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Engine Control Panel

Operator's Manual

SVT 10

SVT 20

SVT 30

SVT 40

U_CTSVT_EN
Revision 0





Section 1 – General information

In accordance with our technological quality policy, SOLÉ DIESEL is constantly applying upgrades on existing products in order to improve customer satisfaction and engine performance. Our new SVT 10/20/30/40 are a product of this development.

Moreover, we only recommend using our Assistance Service for any servicing or intervention needs on the item and using original spare parts. Otherwise, SOLÉ S.A. WILL BE RELEASED FROM ANY WARRANTY AND TECHNICAL SERVICE OBLIGATIONS.

1.1. Introduction to SVT

The SVT range consists of a control and protection panel set used with propulsion engines. All units are designed for easy operation by both the installer and the end customer, with different degrees of performance, depending on the model.

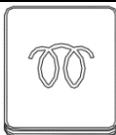
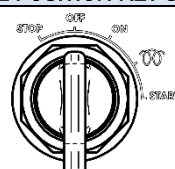
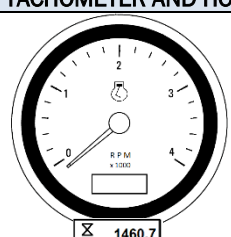
All panels are identified according to their model in the bottom right section (model SVT 10 is identified on the right).



	SVT 10	SVT 20	SVT 30	SVT 40
PANEL				
ELECTRONIC BOARD				
Pre-heating pilot light	•	•	•	•
Battery alarm	•	•	•	•
High temperature alarm	•	•	•	•
Low oil pressure alarm	•	•	•	•
FIVE POSITIONS KEY SWITCH				
Engine stop	•	•	•	•
Turn off electronic board	•	•	•	•
Turn on electronic board	•	•	•	•
Engine pre-heating	•	•	•	•
Engine start-up	•	•	•	•
FIVE POSITIONS KEY SWITCH				
Tachometer / Hourmeter	-	•	•	•
Coolant temperature gauge	-	•	•	-
Oil pressure gauge	-	-	•	-
Voltmeter	-	-	•	-



Section 2 – Panel parts

PRE-HEATING	
	The LED light turns on when the pre-heating spark plugs receive power. It turns off after a few seconds to indicate that the engine is ready for start-up. NOTE: The only purpose of this LED is to inform the user, it does not act on the engine. The pre-heating spark plugs keep working even if the LED light is not on.
BATTERY CHARGING FAULT	
	The LED and the buzzer are activated when the alternator is not charging the battery. NOTE: When the engine is off, the alternator is usually not charging and this alarm is on.
HIGH COOLANT TEMPERATURE	
	The LED and the buzzer turn on when the coolant temperature is too high. NOTE: This alarm should never appear during normal engine operation.
LOW OIL PRESSURE	
	El led y el zumbador se encienden cuando la presión de aceite es demasiado baja. NOTA: Cuando el motor está apagado es normal que la presión del aceite sea baja y esta alarma esté funcionando.
HIGH SEAWATER TEMPERATURE	
	This panel part is prepared to install a LED that turns on when the seawater temperature at the exhaust outlet is more than 70°C. In addition, in case of alarm, the buzzer will emit a sound. It is necessary to install the kit alarm temperature exhaust ref. 60900280.
FIVE POSITION KEY SWITCH	
	The contact key switch is directly connected to the battery (PIN 30) and depending on its position (STOP, OFF, ON, PRE-HEATING, START), the key supplies certain pins/connectors where the different electronic devices are connected.
TACHOMETER AND HOURMETER	
	The tachometer displays the revolutions of the engine and is adjusted for each engine model. If the panel is to be used for an engine other than Solé Diesel models, the tachometer should be adjusted (see Section 2.2.4). The screen located at the bottom of the clock is the work hours counter. The hourglass blinks when its counting the work hours; if it does not blink, it is not counting.
COOLANT TEMPERATURE GAUGE, OIL PRESSURE GAUGE AND VOLTMETER	
	The thermometer indicates the coolant temperature. The pressure meter indicates the pressure of the lubrication circuit. The voltmeter indicates the voltage of the engine electrical installation, generated by the alternator. NOTE: During the start-up stage, when the key switch is at the ON and PREHEATING POSITION, the meter displays the battery voltage, as the alternator is not yet working.
	
	



Section 3 – Settings

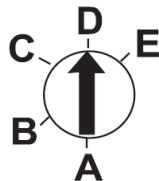
3.1. Tachometer calibration

The tachometers supplied with the panel are calibrated in the factory. The user must only calibrate tachometers purchased as spare parts.

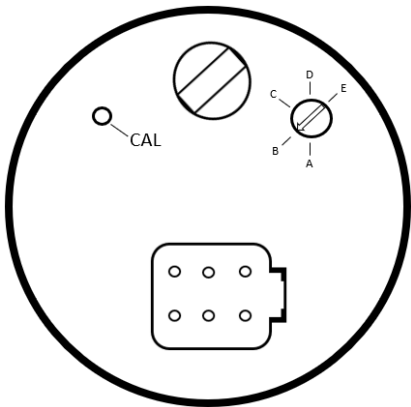
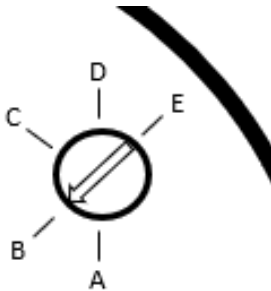
The tachometer can be calibrated with the switch at the rear. To know its position, the pulley ratio must be calculated.

$$\text{Pulley ratio} = \frac{\text{Crankshaft pulley diameter}}{\text{Alternator pulley diameter}}$$

After calculating the pulley ratio, refer to the table (approximate value, if required) and rotate the tachometer switch.

Alternator Poles Polos del alternador	12	Switch Position Posición del interruptor	Switch interruptor
Pulley Ratio Relación de la polea	1:01	A	
	1.5:1	B	
	2:01	C	
	2.5:1	D	
	3:01	E	

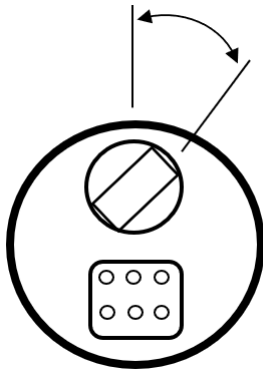
Tachometer Switch



If the pulley ratio is not exactly the same as in the table, the calibration must be completed with the Calibrator (CAL). Introduce a small flat screwdriver into the calibrator (CAL) at the rear of the meter. Carefully calibrate the mechanism moving the meter needle forwards or backwards until it corresponds to the engine speed.

3.2. Replacing the Light Bulb

Unscrew the cap of the light bulb (rear of the meters) and change the light bulb.



Section 4 – Installation

4.1. Standard instrument panel

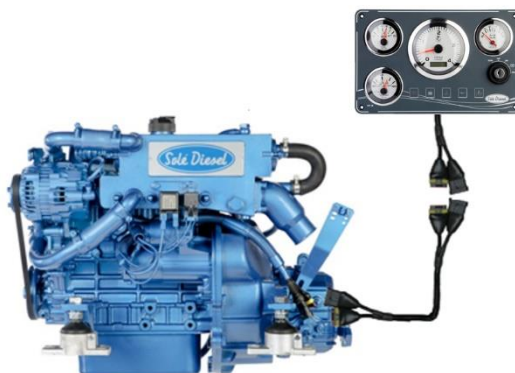
Follow these steps to install the panel:

1. Use the template supplied with the panel to mark the holes where the panel must be screwed. See Section 6 - *Diagrams and installation templates*
2. Fasten the panel, screwing it to the holes on the corners.



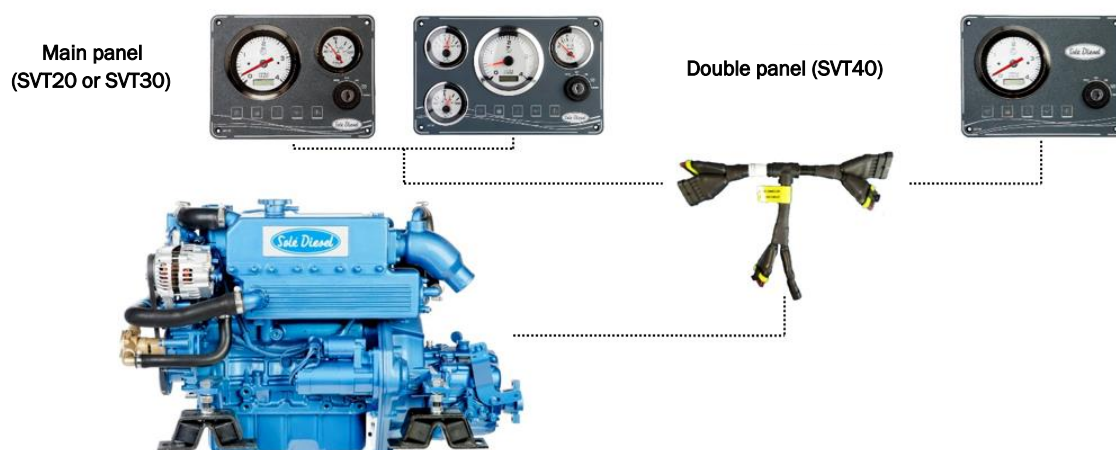
All SVT models supplied by Solé Diesel can operate in wet and saline environments. The installer is responsible for protecting the panel from contact with water. SOLÉ DIESEL SHALL NOT BE HELD RESPONSIBLE FOR A FAULT CAUSED BY DIRECT EXPOSURE TO WATER.

3. Connect two SUPERSEAL plug-ins of the panel with the two engine installation plug-ins.



4.2. Double instrument panel kit

The double instrument panel kit allows you to control, start and stop the engine from the two panels (the main panel SVT20 or SVT30 and the double panel SVT40). Connect the engine and panel wirings to the “T” wiring as it is shown at the picture below.

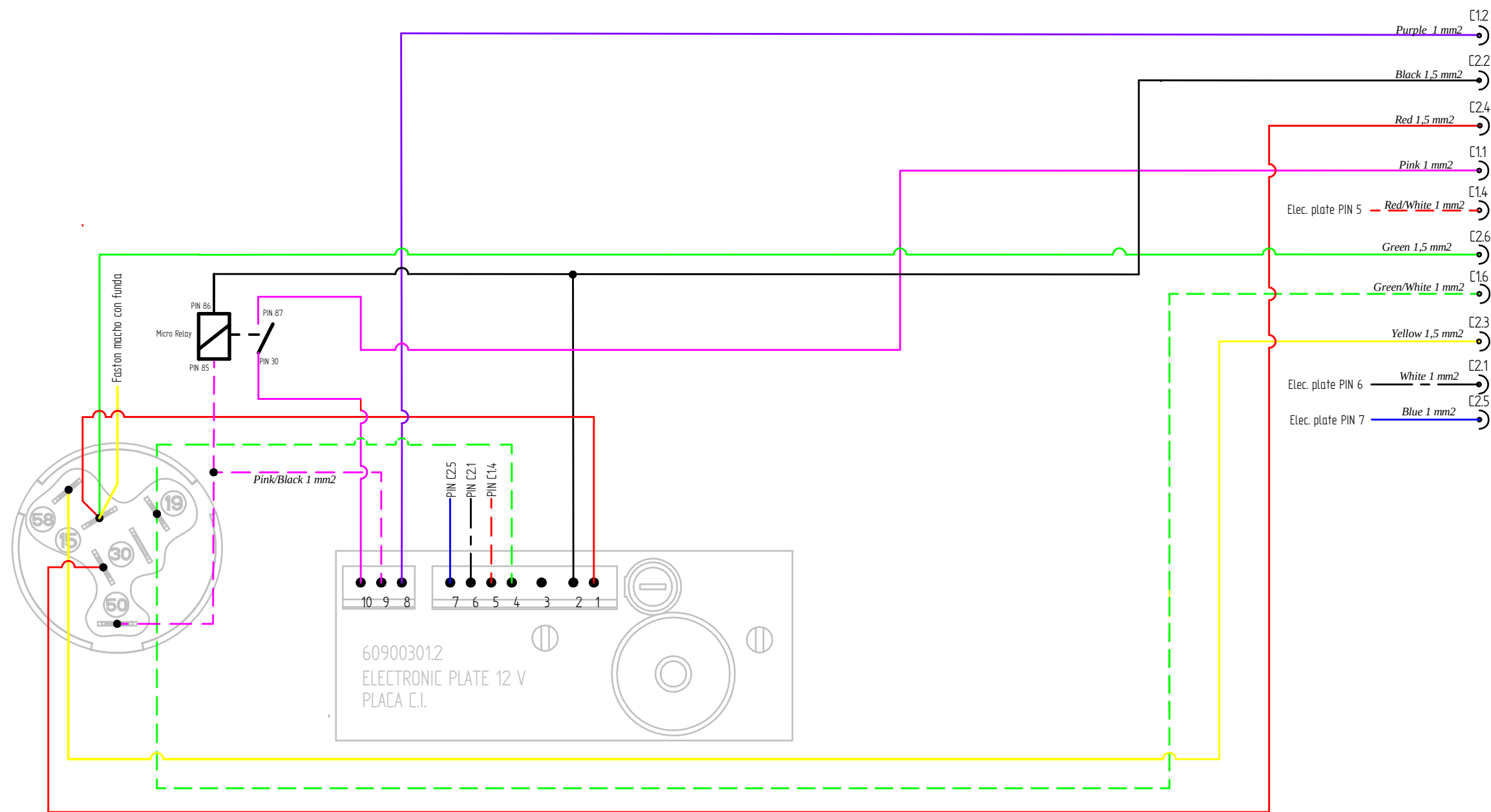


It is possible to control, start and stop the engine from both panels. For this reason, if you start the engine from one panel and stop it from the other, you will listen to an alarm that will remind you that the panel that you used to start is still at the ON position. So, you have to turn it to OFF position again.

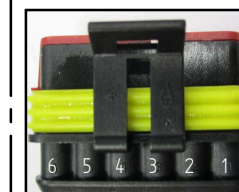


Section 5 – Electrical wiring diagrams





Connector 1 (C.1)

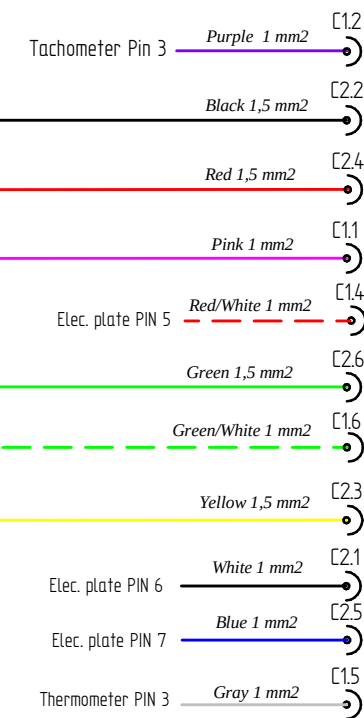
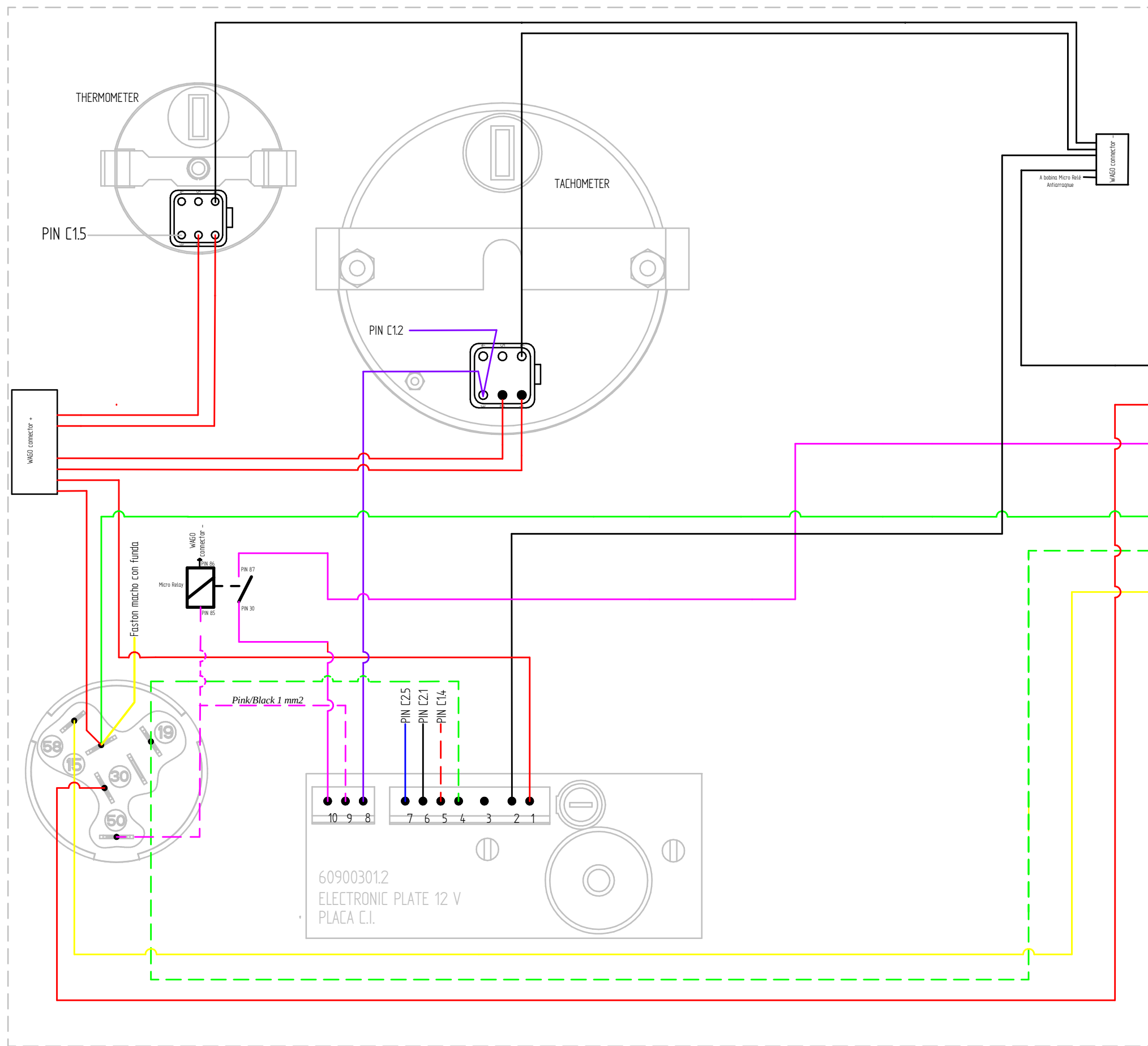


Connector 2 (C.2)

* Especificar siempre en la etiqueta de la instalación la revisión de plano según la que se ha fabricado (ej. Rev. A). Si aún no se ha realizado ninguna revisión poner Rev. -.

Inst. Posterior Panel SVT 10 12 V

DIBUJADO	VERIFICADO	FECHA CREACIÓN	ÚLTIMA REVISIÓN	PÁGINA
RUBEN D	SUBACH	17/02/2016	-/-	
 SOLÉ, S.A.		60910010, 60910000		1 de 1

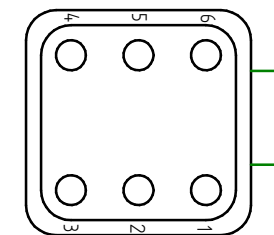


Connector 1 (C.1)



Connector 2 (C.2)

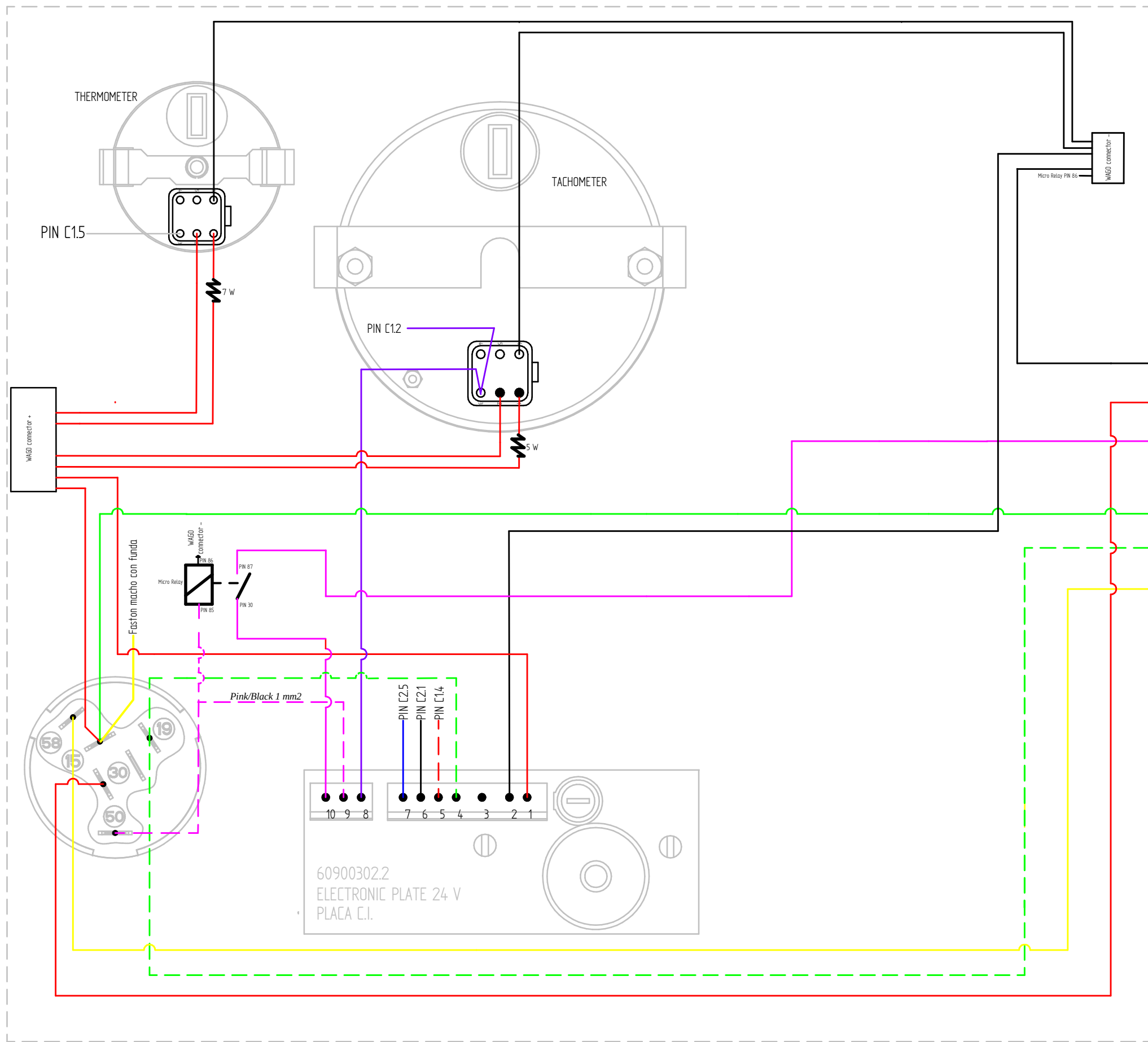
DEUTSCH CONNECTOR



* Especificar siempre en la etiqueta de la instalación la revisión de plano según la que se ha fabricado (ej. Rev. A). Si aún no se ha realizado ninguna revisión poner Rev. -.

Inst. Posterior Panel SVT 20 12 V

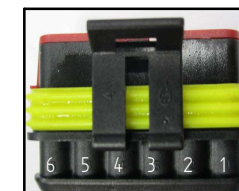
DIBUJADO RUBEN D.	VERIFICADO S.SUBACH	FECHA CREACIÓN 17/02/2016	ÚLTIMA REVISIÓN -/-	PÁGINA
	SOLÉ, S.A.	60910012		1 de 1



- Tachometer Pin 3 — Purple 1 mm2 — C1.2
- Black 1,5 mm2 — C2.2
- Red 1,5 mm2 — C2.4
- Pink 1 mm2 — C1.1
- Elec. plate PIN 5 — Red/White 1 mm2 — C1.4
- Green 1,5 mm2 — C2.6
- Green/White 1 mm2 — C1.6
- Yellow 1,5 mm2 — C2.3
- Elec. plate PIN 6 — White 1 mm2 — C2.1
- Elec. plate PIN 7 — Blue 1 mm2 — C2.5
- Thermometer PIN 3 — Gray 1 mm2 — C1.5

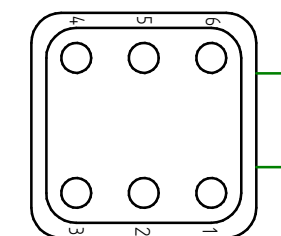


Connector 1 (C.1)



Connector 2 (C.2)

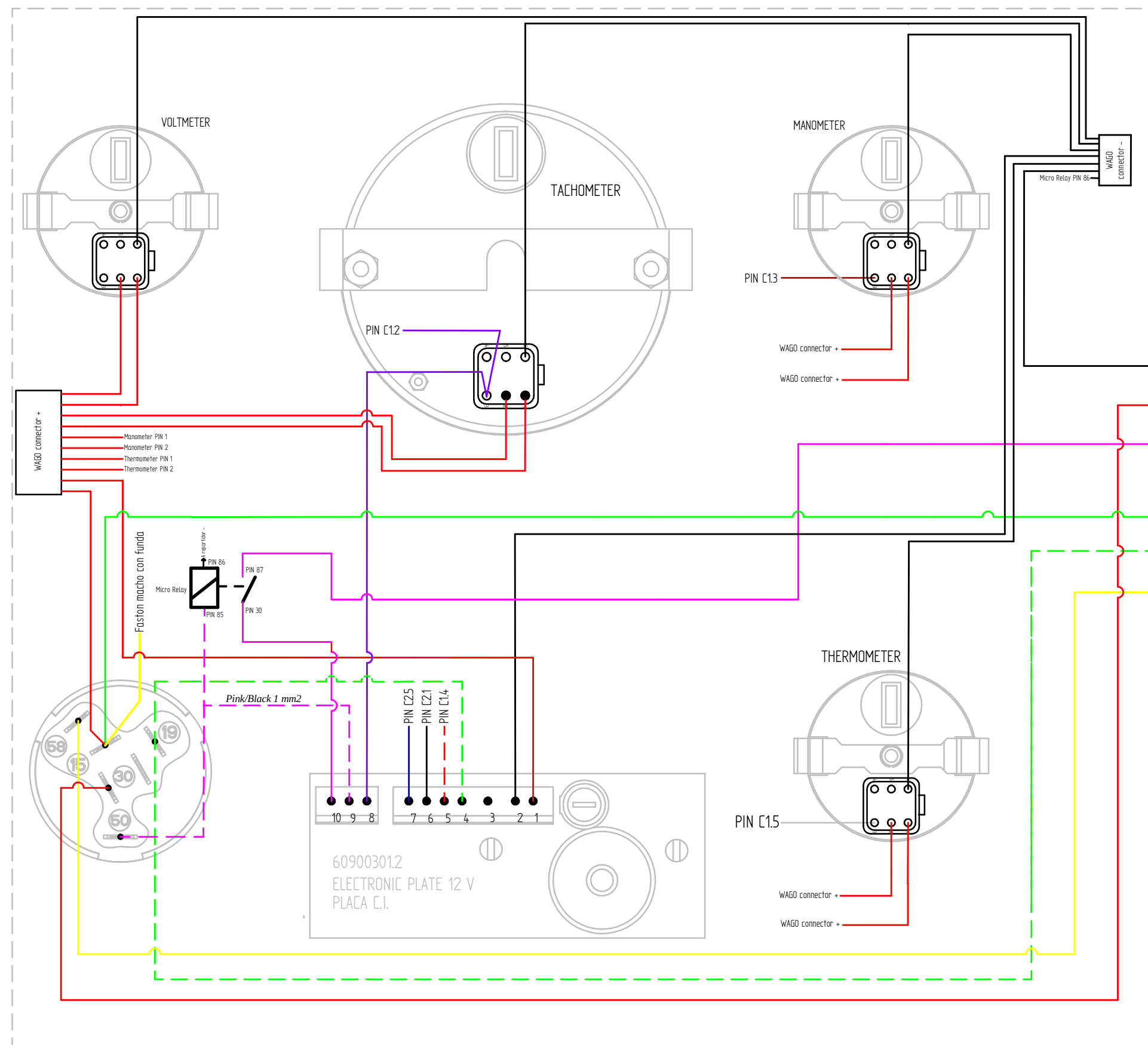
DEUTSCH CONNECTOR



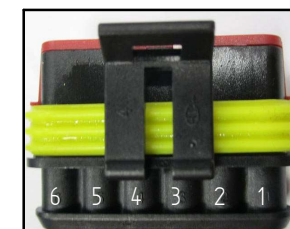
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Inst. Posterior Panel SVT 20 24V

DIBUJADO	VERIFICADO	FECHA CREACIÓN	ÚLTIMA REVISIÓN	PÁGINA
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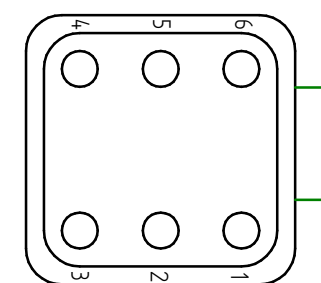


Connector 1 (C.1)



Connector 2 (C.2)

DEUTSCH CONNECTOR

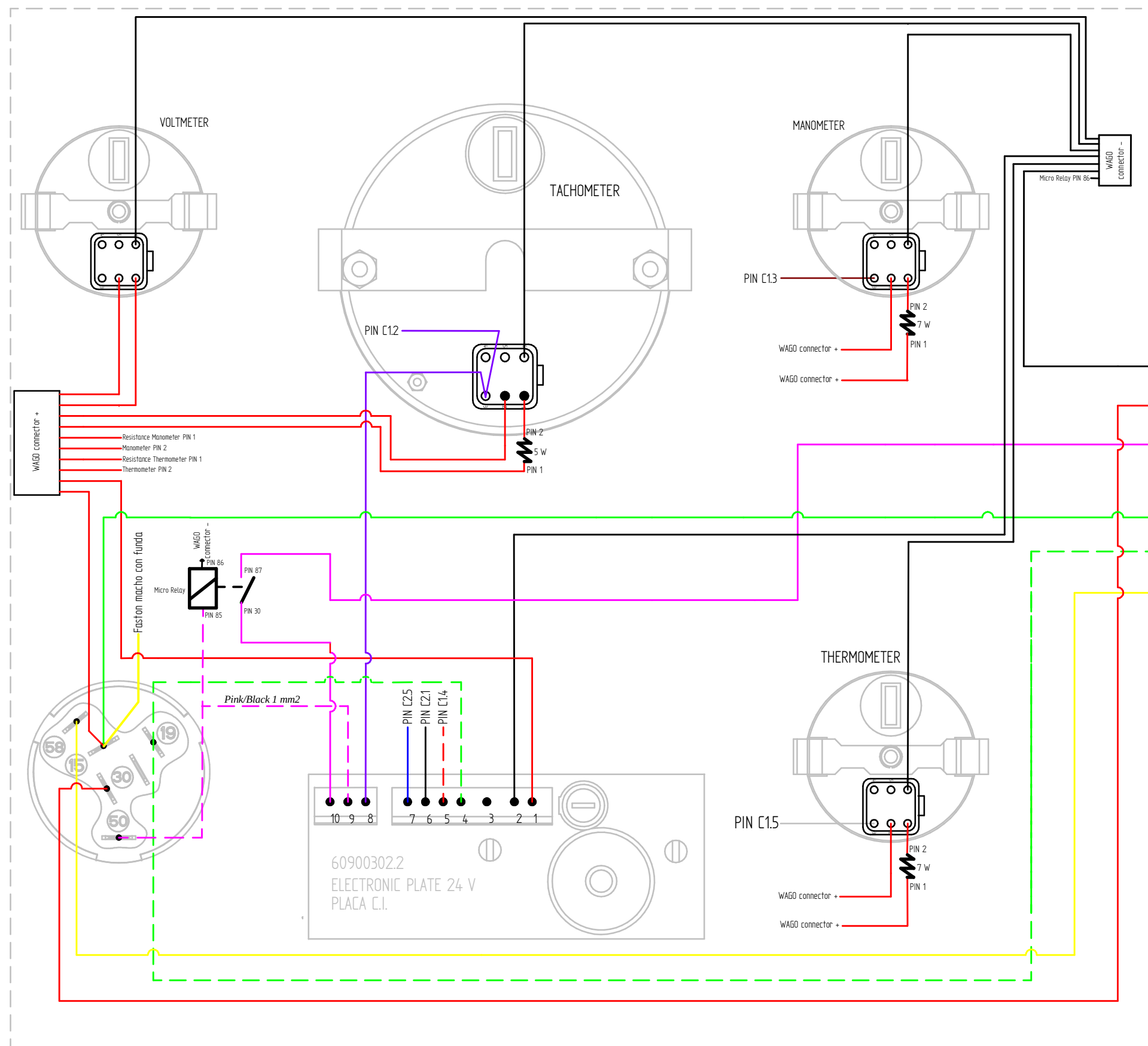


- Tachometer Pin 3 Purple 1 mm2 [C12]
- Black 1,5 mm2 [C2.2]
- Red 1,5 mm2 [C2.4]
- Pink 1 mm2 [C11]
- Elec. plate PIN 5 Red/White 1 mm2 [C14]
- Green 1,5 mm2 [C2.6]
- Green/White 1 mm2 [C16]
- Yellow 1,5 mm2 [C2.3]
- Elec. plate PIN 6 White 1 mm2 [C2.1]
- Elec. plate PIN 6 Blue 1 mm2 [C2.5]
- Thermometer PIN 3 Gray 1 mm2 [C15]
- Manometer PIN 3 Brown 1 mm2 [C13]

* Especificar siempre en la etiqueta de la instalación la revisión de plano según la que se ha fabricado (ej. Rev. A). Si aún no se ha realizado ninguna revisión poner Rev. -.

Inst. Posterior Panel SVT 30 12 V

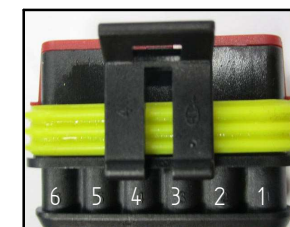
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RUBEN D.	SUBACH	17/02/2016	-/-	
		SOLÉ, S.A.		
		60910014, 60910004, 60910006		1 de 1



- Tachometer Pin 3 — Purple 1 mm2 [12]
- Black 1,5 mm2 [2.2]
- Red 1,5 mm2 [2.4]
- Pink 1 mm2 [11]
- Elec. plate PIN 5 — Red/White 1 mm2 [14]
- Green 1,5 mm2 [2.6]
- Green/White 1 mm2 [16]
- Yellow 1,5 mm2 [2.3]
- Elec. plate PIN 6 — White 1 mm2 [2.1]
- Elec. plate PIN 6 — Blue 1 mm2 [2.5]
- Thermometer PIN 3 — Grey 1 mm2 [15]
- Manometer PIN 3 — Brown 1 mm2 [13]

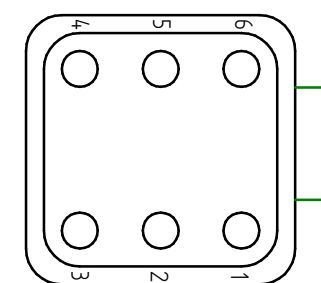


Connector 1 (C.1)



Connector 2 (C.2)

DEUTSCH CONNECTOR



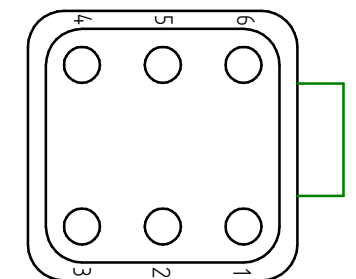
* Especificar siempre en la etiqueta de la instalación la revisión de plano según la que se ha fabricado (ej. Rev. A). Si aún no se ha realizado ninguna revisión poner Rev. -.

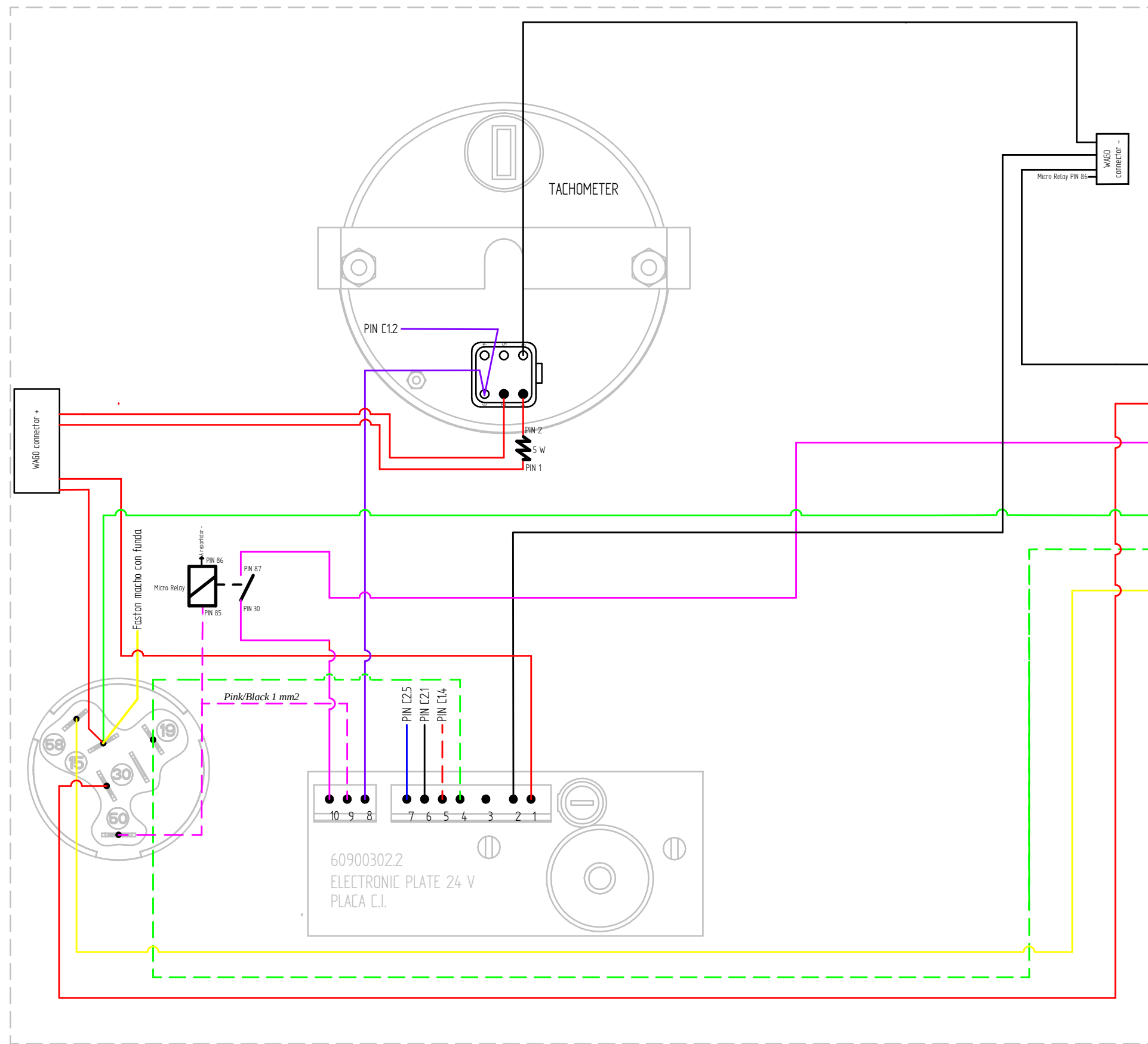
Inst. Posterior Panel SVT 30 24 V

DIBUJADO	VERIFICADO	FECHA CREACIÓN	ÚLTIMA REVISIÓN	PÁGINA
RUBEN D.	SUBACH	17/02/2016	-/-	
		SOLÉ, S.A.		1 de 1
		60910015, 60910005		

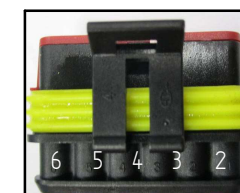


DEUTSCH CONNECTOR



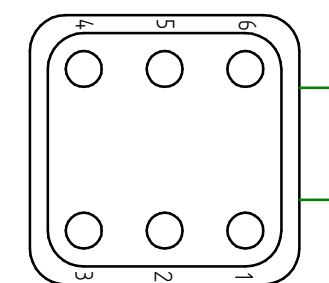


Connector 1 (C.1)



Connector 2 (C.2)

DEUTSCH CONNECTOR



* Especificar siempre en la etiqueta de la instalación la revisión de plano según la que se ha fabricado (ej. Rev. A). Si aún no se ha realizado ninguna revisión poner Rev. -.

Inst. Posterior Panel SVT 40 24V

DIBUJADO	VERIFICADO	FECHA CREACIÓN	ÚLTIMA REVISIÓN	PÁGINA
RUBEN D.	S.SUBACH	17/02/2016	-/-	
		60910017, 60910009		1 de 1





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