

10 Troubleshooting

This section gives information about the procedures which shall be performed in case of abnormal operation. If you fail to fix the problem consult authorized technical service with the following information:

- ▶ Model and serial number of the UPS, which can be found on the nameplate on the rear of the UPS. This information is also available in the test report provided with the UPS.
- ▶ ALR and ST codes in the ALARMS menu



Hazardous voltage and high temperature metal parts inside even if the UPS is disconnected. Contact may cause electric shock and burns. This unit is to be served by authorized technical personnel only.

Alarms and problems you may encounter during operating the UPS are given in the table below.

If you have noticed an abnormality in operation; check the protective earth connections, examine the circuit breaker positions, read alarms from the ALARMS menu and refer to the table. Apply all suggestions corresponding to each alarm. If your issue is excluded or the suggested actions do not solve your problem, consult the technical service.

Alarm	Possible Cause	Action
BYP BAD alarm is present	Bypass mains voltage is different than the inverter reference signal	Make sure that the bypass circuit breaker is "I"/"ON" (if the UPS has no separate bypass mains input, make sure that the input circuit breaker is "I"/"ON").
	(e.g. its beyond its limits or it has a total harmonic distortion > %10)	
VBYP HIGH alarm is present	Bypass mains voltage is higher than its upper limit	Check if the bypass mains voltage is in specified limits
VBYP LOW alarm is present	Bypass mains voltage is lower higher than its lower limit	
BYP SYN FL alarm is present	Frequency of bypass mains voltage is beyond the frequency range for bypass operation or bypass mains voltage is very low	
BYP SEQ FL alarm is present	Phase sequence of bypass mains voltages is not OK	Phase sequence of the separate bypass mains input shall be changed. Consult technical service
MAN BYP alarm is present	Manual bypass switch is "ON"	Check the position of the manual bypass switch.
INV OVTE alarm is present	Inverter block temperature is very high	Check if there is an overload and remove the excessive load. Measure the ambient temperature near UPS. Make sure that the temperature is in specified limits. Check if the fans are running.
OUT OVLD alarm is present	Rms current drawn from any of the output lines exceeds its nominal value	Check if there is an overload and remove the excessive load. If the total power drawn by the load is less than the nominal power, make sure that it is distributed evenly between phases.

Alarm	Possible Cause	Action
INV BLKD alarm is present	Inverter operation is automatically stopped due to a fault	Consult the technical service
VSEC NOK alarm is present (Output voltage is beyond its limits)	The UPS may not started up yet. This alarm is permanent if the UPS is intended to be started with the bypass blocked or when the bypass mains is not in specified limits	<p>Make sure that all circuit breakers is "I"/"ON"</p> <p>Check if there is any other alarms and apply the related suggestions</p> <p>Examine the preferences, check the mains voltages and read the "modes of operation" section of the manual. Determine if the combination of line voltages and preferences does inhibit the UPS operation.</p>
	The UPS may have stopped to feed the load because the combination of the mains conditions ant the user preferences made from the COMMANDS menu does not allow the UPS to work in any of the operation modes.(e.g. if inverter is disabled and both input and bypass mains voltages are not acceptable or if the rectifier is disabled when the bypass voltage is not in specified limits or batteries may be discharged during a prolonged outage)	
	The output circuit breaker is "0"/"OFF"	
VIN HIGH alarm is present	Input line/neutral voltage is higher than its upper limit	Check if the bypass mains voltage is in specified limits
VIN LOW alarm is present	Input line/neutral voltage is lower than its lower limit	
IN SYN FLR alarm is present	Frequency of mains voltage is beyond the frequency range for normal operation or mains voltage is very low	Check if the mains voltage is in specified limits
IN SEQ FLR alarm is present	Phase sequence of input mains voltages is not OK	Phase sequence of the mains input shall be changed. Consult technical service
RECT OVTE alarm is present	Rectifier block temperature is very high	<p>Measure the ambient temperature near UPS.</p> <p>Make sure that the temperature is in specified limits.</p> <p>Check if the fans are running.</p>
RECT OVLD alarm is present	RMS current drawn from any of the input lines exceeds its nominal value	Check if there is an overload and remove the excessive load.
VDC HIGH alarm is present	Any of the DC bus voltages is higher than its upper limit	Consult the technical service
VDC LOW alarm is present	Any of the DC bus voltages is lower than its lower limit Means that the batteries had discharged. It is removed when the rectifier resets.	If you encounter this alarm during start-up, check if the inrush circuit breaker is "ON"/"I".
		Charge the batteries, perform battery test and check if the alarm has removed.
RECT BLKD alarm is present	Rectifier operation is automatically stopped due to a fault	Consult the technical service

Alarm	Possible Cause	Action
VDC NOK alarm is present	Any of the DC bus voltages approaches its lower or upper limits May mean that the batteries have approached to their lower voltage limit and are almost empty.	Charge the batteries, and check if the alarm has removed.
AMB OVTE alarm is present	Ambient temperature exceeds its upper limit	Measure the ambient temperature near UPS. Make sure that the temperature is in specified limits.
GEN ON alarm is present	Generator friendly operation is activated (digital input "GEN ON" is set high)	Check the "GEN ON" input
UPS OFF alarm is present	Emergency stop is activated (digital input "UPS OFF" is set high)	Check the "UPS OFF" input
BATT FAILED alarm is present	Batteries failed in the battery test	Perform the test again when the batteries have been charged for a long time and the battery circuit breaker is "I"/"ON" Check if the alarm continues
BATT C. OPEN alarm is present (A difference between battery & DC bus voltage is present)	Battery circuit breaker (F5) is probably open ("0"/"OFF")	Make sure that the battery circuit breaker is "I"/"ON". If not do the following: -Check the rectifier preference and enable the rectifier. -Make sure that the input mains voltage is in specified limits. -Make sure that the UPS has switched to normal mode and close the battery circuit breaker.
	The battery circuit breaker of the external battery cabinet is open ("0"/"OFF")	Make sure that the battery circuit breaker of the external battery cabinet is "I"/"ON". If not do the following: -Check the rectifier preference and enable the rectifier. -Make sure that the input mains voltage is in specified limits. -Make sure that the UPS has switched to normal mode and close the battery circuit breaker.
	Battery fuses of the battery circuit breaker (F5) or the external battery cabinet may have blown	Check if the battery fuses are blown. Replace if necessary (see maintenance section)
	There is no battery in the system	Batteries shall be supplemented. Consult technical service