473 - Hub output supply unstable - V82

Replace the defective pow er net

Does this solve the problem?

1] Yes
2] No
3] I don't know

- Explanation

IN THE HUB:

Check any loose connection and damage in the varistor fixed on G401 and replace if required

Check for the surge protector upgrade in Power Net as per Doc 0013-3681 or 0033-3872.

Relevant Documentation	
Description	**DMS No.**

Test Proj Adnl Elec Prot V82	0013-3681
Test Proj Add Elec Prot V82	0033-3872

Check for any loose connections at the power net (Pos: G401)
Check the input and output voltage 230/115VAC => 24VDC
Replace the power net if it is defective.

Relevant spare parts	
Description	**Item No.**
PS ADC 5483R-3 10A-27,4 NM PIN (New type)	188453
VDR SIOV-S20K275 275V (Old type)	60000613

Relevant CIM Case	
CIM Case	**Information from CIM Case**
1390	Item no 60000719 at local stocks must be scraped and replaced with 188453

473 - Hub output supply unstable - V82

Check HUB Computer power plugs

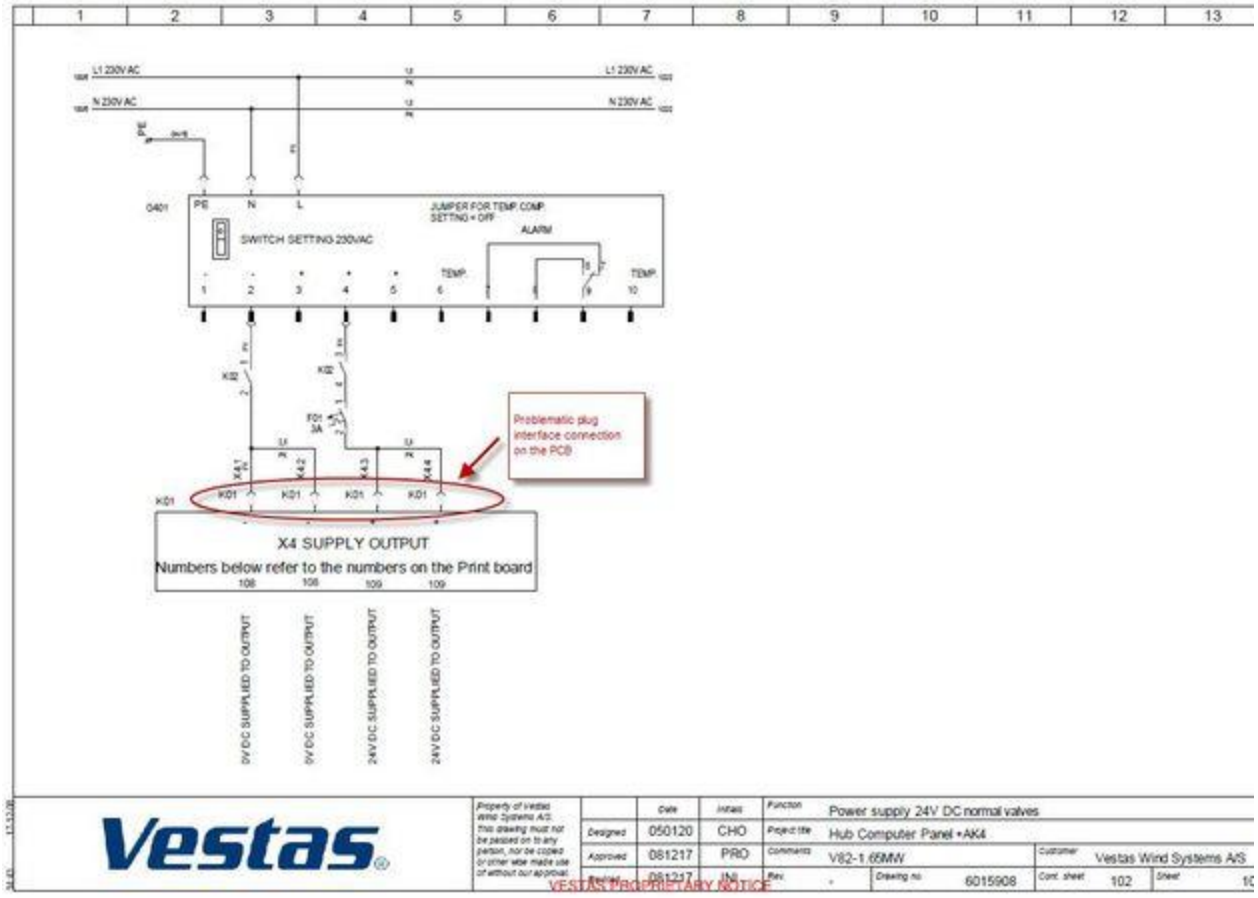
Does this solve the problem?

1] Yes
2] No
3] I don't know

- Explanation

Check 24V DC Power supply plug

The problem is relating to the X4 plug connection where the 24VDC is supplied to the HUB Controller.

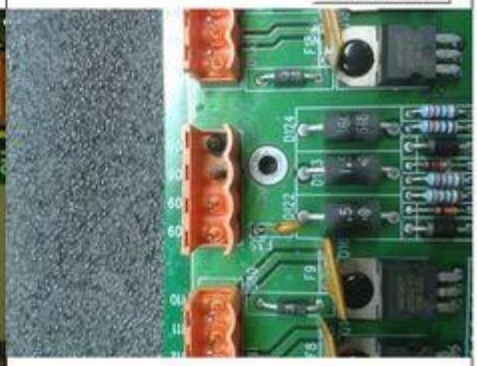


It has in many cases been seen that the plug connection have been overheated and burned as indicated on the below pictures.

1. Insert Picture

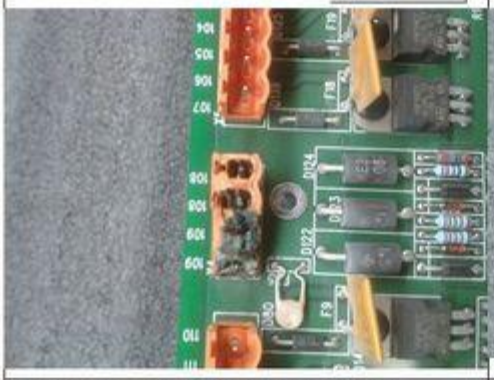
Picture 1 Hub computer shows burnt 108/109 connectors

2. Insert Picture



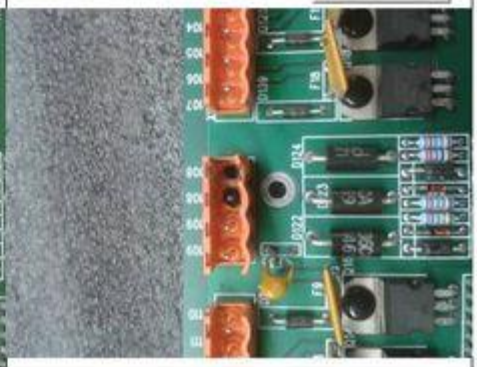
Picture 2 Hub computer shows burnt 108/109 connectors

3. Insert Picture



Picture 3 Hub computer shows burnt 108/109 connectors

4. Insert Picture



Picture 4 Hub computer shows burnt 108/109 connectors

The Minor Component Repair Team, has been requested to implement an improved interface on the PCB, so that the overheated connections could avoided.
Case creator have proposes a simple fix to mitigate the problem. Namelyto install a screw terminal versus the existing pin plug connector.

Picture 5 Existing Plugin type connector

Picture 6 Proposed screw type connector

The proposed solution by case creator have been forwarded to the Minor Component repair Program, awaiting approval from technology responsible.

Description of action until a solution is in place.

If a HUB Computer fails in the field please replaced it with a new part and return the defective part for repair, under the item number 51701801 DEF SIF HUB COMPUTER CABINET EVOII

The CIM1594 is raised to address the issues with the Hub Computer, and any replacement cost should therefore go to that case.

This case is only to have the proposes repair solution implemented.

Relevant CIM Cases		
CIM Case	**Task List**	**SWI**
1344		
1594		
3410		

473 - Hub output supply unstable - V82

Check the wiring connections

Does this solve the problem?

1] Yes
2] No
3] I don't know

- Explanation

IN THE HUB:

Check that all hub computer plugs are properly seated.

Check that the solenoid valve connections form the hub computer,
Check for any cable damage in the hydraulic valves.
Check for any loose connections in the hub system or any 24V DC short in Hub ,

If any cable is damaged replace with new:

Relevant spare parts	
Description	**Item No.**
Cable W 900 Filter clog -B406	60021519
Cable W 919-T465 Hub pressure	60021523
Cable W 920-T290-1 pressure transducer W	60021524
Cable W 921-T290-2 pressure transducer W	60021525
Cable W 922-T290-3 pressure transducer W	60021526
Cable W 930-B470 hydraulic oil temp	60021533
Cable W 940 Parking valve Y 210.0-1	60021534
Cable W 944 Parking valve Y 210.0-2	60021536
Cable W 948 Parking valve Y 210.0-3	60021538
Cable W 941 Shutdow n valve Y215.O-1	60021535
Cable W 945 Shutdow n valve Y215.O-2	60021537
Cable W 949 Shutdow n valve Y215.O-3	60021539
Cable W 952 Idle valve Y445.0	60021541
Cable W 954 Flushing valve Y440.0	60021543
Cable W 956 Proportional valve Y0205.0-1	60021544
Cable W 957 Proportional valve Y0205.0-2	60021545
Cable W 958 Proportional valve Y0205.0-3	60021546
Cable W 923 _ T261-1Pos.transducer1 Std	60101018
Cable W 924 T261-1Pos.transducer 2 Std	60101148
Cable W 925 T261-1Pos.transducer 3 Std	60101149

Clean the slip ring us per SWI

Does this solve the problem?

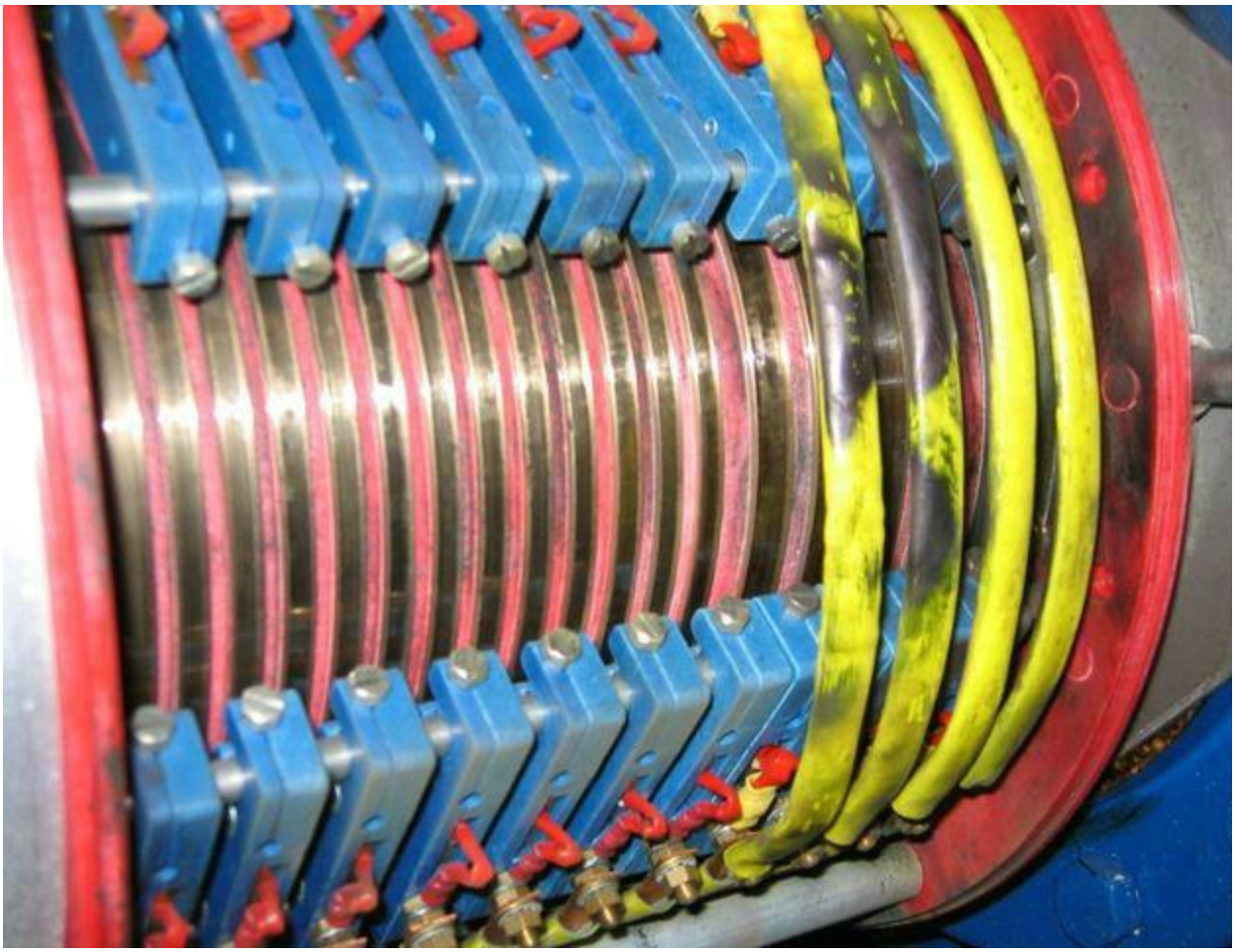
1] Yes
2] No
3] I don't know

- Explanation

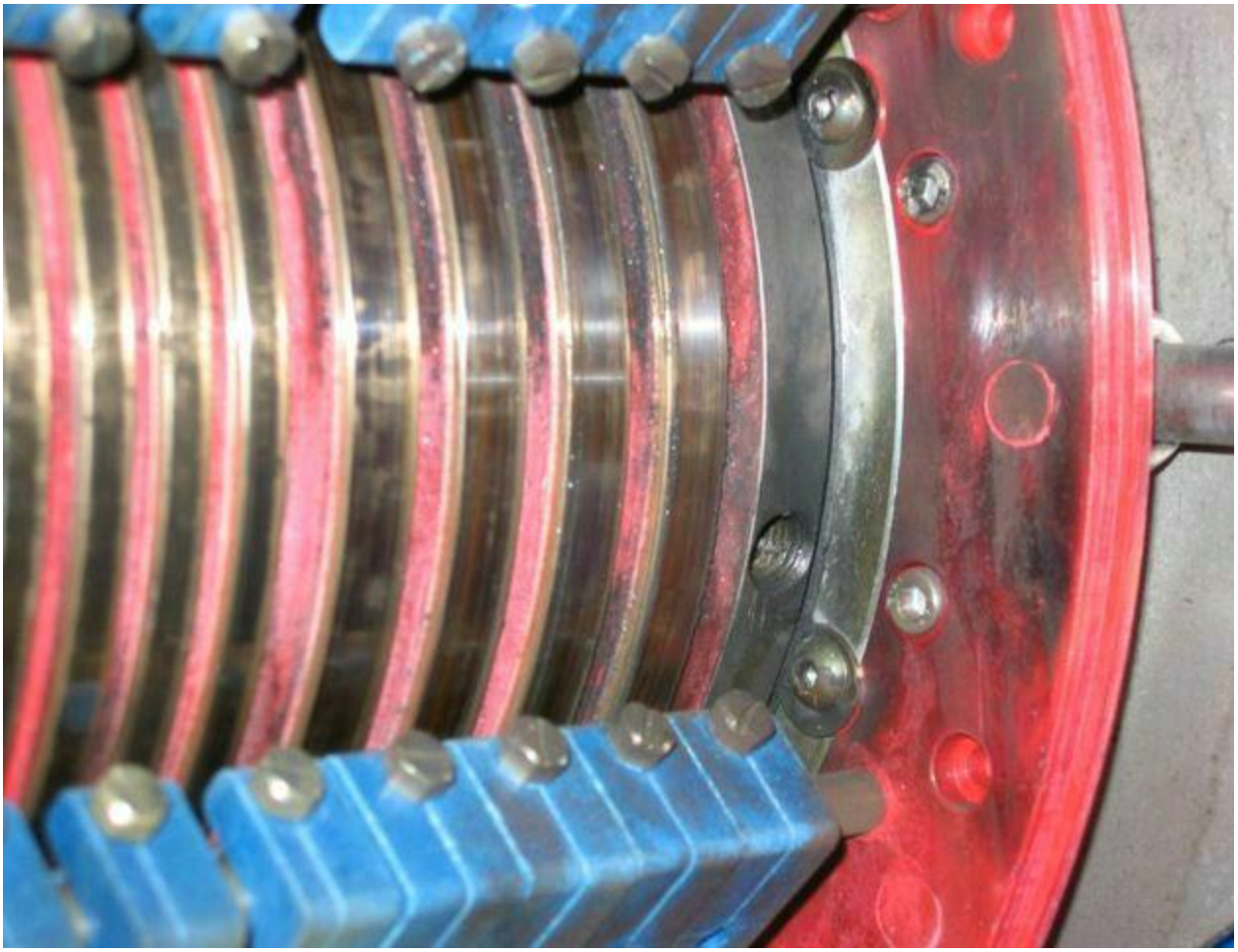
IN THE HUB:

In most instances, a bad connection at the slip ring causes this alarm.
Investigate the slip ring for damage, dust or oil contamination.

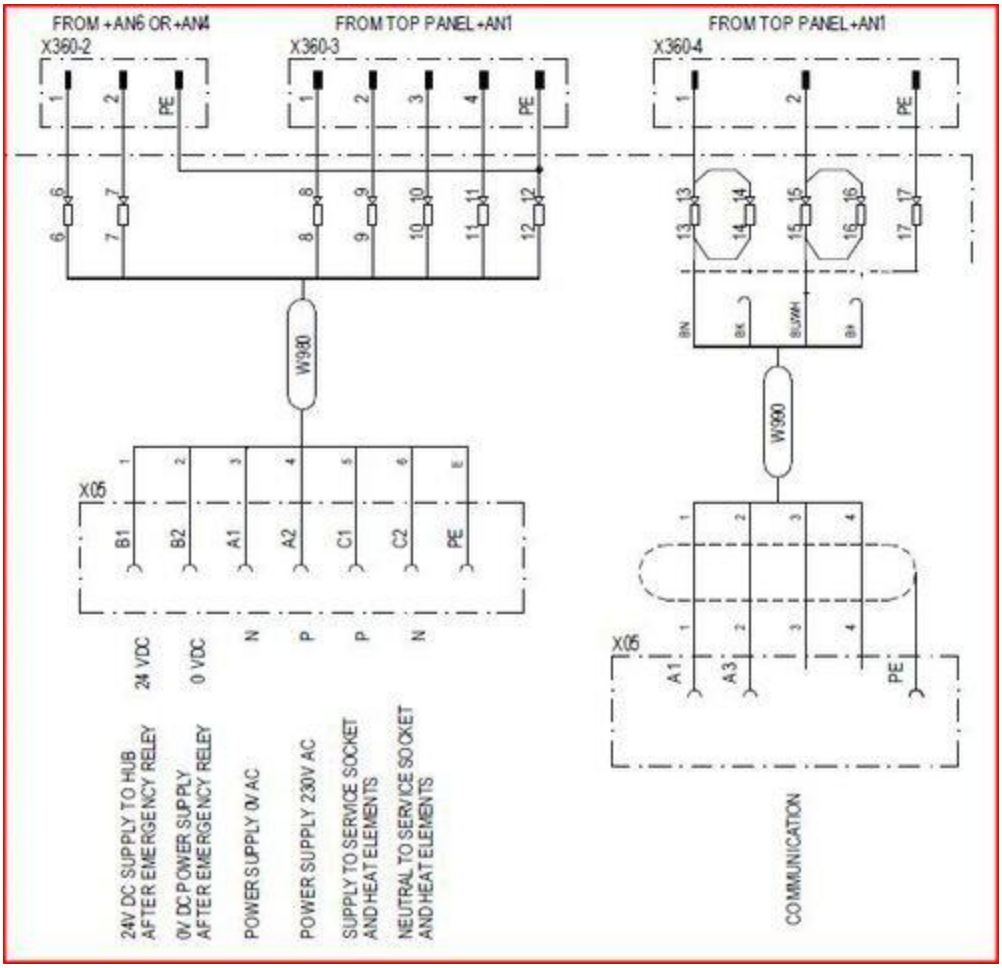
Relevant documentation	
Description	DMS No.
Cleaning Procedure for Slipring Unit V82	0001-4933



Dust and oil accumulation on the slip ring short circuiting between the tracks which can cause this alarm.



Check the condition of the brushes on the slip ring. Check for 230VAC supply to the hub and hub communications:



Replace the brushes if worn, damaged or contaminated beyond repair.
If any cable problems or sleeve damages are found, use the following re-termination KIT to rectify.

Relevant spare parts	
Description	**Item No.**
CABLE MATERIAL	60095997

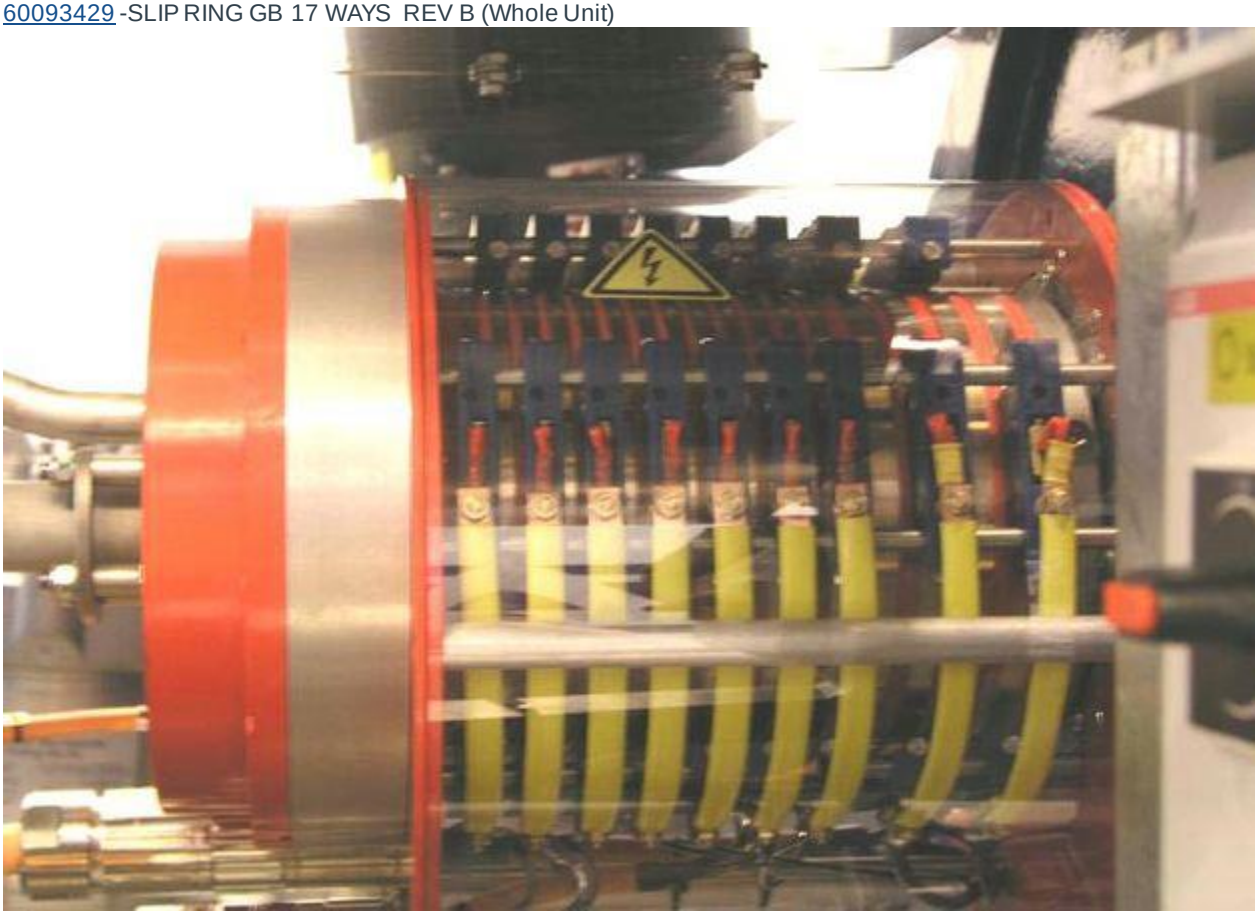
Slip ring brushes:

Relevant spare parts	
Description	**Item No.**
BRUSH HOLDER ASSEMB. SILVER GR (5A)	60069225
20A BRUSH HOLDER ASSEMB. COPPE	60069223
SLIP RING GB 17 WAYS REV B (Whole Unit)	60093429

60069225 - BRUSH HOLDER ASSEMB. SILVER GR (5A)

60069223 - 20A BRUSH HOLDER ASSEMB. COPPE

60093429 -SLIP RING GB 17 WAYS REV B (Whole Unit)



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Minimize 473 - Hub output supply unstable - V82

Check the cable connections/replace the defective cables

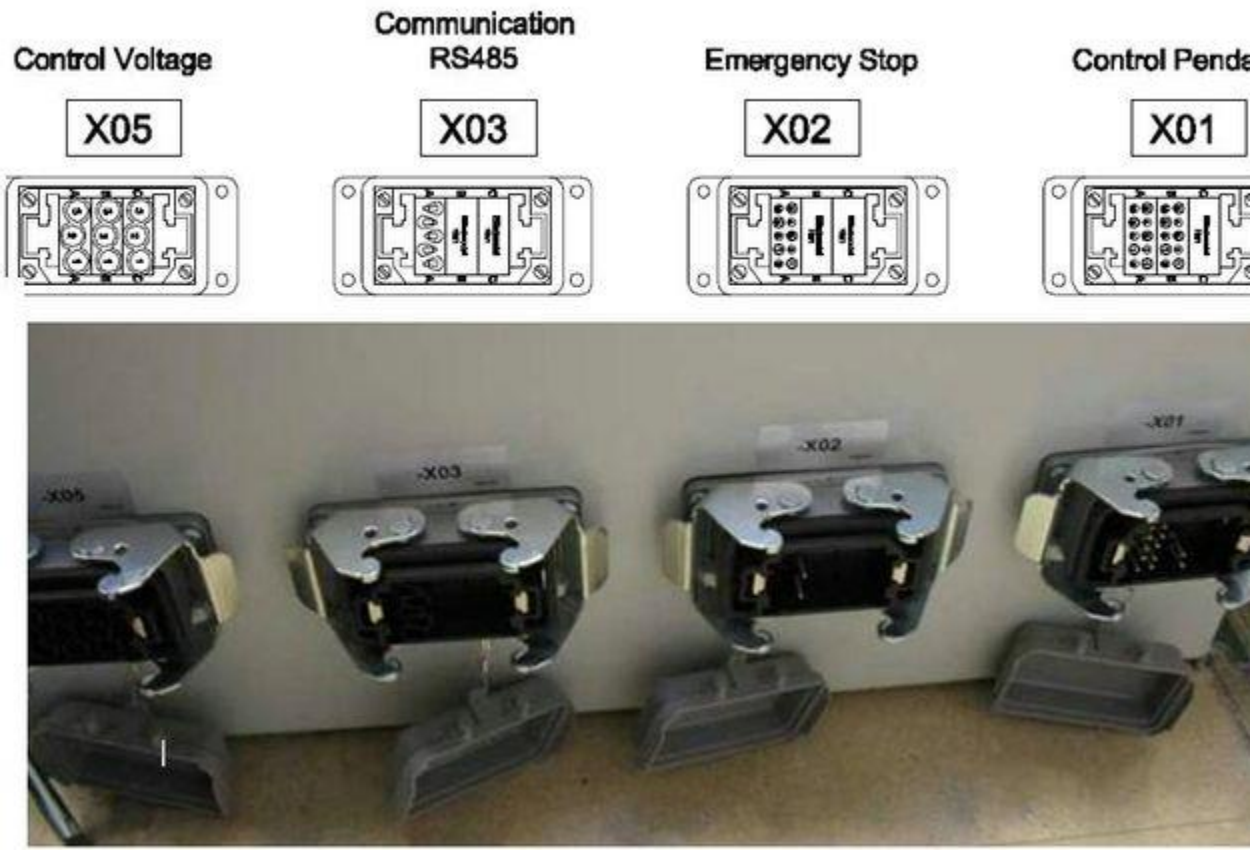
Does this solve the problem?

1] Yes
2] No
3] I don't know

- Explanation

IN THE HUB:

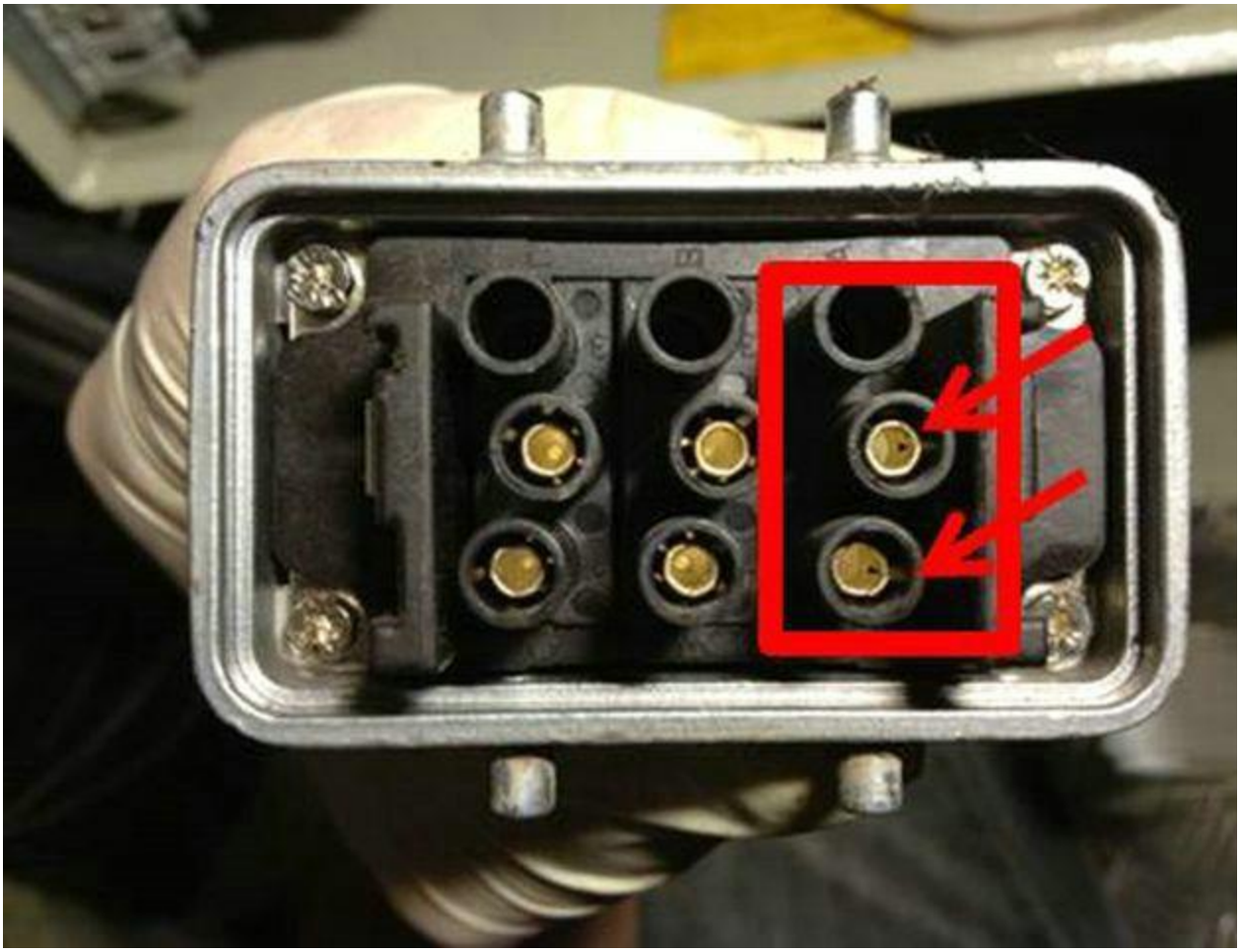
Check the condition of Plugs X05 (supply) on the AK4 panel in the hub.



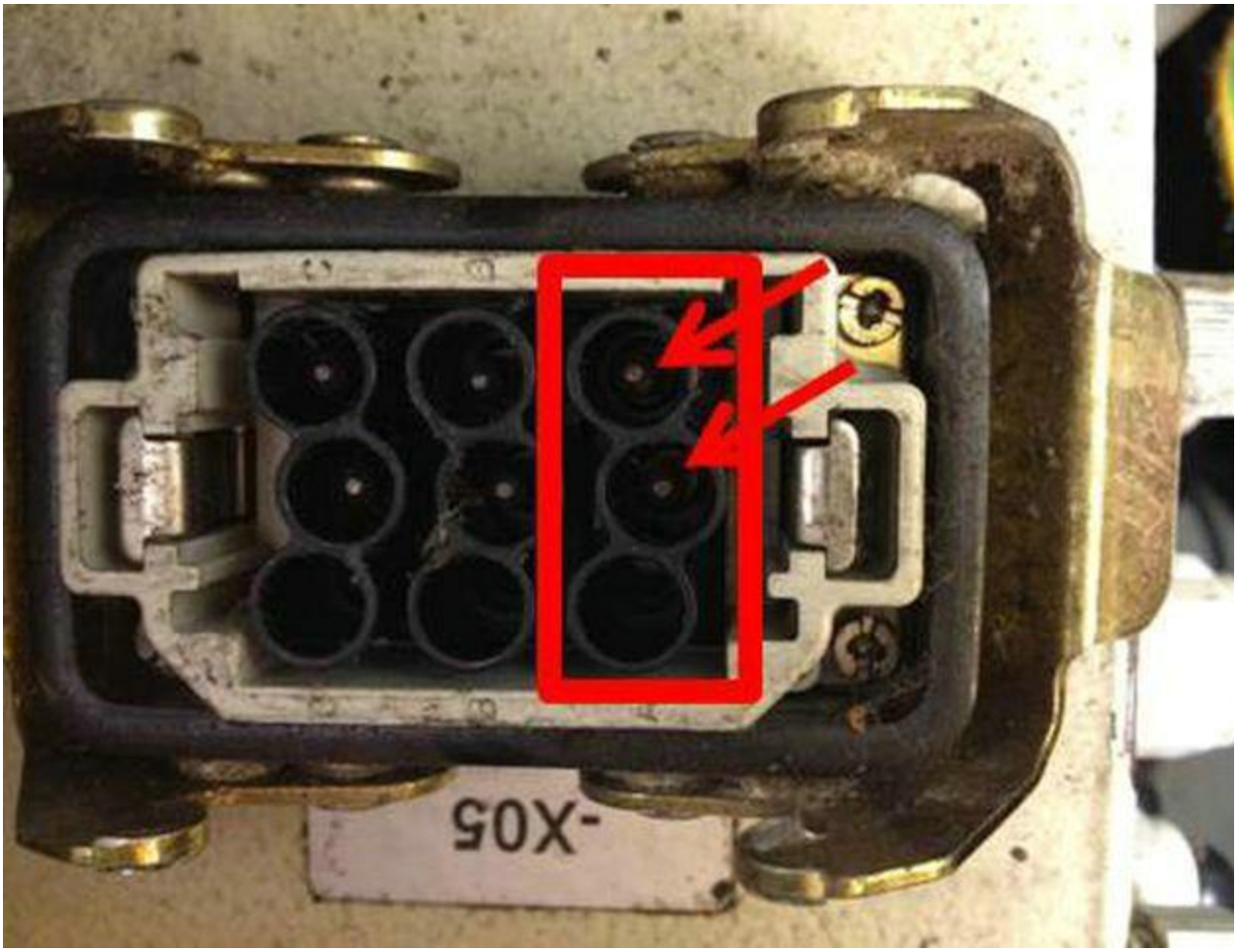
TO CHECK THE X05 SUPPLY CABLE:

Ensure that the X05 Plug (230VAC supplyto the hub) properlyseated:

Check X05 Plug female pins A- 1 and 2.



Check X05 Plug male pins A- 1 and 2.



Check the condition of the –W980 cable in the hub.

Check for any cracks or wear on the cable.

Replace the cable if it is defective.

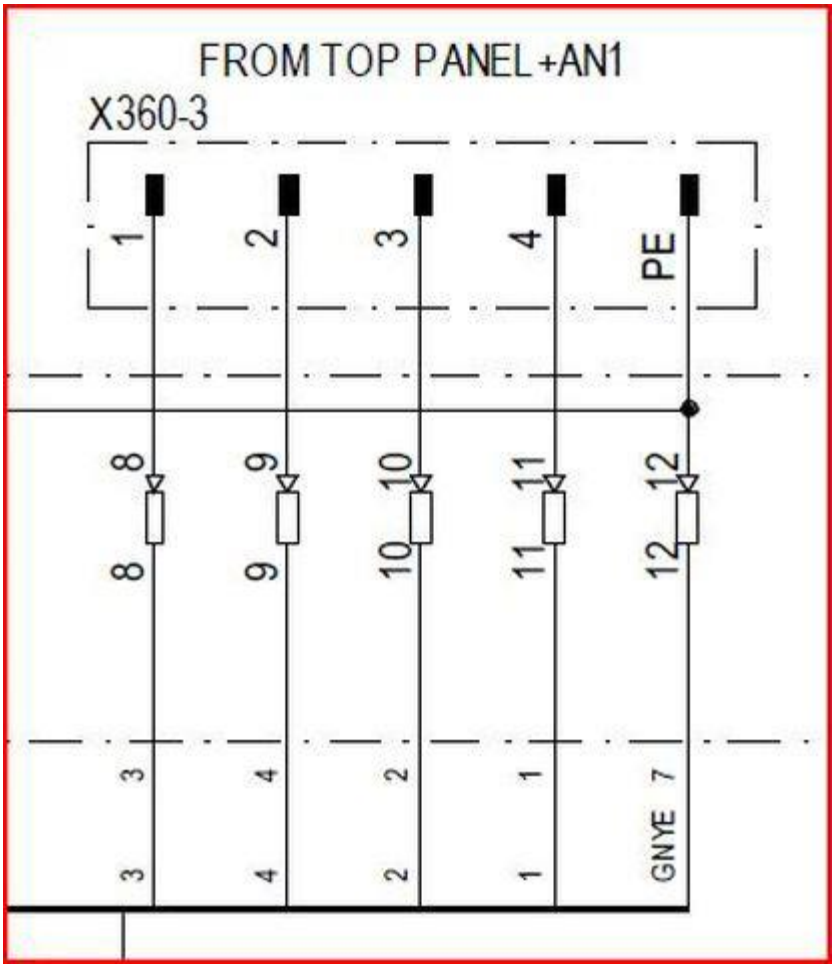
Perform a continuity check on the –W980 cable:

WARNING: Ensure that proper LOTO procedures have been followed and no voltage is present on the 230VAC circuit before testing the cable.

On the W980 cable place a jumper between Pins 1 & 2 in module A.

IN THE NACELLE:

Remove the –X360-3 plug from the slip ring.

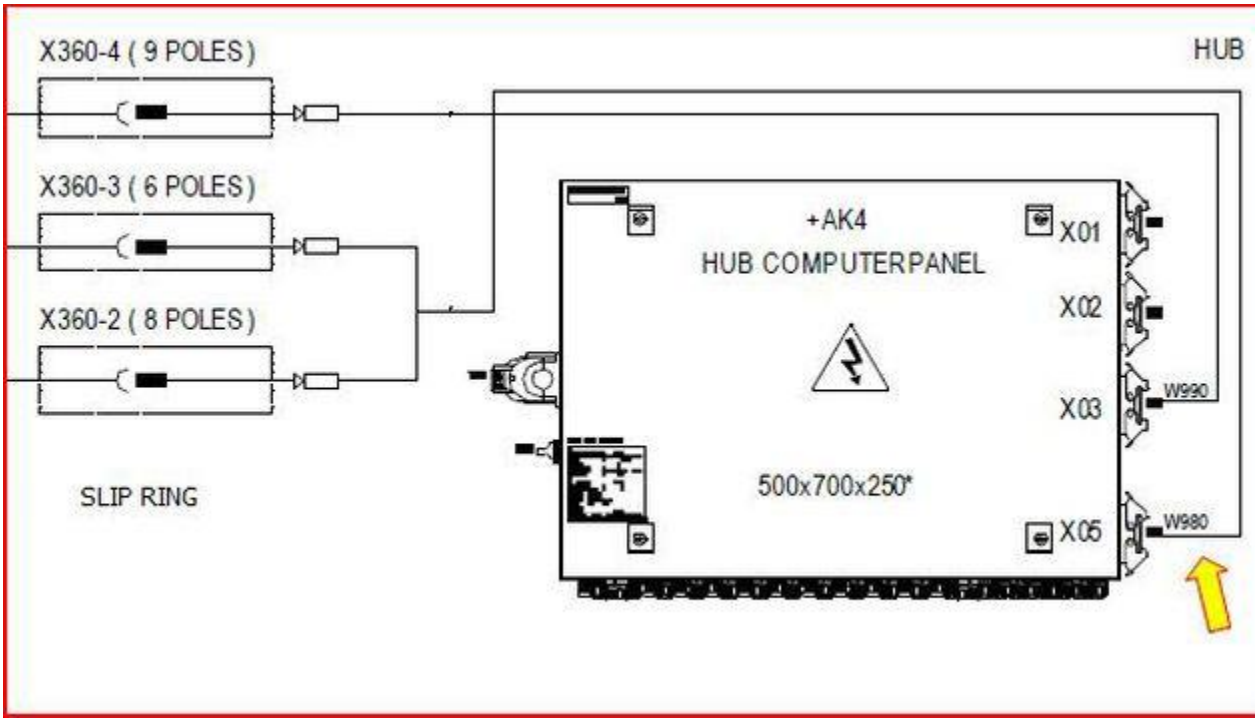

FROM TOP PANEL +AN1
X360-3
1
2
3
4
PE
8
9
10
11
12
8
9
10
11
12
3
4
2
1
7
3
4
2
1
GNYE

With a multimeter set to read Ω, measure between pins 1 & 2.

With the jumper in the hub, there should be a very low resistance value read by the meter.

Perform continuity checks on the - W360-3 and -W360-4 cables between the slip ring to AN1 cabinet. Replace any defective cables found.

Relevant spare parts	
Description	**Item No.**
CABLE W980 IEC Supply	60021557



Replace the defective hub computer

Does this solve the problem?

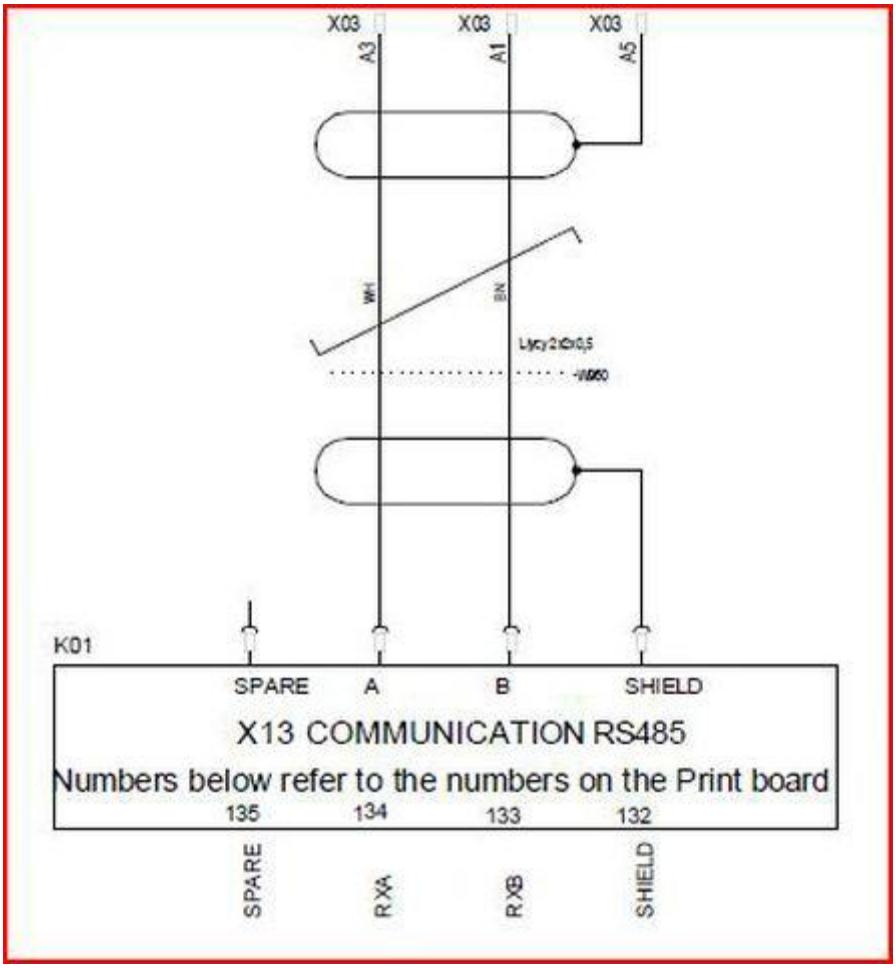
1] Yes
2] No
3] I don't know

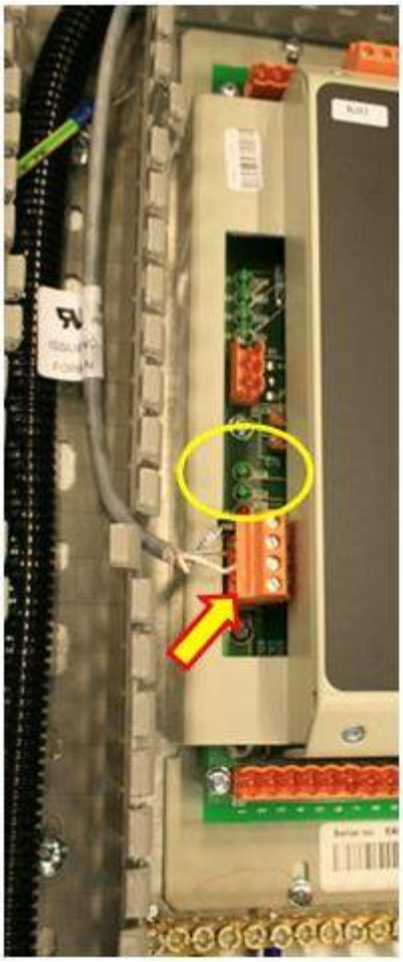
- Explanation

IN THE HUB:

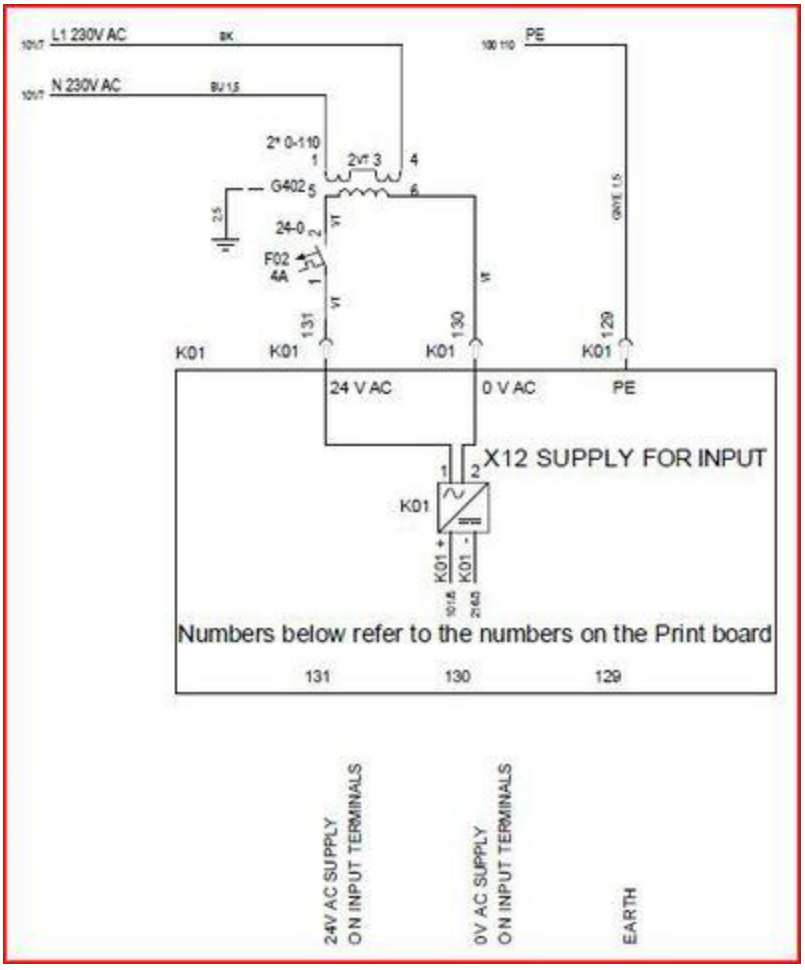
Check for any loose connections in the communication channel.

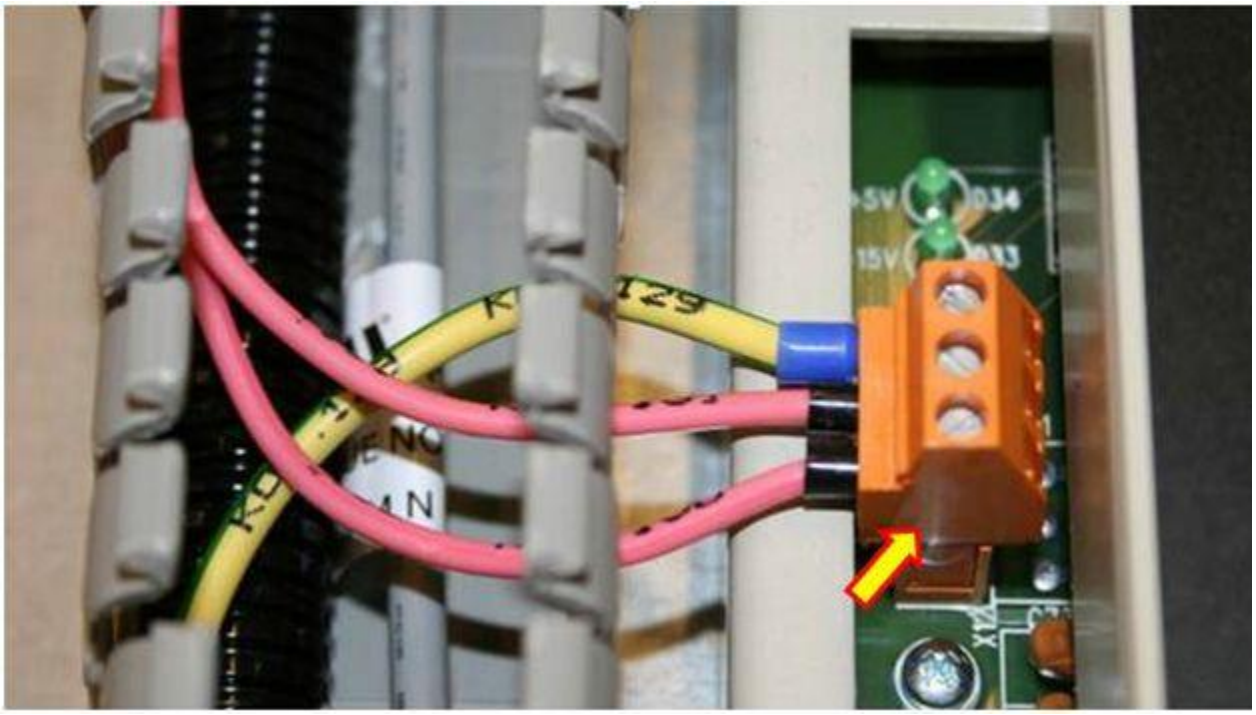
Check the hub computer communication RX/TX signal.


X03
X03
X03
A3
A1
A5
WH
BN
K01
SPARE
A
B
SHIELD
X13 COMMUNICATION RS485
Numbers below refer to the numbers on the Print board
135
134
133
132
SPARE
RXA
RXB
SHIELD



Check the Hub computer input supply.
Check for any loose connections in the input supply pin.

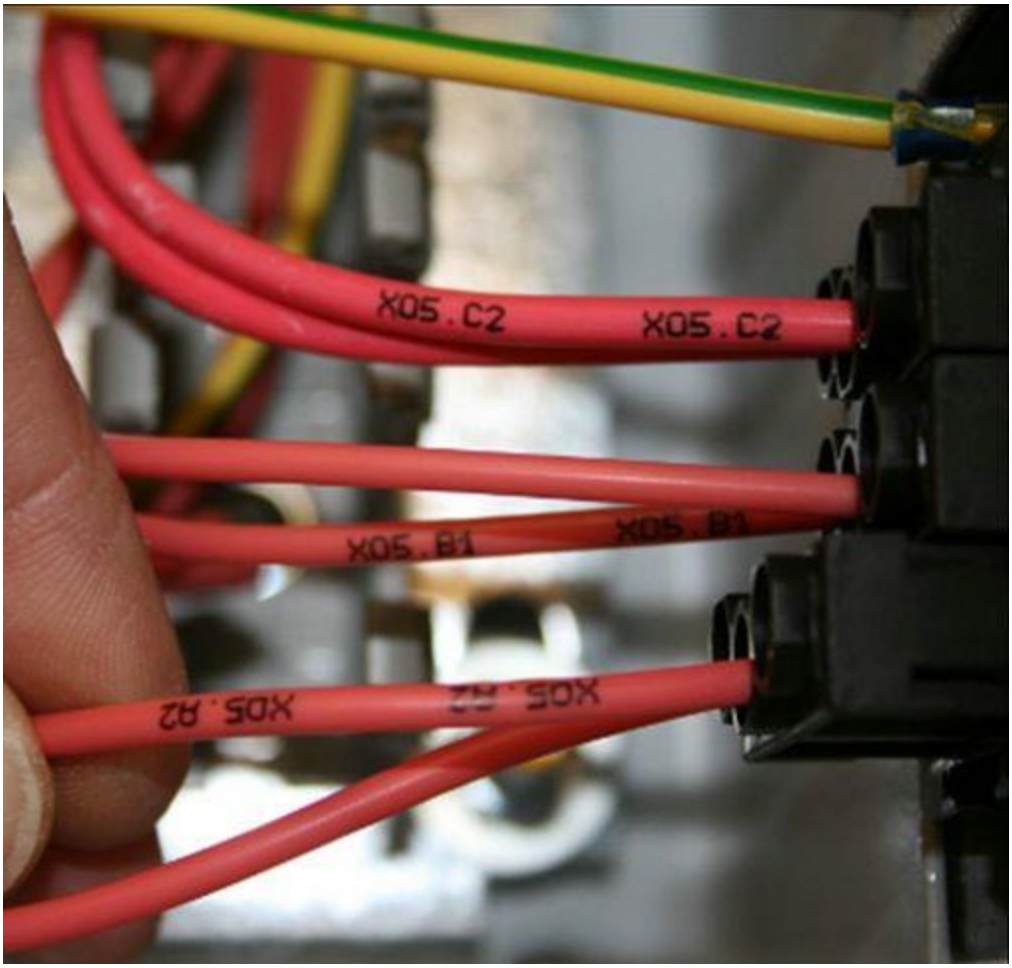

L1 230V AC
N 230V AC
PE
2* 0-110
2VT 3
G402
24-0
F02
4A
131
130
129
K01
24 V AC
0 V AC
PE
X12 SUPPLY FOR INPUT
Numbers below refer to the numbers on the Print board
131
130
129
24V AC SUPPLY ON INPUT TERMINALS
0V AC SUPPLY ON INPUT TERMINALS
EARTH



Check the control voltage port and plug for loose connections.

Check the communication cable for poor or loose connection.

Check the control voltage cable for poor or loose connections.



Replace the hub computer if it is found to be defective.

Relevant spare parts	
Description	**Item No.**
SIF HUB COMPUTER CABINET EVOII	51701801

Relevant CIM case		
CIM case	**Task list**	**SWI**
1594	12511	

Relevant documentation	
Description	**DMS No.**
Add_Elec_Protec_V82	0033-3872
0013-3681_Test Proj_Adnl Elec Prot_V82	0013-3681

Replace emergency relay

Does this solve the problem?

1] Yes
2] No
3] I don't know

- Explanation

The Emergency Stop Relay in the AN1 panel stops the power to the hub valves at terminals 43-44. Cycle the relay while measuring continuity across these terminals. If the relay is faulty, the signal to the hub valves can be compromised and the relay should be replaced.

Relevant spare parts	
Description	**Item No.**
EMERGENCY RELAY 3TK2806OBB4 5NO+1NC 400V	60004996