:				73
Subject:		GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				

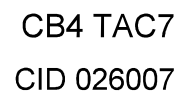


Refer to sheets "Modbus Pa Sensors - Wiring and "Modbus Pa Sensors - Setup 1/2" for the wiring and configuration, respectively, of the kit Filters Pressure sensor

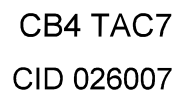
[Modbus Pa Sensors - Wiring 1](#)
[Modbus Pa Sensors - Setup 1](#)

[Modbus Pa Sensors - Wiring 2](#)
[Modbus Pa Sensors - Setup 2](#)

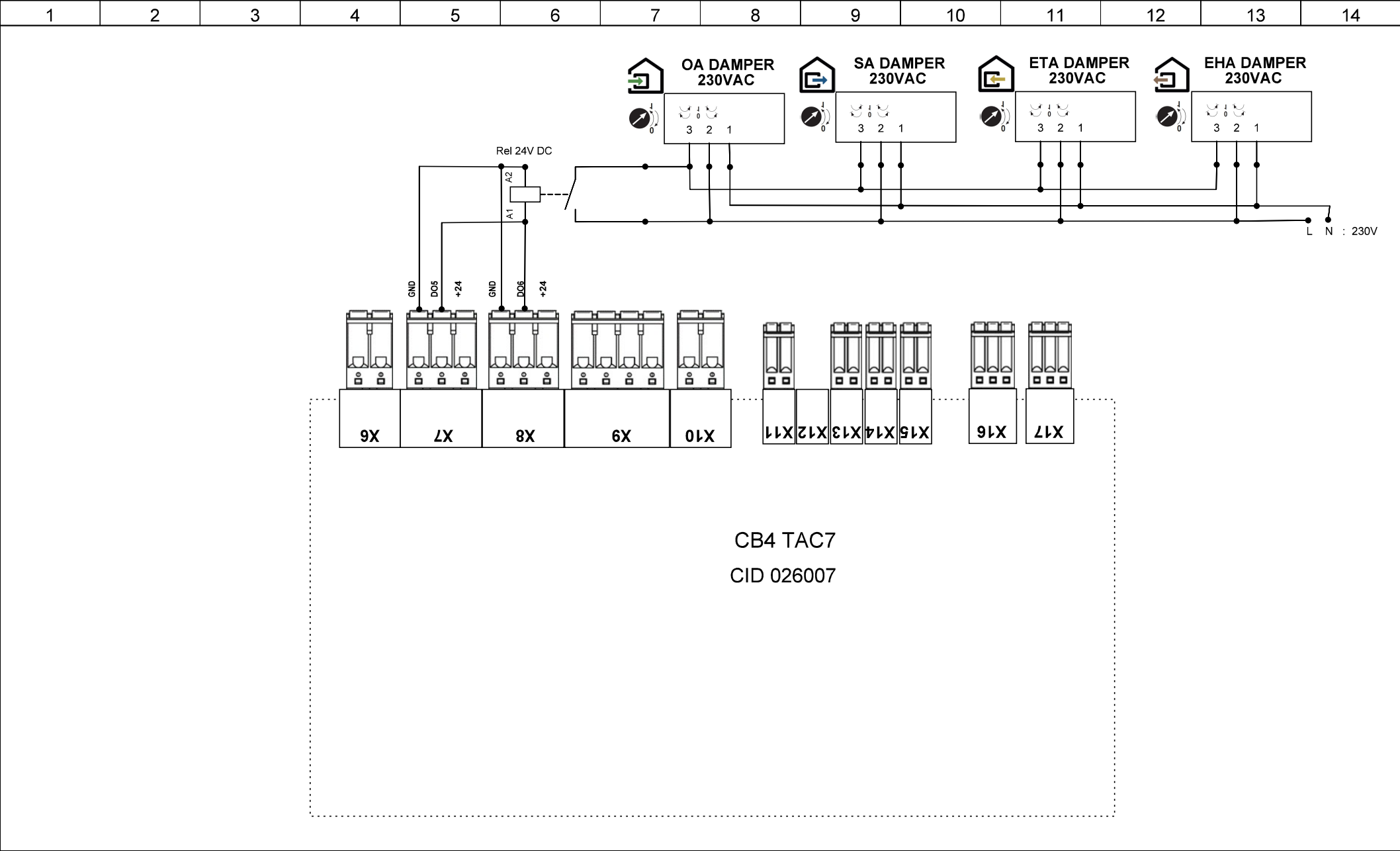
Changes		Name		Date	Configuration of function:	Page
Name	Date	Draw.:	ola	27/09/2024	Function Filters/Pressure alarm/Filters pressure revelation with sensors	25
		check.:				
		Norm.:			Application: Filters alarm & monitor	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					73



Changes			Name	Date	Configuration of function: Function Air Handling Unit/Dampers	Page
Name	Date	Draw.:	ola	27/09/2024		26
msg	07/04/2023	check.:				
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Motorised damper - standard	73



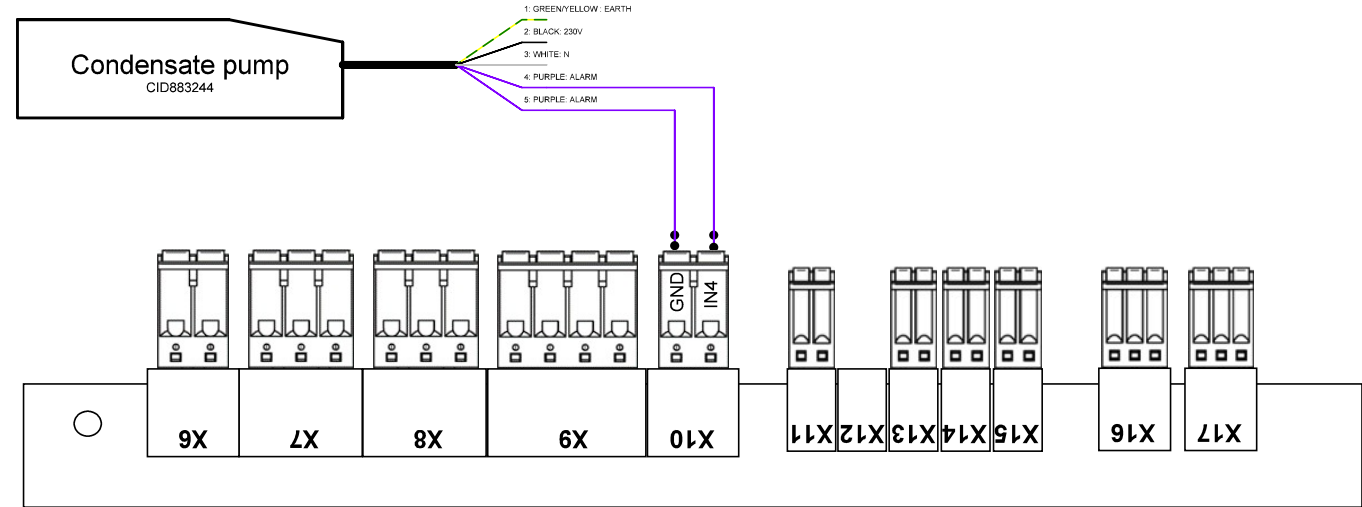
Changes			Name	Date	Configuration of function: Function Air Handling Unit/Dampers	Page
Name	Date	Draw.:	ola	27/09/2024		27
		check.:				
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Motorised damper - spring ret	73



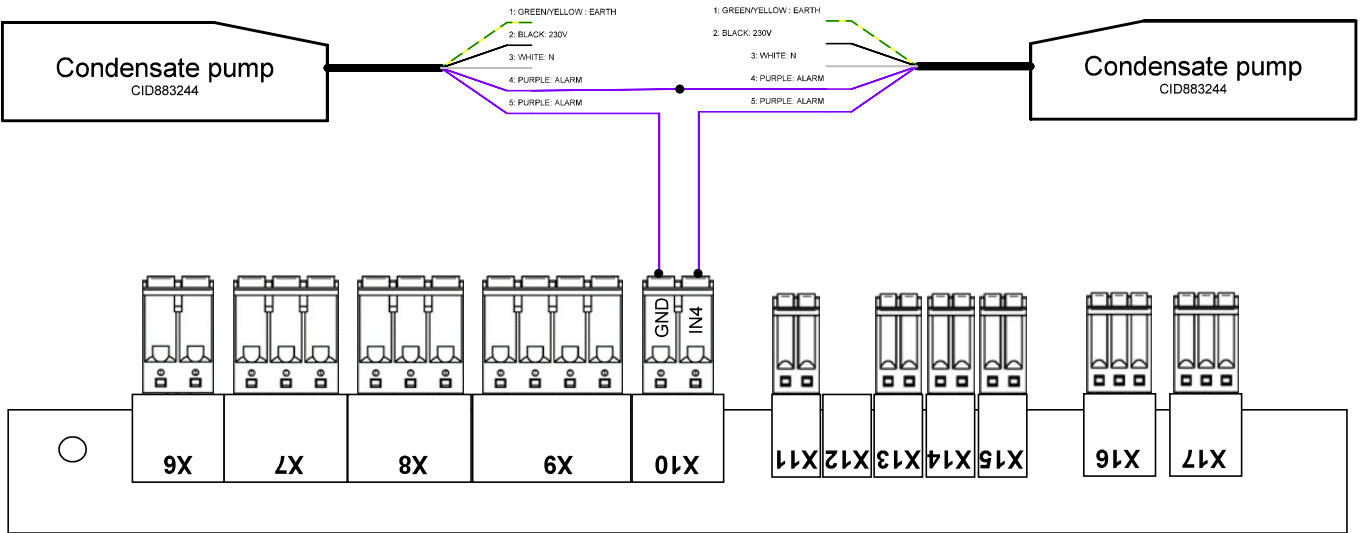
Changes			Name	Date	Configuration of function:	Page
Name	Date	Draw.:	ola	27/09/2024	Function Air Handling Unit/Dampers dampers move simultaneously in same direction (they all close or all open)	28
		check.:				
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Motorised damper - 230 V AC	73

1 device with drain pump
(GLOBAL LP or postcooling coil)

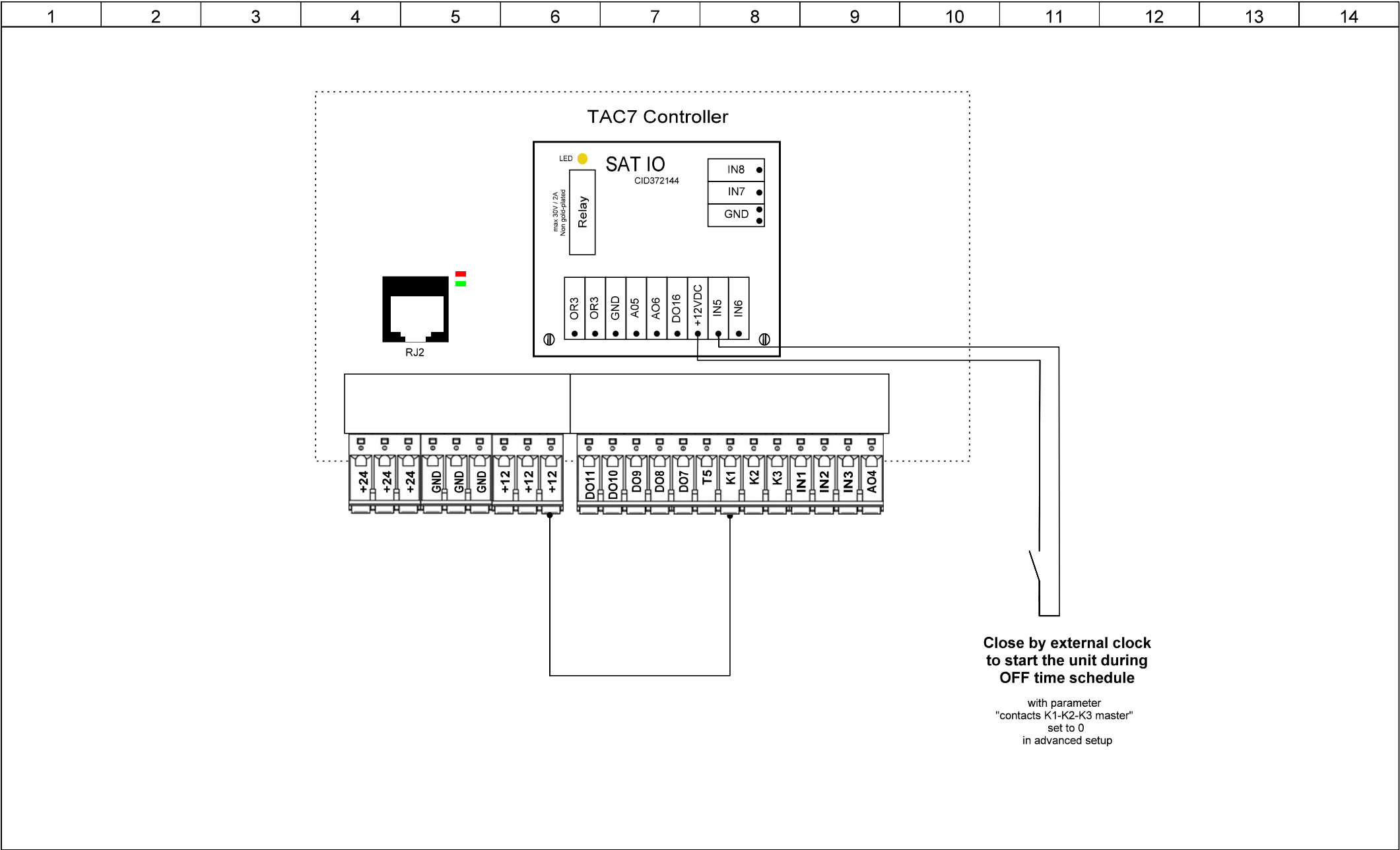
The condensate pump contains an internal sensor that will automatically start the pump when the water level rises above approx. 15 mm and stop the pump when the water level has fallen to approx. 5 mm. The condensate pump is also fitted with a high water level alarm that will operate the alarm relay if the water level rises above approx. 25 mm. The pump will continue to run until the minimum water level is reached and the alarm will reset.



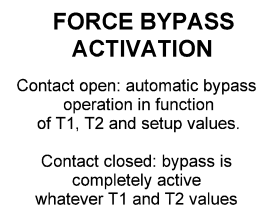
2 devices with drain pump
(GLOBAL LP and postcooling coil)



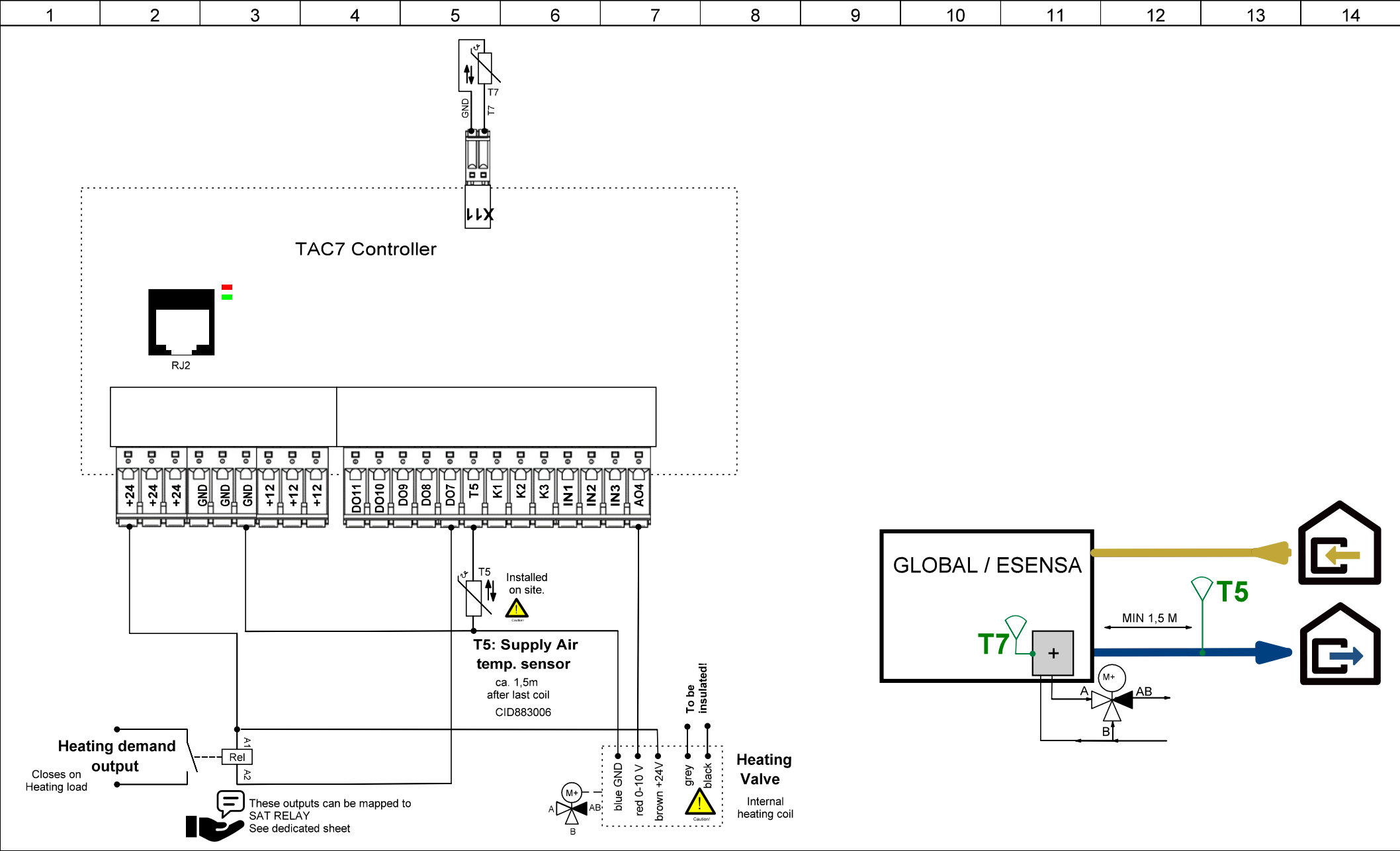
Changes			Name	Date	Application: Condense pump	Page
Name	Date	Draw.:	ola	27/09/2024		29
		check.:				
		Norm:				
Subject:		GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				of 73



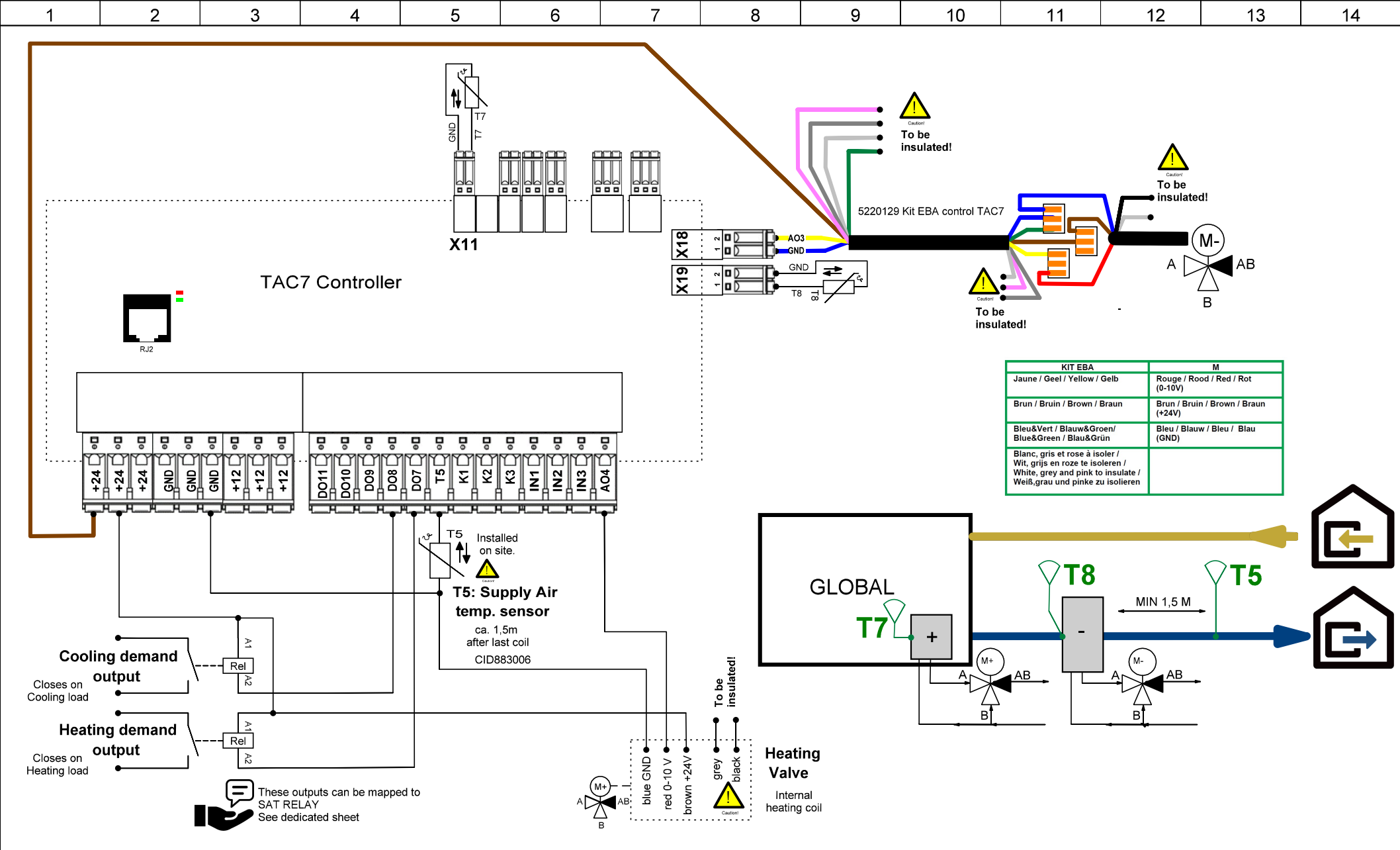
Changes				Name	Date	Configuration of function:	Page
Name	Date	Draw.:	ola		30/09/2024	Timeschedules configured Control screen of TACtouch: Speed selecion on 'AUTO'	31
		check.:					
		Norm:				Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					External Clock	73



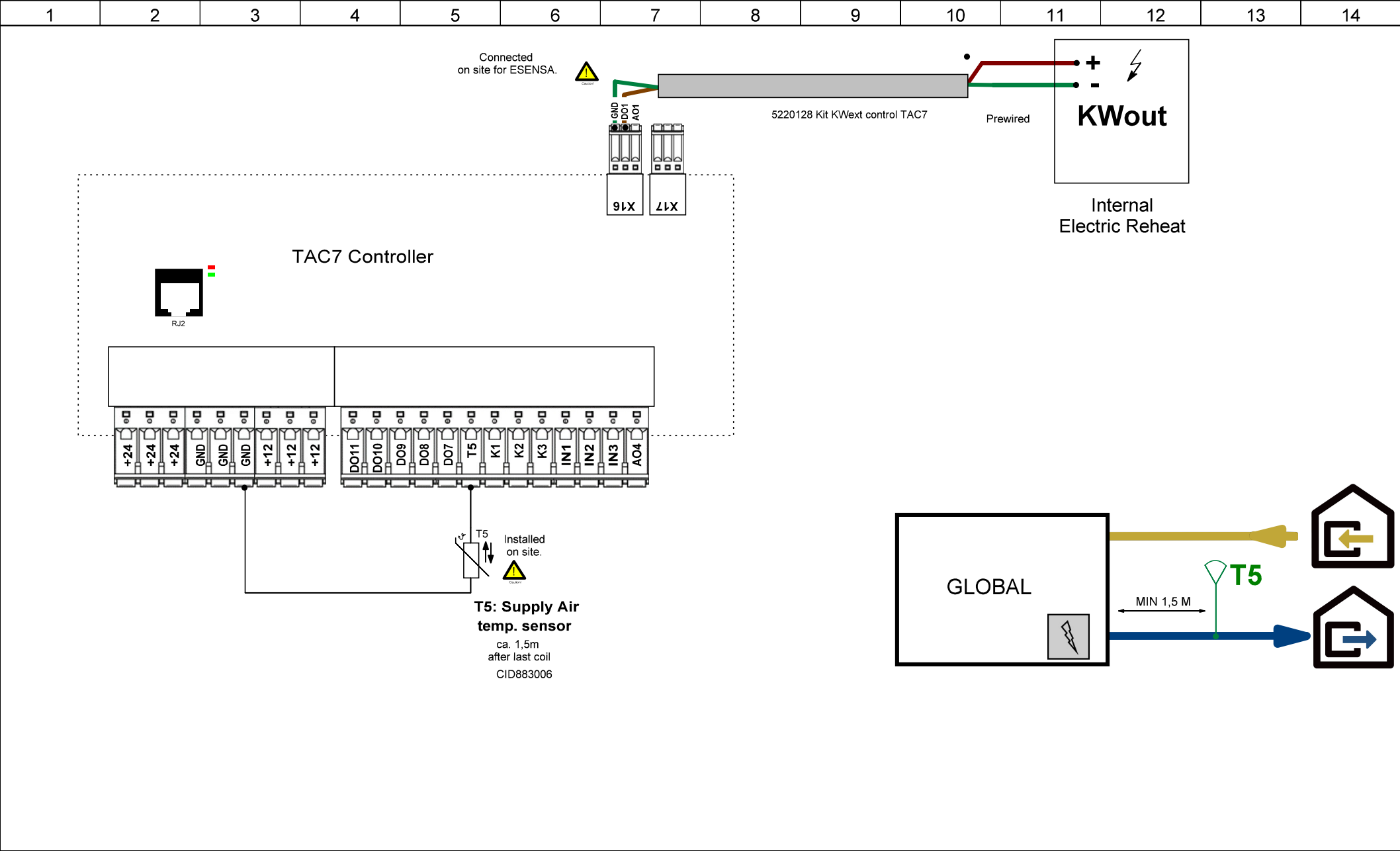
Changes			Name	Date	Configuration of function: Function Temperature/Freecooling	Page
Name	Date	Draw.:	ola	30/09/2024		32
		check.:				
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Bypass	73



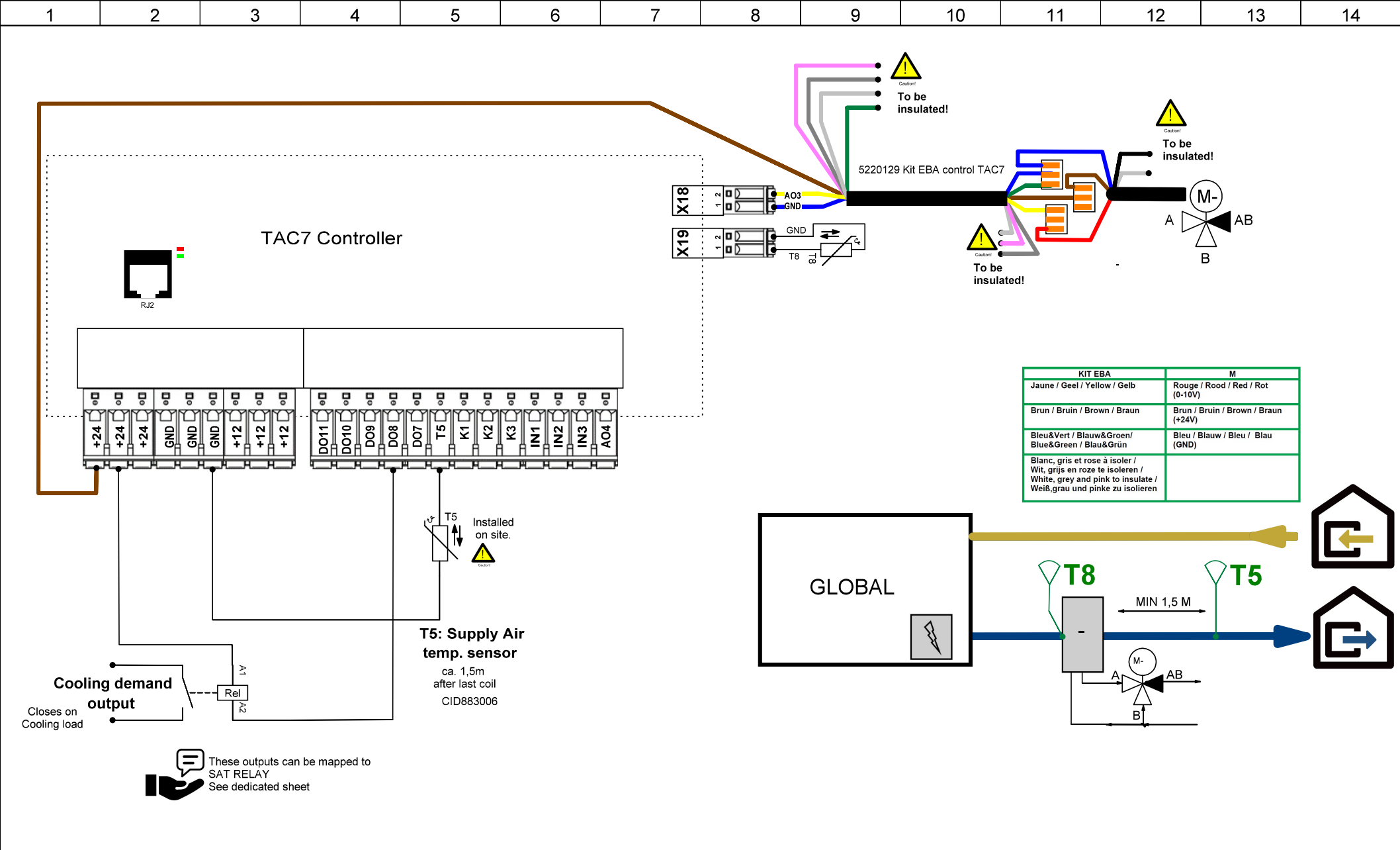
Changes		Name		Date	Configuration of function: Function Heat/Reheat/ Internal Waterborne Rehater (IBA)	Page
Name	Date	Draw.:	ola	30/09/2024		33
		check.:			Application: IBA Internal Waterborne Reheat	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					73



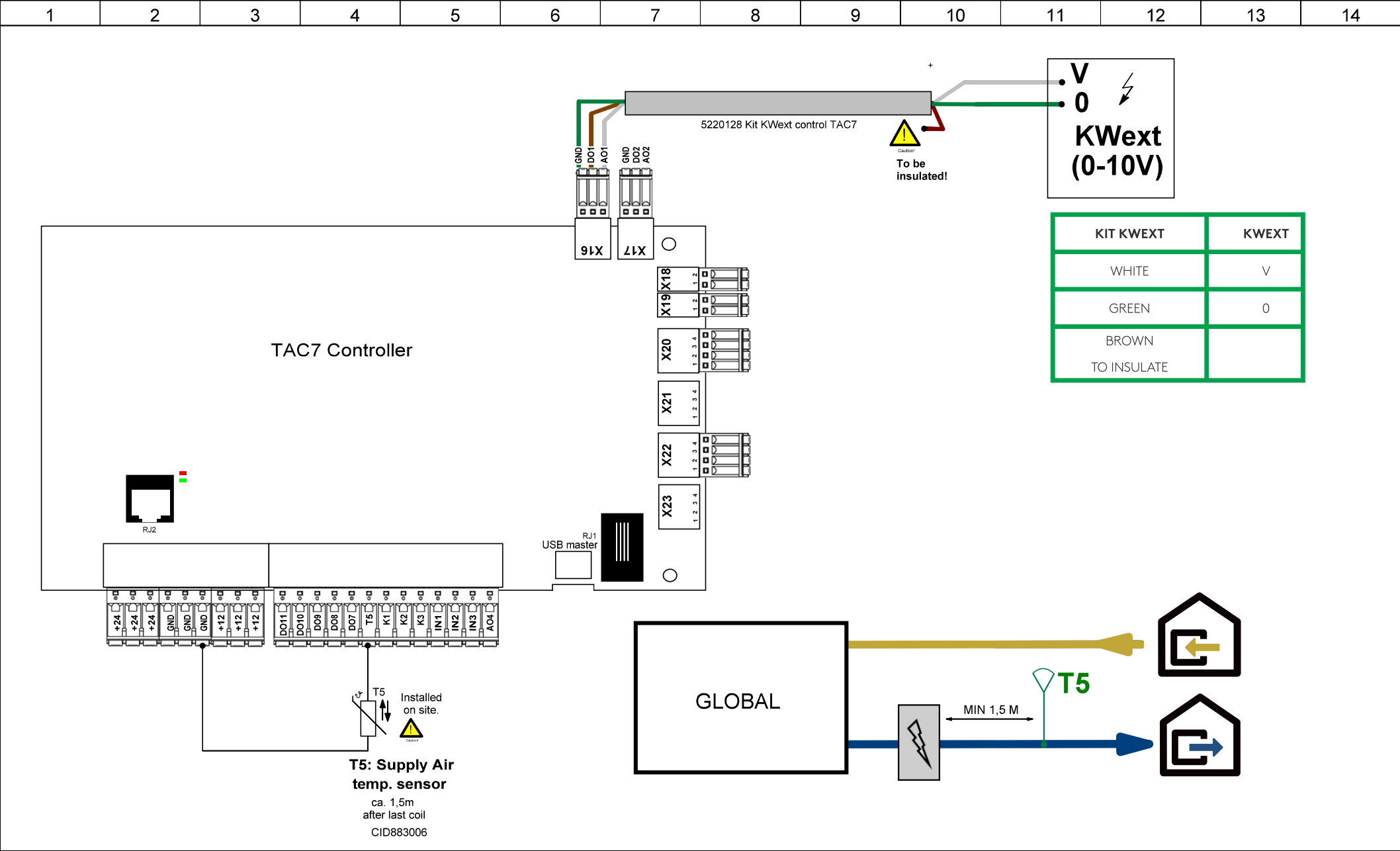
Changes			Name	Date	Configuration of function: Function Heat/Reheat/Internal Waterborne Rehater (IBA) & Function Cool/Settings/External Waterborne Recooler (EBA-)	Page
Name	Date	Draw.:	ola	03/10/2024		34
		check.:				
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Int. heating & Ext. cooling	73



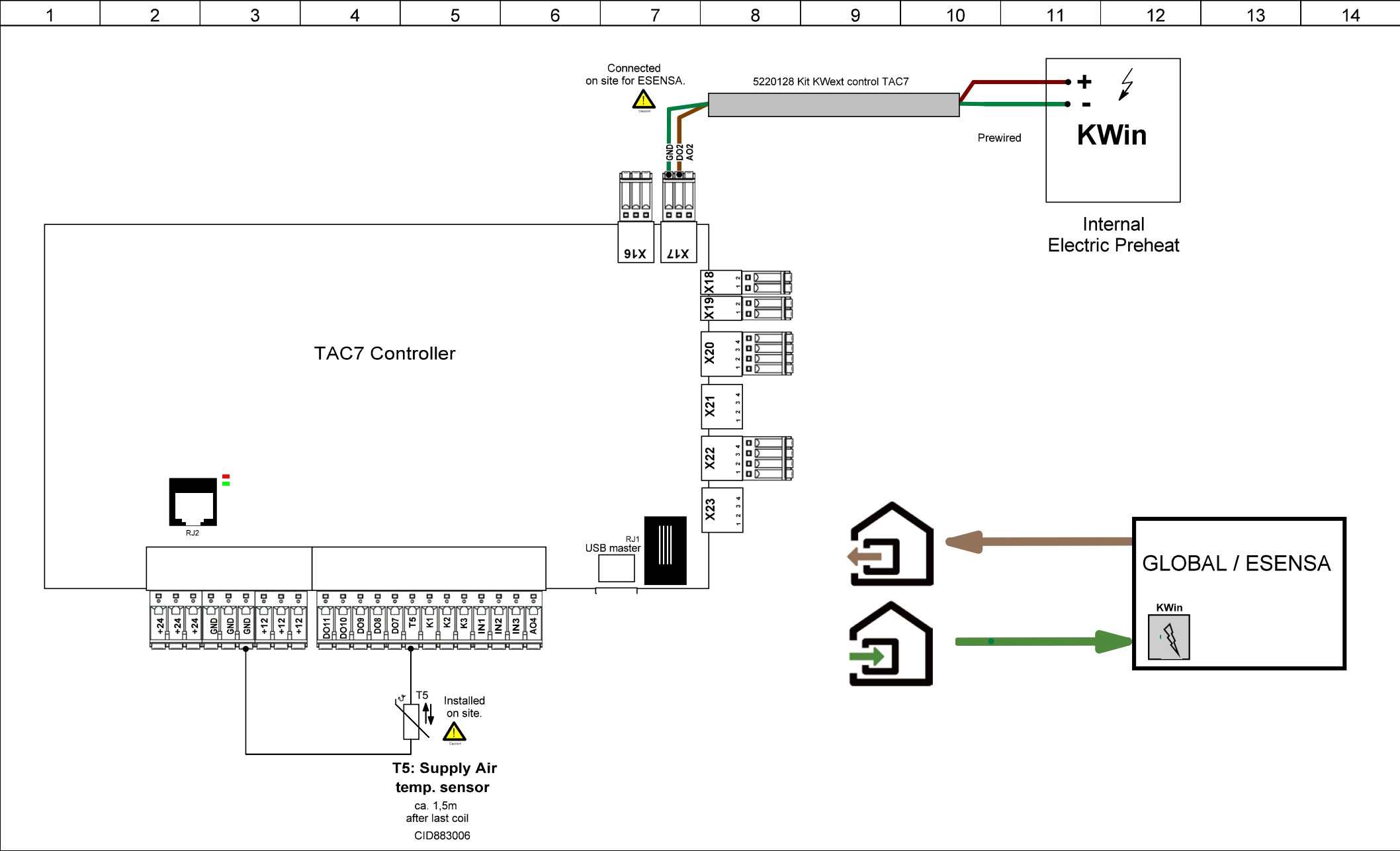
Changes			Name	Date	Configuration of function: Function Heat/Reheat/ Internal Electric Rehater (KWout)	Page
Name	Date	Draw.:	ola	30/09/2024		35
		check.:			Application: KWout Internal Electric Reheat	of
		Norm:				73
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					



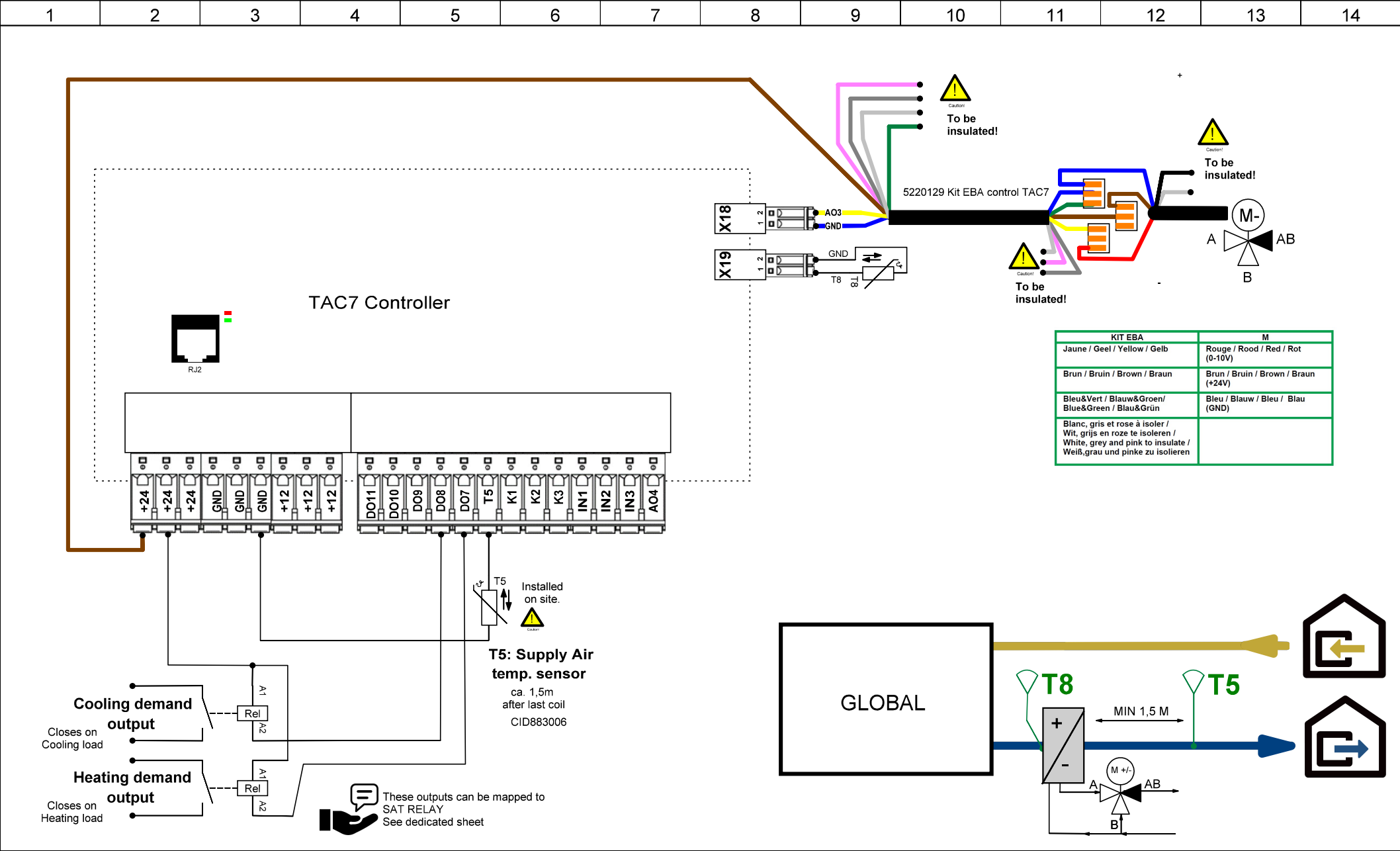
Changes			Name	Date	Configuration of function:	Page
Name	Date	Draw.:	ola	03/10/2024	Function Heat/Reheat/Internal Electric Reheater (KWout)	36
		check.:			& Function Cool/Settings/External Waterborne Recooler (EBA-)	
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Int. elec heating & Ext. cool	73



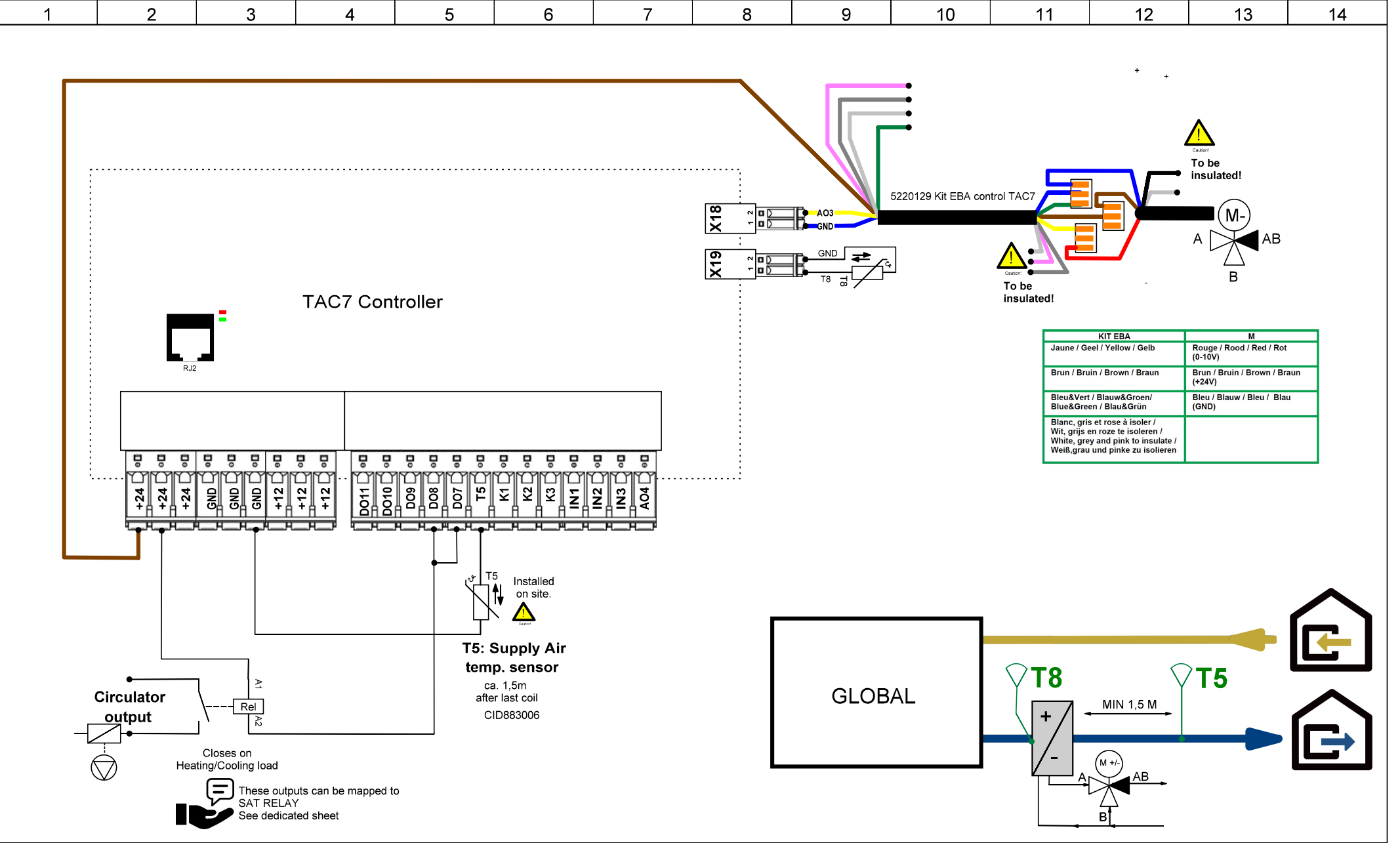
Changes			Name	Date	Configuration of function:	Page
Name	Date	Draw.:	ola	03/10/2024	Function Heat/Reheat/ External Electric Rehater (KWext - 0-10V)	37
		check.:				
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				External elec. heating 0-10V	73



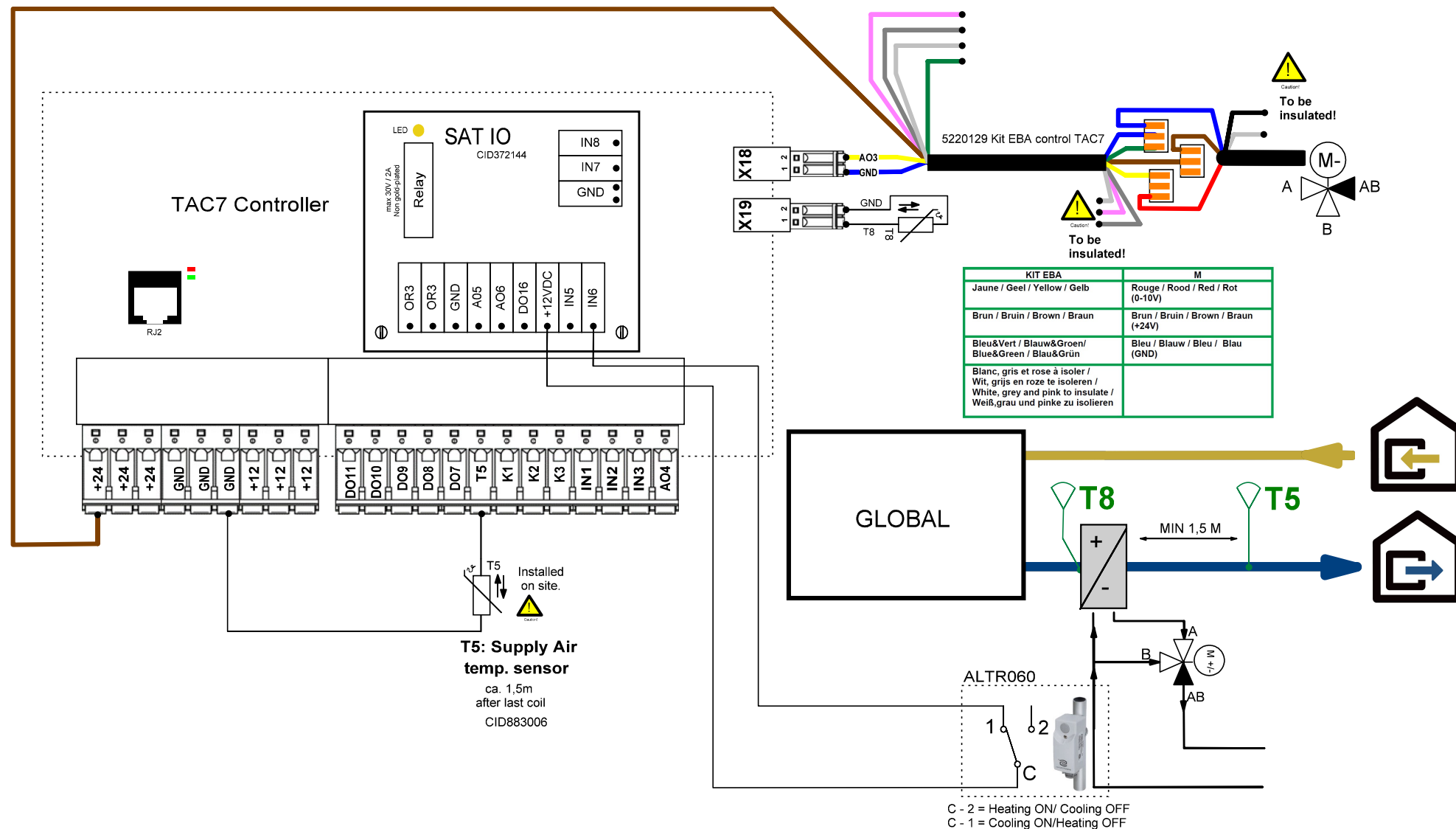
Changes			Name	Date	Configuration of function: Function Heat/Preheat/ Internal Electric Prehater (KWin)	Page
Name	Date	Draw.:	ola	03/10/2024		38
		check.:			Application: KWin Internal Electric Preheat	of 73
		Norm:				
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					



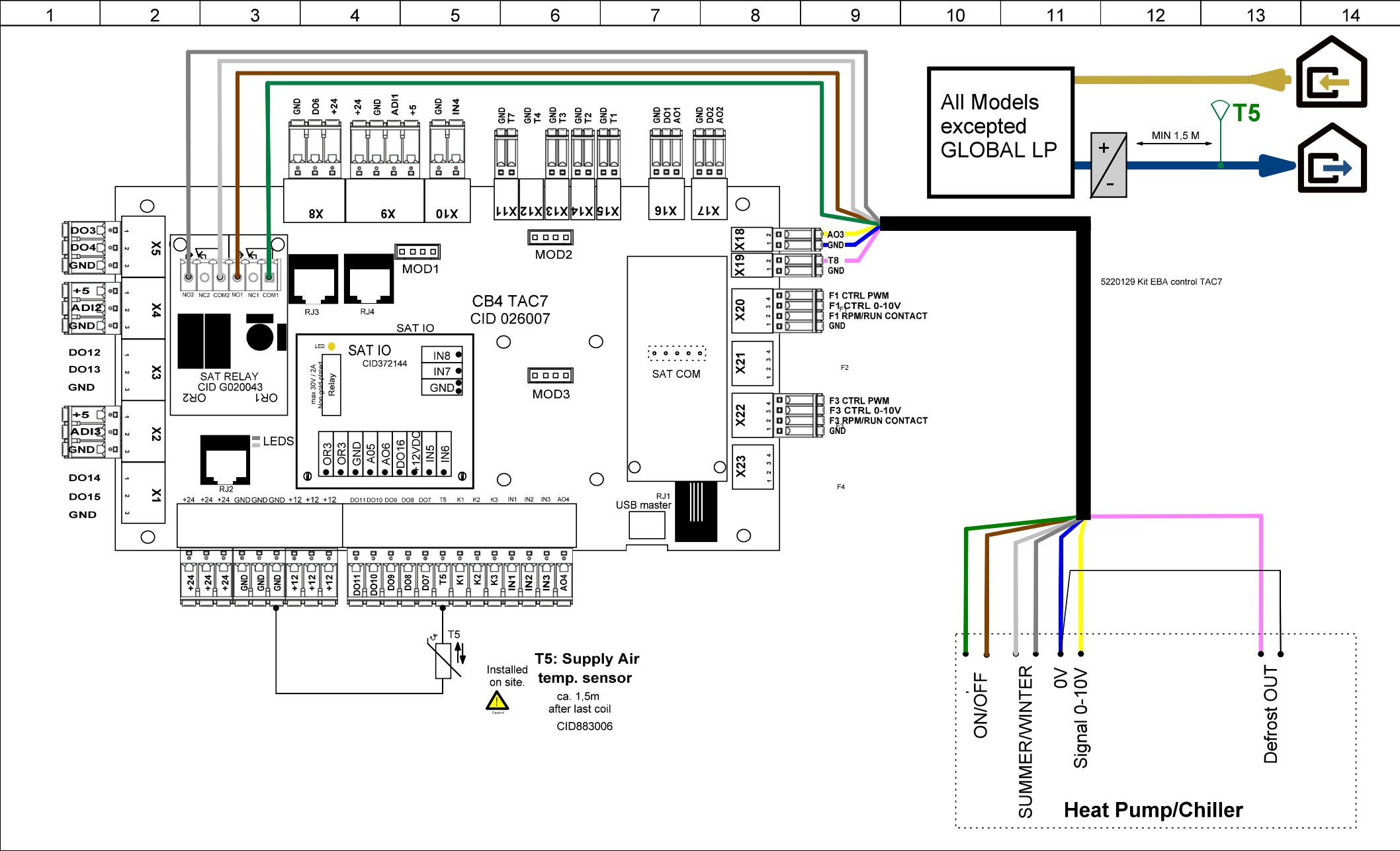
Changes			Name	Date	Configuration of function:	Page
Name	Date	Draw.:	ola	03/10/2024	Function Heat/Cool/ External Waterborne Reversible (EBA+-)	40
		check.:				
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Reversible battery	73



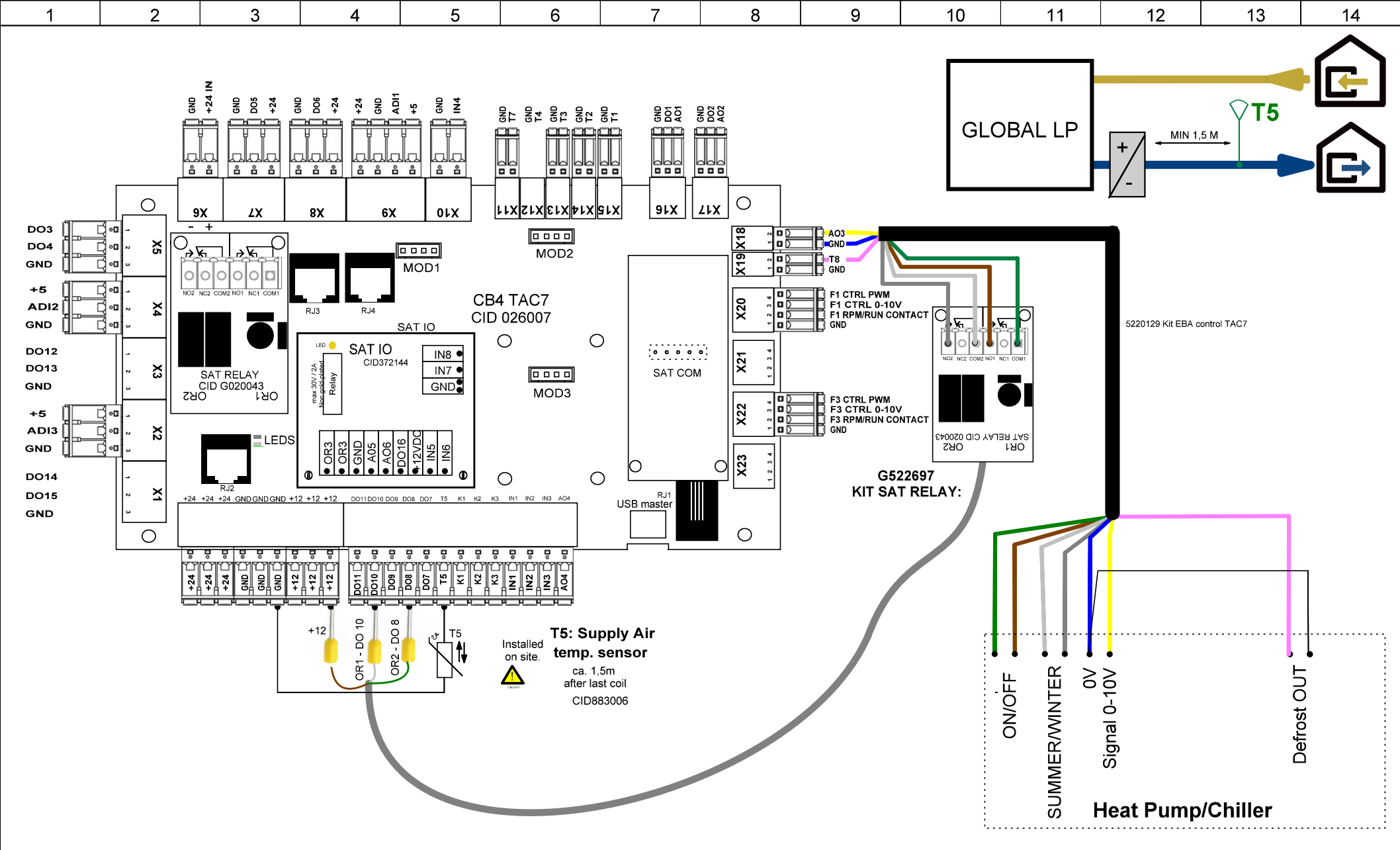
Changes			Name	Date	Configuration of function:	Page	
Name	Date	Draw.:	ola	03/10/2024	Function Heat/Cool/ External Waterborne Reversible (EBA+-)	41	
		check.:					
		Norm:				Application: Reversible battery with 1 circulator	of 73
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7						



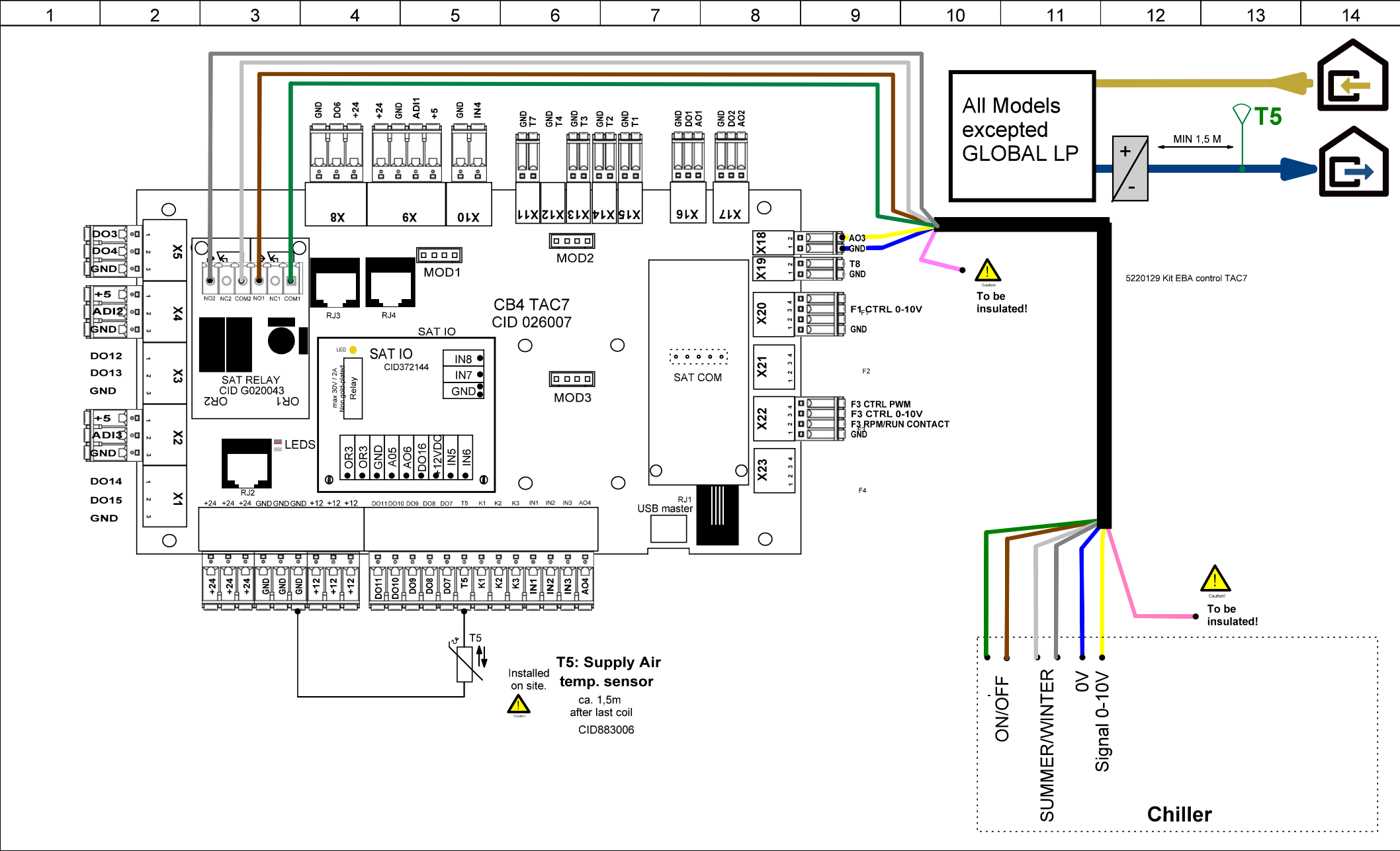
Changes			Name	Date	Configuration of function: Function Heat/Cool/ External Waterborne Reversible (EBA+-)	Page
Name	Date	Draw.:	ola	03/10/2024		42
		check.:				
		Norm:			Application: Reversible battery with 1 surface contact thermostat	of 73
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					



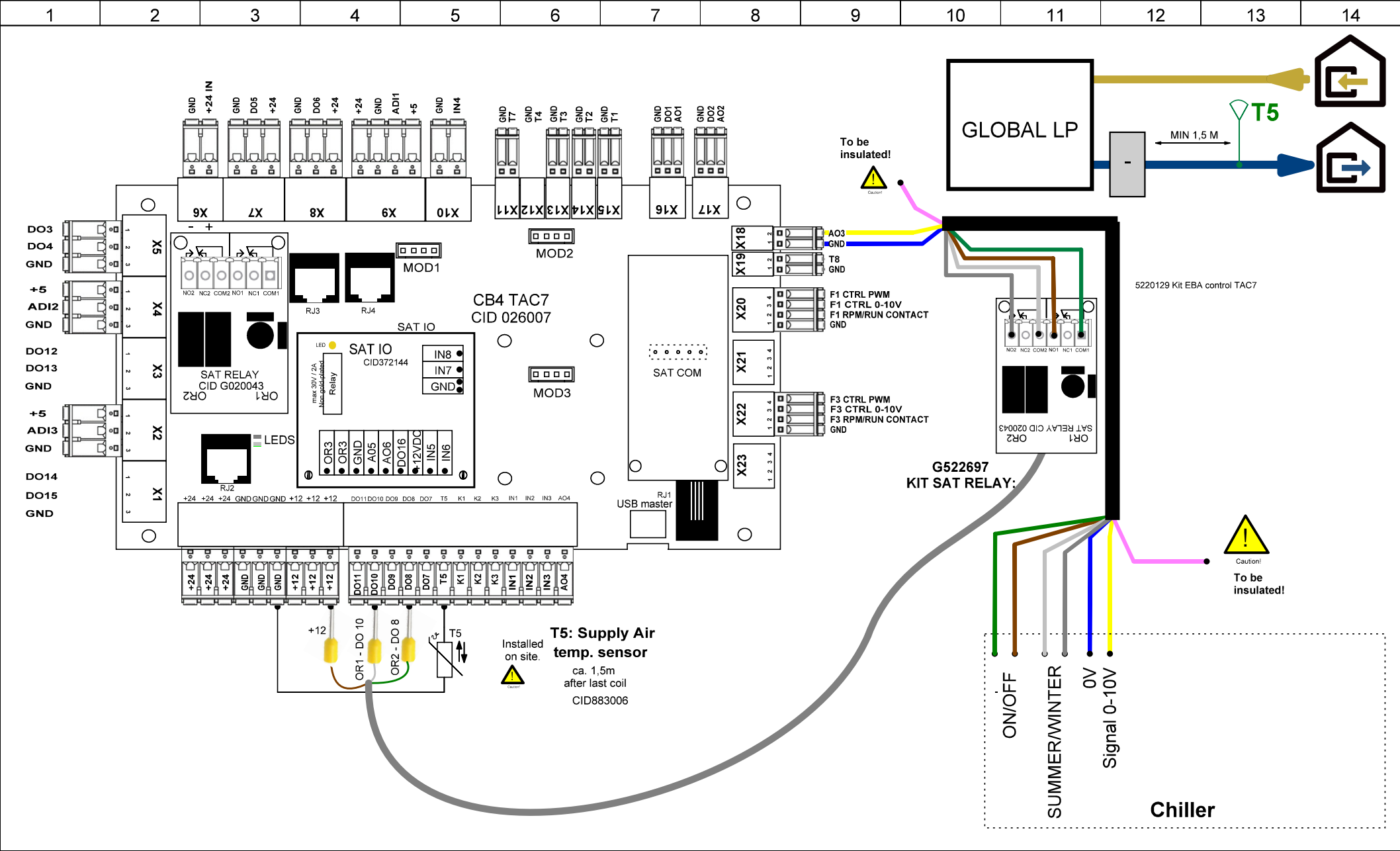
Changes				Name	Date	Configuration of function:	Page
Name	Date	Draw.:	msg		22/10/2024	Function Heat/Re-heat/Heat pump	43
		check.:				Function Cool/Settings/Chiller	
		Norm.:				Function Heat / Cool/Settings/Heat pump and Chiller	
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					Application:	of
						Heat pump/Chiller	73



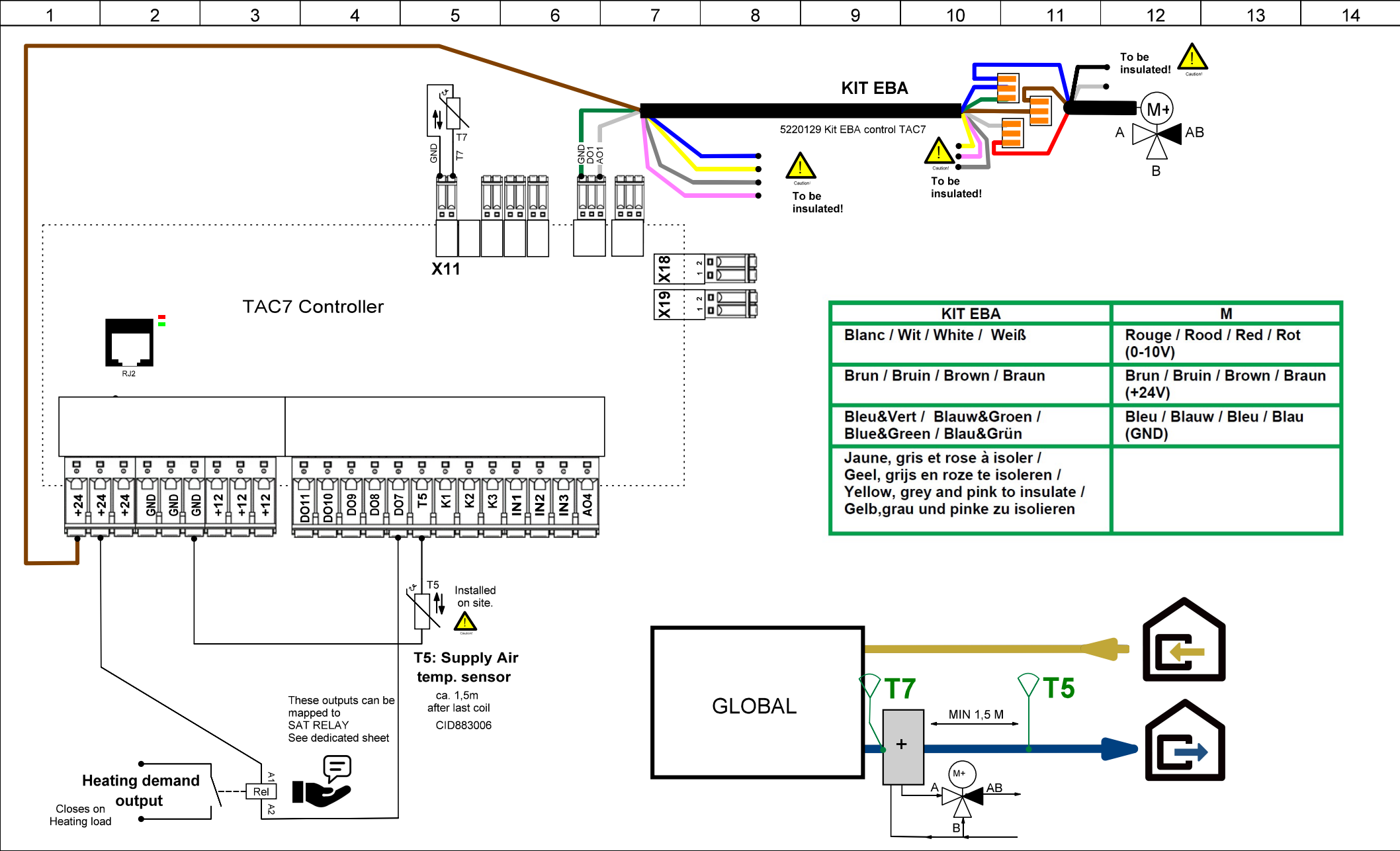
Changes			Name	Date	Configuration of function:	Page
Name	Date	Draw.:	msg	22/10/2024	Function Heat / Cool/Settings/Heat pump and Chiller	44
		check.:				
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Heat pump/Chiller	73



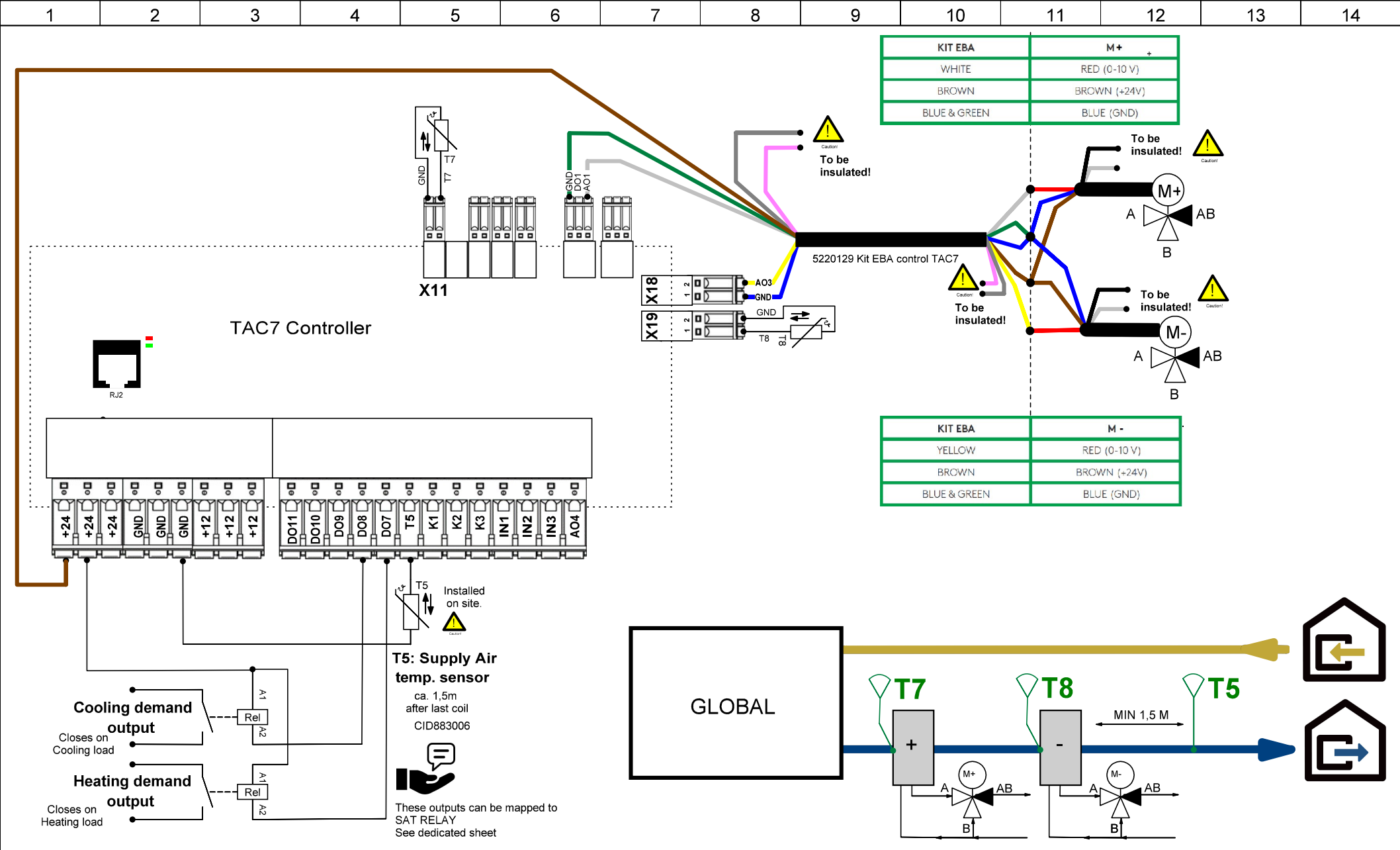
Changes			Name	Date	Configuration of function: Function Cool/Settings/Chiller	Page
Name	Date	Draw.:	msg	22/10/2024		45
		check.:			Application: Chiller	of 73
		Norm:				
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					



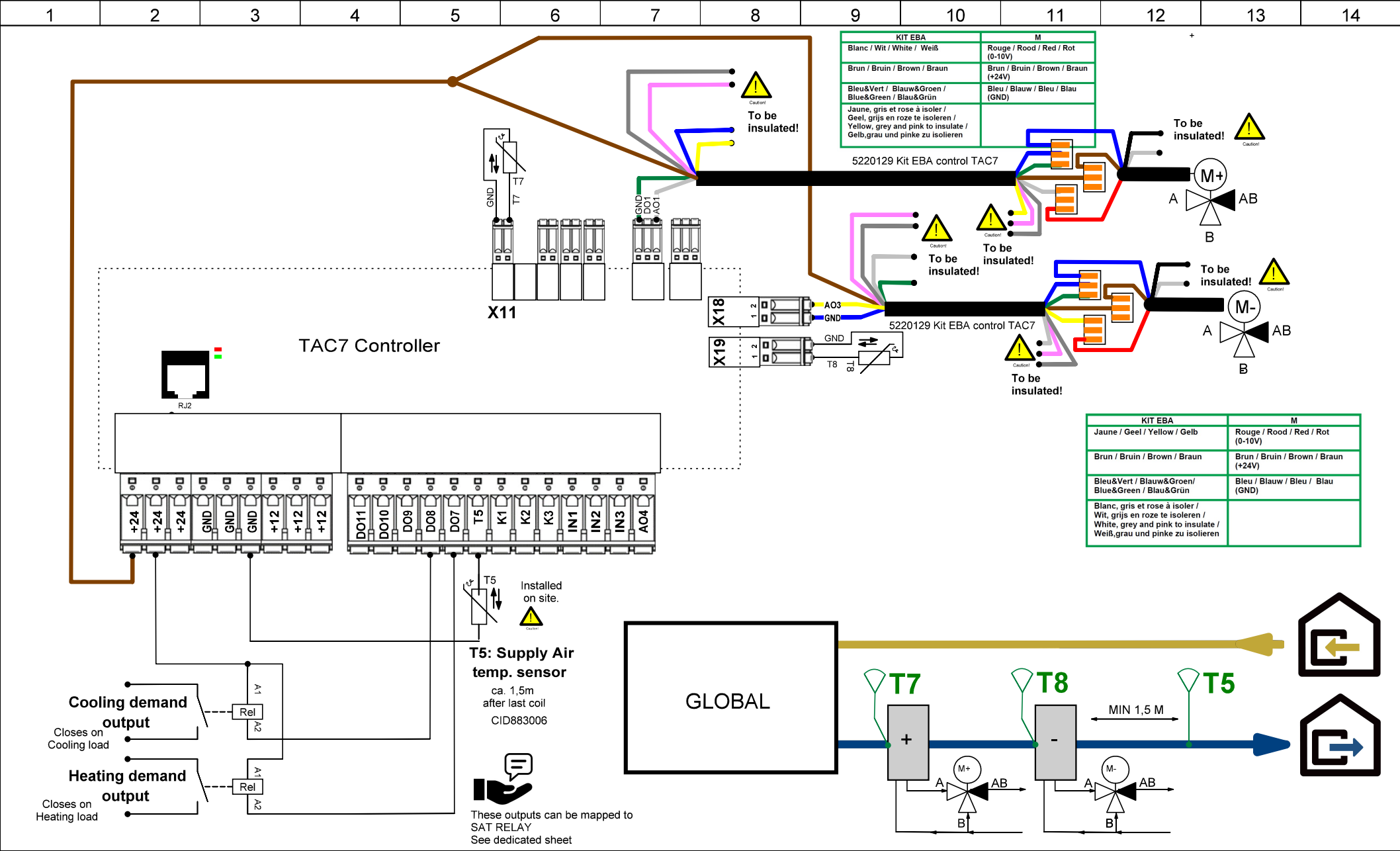
Changes				Name	Date	Configuration of function:	Page
Name	Date	Draw.:	msg		22/10/2024	Function Cool/Settings/Chiller	46
		check.:					
		Norm.:				Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					Heat pump/Chiller	73



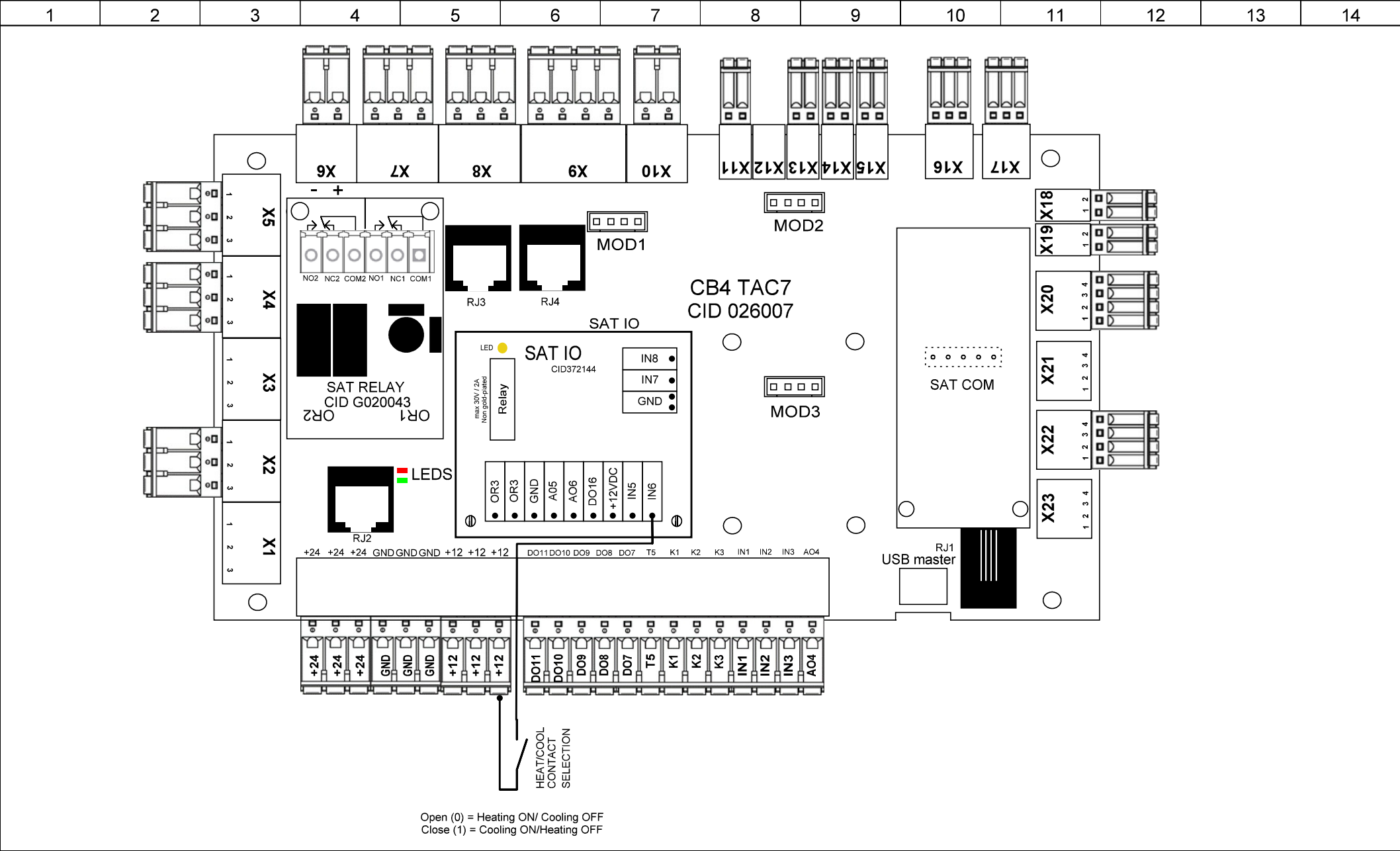
Changes			Name	Date	Configuration of function:	Page
Name	Date	Draw.:	ola	03/10/2024	Function Heat/Reheat/ External Waterborne Rehater (EBA+)	47
		check.:				
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				External heating coil	73



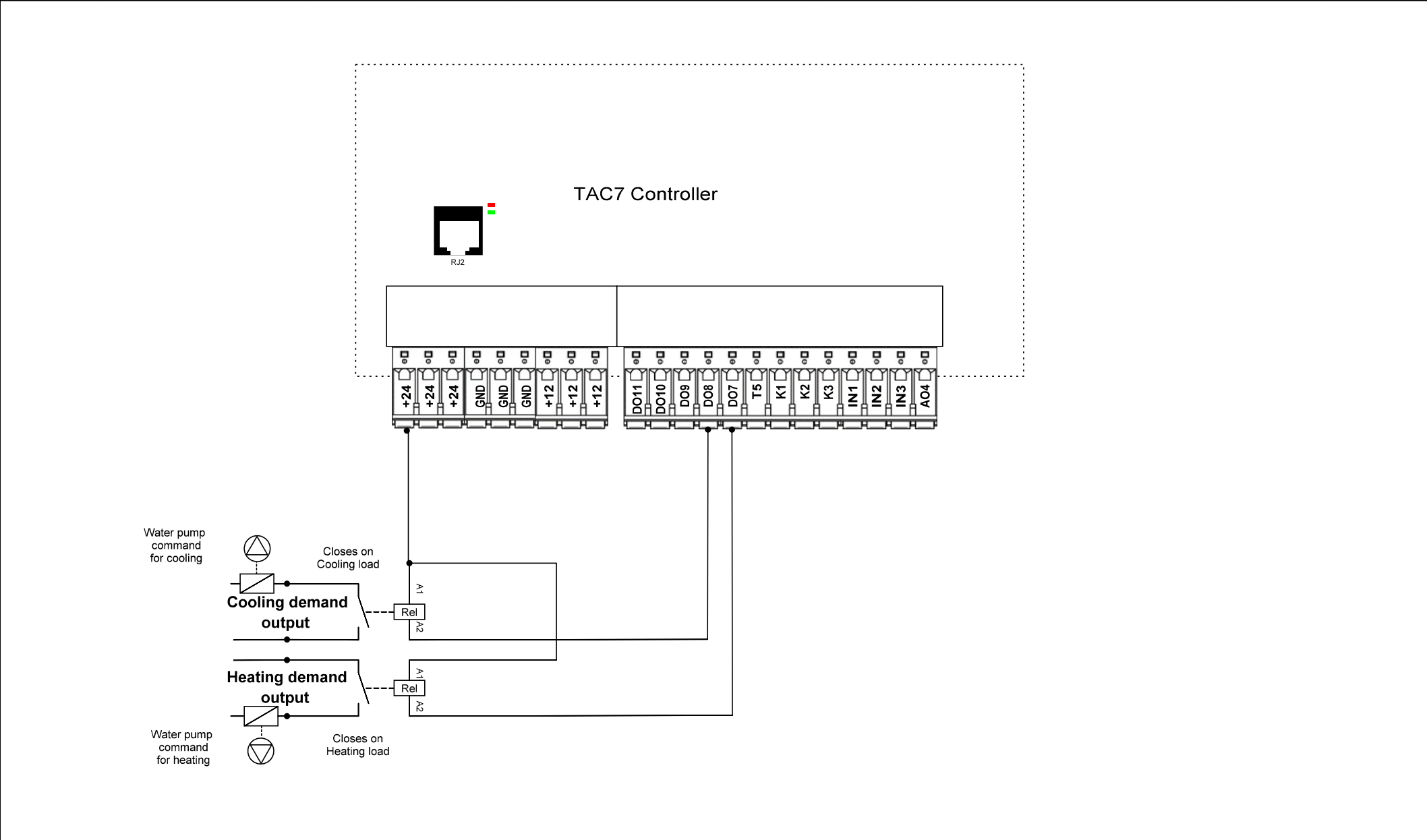
Changes		Name	Date	Configuration of function:	Page
Name	Date	Draw.:	ola	03/10/2024	48
		check.:			
		Norm.:			73
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7			Application: Ext. heating & Ext. Cooling 1 (use of 1 EBA cable)	



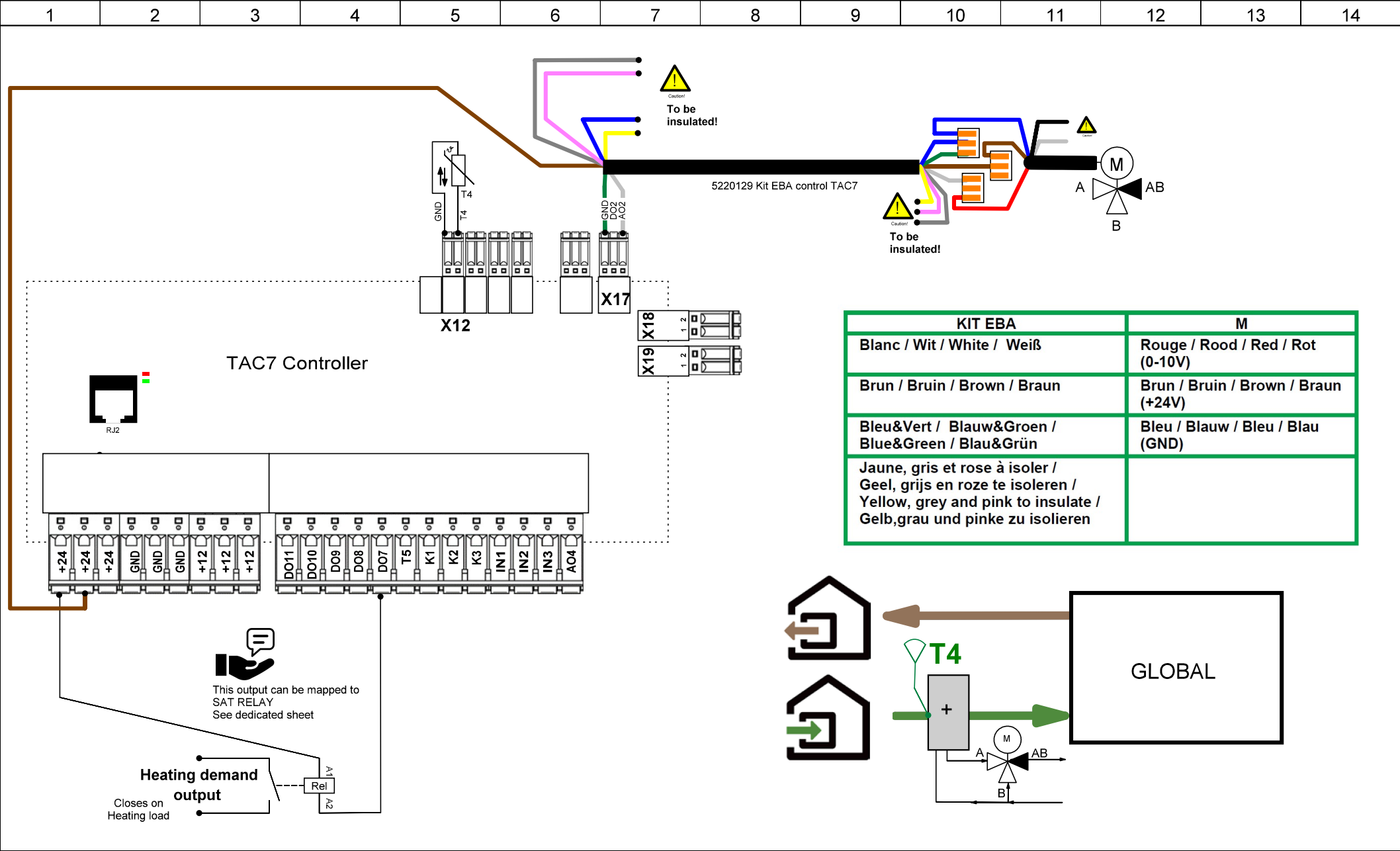
Changes		Name		Date	Configuration of function:	Page
Name	Date	Draw.:	ola	03/10/2024	Function Heat/Reheat/External Electric Rehater (KWext) & Function Cool/Settings/External Waterborne Recooler (EBA-)	49
		check.:				
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Ext. heating & Ext. Cooling 2 (use of 2 EBA cables)	73



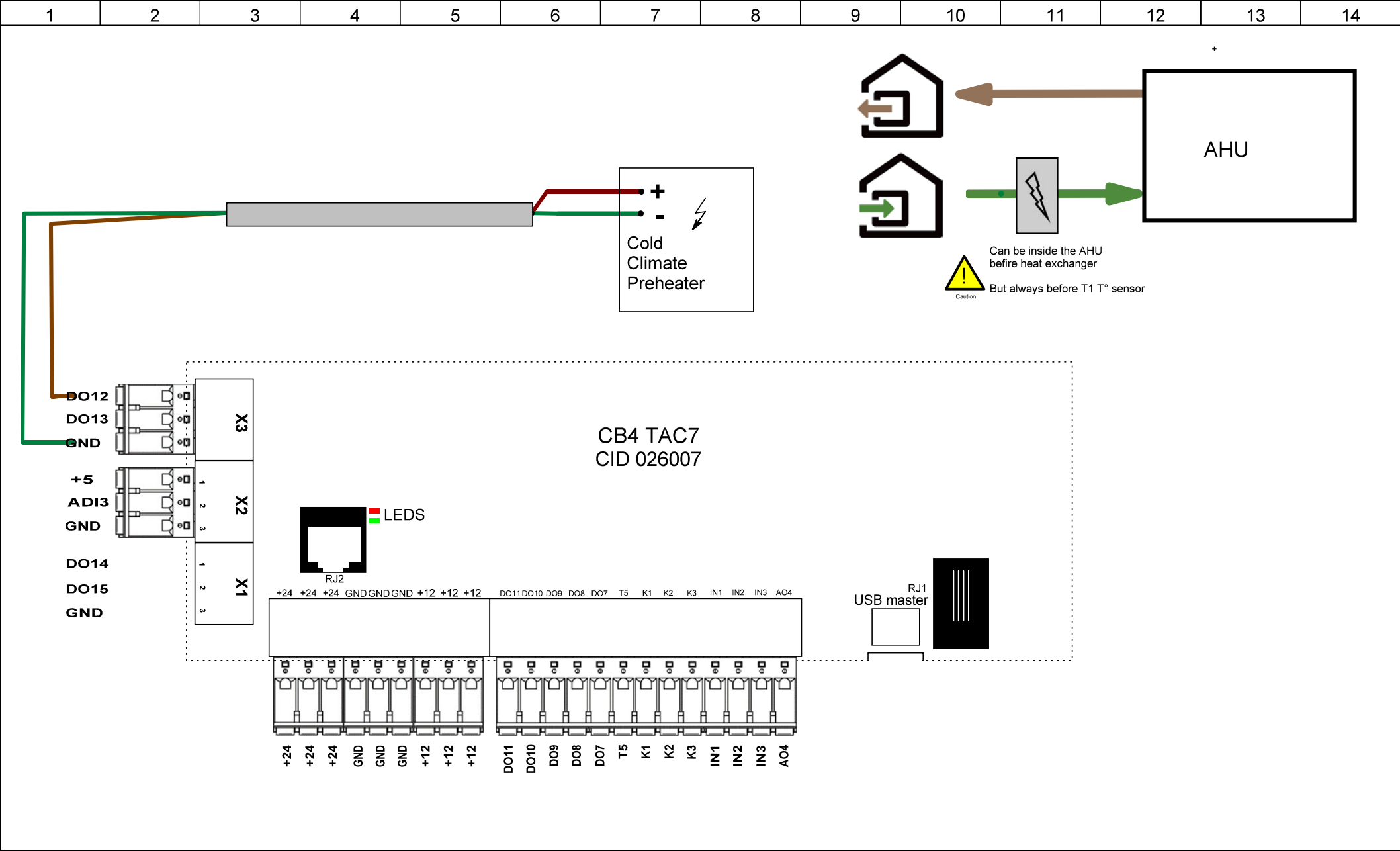
Changes		Name		Date	Selection of heating/cooling in presence of postheater/postcooler. In alternative to heat/cool selection via: - TACtouch Function Temperature/Regulation mode - Automatic changeover - BMS heat/cool selection control	Page
Name	Date	Draw.:	ola	04/10/2024		52
		check.:			Application: HEAT/COOL CONTACT SELECTION	of 73
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					



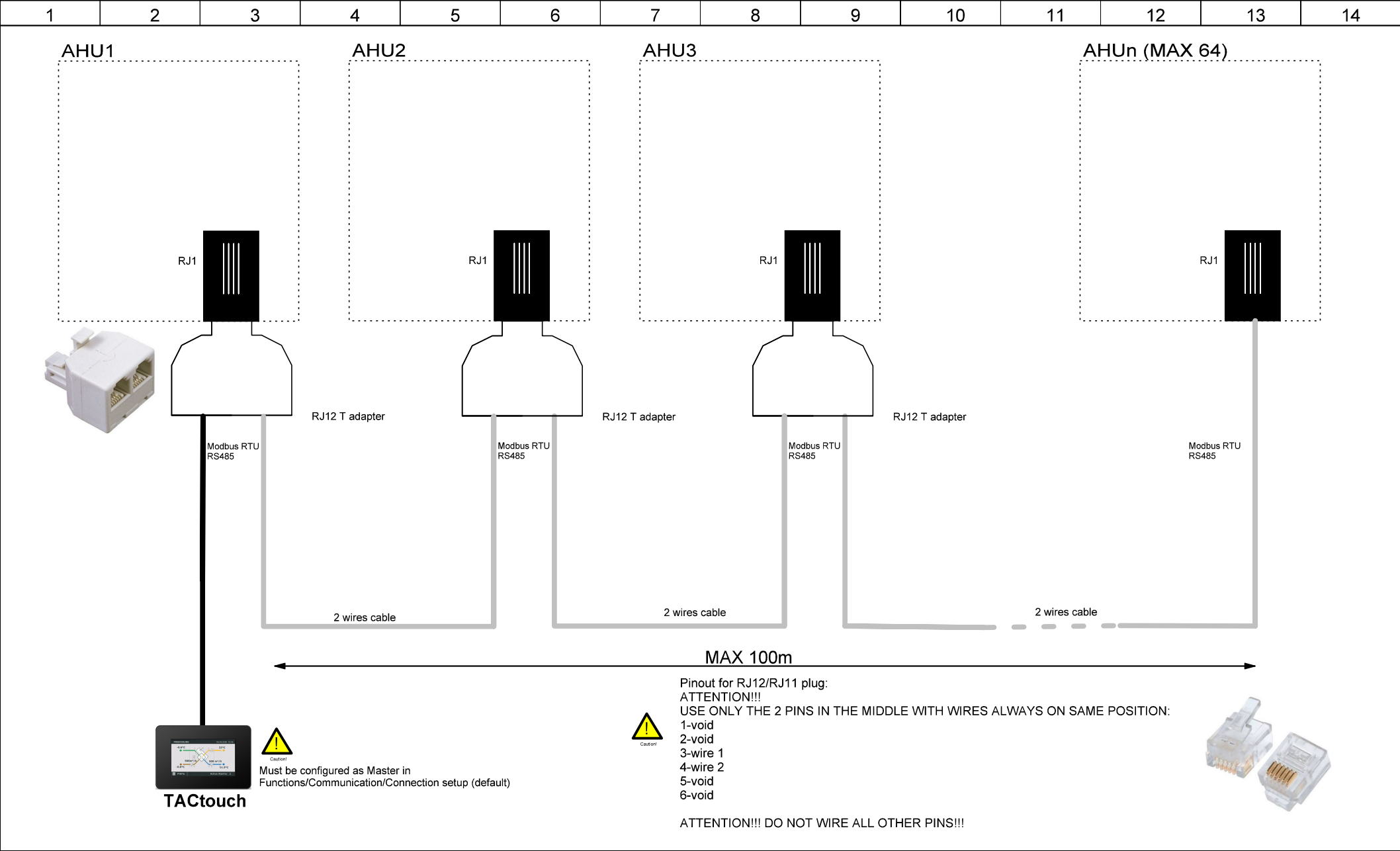
Changes			Name	Date	Configuration of function:	Page
Name	Date	Draw.:	ola	04/10/2024		53
		check.:				
		Norm:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Circulator pump (with hydraulic coils)	73



Changes			Name	Date	Configuration of function: Function Heat/Preheat/ External Waterborne Prehater (EBAin)	Page
Name	Date	Draw.:	ola	04/10/2024		54
		check.:			Application: External Hydraulic Preheater	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					73



Changes			Name	Date	Configuration of function: Function Heat/Cold Climate Preheater	Page
Name	Date	Draw.:	msg	17/10/2024		55
		check.:			Application: Cold Climate Preheater	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					73



Changes			Name	Date	Configuration of function: Function Communication/Connection Setup Function Network	Page
Name	Date	Draw.:	msg	17/10/2024		60
		check.:				
		Norm:			Application: TACtouch centralised short	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					73

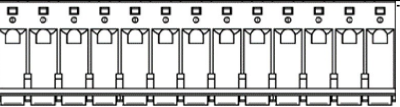
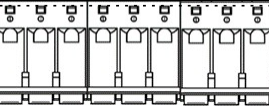
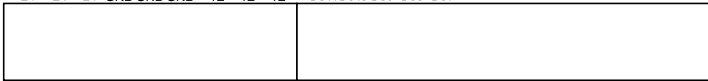
CB4 TAC7
CID 026007



RJ2

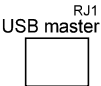
+24 +24 +24 GND GND GND +12 +12 +12

DO11 DO10 DO9 DO8 DO7 T5 K1 K2 K3 IN1 IN2 IN3 AO4



+24 +24 +24 GND GND GND +12 +12 +12

DO11 DO10 DO9 DO8 DO7 T5 K1 K2 K3 IN1 IN2 IN3 AO4



 Select the COM port to which the USB-RS 485 adapter cable is connected

 Once setup is changed, Press "RESET COM" at the end of this menu to validate the change



CID 522224

TACsimulator V2

Section Communication/Connection Setup/
Parameters:

Modbus Type	RTU
COM Port	COMx
Baudrate	38400
Parity and Stop bits	None 2 STOP BITS
Modbus Master	Yes
TAC Modbus address	1

CB4 TAC7
CID 026007



RJ2

+24 +24 +24 GND GND GND +12 +12 +12

DO11 DO10 DO9 DO8 DO7 T5 K1 K2 K3 IN1 IN2 IN3 AO4



RJ1
USB master



TACsimulator V2

Section Communication/Connection Setup/
Parameters:

Modbus Type	RTU
COM Port	COMx
Baudrate	38400
Parity and Stop bits	None 2 STOP BITS
Modbus Master	Yes
TAC Modbus address	1



Select the COM port
to which the USB-C
cable is connected

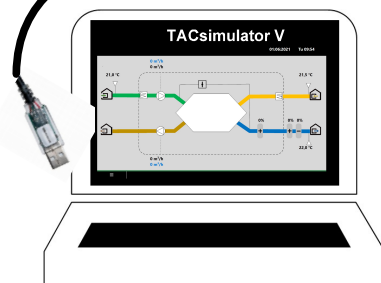
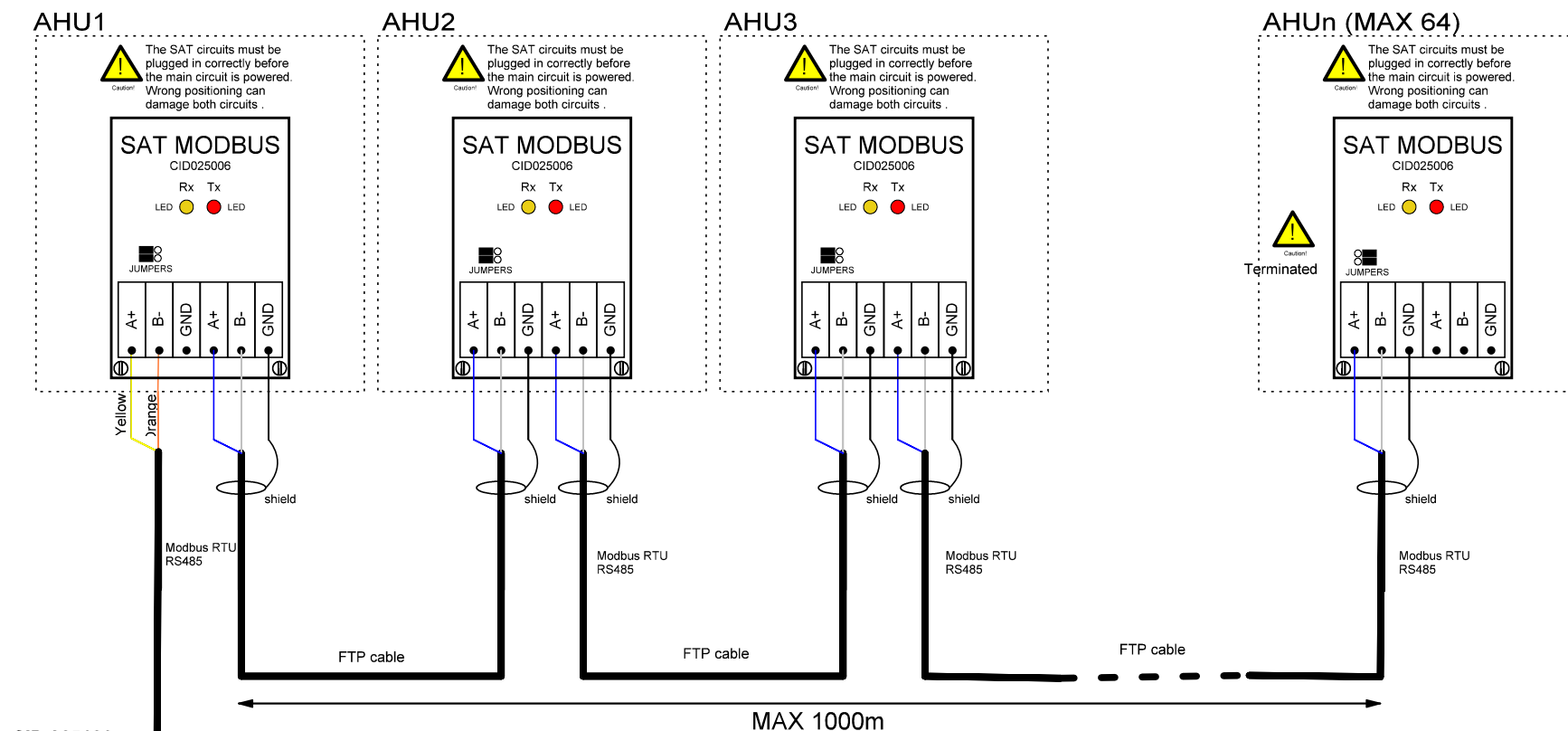


Once setup is changed,
Press "RESET COM" at the
end of this menu to
validate the change



standard USB C cable

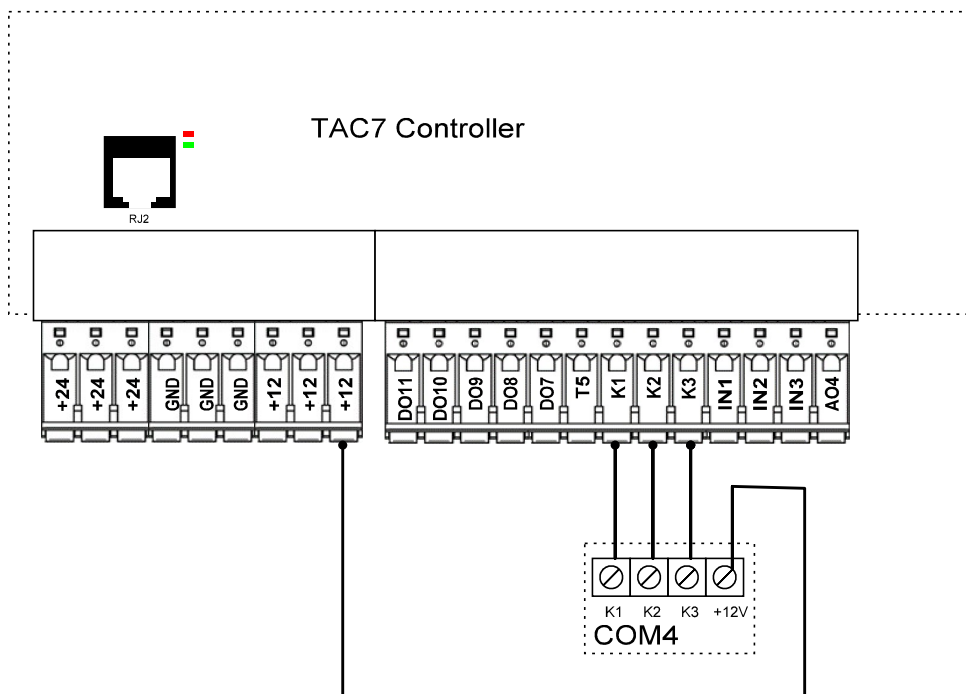
Changes			Name	Date	From version TAC7 v1.0.10.66	Page
Name	Date	Draw.:	msg	06/05/2025		62
		check.:				
		Norm:			Application: Software HMI+USB C	of 73
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					

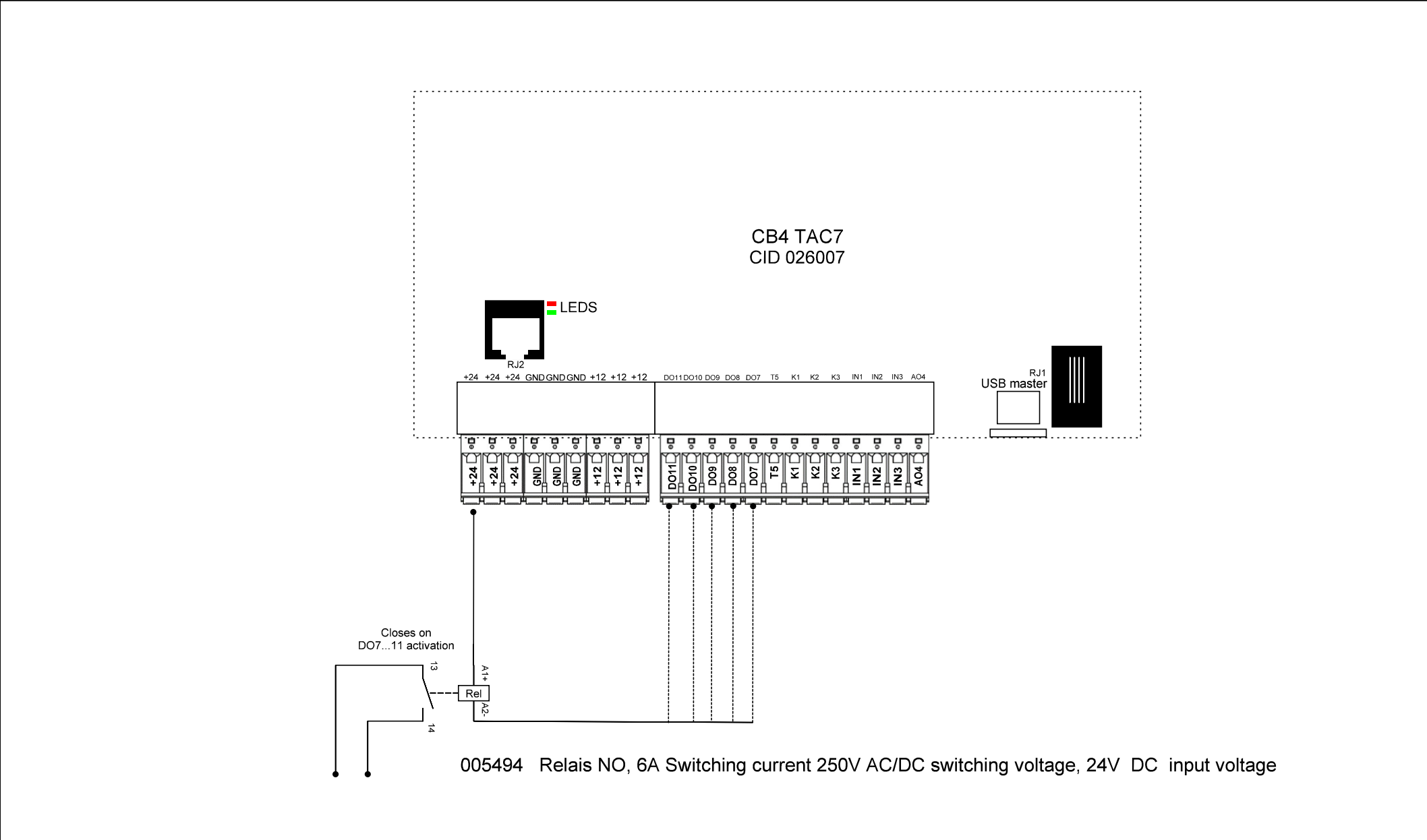


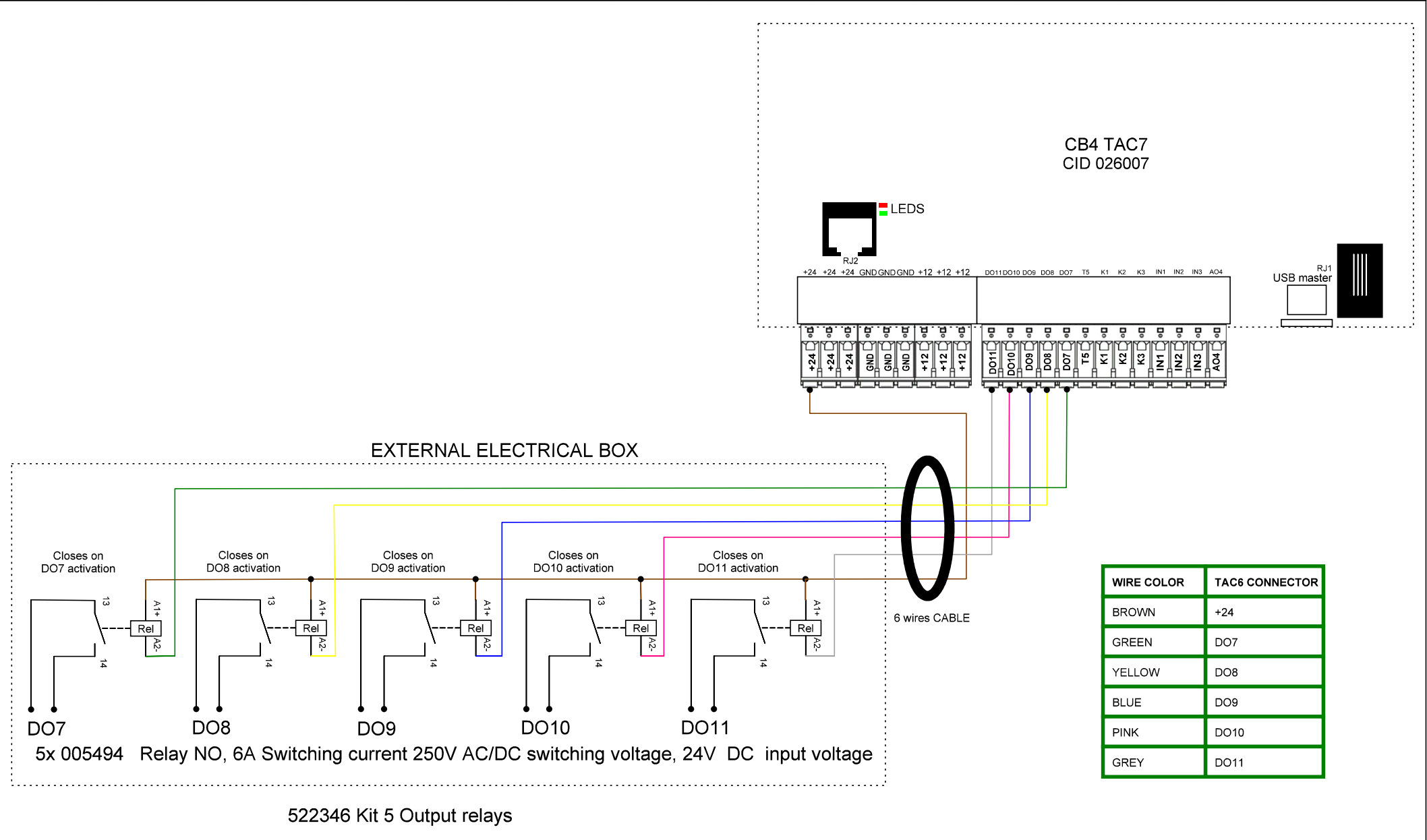
 Select the COM port to which the USB-RS 485 adapter cable is connected

 Select the Modbus address of the desired unit to reach in menu "Settings/Connection Setup"

Changes			Name	Date	Configuration of function:	Page
Name	Date	Draw.:	msg	17/10/2024		63
		check.:				
		Norm:				
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Application: Soft HMI centralised	of 73







*SAT RELAY CONFIGURATION ONLY FOR NON LP MODELS

Section Inputs/Outputs / Settings / Parameters:

User Digital I/O Mapping

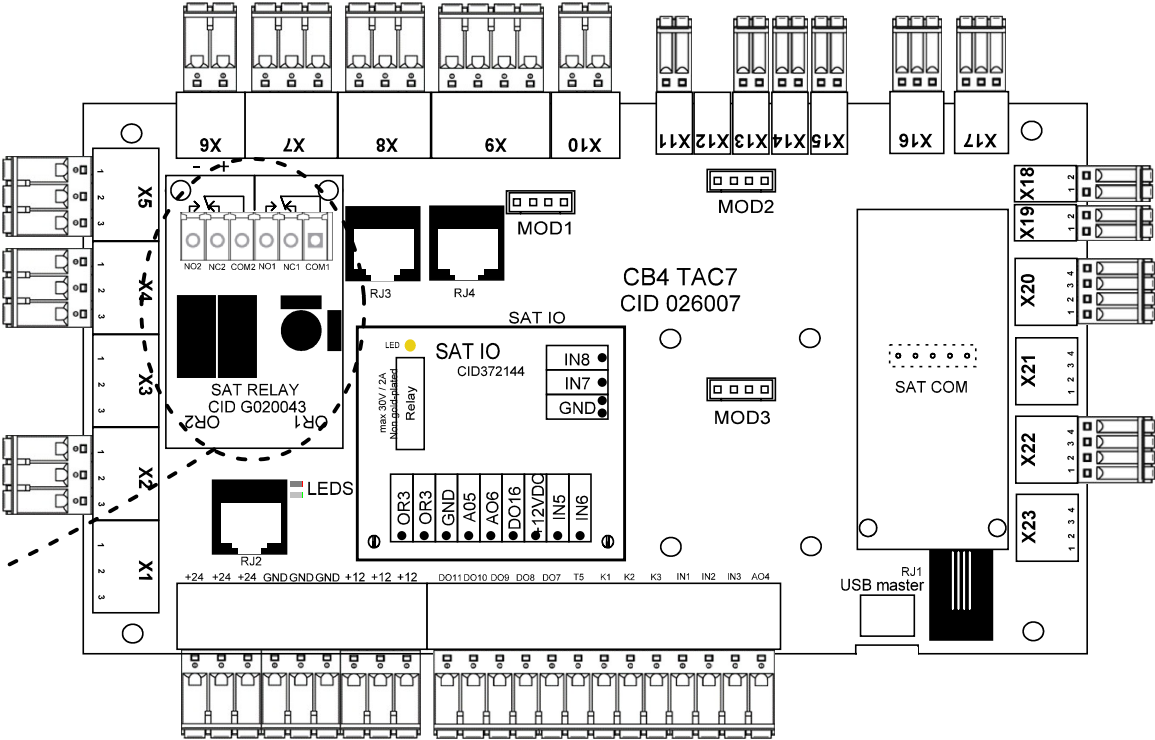
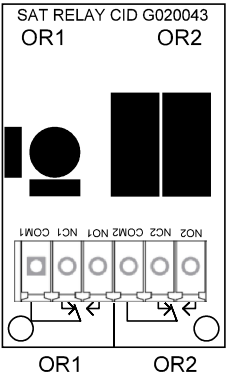
ON

Section Inputs/Outputs / User Digital I/O Mapping - Outputs/ Parameters:

Select desired functions to be mapped on SAT RELAY OR1 or OR2:

- Circulator pump for hydraulic reheater/reversible (by default on DO7)
- Circulator pump for hydraulic cooler (by default on DO8)
- Default Alarm satus (by default on DO9)
- Pressure Alarm satus (by default on DO10)
- Fan On satus (by default on DO11)
- Bypass satus (by default on SAT IO OR3)
- Heat satus (by default unapped)
- Cool satus (by default unapped)
- Circulator pump for hydraulic preheater (by default unapped)

SAT RELAY plugged on TAC7 controller dedicated connector



Changes			Name	Date	Configuration of function: mandatory used for GLOBAL LP, then premounted and prewired – option for other models SAT RELAY OR1 – relay SPDT (COM + NC/NO) – max 0,5A 30V DC SAT RELAY OR2 – relay SPDT (COM + NC/NO) – max 0,5A 30V DC See * here above for settings	Page
Name	Date	Draw.:	msg	17/10/2024		68
		check.:				
		Norm:			Application: SAT RELAY	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7					73

Label	CID
INSIDE Connect, fitted in electrical cabinet	883819
INSIDE Connect, delivered loose (no PSU)	883820
INSIDE External antenna-a-15	883821
INSIDE External antenna-a-30	883822

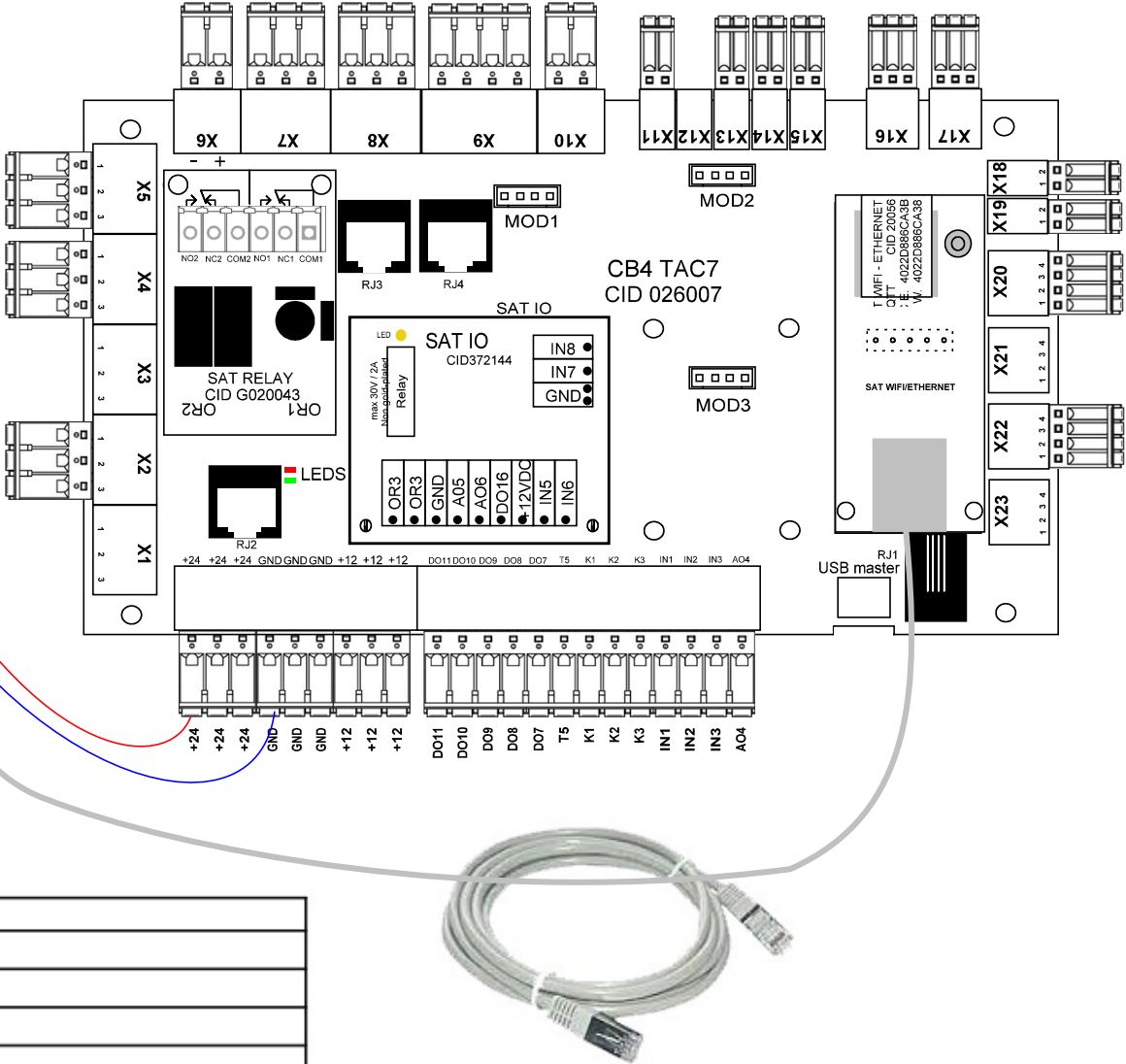
IP65

External antenna-a-30

1,5 / 3 m

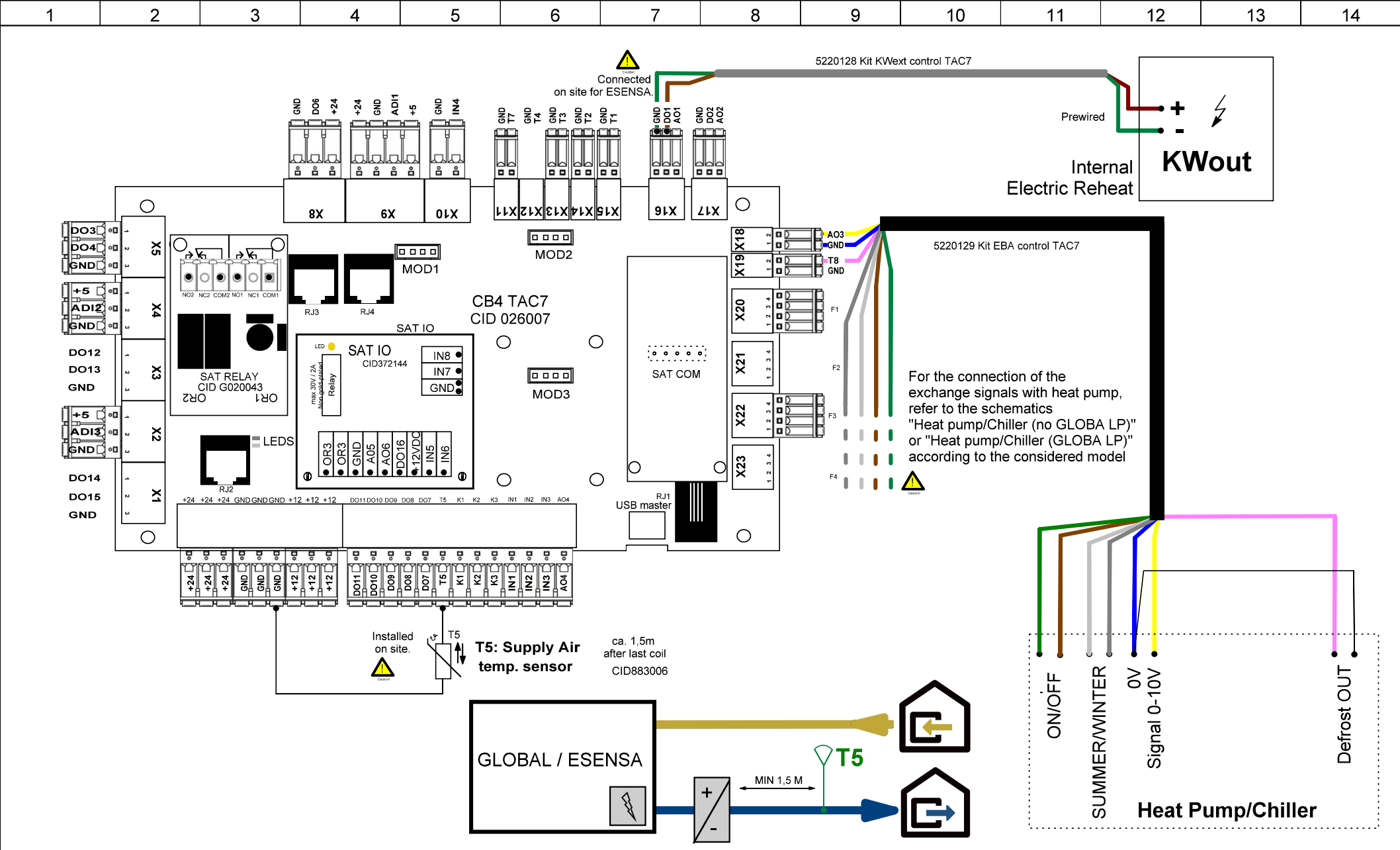


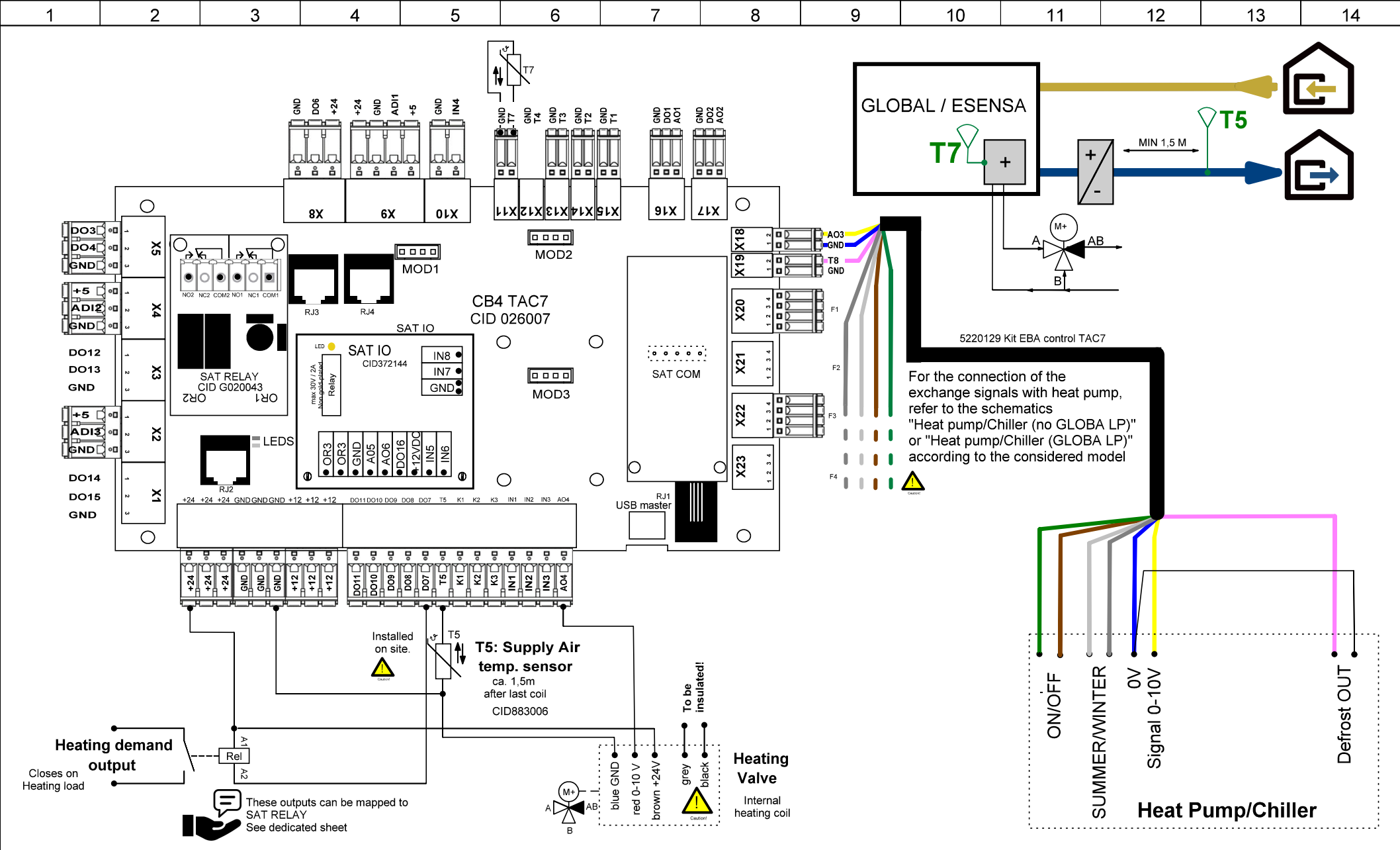
LTE



DHCP	Off
IP address	169.254.235.1
Netmask	255.255.255.248
Default gateway	169.254.235.6
Primary DNS	8.8.8.8

Changes			Name	Date	Configuration of function: Function/Communication/Configuration of SAT LAN See settings in table here above	Page
Name	Date	Draw.:	msg	30/09/2025		70
		check.:			Application: Cloud+4G router	of 73
		Norm:				
Subject:		GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				





Changes		Name		Date	Configuration of function:	Page
Name	Date	Draw.:	msg	15/01/2026	Function Heat/Cool / Settings: Heat Pump First to start cascade = First	72
		check.:			Function Heat/Reheat: Waterborne reheater First to start cascade = Next	
		Norm.:			Application:	of
Subject:	GLOBAL_ESENSA_Wiring TAC7 rev 20260529.spl7				Cascade HP & IBA	73

