



Technical Customer Information

KI0205e0

**Error check list, error messages,
error causes, correctives for DSV
5444/5445 (Lift)**


12.12.02

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Check-it:

Before sending your inverter DSV5444/5445 for repair please check the following:

Error	Operation	Comment
BB off (instantly after switching power on)	1) Check encoder and connection 'X3' (if necessary 'XA' / 'XC'), jumper 'JP3' is not positioned correctly (1Vss or TTL/HTL)	Read the operating instructions!
	2) PTC thermistor plug not connected, one of the phases at L1...L3 is missing	Series fuses ok?
	3) Short-circuit at either 'X1' or the plugs of encoder or interface: measure pin 20 and 22 at 'X1' against pin 18 (at each case approx. 15V?), measure pin 3 against pin 4 at 'X3' (5V not there? -> as a result of short-circuit at 'X3', 'XC' or 'X4' caused the defect of the internal fuse 2,5A, if you can measure none of the voltages the power-unit is defect -> send for repair!)	Disconnect all plugs!
	4) emergency evacuation activated, but flag 0E62 not set to '0'	'E1' resp. '0E62' ok?
BB instantly off (after ISP and E0)	1) Short-circuit at the motor terminal plate (humidity?), defect motor supply cable, contactors defect, motor winding defect, foreign particles	Insulation test?
	2) Encoder-cable-shield not or only one-sided contacted to the housing	Measure against „PE“
	3) Power stage or AddOn of the inverter defect (send for repair)	
	4) IIdt-timer value (0E5A) is below 250ms (set it to 5000ms)	
BB off after a few seconds	1) IIdt error, because of wrong rotating field allocation or phase-sequence of the motor, or motor is not connected at all	U1, U2, U3 -> U, V, W (motor)
	2) Motor temperature too high or thermistor is not working correctly or defect	
	3) Mechanical stiffness (the brakes unlock not totally)	
Motor is rotating very slow or is jerking	1) Phase-sequence, phase angle, encoder pulse numbers or number of motor poles wrong, resp. slow speed instead of high speed connected (modification – plant with old motor)	Rating plate?
Motor causes heavy noise ('growling')	1) Amplification values (parameters 'k' and 'f7') adjusted too high, or possibly encoder-cable-shield is not or only one-sided contacted to the housing	
	2) JP3-flag 0E3E is set to '0' although no 1Vss-Encoder is in use	
extraneous voltage 24V short-circuited	1) Input/Output at 'X1' or 'X2' short-term over voltage more than 30Vdc (Transilidiodes break through -> possibly you have to remove them)	Avoid suspending mass as far as possible
Parameter can not be modified	1) Data safety switch between 'X3' and 'X4' set to 'R' (at the top) -> set it to 'RW' (lower position)	
	2) wrong password or special software inside	
After changing data the drive does not work	1) Variable/parameter, by mistake, transferred via FU-Control during the run, modified and stored later	Transfer the software again from PC to inverter
After changing the software the drive does not work	1) 40-MHz-software transferred into 50-MHz-inverter (or contrary). Wrong update transferred, chosen option board not compatible with software (resp. important in regard of 12-bit and 16-bit resolver)	Read the operating instructions!
Motor is accelerating very slow	1) Parameter 't' wrong: 'old' silumin motors often have only double-digit values, new ones always have triple-digit values from 150 to 450 (asynchronous gearless even from 550 to 750)	Read the operating instructions!
	2) Parameter 'f0' wrong: at 10...15A-inverters 'f0'-value can be till 850, for others normally have typical values from 300 to 600	
Motor oscillates during constant motion	1) I-part 'run' too small: at all 50-MHz-inverters and 40-MHz-inverters with special software (LIFT7TZ, LAST7TZ) the I-parts 0E1C and 0E1E can be modified separately (set 0E1E to approx. 2...5 times higher than 0E1C)	Read the operating instructions!
Motor jerks heavy during the start-up process	1) Values 'start delay', 'starting jerk speed' and 'starting jerk time' chosen unfavourable or 'P-parts' too weak and 'I-part stop and hold' not small enough (possibly mechanical system defect?)	Read the operating instructions!

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Motor jerks heavy during the approach	1) 'Ve' too high ('stop distance to floor' and 'return ramp' are not compatible), approach too much direct in the case of heavy cabin, ramp 'B' too steep 2) In case of 50-MHz-software: possibly value 0E12 is to set lower than 'Ve'	Read the operating instructions!
Synchronous gearless does not run correctly	1) Primary initialisation faulty, phase angle ignored, encoder during the run dis- and reconnected 2) Encoder cable faulty (in case of using cable shielded in- and outside either both to Pin 12 or use metallised housing encoder (resp. manufacturer Thora SON 2100 Nr. 47150M25T001)	Read the operating instructions!
In spite of 'BB' on there is no connection to the PC	1) WinDietz-version too old (at least 1.16b or higher), interface cable wrong wired (attention: special type of interface cable), wrong 'COM' or wrong inverter resp. wrong application chosen: Chose '5445' at 'Converter', the used 'Comport' (mostly interface 'COM1') and at 'Application' chose 'LIFT_D.CNF' (or for experts LIFT1SX.CNF), [please update at least every 3 months the folder DATEN via internet)	SUB-D-9-female to SUB-D-9-female, pin 2 to 2, pin 3 to 3, pin 5 to 5, pin 8 and pin 5 bridged and cable-shield to housing

Important data, that you necessary need for adjusting the plant and for technical queries.

Anyway, it does not work...	Please note – before calling the hotline – the following data, so that we can check the condition of hard- and software.	0049 7025 101-42 or -29
M.Nr.:		6-digit number, rating plate top right
Type of inverter:		resp. 5445-20/400
Motor data:		resp. 1450Upm 50Hz 11kW 23A
Encoder data:		resp. 1024 1Vss sin/cos
Suspension:		resp. 2 to 1
Transmission:		resp. 37 to 1
Drive wheel:		resp. 480mm
Velocity:		resp. 1m/s
Load capacity:		resp. 1000kg

A choice of error messages

Error message	Meaning/correctives	Comment
"Rot. encoder err"	Encoder not connected or defect. Encoder type (sin/cos, TTL, HTL) chosen wrong. Encoder cable wrong wired or defect.	check Jumper JP3, encoder connection
"I2dt"	IIdt value too high (over current for a too long time) caused by: overload, control deviation, wrong motor, wrong encoder connection, brake locked or grinding during the run, mechanical stiffness, wrong FU settings.	
"Phase failure"	Line voltage not beneath the specification; one phase is missing, or voltage is too low.	resp.Un +/- %
"DC link over V"	The DC link voltage is too high. Brake resistant not connected electrically, or wrong value chosen, internal brake chopper defect, GND fault motor or brake resistant.	Uk max = 700V at Un =400V 3AC
"DC link under V"	The DC link voltage is too low. Line voltage too low, line voltage breakdown. Charging circuit defect. Short voltage breakdown: means error stored	Uk min = 300V RESET
"Temp rectifier"	The temperature of the cooling element is too high. overload, output current too high for a long time, ambient temperature too high, fan defect, inverter dirty	80°C - 90°C
"PTC therm. error"	Thermistor input: motor temperature too high, not bridged, thermistor input or thermistor defect	Motor temperature 120°C - 185°C

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"Short circuit"	Short-circuit and/or GND fault at the motor clamps, wrong parameter settings F0, t, p-gains, switching at the inverters motor output during current flow, short-circuit while disconnected motor means DSV is defect	approx. 2 times In momentary
"Parameter error"	Different checksum RAM and EEPROM. Overflow after calculation of customer units in command program, command program defect. Check settings and command program!	"save values ?" effects new, updated checksum
"RS485"	The communication from controller board to FU-Contol is faulty.	

A choice of operation modes

Operation mode message	Meaning	Comment
"All is okay"	No error.	
"Pulse inhibit"	The input ISP is low; the inverter is off.	Put values in for all settings and store here exclusively.
"Rdy to switch on"	The inverter is waiting for start command.	
"Speed control"	Start command is present, operation mode is "Speed control".	
"Posit. control"	Start command is present, operation mode is "Posit. control".	
"Analog mode"	Start command is present, the set point is given analogue.	resp. Beringer Hydraulik Lift

A choice of menu item "inspect interface" messages

Message	Meaning	Comment
leer	No command is given; menu activated just now	
(frei)	ISP and E0 active, the motor is energised, holding torque, the brake unlocks (output A9)	
(V3)(an)	Drive command V3 is active.	
(Vi), (V1), (V2), (Ve), (Vn)	Active drive command Vi, V1, V2, Ve resp. Vn	
(Ve)(go)	Electrical braking operation at approach speed Ve.	
(pos), (lpos)	Position control and electrical stop in level position.	
(npos)	Position control stopped outside of the exact level position, run abortion caused by ISP and/or E0.	
(V0)	Drive signals V3 - Vn withdrawn, contact bounce, error during the run.	
(aus)	End of run caused by ISP and/or E0 withdrawn.	



The tables shown above are not completed. Depending on the chosen software some displayed messages are not shown here, or had to be added. Some of the error messages will be reseted automatically depending on the chosen software and their settings. The messages although can be readout of the fault and event memory. You can find further information in the actual operating instructions (subject to technical changes).