

Troubleshooting guide – MES 1001

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NB! General advice: Software update

Always update sensor to latest software revision before proceeding with troubleshooting. For instruction how to update SW, see User Guide section 2.4.2 (via LCP) or 3.10 (via SST)

Danfoss IXA website

Latest version of sensor SW and User Guide are available for download on the Danfoss IXA website. Here, you can also find links to maintenance instruction videos.

<https://danfoss-ixa.com/services-and-support> (scroll down to Downloads)



Contact Danfoss IXA Service & Support


If solutions suggested below do not fix the issue, or if your issue is not on the list, please contact Danfoss IXA Service & Support at ixa.service@danfoss.com

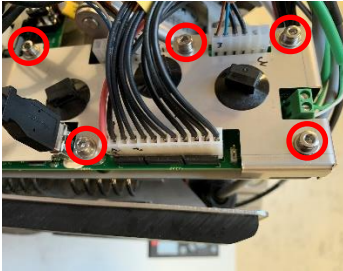
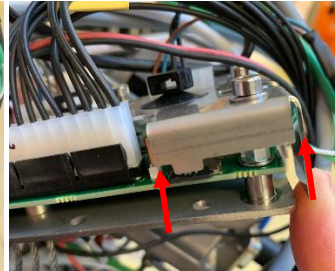
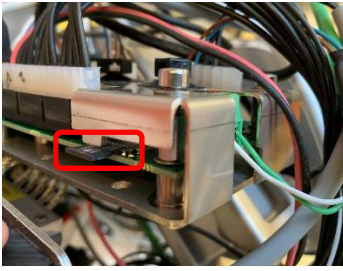
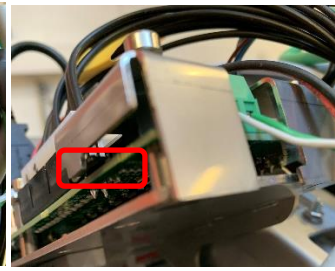
Abbreviations

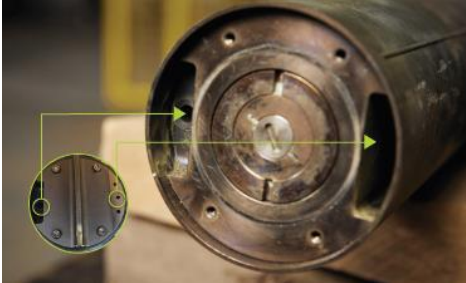
LCP: Local Control Panel (Display on sensor front)


SST: Sensor Service Tool (software tool)

Alarm/ Warning	Issue	Solution
A113	Sensor time and date setup required	Use a. or b. a. 1. In LCP menu, go to 2. Settings > 2-6. Set time and date 2. Press OK. 3. If necessary, use arrows to set time and date. 4. Press OK again to confirm time and date b. 1. In SST, go to Settings -> Service (tab) 2. In "Time" window, press: "Set to PC" or 3. Set Date and Time manually and press "Apply" NB! In all cases, UTC time shall be used.

Alarm / Warning	Issue	Solution
A33 A102	Optics may be contaminated, please clean. Deep UV (200-215 nm) counts too low...	<ol style="list-style-type: none"> 1. Update to latest software (see top of this guide) 2. Clean probe optics using Probe Optics Cleaning Kit (see User Guide section 6.2.6) 3. In LCP menu, go to 5. Maintenance > 5-2. Optics Cleaned 4. Press OK 5. Visually inspect that reflector is not damaged. NB! Do NOT open/unscrew backside of reflector. 6. Check that the compressed air supply is open and within required range. 7. Check condition of compressed air filter units. Replace filter elements if necessary (see User Guide section 6.2.5). <p>NB! Step-by-step instruction video for cleaning of probe optics is available. Use QR code or find link on website (see link in top of this guide).</p> 
W1 A23	Compressed air pressure is under limit Compressed air pressure is dangerously low	<ol style="list-style-type: none"> 1. Check that the compressed air supply is open and within required range. 2. Check condition of compressed air filter units. Replace filter elements if necessary (see User Guide section 6.2.5).
W122 A124	Light Source has limited lifetime Light Source replacement required	<p>If W122 or A124 occurs after less than 12 months of operation, it may be related to a SW bug in previous software versions. Issue may occur at first use of sensor and/or after setting sensor time and date.</p> <p>In this case:</p> <ol style="list-style-type: none"> 1. Update to latest software (see top of this guide) 2. Check that warning and/or alarm is no longer present. 3. If warning and/or alarm persists, contact Danfoss IXA Service & Support at ixa.service@danfoss.com
W97	GPS signal has been lost	<p>If GPS input is not used via RS-422 connector, GPS functionality shall be disabled:</p> <ol style="list-style-type: none"> 1. In LCP menu, go to 2. Settings > 2-5. GPS 2. Set to Disabled using OK and up/down arrows and confirm with OK. 3. Go to 3. Interfaces > 3-1. LAN setup > 3-14. Reboot and press OK to reboot sensor. 4. Wait for sensor to start again (takes a few minutes). 5. Check that warning has been cleared.

Alarm / Warning	Issue	Solution
W13	<p>Contamination during calibration. Check air supply.</p> <p>(Maybe in combination with erratic readings)</p>	<ol style="list-style-type: none"> 1. Check that the compressed air supply is open and within required range. 2. Check condition of compressed air filter units. Replace filter elements if necessary (see User Guide section 6.2.5). <p>If issue persists after completing 1. and 2., continue to 3.</p> <ol style="list-style-type: none"> 3. Update to latest software (see top of this guide) NB! Do not continue before updating SW. 4. In LCP menu, go to 5. Maintenance > 5-2. Optics Cleaned 5. Press OK 6. Let sensor run in Sensing mode for at least one hour to allow sensor to self-adjust. 7. Check that there are no alarms and warnings and that readings are not erratic.
A80	<p>SD card NOT detected - limited storage of measurement data.</p>	<ol style="list-style-type: none"> 1. Turn off sensor and remove cabinet 2. Loosen 5 bolts and slightly lift PCB cover plate (see pictures below) 3. Remove SD card from socket on PCB 4. Re-insert SD card in socket on PCB 5. Turn on sensor and check if alarm is cleared <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Loosen bolts shown above</p> </div> <div style="text-align: center;">  <p>Lift cover plate to free SD card</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  <p>Remove SD card from slot</p> </div> <div style="text-align: center;">  <p>Re-insert SD card and re-mount cover plate</p> </div> </div>

Alarm / Warning	Issue	Solution
N/A	Low or zero ppm values	<ol style="list-style-type: none"> 1. Check that the compressed air supply is open and within required range. 2. Check condition of compressed air filter units. Replace filter elements if necessary (see User Guide section 6.2.5). 3. Clean inlet and outlet holes with thin metal rod <ol style="list-style-type: none"> a. See picture below. b. See User Guide section 6.2.7 for detailed description 4. Turn off sensor and remove cabinet 5. Inspect backend for traces of exhaust gas and/or oil in compressed air system <ol style="list-style-type: none"> a. Black soot on inside of tubes b. Droplets of oil on inside of tubes c. If signs of soot or oil, compressed air system may be damaged, and repair needed. Contact Danfoss IXA Service & Support at ixa.service@danfoss.com  <p data-bbox="715 1178 1155 1211">Inlet and outlet on probe to be cleaned</p>
N/A	Problem connecting to sensor with SST (via LAN)	<ol style="list-style-type: none"> 1. In LCP menu, go to 3. Interfaces > 3-1. LAN setup > 3-16. DHCP 2. Check that DHCP is Disabled. 3. If DHCP is Enabled, change to Disabled and reboot sensor using LCP menu 3-14. Reboot 4. In LCP menu 3-11. LAN IP address, check that sensor IP address = 192.168.1.10 5. Set up PC to have fixed IP address = 192.168.1.2 NOTE: IP addresses of PC and sensor shall not be exactly the same. 6. Log on to sensor via SST with IP = 192.168.1.10 username = admin password = admin <p data-bbox="715 1787 1394 1821">NB! See User Guide Appendix 3 for detailed description</p>

Alarm / Warning	Issue	Solution
N/A	Blank LCP / blank orange LCP	<ol style="list-style-type: none"> 1. Remove bolts in cabinet and firmly push cabinet towards probe to check if issue is caused by a loose connection. 2. If this does not solve the issue, contact Danfoss IXA Service & Support at ixa.service@danfoss.com
N/A	Erratic readings	Follow instructions for “W13: Contamination during calibration. Check air supply.” in this troubleshooting guide.
N/A	No signal on SCR panel	The analog outputs on MES 1001 requires 24 VDC supply. Check the loop power for analog outputs and/or refer to User Guide section 6.3.3 for guidance.
N/A	<p>USB error message on LCP: “Storage media not found”</p> <p>(For example, during SW update or download of Diagnostics Report.)</p>	<p>Check that</p> <ol style="list-style-type: none"> 1. USB is correctly inserted in USB connector on front panel (see picture below) 2. All files from the installer zip-file are unpacked and copied to the root of the USB drive 3. USB capacity is not larger than 32 GB (sensor only supports USB drives up to 32 GB size). 4. USB is formatted to use FAT32 file system 5. If still not working, try using a different USB drive. <p>NB! It is recommended to start out with a new/blank USB drive</p> <p>See User Guide section 2.4</p>  <p>USB drive connected at interface panel</p>