TROUBLE SHOOTING AND DIAGNOSIS CBD4

Description
If there is a problem with a system with CBD4 not working properly there are two
tools for help to get the system working or to find the reason for the error:
A trouble shooting guide that gives you a check list and a diagnosis tool that offers
the possibility to read out error registrations from the system itself.

Trouble Shooting
User:

Symptom	Check	Try
The desk does not run	Is the main connected to the control box?	Try to connect a lamp or similar to the main supply to check that the supply voltage is OK
	Are all plugs mounted correctly in the control box and to the leg? *See drawing*	Check all connections
	Are there any visible damages on cables, controls, the control box or legs?	Damaged parts must be exchanged – contact Service
The desk stops and can only run in the opposite direction	Is the desk in fully extracted position?	When the desk has reached its upper position it can only run downwards
	Is there much load on the desk compared to when the desk functioned normally?	Remove some of the load and try again
The desk will only run downwards even though the desk is not overloaded		Perform **Basic setting**
The desk does not run with full stroke length upwards. Always stops at the same position		The system has set a new end-stop outwards. Perform **Basic setting** to remove this stop

Basic setting:
Push the arrow downward button. The legs run in bottom position and keep the pressure on the
button for min. 6 seconds after all legs have reached bottom position. At certain error types this
must be done twice in succession. Now the desk is in initial position.

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Service:

Symptom	Check	Try
The desk does not run at all. No movement is observed	Defective handset or control box. Poor connection. Mains cable fallen out. No voltage on the mains cable.	Check all connections. Check that there is voltage in the mains plug. Connect a handset that you know is OK. If it can run the handset is defective. If this does not help the control box is defective.
Not all legs run when you run the desk downwards	The leg(s) that do not run are defective or the cable connection for the leg(s) are not OK	Change leg/cable, starting with the cable
The desk is in lower position and will not run up. You cannot see whether all legs are moving	The desk is overloaded	Remove some of the load on the desk
	One or more legs are defective or the cable connection between leg(s) and control box is not OK	Remove all motor cables from the control box. Mount one leg at a time in channel 1, perform **Basic setting** and hereafter run a bit upwards. If a leg will not run upwards after **Basic setting** it is defective. Try to exchange the motor cable before exchanging the leg.

Diagnose

CBD4 with software 0077402 version 1.86 and other new versions are able to show an error diagnose.

If an error that stops the system occurs, the CBD4 will alert with an error statement, if the CBD4 is not out of action e.g. mains fuse broke or defect transformer.

Too view the error states a control DP1C with display is needed (all DP1C's, which are produced after March 1, 2006 are suited). Should more errors occur at the same time, up to 6 error states can appear in the display in succession, if the key on the DP1C is activated for several seconds.

Below stated list shows a description of the possible error states.

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DP1C Error Code List:

Error States	Name	Description	Potential Cause	Action
E01	Position lost	The desk has unknown position and needs to be initialized	Position error	Initialize
E02	Overload up	Overload upwards has occurred	Hit obstruction	Remove overload
E03	Overload down	Overload downwards has occurred	Hit obstruction	Remove overload
E16	Error	Illigal keys pressed (handled internally in DP1C	Hit up e.g. down simultaneously	

CBD4 Error:

Error States	Name	Description	Potential Cause	Action
E08	Watchdog	Indicates that software failed to activate routine that checks calculations	Program fault Processor problems	Contact LINAK A/S
E09	Stack overflow	Indicates that software caused a stack overflow (infinite loop)	Program fault Processor problems	Contact LINAK A/S
E10	Short circuit	One of the motor outputs are short circuited	Squeezed motor cable Short in motor	Exchange cable or motor
E11	Double key pressed	Indicates that one or more key (s) are pressed on passive matrix – error on a control	Multiple keys pressed on 2 different handsets or squeezed control cable button constalling activated	
E12	Cable orientation	One motor cable is not mounted correctly	Motor cable plugged upside down Bad cable	
E13	Position error	One channel has position different then others	Too much back drive occurred	
E14	Power fail	Power fail happened	Mains missing	
E15	Channel mismatch	Change in number of actuators since initialization	Disconnection DL added	

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E17	Channel 1 missing	Channel 1 is detected missing	Disconnection	
E18	Channel 2 missing	Channel 2 is detected missing	Disconnection	
E19	Channels 3 missing	Channel 3 is detected missing	Disconnection	
E20	Channel 1 type error	Channel1 is not same type as when initialized	Change in DL type	
E21	Channel 2 type error	Channel 2 is not same type as when initialized or not same type as channel 1	Change in DL type	If DL is not changed – failure in leg
E22	Channel 3 type error	Channel 3 is not same type as when initialized or not same type as channel 1		Change in DL type
E23	Channel 4 type error	Channel 4 is not same type as when initialized or not same type as channel 1	Change in DL type	
E24	Channel 1 pulse fail	Channel 1 had too many pulse errors	Loose/faulty cable Hall sensor PCB	Check cable connections change cable
E25	Channel 2 pulse fail	Channel 2 had too many pulse errors	Loose/faulty cable Hall sensor PCB	
E26	Channel 3 pulse fail	Channel 3 had too many pulse errors	Loose/faulty cable Hall sensor PCB	
E27	Channel 4 pulse fail	Channel 4 had too many pulse errors	Loose/faulty cable Hall sensor PCB	
E28	Channel 1 overload up	Overload up occurred on channel 1	Reached end stop	
E29	Channel 2 overload up	Overload up occurred on channel 2	Reached end stop Hit obstruction	
E30	Channel 3 overload up	Overload up occurred on channel 3	Reached end stop Hit obstruction	
E31	Channel 4 overload up	Overload up occurred on channel 4	Reached end stop Hit obstruction	
E32	Channel 1 overload down	Overload down occurred on channel 2	Reached end stop Hit obstruction	

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E33	Channel 2 overload down	Overload down occurred on channel 2	Reached end stop Hit obstruction	
E34	Channel 3 overload down	Overload down occurred on channel 3	Reached end stop Hit obstruction	
E35	Channel 4 overload down	Overload down occurred on channel 4	Reached end stop Hit obstruction	
E36	Channel 1 anti collision	Anti collision triggered on channel 1	Hit obstruction	
E37	Channel 2 anti collision	Anti collision triggered on channel 2	Hit obstruction	
E38	Channel 3 anti collision	Anti collision triggered on channel 3	Hit obstruction	
E39	Channel 4 anti collision	Anti collision triggered on channel 4	Hit obstruction	
E 40	Channel 1 SLS	Safety limit switch activated on channel 1	Hit obstruction/hall failure	
E41	Channel 2 SLS	Safety limit switch activated on channel 2	Hit obstruction/hall failure	
E42	Channel 3 SLS	Safety limit switch activated on channel 3	Hit obstruction/hall failure	
E43	Channel 4 SLS	Safety limit switch activated on channel 4	Hit obstruction/hall failure	
E44	Channel 1 direction	Pulses counted wrong direction in channel 1	Motor poles are crossed Hall sensor cables are crossed	
E45	Channel 2 direction	Pulses counted wrong direction in channel 2	Motor poles are crossed Hall sensor cables are crossed	
E46	Channel 3 direction	Pulses counted wrong direction in channel 3	Motor poles are crossed Hall sensor cables are crossed	
E47	Channel 4 direction	Pulses counted wrong direction in channel 4	Motor poles are crossed Hall sensor cables are crossed	

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