12. Diagnostics

12.1 Troubleshooting

12.1.1 Reset alarm

The alarms are not saved. To deactivate an alarm, the cause that generated it must be removed.



CAUTION! The controller automatically restarts as soon as the alarm condition is cleared.

12.1.2 Common problems

Following are the most common problems that are not due to faults.

Problem	Cause	Solution
The configuration cannot be changed	The **ENTER** and **ESCAPE** keys were released before the "-- Operation Mode -- Now Available" message appeared Or the **ENTER** and **ESCAPE** keys have not been pressed or released simultaneously.	Correctly perform the procedure. See "Select a configuration" on page 61.
The keys do not respond when pressed	The microprocessor is executing complex algorithms.	Wait a few seconds and retry.
	Connection between surveillance board and absent power board.	Check the connections.
TX2 LED flashes but the RX2 LED does not flash in response	Power board damaged.	Contact Selpro customer service.
TX2 LED is off	Connection between surveillance board and absent power board.	Check the connections.
	Surveillance board damaged.	Contact Selpro customer service.
The "Function not allowed" message appears	An unavailable menu/function has been accessed	Press the **ESCAPE** key.

12.1.3 Alarm messages

***Note**: the priority with which the messages are displayed is equal to the order they are shown in the table. A priority alarm is displayed before less important alarms.*

In the event of an alarm:

- The display flashes and the relative message appears in the first line.

  ***Note**: the message appears only if the controller is in working mode. If during this programming step, it only appears at the output of this step.*

- Relay **RL1** is de-energized and the **FAIL** LED turns on.

Message	Cause	Solution
Step error	Step switching error	Unrecoverable internal error, try turning off and restarting the device. If it repeats often, replace the equipment
PWR Thermal	Autotransformers thermal contact opening	Wait for the autotransformer to cool Check that the controller is installed in a ventilated room away from direct sunlight. Make sure room temperature is under 50°C.

Message	Cause	Solution
PWR Fail	No phase on the power supply	Make sure the power cables are correctly connected and that the terminal board screws are tight. If applicable, make sure the fuses in series at power supply are integral.
T.K. Alarm open	External thermal overload protection contact open **TK**	Make sure the connected circuit breakers are closed and correctly connected in series. Make sure the wires are correctly connected to the **TK** contact and that the screws are tight.
Board Overtempt	Regulation stopped due to control board exceeding the maximum working temperature (85 °C)	Check that the controller is installed in a ventilated room away from direct sunlight. Make sure room temperature is under 50°C.
Power Overtemp	Regulation stopped due to power board exceeding the maximum working temperature (85°C)	Make sure the controller is correctly installed, see "Wall mount" on page 24.
Max current	Instant current above maximum limit.	Check the load conditions of the device
I2t current	Heat current above maximum limit	
OverVoltage	Power supply voltage above maximum limit	Excessive power supply voltage, check the power supply voltage to the device. Check the autotransformer connections
UnderVoltage	Power below minimum limit	Power supply voltage insufficient, check power supply voltage to the device
Bad measure	Internal memory damaged	Unrecoverable internal error, replace the device
Restart	Internal arrangement of the parameters, outputs temporarily not available	If it stays steady, replace the device
Peripheral KO	Hardware connection between logic board and blocked power	Unrecoverable internal error, try turning off and restarting the device. If it repeats often, replace the equipment
Under Range or Open	Input signal under minimum value. See "Minimum and maximum limits for inputs IN1 and IN2" on page 82	Make sure the set configuration is suited to the control signal used. Make sure the transducer/sensor/probe is correctly connected.
Over Range or Short	Input higher than maximum value. See "Minimum and maximum limits for inputs IN1 and IN2" on page 82	Make sure the input used is foreseen by the configuration in use (parameter **Step**). Make sure the transducer/sensor/prove is in good conditions and working,

12.1.4 Minimum and maximum limits for inputs IN1 and IN2

Following are the minimum and maximum limits with a precision of ±5%.

Configuration	Minimum limit	Maximum limit	Unit of measure
rS-020	-	> 24	mA
rS-010	-	> 11	V dc
rS-420	< 2	> 24	mA
rPr420	< 2	> 24	mA
rPr015 (*)	< 2	> 24	mA
rPr025 (*)	< 2	> 24	mA
rPr030 (*)	< 2	> 24	mA
rPr045 (*)	< 2	> 24	mA
rPr050 (*)	< 2	> 24	mA
rUu-05	-	> 5.5	V dc

Configuration	Minimum limit	Maximum limit	Unit of measure
rPu030 (*)	-		V dc
rUu010	-	> 11	V dc
rtE-01		> 100	°C
rtE-02	< 11	> 100	°C

12.1.5 Warning messages

***Note**: the priority with which the messages are displayed is equal to the order they are shown in the table. A priority alarm is displayed before less important alarms.*

Possible warning messages are shown below:

Message	Cause	Solution
TK Warning	External overheat protection contact open TK (with SW1-3 = ON).	Check the cause of opening contact TK.
SlaveSafe KO	4-20 mA signal at input IN3 < 2 mA or >23 mA, see "Switching of setpoint following the ambient temperature from IN3 (Bank Switch)" on page 50.	Check the connections to IN3 Check for and check the value of the 4-20 mA signal at input IN3
Bad step	Bad step: the equipment automatically skips to the next step	Check the connections of the two autotransformers and check the voltage present at their connection terminals. If the error repeats frequently, replace the equipment and/or the autotransformers