

DPWL*: sensore rilevatore perdite gas refrigerante / refrigerant gas leak sensor



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READ AND SAVE THESE INSTRUCTIONS

Semiconductor sensor R22-R134a-R404a-R407a R407c-R410a- version

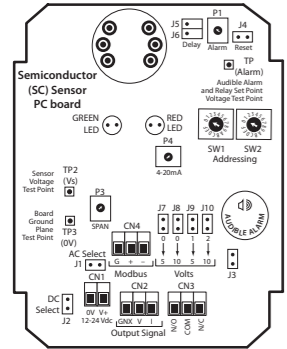


Fig. 1

Infrared sensor CO₂ version

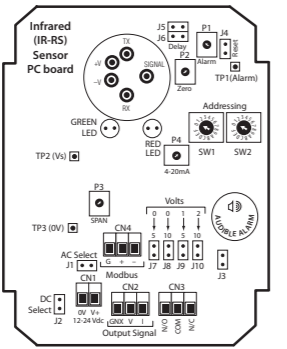


Fig. 2

Infrared R134a-R404a-R407a R410a- version

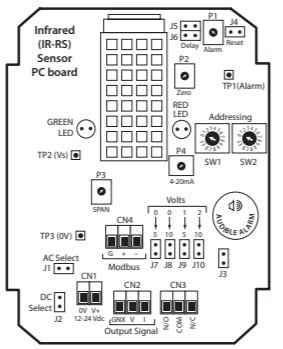
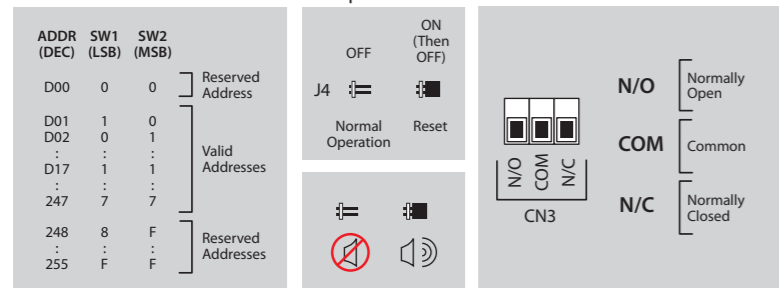


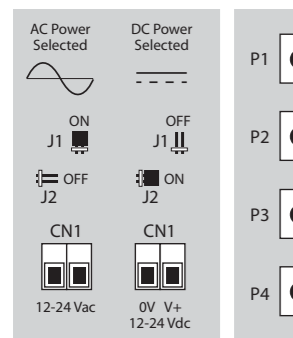
Fig. 3

Legenda:

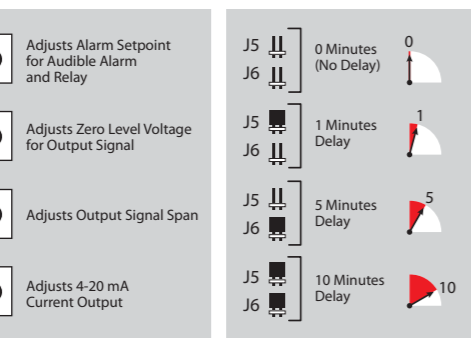
SW1 and SW2 Modbus Addressing J4 Reset Jumper CN3 Relay Connector



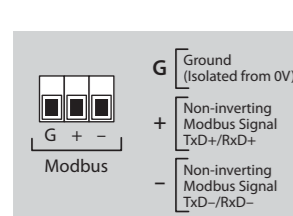
J1 and J2 Power Supply Selection Jumper



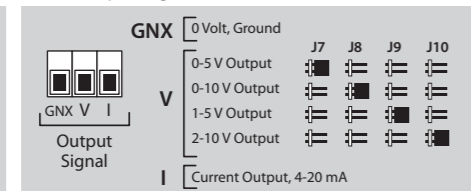
P1-P4 Adjustment Pots for Audible Alarm and Relay



CN4 Modbus Connector



J7-J10 Output Jumper for CN2 Output Signal Connector



ITA

La presente guida ha lo scopo di fornire le operazioni minime da eseguire per una veloce configurazione e messa in funzione del sensore rivelatore di gas refrigerante DPWL alimentato con trasformatore 24Vac. Eseguire la configurazione delle operazioni riportate nell'elenco contraddistinte dal segno ● (quelle evidenziate con il segno - non sono da fare) seguendo la colonna del "tipo di configurazione da eseguire" in accordo al controllo o tipo di collegamento. Per maggiori informazioni consultare il foglio istruzioni +050003510 o manuale tecnico +0300035EN.

Conf.	Elenco delle azioni da fare	Tipo di configurazione da eseguire			Funz. autonomo																
		pRACK /pCO3 (collegamento ingresso analogico 4...20mA)	pCOS/PVPRO/PWPRO (collegamento seriale RS485 Modbus)	IR33 Univ. (collegamento ingresso analogico) Vedi nota 1																	
J1-J2	Configura il tipo di alimentazione Vac J1=PRESENTE - J2=NON PRESENTE Configura il tipo di alimentazione Vdc J1= NON PRESENTE - J2= PRESENTE	●	●	●	●																
J3	Configura il segnalatore acustico J3= PRESENTE = attivo J3= NON PRESENTE = disattivo	●	●	●	●																
J5-J6	Impostazione del ritardo allarme selezionando il jumper seguendo la tabella sotto riportata. Se si ha un collegamento seriale RS485 selezionare J5=Off e J6=Off, impostando il ritardo da parametro via seriale. <table border="1"> <tr> <th>Delay jumper</th> <th>Sounder and Relay Delay</th> </tr> <tr> <td>J5</td> <td>J6</td> </tr> <tr> <td>OFF</td> <td>OFF</td> <td>0 (no delay)</td> </tr> <tr> <td>ON</td> <td>OFF</td> <td>1 minute</td> </tr> <tr> <td>OFF</td> <td>ON</td> <td>5 minutes</td> </tr> <tr> <td>ON</td> <td>ON</td> <td>10 minutes</td> </tr> </table> Legenda: On=Presente Off=Non Presente	Delay jumper	Sounder and Relay Delay	J5	J6	OFF	OFF	0 (no delay)	ON	OFF	1 minute	OFF	ON	5 minutes	ON	ON	10 minutes	●	-	●	●
Delay jumper	Sounder and Relay Delay																				
J5	J6																				
OFF	OFF	0 (no delay)																			
ON	OFF	1 minute																			
OFF	ON	5 minutes																			
ON	ON	10 minutes																			
SW1-SW2	Configura indirizzo seriale: SW1 seleziona gli indirizzi da 1 a 15. SW2 moltiplica il valore impostato su SW1 per un valore 16. Vedi tabella 2 Formula: ID = SW1+(SW2 x 16) Esempio: ID = 17 SW1=1; SW2=1	-	●	-	-																
CN4	Collegare il cavo seriale RS485 prestando attenzione ai collegamenti Default Baud rate 9600. Verificare che il software preveda la gestione del sensore.	-	●	-	-																
CN3	Collegamenti uscita digitale N/O - COM (max 1A/24V)	-	-	●	●																
CN2	Collegare uscita corrente tra 0V e I (vedi Nota 3)	●	-	●	-																
CN1	Alimentare il sensore con trasformatore esterno 12...24 Vac 3 VA (Se si alimenta solo sensore si possono usare i seguenti trasformatori: TRA12VDE00 - pannello, TRADR4W012 - guida omega, TRASP3E120 - a spina);	●	●	●	●																

Tab. 1

Legenda

● da fare - non fare

Note: Usato con controllo IR33 Universale il valore espresso a display in ppm per la versione semiconduttore è x 10, per la versione infrared x100; È possibile alimentare in DC anche prelevando l'alimentazione da pRACK dai terminali +VTerm e GND (J24) In questo caso DPWL - J1 non presente, J2 presente; J7 - J8 - J9 - J10 si configurano solo se si desidera l'uscita in tensione (vedi manuale tecnico).

Cambio del baud rate da 9600 (default) a 19.200

1. Posizionare i commutatori rotativi SW1=F e SW2=F;
2. Cortocircuitare per un breve attimo il jumper J4;
3. Rimpastare l'indirizzo desiderato di SW1 e SW2;
4. Per verificare se è stato cambiato, togliere l'alimentazione e verificare se alla riaccensione il led rosso esegue un lampeggio (conferma dell'avvenuto cambiamento del parametro);

Per cambiare il livello di soglia allarme ppm

1. Collegare il multimetro in volts DC tra TP3 (0V-GND) e TP1 (alarm).
2. Ruotare il trimmer P1 nella scala da 0 a 5Vdc.selezionando il valore (scala lineare). Per il calcolo applicare la seguente formula:

$$V_{(TP1-TP3)} = \frac{\text{ppm (set point desiderato)} \times 5V}{\text{max valore fondo scala ppm}}$$

Es. sensore ver. semiconduttore con set point a 500 ppm $V_{(TP1-TP3)} = \frac{500 \times 5}{1000} = 2,5 V$

max valore fondo scala ppm: Semiconduttore = 1000; Infrared = 10000.

Se possibile, cambiare la soglia allarme da supervisor o parametri modbus.

Esempio selezione indirizzo ID (SW1-SW2)

Address	SW1	SW2	Selection	Address	SW1	SW2	Selection	Address	SW1	SW2	Selection
0	0	0	Reserve	11	B	0	Address 11	246	6	F	Address 246
1	1	0	Address 1	12	C	0	Address 12	247	7	F	Address 247
2	2	0	Address 2	13	D	0	Address 13	248	8	F	Reserve
3	3	0	Address 3	14	E	0	Address 14	249	9	F	Reserve
4	4	0	Address 4	15	F	0	Address 15	250	A	F	Reserve
5	5	0	Address 5	16	0	1	Address 16	251	B	F	Reserve
6	6	0	Address 6	17	1	1	Address 17	252	C	F	Reserve
7	7	0	Address 7	18	2	1	Address 18	253	D	F	Reserve
8	8	0	Address 8	19	3	1	Address 19	254	E	F	9600 Baud rate
9	9	0	Address 9	20	4	1	Address 20	255	F	F	19200 Baud rate
10	A	0	Address 10	21	5	1	Address 21				

Tab. 2

ENG

The purpose of this guide is to describe the minimum operations required for quick configuration and setup of the DPWL refrigerant gas sensor supplied with 24 Vac transformer. Perform the configuration operations shown in the list marked ● (those marked - should be skipped) under the "Type of configuration required" column, depending on the controller used or type of connection. For further information see instruction sheet +050003510 or technical manual +0300035EN.

Conf.	List of operations	Type of configuration required																			
		pRack /pCO3 (4 to 20 mA analogue input connection)	pCOS/PVPRO /PWPRO (RS485 Modbus serial connection)	IR33 Univ. (analogue input connection) See note 1	Stand-alone operation																
J1-J2	Set the type of power supply Vac J1=PRESENTE - J2=NOT PRESENTE Set the type of power supply Vdc J1= PRESENTE - J2= NOT PRESENTE	●	●	●	●																
J3	Enable audible signal J3= PRESENTE = enabled J3= NOT PRESENTE = disabled	●	●	●	●																
J5-J6	Set the alarm delay by setting the jumpers shown in the table below. If an RS485 serial connection is used, select J5=Off and J6=Off, setting the delay by parameter via the serial connection. <table border="1"> <tr> <th>Delay jumper</th> <th>Sounder and Relay Delay</th> </tr> <tr> <td>J5</td> <td>J6</td> </tr> <tr> <td>OFF</td> <td>OFF</td> <td>0 (no delay)</td> </tr> <tr> <td>ON</td> <td>OFF</td> <td>1 minute</td> </tr> <tr> <td>OFF</td> <td>ON</td> <td>5 minutes</td> </tr> <tr> <td>ON</td> <td>ON</td> <td>10 minutes</td> </tr> </table> Key: On=Present Off=Not present	Delay jumper	Sounder and Relay Delay	J5	J6	OFF	OFF	0 (no delay)	ON	OFF	1 minute	OFF	ON	5 minutes	ON	ON	10 minutes	●	-	●	●
Delay jumper	Sounder and Relay Delay																				
J5	J6																				
OFF	OFF	0 (no delay)																			
ON	OFF	1 minute																			
OFF	ON	5 minutes																			
ON	ON	10 minutes																			
SW1-SW2	Set serial address: SW1 selects addresses from 1 to 15. SW2 multiplies the value set on SW1 by value 16. See table 2 Formula: ID = SW1+(SW2 x 16) Example: ID = 17 SW1=1; SW2=1	-	●	-	-																
CN4	Carefully connect the RS485 serial cable. Default baud rate 9600. Make sure the software allows management of the sensor.	-	●	-	-																
CN3	N/O - COM digital output connections (max 1A/24V)	-	-	-	●																
CN2	Connect current output between 0V and I (see Note 3)	●	-	●	-																
CN1	Power up the sensor with 12-24 Vac 3 VA external transformer (if only powering the sensor the following transformers can be used: TRA12VDE00 - panel, TRADR4W012 - DIN rail, TRASP3E120 - plug-in);	●	●	●	●																

Tab. 1

Key

● to do - not to do

Note: When used with the IR33 Universal controller the value on the display in ppm for the semiconductor version is x 10, for the infrared version is x100; DC power is also available from the pRack via the +VTerm and GND (J24) terminals. In this case, DPWL - J1 is not present, J2 is present; J7 - J8 - J9 - J10 are only configured for voltage output (see the technical manual).

Changing the baud rate from 9600 (default) to 19200

1. Switch rotary selectors SW1=F and SW2=F;
2. Jumper terminal J4 for a brief moment;
3. Reset the desired address on SW1 and SW2;
4. To make sure that the setting has been changed, power down and when restarting check that the red LED flashes (confirming the parameter has been changed);

Changing the alarm threshold in ppm

1. Connect the multimeter with DC voltage setting between TP3 (0V-GND) and TP1 (alarm).
2. Turn trimmer P1 on the scale from 0 to 5Vdc to select the value (linear scale). For the calculation apply the following formula:

$$V_{(TP1-TP3)} = \frac{\text{ppm (set point desiderato)} \times 5V}{\text{max valore fondo scala ppm}}$$

E.g. semiconductor ver. sensor with set point 500 ppm $V_{(TP1-TP3)} = \frac{500 \times 5}{1000} = 2,5 V$

max. full scale ppm value: Semiconduttore = 1000; Infrared = 10000.

It is possible change the threshold alarm by supervisor or modbus parameter.

Example address ID settings (SW1-SW2)

Address	SW1	SW2	Selection	Address	SW1	SW2	Selection	Address	SW1	SW2	Selection
0	0	0	Reserve	11	B	0	Address 11	246	6	F	Address 246
1	1	0	Address 1	12	C	0	Address 12	247	7	F	Address 247
2	2	0	Address 2	13	D	0	Address 13	248	8	F	Reserve
3	3	0	Address 3	14	E	0	Address 14	249	9	F	Reserve
4	4	0	Address 4	15	F	0	Address 15	250	A	F	Reserve
5	5	0	Address 5	16	0	1	Address 16	251	B	F	Reserve
6	6	0	Address 6	17	1	1	Address 17	252	C	F	Reserve
7	7	0	Address 7	18	2	1	Address 18	253	D	F	Reserve
8	8	0	Address 8	19	3	1	Address 19	254	E	F	9600 Baud rate
9	9	0	Address 9	20	4	1	Address 20	255	F	F	19200 Baud rate
10	A	0	Address 10	21	5	1	Address 21				

Tab. 2

Esempio schemi di collegamento / Example connection diagrams

pRack / pCO3 (collegamento Ing. Analogico 4...20 mA) / pRack / pCO3 (4 to 20 mA analogue input connection)

Sensore / Sensor

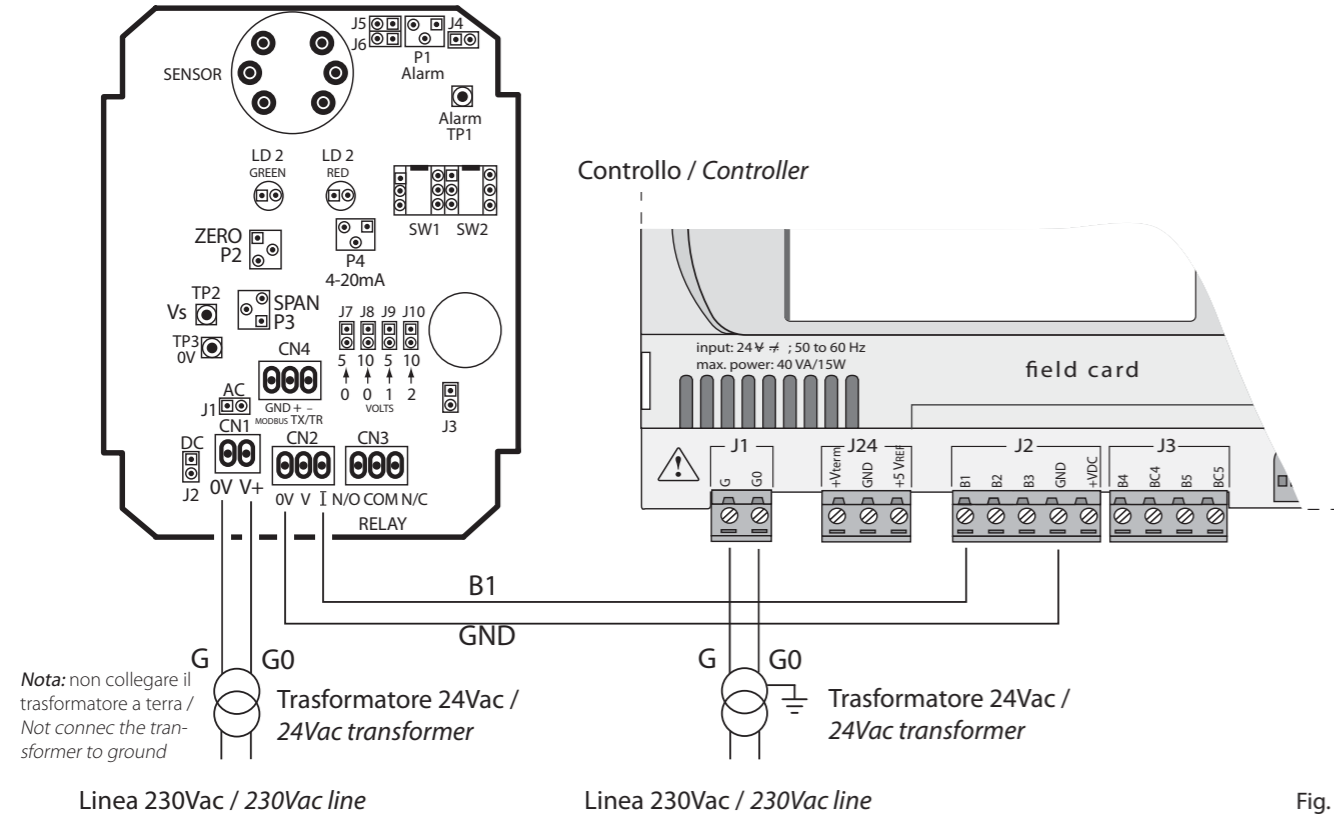


Fig. 3

pCO5 / PVPRO / PWPRO (collegamento RS485 Modbus) / pCO5 / PVPRO / PWPRO (RS485 Modbus connection)

Sensore / Sensor

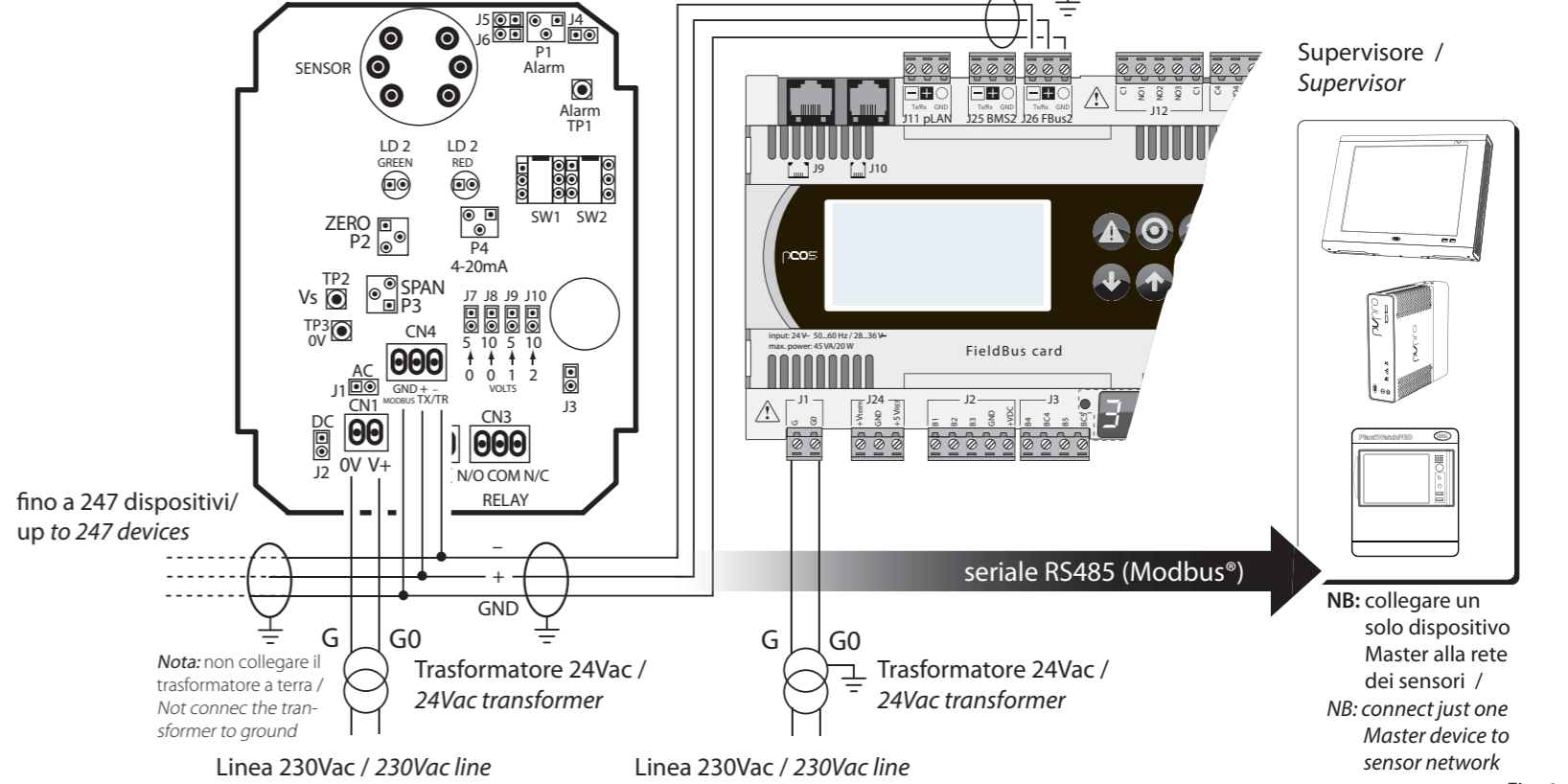


Fig. 4

ir33 universale (collegamento Ing. Analogico 4...20 mA) / ir33 universal (4 to 20 mA analogue input connection)

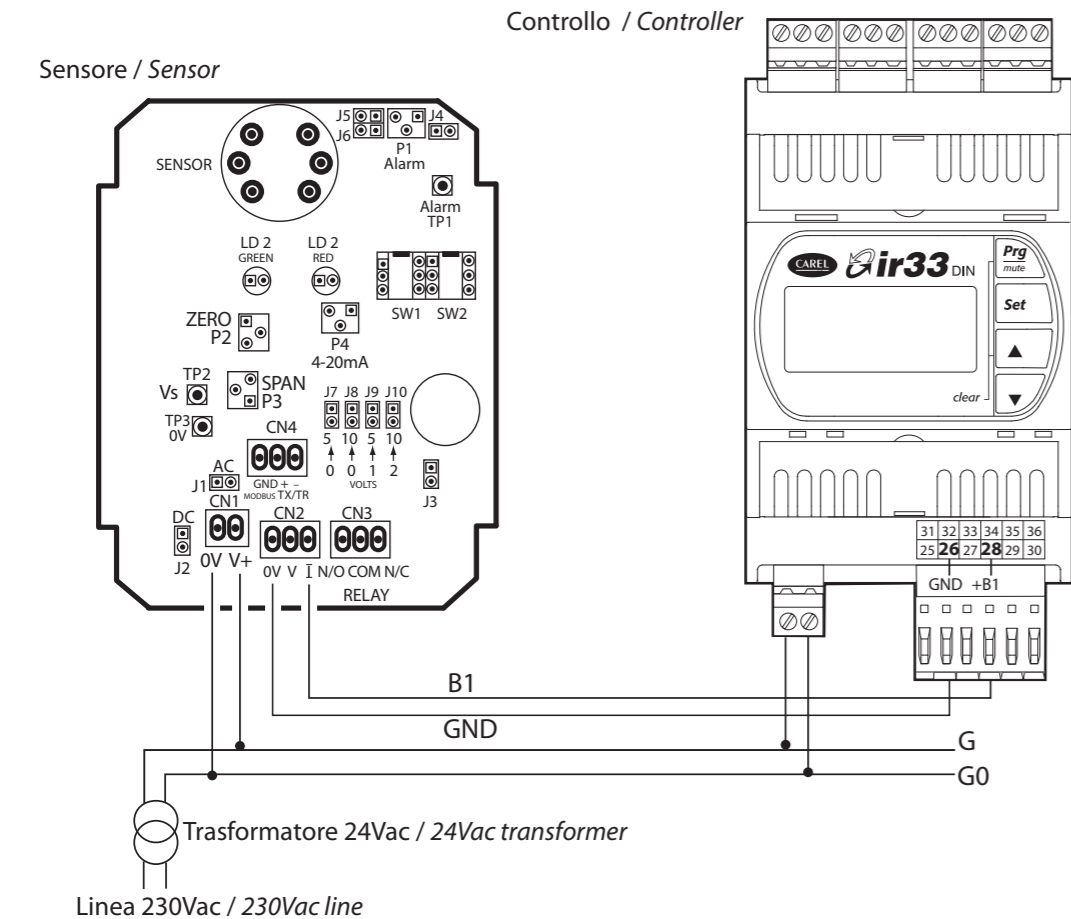


Fig. 5

Funzionamento autonomo / Stand-alone operation

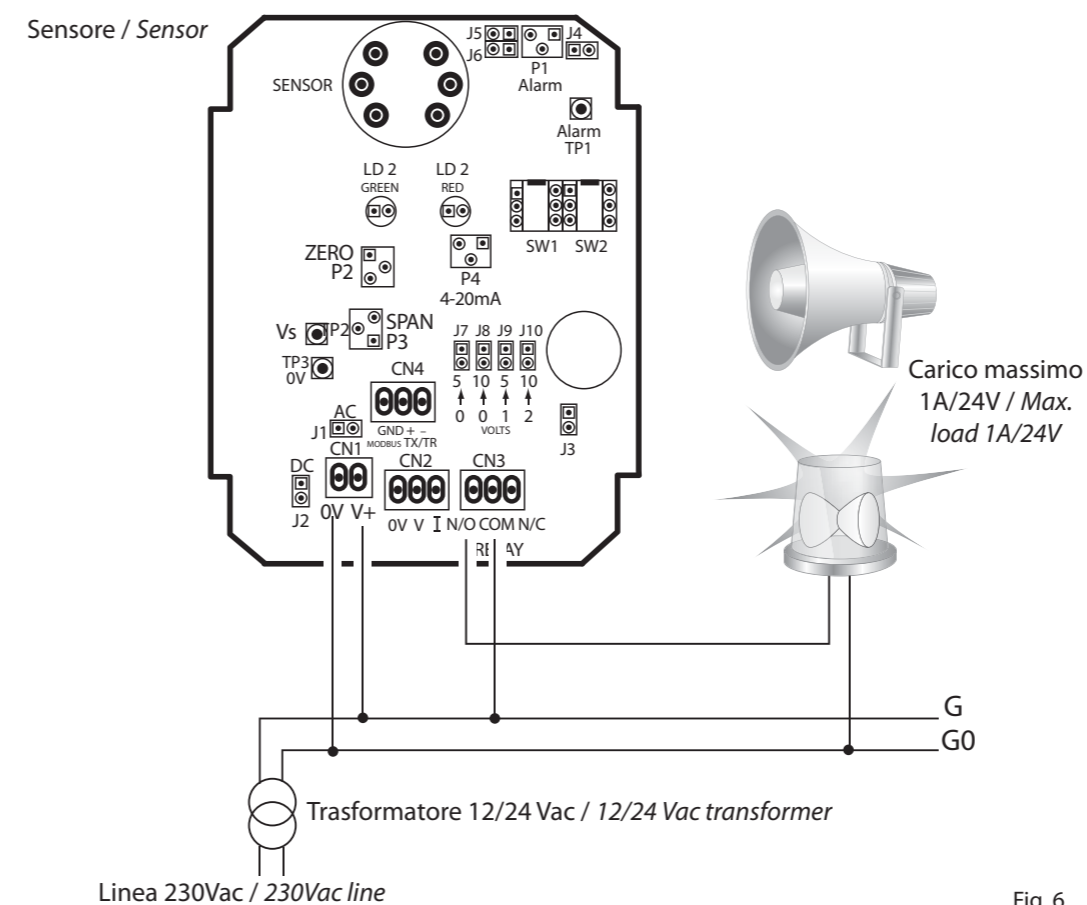


Fig. 6

- ITA**
- Per la configurazione dei controlli seguire le istruzioni riportate nei relativi manuali;
 - è possibile collegare il sensore contemporaneamente l'uscita analogica di un controllo, l'uscita digitale per gestire un allarme locale e un collegamento seriale RS485 Modbus con il supervisore.

- ENG**
- For configuration of the controllers follow the instructions shown in the corresponding manual;
 - the sensor can be connected at the same time with the analogue output to a controller, the digital output to manage a local alarm and RS485 Modbus serial connection to the supervisor.