Troubleshooting guide

Number	HMI alarm code	Alarm/warning overview	Motor operation/response	Trigger	Possible solutions	Reference to DV Manual
A1	1101	V LO Alarm → Supply voltage low - Alarm	Drive will report “Supply voltage low” and Alarm stop. - Motor is not allowed to run.	✓ Supply voltage to the DV is too low.	1. Check supply voltage. 2. Check cables /wiring for damage and/or poor connections - if damaged replace.	Please see voltage rating, found in section 16, technical specification.
A2	1102	V HI Alarm → Supply voltage too high - Alarm	Drive will report “Supply voltage high” and Alarm stop. - Motor is not allowed to run.	✓ Supply voltage to DV is too high.	1. Check input supply, if high reduce voltage. 2. Configuration for braking set wrong, allowing for DC link voltage to be pumped up through the motor - Check if fan config file is correct - reconfigure setup if needed. 3. Instability in load when supplied with max. voltage - secure load or reduce supply voltage	Please see voltage rating, found in section 16, technical specification.
A3	1201	I HI alarm → Output current high - Alarm	Drive will report “Output current high” and Alarm stop. - Motor is not allowed to run.	✓ Short circuit in motor cable. ✓ Short circuit in one or more motor windings. ✓ IGBT failure	1. Check motor for shorts - if motor failed, exchange. 2. Check motor cables for damaged and shorts - if damaged, exchange. 3. Disconnect mains from drive and check motor connections for shorts - if shorted, exchange drive.	
A4	2301	Temperature High → Temperature of drive too high (>95 °C) - Warning	Reduced drive performance	✓ Cooling of the DV enclosure too low. ✓ Insufficient air circulation around the DV. ✓ Air temperature around the DV is too high.	1. Check for and enable proper airflow. 2. Check cooling fins - clean if needed. 3. If external fan mounted - check if external fan spins, replace if damaged / not working.	Please see operating temperature, found in section 16, technical specification.
A5	2101	Input phase Error → Main’s phase missing (L1, L2, L3) - Warning	Reduced drive performance	✓ Missing phase in supply voltage to the DV ✓ Large imbalance in supply voltage.	Check input supply, wiring and fuses.	Please see manual for electrical installation - section 10.
A6	1203	Rotor blocked → Rotor/Fan unable to rotate - Warning/ Alarm	If occurs, the set numbers of retries (5), within 60 minutes, blocked rotor alarm and Alarm stop is given - Motor is not allowed to run.	✓ Configuration not matching application ✓ The rotor is unable to rotate due to a mechanical blockage of the rotor or fan.	1. Check configuration - if wrong, change configuration 2. Check if fan is blocked/unable to rotate - remove obstacles for fan to be able to spin. 3. If rotor is locked, exchange motor.	
A7	2201	Current limit → Motor has reached it’s current limit - Warning	Reduced drive performance	✓ The DV has reached the limit for maximum output power. ✓ The connected motor is larger than allowed for the chosen DV. ✓ The load is too big for the connected motor. ✓ The drive is ramping up the fan too fast.	1. Increase ramp time. 2. Check configuration. 3. Increase maximum motor current to match motors nameplate.	
A8	2202	V HI Limit → Voltage limit - Warning	Reduced drive performance	Displayed in case of derating due to insufficient motor voltage (e.g. insufficient supply voltage to run the motor at the requested speed).	1. Check if Mains supply matches motor voltage - output voltage for motor is approx. Mains voltage x 0.9. 2. Enable field weakening - allows for conversion of excess current to voltage to a limited degree.	Please see motor output voltage, found in section 16, technical specification.
A9	1204	Rotor direction → Rotating in the wrong direction - Alarm	Motor operation stops after windmilling timeout.	✓ Windmilling in the opposite direction during the startup process. ✓ Displayed if windmilling situation lasts for more than the specified time	Check for draft in duct or forced wind from other source	
A10	2303	EEPROM Error → Fault in internal EEPROM circuit - Warning	Drive will not operate with requested configuration file	✓ Incorrectly chosen configuration file - tried to download a configuration file which is not contained in the DV. ✓ The DV is defective.	1. If error occurred whilst update was attempted, power cycle drive and retry update attempt. - Check that the correct configuration / firmware files are being used. 2. Replace drive.	
A11	1001	Internal Stop → Alarm stop - Alarm	Motor stops	Displayed when an alarm/warning/error has exceeded its maximum number of retries attempts	1. Reset alarm via Modbus or digital input 2. Power cycle drive	
A12	1103	Earth fault (Only frame size H5) - Alarm	If occurs, the set numbers of retries (5), within 60 minutes alarm is given and motor stops	✓ Earth fault on motor cables or motor windings.	1. Check earth connections on drive and motor - if connection is loose or missing, mount cables correctly. 2. Check motor cables for damage - if damaged, replace cables. 3. Check motor windings - if fault is detected, replace motor. 4. Remove power and motor from drive and measure for shortage between motor output and earth.	Please see section 10. electrical installation - 10.0.6 relating to grounding.
A14	1202	Motor phase error (U, V, W) - Alarm	Drive will report “Motor phase error” and Alarm stop. - Motor is not allowed to run.	✓ One or more cables between drive and motor are disconnected. ✓ One or more motor windings are disconnected.	1. Check wires in motor phase terminals on drive. 2. Check motor wires for damaged - if damaged, exchange. 3. Check motor windings - if fault is detected, replace motor.	Please see section 10.3 Motor connection for installation guide
A15	1301	Communication error MOC → Internal communication fault - Alarm	Drive will not operate	✓ During the process of updating the MOC configuration file, communication was inadvertently disconnected. ✓ If the alarm goes off during normal operation, it indicates a defective DV.	1. MOC failure – Attempt to reinstall MOC software. 2. Replace drive.	
A16	2102	V Ripple → Ripple voltage too high - warning	Reduced drive performance	✓ Imbalance on voltage supply. ✓ Load imbalance causing adaptive control difficulties	1. Check input supply. 2. Check load for defects.	

Number	HMI alarm code	Alarm/warning overview	Motor operation/response	Trigger	Possible solutions	Reference to DV Manual
A19 (17 with GEN II)	2204	Ext. 24VDC supply overload - Warning	Drive will switch off external +24V supply - Motor is still allowed to run.	✓ Overloading or short circuit on +24V voltage supply	1. Check ext. 24v output for external shortage causing overload. 2. If overload has been removed from +24VDC output and alarm can not be reset, drive might have suffered damage	Please see Table 10.6: Block terminal connections overview, for allowed load.
A20 (18 with GEN II)	1302	MOC in bootloader - Alarm	Drive will not operate	✓ Displayed in case firmware update of MOC has failed	Attempt download of MOC software.	
A23 (19 with GEN II)	2302	Communication error IOM - Warning	Displayed as a warning, I/O module function not usable	✓ Displayed in case communication to I/O Module is not detected	Check I/O module for correct installation – If I/O module is not needed it can be disabled in the UDF	
A24 (20 with GEN II)	1205	Motor overheat (IOM) → Motor is overheating - Warning	If occurs, the set numbers of retries (5), within 60 minutes alarm is given along with Alarm stop. - Motor is not allowed to run.	✓ Displayed in case the motor has overheated.	1. Check wiring, motor and thermistor. 2. Check configuration - pay attention to max current setting, it most not exceed motor max. current.	
A25 (21 with GEN II)	2205	Windmilling – Warning	If occurs Motor is spinning in the wrong direction.	✓ Displayed in case motor is spinning in the other direction compared to specified in setup	1. Check possibilities for drafts or winds causing backwards rotation, and remove possibilities. 2. Enable passive or active holding torque to keep fan from rotating backwards.	
A27	2304	IO Config mismatch	Displayed as a warning, I/O function not usable.	✓ Displayed in case the same function has been assigned to several in- or outputs	Check configuration of in- and outputs and correct the assigned functions.	
A30		Unknown system alarm - “No current detected”				

New alarms/warnings added with introduction of DV GEN II					
Number	**HMI alarm code**	**Alarm/warning overview**	**Motor operation/response**	**Trigger**	**Possible solutions**
(A25 with GEN II)	2206	I_in_limit - Warning	If occurs, the set numbers of retries (5), within 60 minutes, alarm is given along with Alarm stop. - Motor is not allowed to run.	✓ If the input current is at the limit, set for DC bus current, Warning will be reported	1. Check configuration, correct if wrong config is used. 2. Check and correct current limit. 3. Hardware of drive might be damaged, check and replace drive if damage is found.
(A26 with GEN II)	2207	LowSpeed- Warning	If occurs, the set numbers of retries (5), within 60 minutes, alarm is given along with Alarm stop. - Motor is not allowed to run.	✓ If the low speed function is active and speed is lower than specified in configuration, a warning will be reported.	1. Check speed reference and control type set. 2. Check configuration, correct if wrong config is used. 3. Hardware of drive might be damaged, check and replace drive if damage is found.
(A28 with GEN II)	1305	Undervoltage17V - Alarm	Drive will not operate - Undervoltage17V is reported along with Alarm stop.	✓ Displayed in case of detection of an undervoltage of the 17V supply	1. Check for hardware of drive damage of drive. 2. Replace drive.
(A34 with GEN II)	2208	Cooling fan missing - Warning	Drive will derate when high temperature has been reached and will therefor not be able to deliver the desired effect.	✓ Displayed in case there is no feedback signal from the cooling fan.	1. Check connection between drive and external cooling fan. 2. Replace fan.
(A36 with GEN II)	2209	Fan vibration high - Warning	If the drive is subjecte to high vibration levels continuously, it will derate, until the vibration level has reached an acceptable level.	✓ Displayed if the vibration level of the drive is higher than the limits set in the FCF	1. Check for correct configuration, correct if needed. 2. Check for imbalance of fan. 3. Check for other sources of vibration, remove or stabilize to reduce vibration level
(A37 with GEN II)	2306	Drive vibration critical - Warning	If occurs, the set numbers of retries (5), within 60 minutes, alarm is given along with Alarm stop. - Motor is not allowed to run.	✓ Displayed if the vibration level of the drive is higher than the limit set in the CCF	1. Check for imbalance of fan. 2. Check for other sources of vibration, remove or stabilize to reduce vibration level

LED indication	Drive status std. setting	Drive status with LED error indication activated
Constant green	Good - No warning or alarm, no communication	Good - No warning or alarm, no communication
Flashing green	Good - Active RS-485 communication, No warning or alarm	Good - Active RS-485 communication, No warning or alarm
Flashing red continuously	Warning active	Warning active
Constand red	Alarm active	N/A
Flashing red temporarily	N/A	""Show alarm on LED"" activated 1 Flash = Supply issue 3 Flashes = Internal DV issue 5 Flashes = Motor issue