


10.3 Diagnostic codes and causes

All errors which occur in the ROD4-3... during operation are stored in a diagnostic list in the device. You can call up this list with the **RODsoft** software. On the toolbar, click  or select **System data** → **Load diagnostic data from sensor** on the menu bar.

The messages from the last 8 events are documented. This first memory slot always contains the most recent error message.

Listed in the following table are all errors together with corresponding troubleshooting notices:

Code	No	Meaning	Measure
102	2	Data transfer error on interface X2.	↺ Check the interface parameters and start the transfer again.
103	2	Data transfer error on interface X2.	↺ Check the interface parameters and start the transfer again.
104	2	Data transfer error on interface X2.	↺ Check the interface parameters and start the transfer again.
105	6	Function, access, command not permitted at currently selected access level.	↺ Change the access level and start the transfer again.
201	4	Interface X2 time specifications not complied with, last message overwritten.	↺ Check the interface parameters and start the transfer again.
302	2	Interface X2 time specifications not complied with, send data not acknowledged.	↺ Check the interface parameters and start the transfer again.
306	5	Previous message not completely issued, interface X2 time specifications not complied with.	↺ Check the interface parameters and start the transfer again.
801	2	Error memory cannot be read, internal defect	↺ If reset is not successful, contact customer service.
805	6	Error memory cannot be transferred, transmission error at interface X2	↺ Check the interface parameters and start the transfer again.
1002	1	Motor does not reach nominal rotational speed after start-up; internal defect.	↺ If reset is not successful, contact customer service.
1002	2	Motor speed not constant after start-up; internal defect.	↺ If reset is not successful, contact customer service.
1003	1	Motor does not reach nominal rotational speed after start-up; internal defect.	↺ If reset is not successful, contact customer service.
1003	2	Motor speed not constant after start-up; internal defect.	↺ If reset is not successful, contact customer service.

Table 10.2: ROD4-3... – diagnostic codes, causes and measures

Code	No	Meaning	Measure
1003	3	Motor speed not constant after start-up; time-out.	↪ If reset is not successful, contact customer service.
1110	4	Switching outputs Fn1/Fn2 cannot be switched, short-circuit with 0 V DC or +24 V DC.	↪ Check the connection/wiring of Fn1/Fn2.
1110	5	Switching outputs Fn1/Fn2 cannot be switched, short-circuit between Fn1 and Fn2.	↪ Check the connection/wiring of Fn1/Fn2.
1110	6	Switching outputs Fn1/Fn2 cannot be switched, short-circuit with 0 V DC or +24 V DC.	↪ Check the connection/wiring of Fn1/Fn2.
1111	7	Short-circuit between switching outputs Fn1/Fn2.	↪ Check the connection/wiring of Fn1/Fn2.
1111	8	Short-circuit of one switching output (Fn1 or FN2) with 0 V DC.	↪ Check the connection/wiring of Fn1/Fn2.
1111	9	Short-circuit of one switching output (Fn1 or FN2) with +24 V DC.	↪ Check the connection/wiring of Fn1/Fn2.
1606	4	Angle error detected, poss. rotation of the sensor housing; switch-off and reset followed.	↪ If reset is not successful, contact customer service.
1607	5	Angle error detected, poss. rotation of the sensor housing; switch-off and reset followed.	↪ If reset is not successful, contact customer service.
1608	8	Motor speed not constant during operation, poss. rotation of the sensor housing.	↪ If reset is not successful, contact customer service.
1608	9	Motor speed not constant during operation, poss. rotation of the sensor housing.	↪ If reset is not successful, contact customer service.
1608	10	Motor speed not constant during operation, poss. rotation of the sensor housing.	↪ If reset is not successful, contact customer service.
1705	1	Signal of a photoelectric sensor of the window monitoring below the bottom limit, dirty front cover.	↪ Clean the front cover according to instructions (see chapter 7.2 "Cleaning" on page 38).
1705	2	Signal from a photoelectric sensor of the window monitoring above the upper limit, oil/grease on the front cover.	↪ Clean the front cover according to instructions (see chapter 7.2 "Cleaning" on page 38).

Table 10.2: ROD4-3... – diagnostic codes, causes and measures

Code	No	Meaning	Measure
1906	1	Switching outputs Fn1/Fn2 cannot be switched, internal or external short-circuit.	↗ Check the connection/wiring of Fn1/Fn2. If reset is not successful, contact customer service.
1906	2	Switching outputs Fn1/Fn2 cannot be switched, internal or external short-circuit.	↗ Check the connection/wiring of Fn1/Fn2. If reset is not successful, contact customer service.
1906	5	Read back error on switching outputs Fn1/Fn2, internal or external short-circuit.	↗ Check the connection/wiring of Fn1/Fn2. If reset is not successful, contact customer service.
1906	6	Error on the laser's switch-off path, switch-off because of eye safety, internal defect.	↗ If reset is not successful, contact customer service.
1907	4	Angle error detected, poss. rotation of the sensor housing; switch-off and reset followed.	↗ If reset is not successful, contact customer service.
1907	7	Angle error detected, poss. rotation of the sensor housing; switch-off and reset followed.	↗ If reset is not successful, contact customer service.
2002	12	Configuration data displayed for inspection not acknowledged quickly enough	↗ Start the transfer again.
2007	18	Date of the currently transmitted detection field is older than the date of the detection field stored in the sensor.	↗ Update the PC's date and time setting.
2017	19	Data transfer error with ConfigPlug.	↗ Replace the ConfigPlug or the complete cable with plug.
2017	23	The connected sensor does not support the configuration file in the ConfigPlug.	↗ Change the sensor, observe the device type.
2017	24	The connected sensor does not support the configuration file in the ConfigPlug.	↗ Change the sensor, observe the device type.
2017	26	Date of the currently transmitted configuration is older than the date of the configuration stored in the sensor.	↗ Update the PC's date and time setting.
2201	5	Number of measurements in the scan too small due to rotational speed error in the motor or because internal fuse was blown.	↗ If reset is not successful, contact customer service.
2302	1	Error occurred during sensor start-up.	Sequential error.

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Code	No	Meaning	Measure
2401	10	Reference measurement failed; glare from another light source (905 nm) or rotation speed error.	Sensor performed reset.
2401	13	Reference measurement failed, dust in the device, due to the plug housing or dummy cap not being screwed on.	↪ Screw the plugs of interfaces X1 and X2.
2401	41	Reference measurement failed; glare from another light source (905 nm) or rotation speed error.	Sensor performed reset.
2402	10	Reference measurement failed; glare from another light source (905 nm) or rotation speed error.	Sensor performed reset.
2402	41	Reference measurement failed; glare from another light source (905 nm) or rotation speed error.	Sensor performed reset.
2701	1	Invalid diagnostic command received, software incompatible with firmware.	↪ Use a newer version of the configuration software.
2702	3	Invalid diagnostic value requested, software incompatible with firmware.	↪ Use a newer version of the configuration software.
2800	2	2 field pair control inputs activated longer than 1 s.	↪ Check the switchover times of the control inputs FPS1 - FPS4.
2800	3	The detection field changeover which occurred does not match the preset which was programmed in the sensor.	↪ Check the activation of the detection fields in the program wizard.
2800	4	More than 2 detection fields activated during operation.	↪ Check the activation of the control inputs FPS1 - FPS4.
2800	6	Unusable or defective control voltage for the detection field activation.	↪ Check the activation of the control inputs FPS1 - FPS4.
2800	8	No detection field activated. Can occur during operation and switching off the device.	↪ If detected during running operation, check the activation of the control inputs FPS1 - FPS4.
2801	1	Error while testing the inputs for detection field changeover; internal defect.	↪ Contact the customer service.
2802	3	The detection field activation which occurred does not match the preset which was programmed in the sensor.	↪ Check the activation of the detection fields in the program wizard.
2802	4	More than 2 detection fields selected when starting the sensor.	↪ Only activate one of the control inputs FPS1 - FPS4.
2802	6	Unusable or defective control voltage for the detection field activation.	↪ Check the activation of the control inputs FPS1 - FPS4.

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Code	No	Meaning	Measure
2802	8	No detection field activated during start-up of the sensor.	↪ Activate one of the control inputs FPS1 - FPS4.
2804	3	The detection field activation which occurred does not match the preset which was programmed in the sensor.	↪ Check the activation of the detection fields in the program wizard.
2804	4	No detection field clearly selected.	↪ Check the activation of the control inputs FPS1 - FPS4.
2804	6	Unusable or defective control voltage for the detection field activation.	↪ Check the switchover times of the control inputs FPS1 - FPS4.
3016	11	Confirmed single password entered wrong.	↪ Repeat the password entry.
3203	6	Sensor has optical glare caused by another device.	↪ Switch off the supply voltage and start the sensor again.
3203	7	Sensor has optical glare caused by another device.	↪ Switch off the supply voltage and start the sensor again.

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