

11 Fault indications

A fault indication is called automatically whenever a fault occurs. Faults are indicated by means of an F in the first position followed by a 2-digit number. The indication flashes (approximately 0.8 s bright, 0.2 s dark).

Mains faults

- F02** Incorrect rotating field or synchronization voltage does not correspond to phase voltage (incorrect terminal-phase connection of terminals 1U/1W and 26/30)
- F03** Mains frequency not in 45 Hz to 65 Hz range or frequency change > 1.5Hz/sec
- F04** Phase failure, mains fuse or electronics power supply was switched off in the presence of DRIVE ENABLE signal (at terminal 64)
- F05** Mains voltage outside tolerance range ($\pm 20\%$)

Interface fault

- F06** Parity error during data reception via serial interface (e.g. incorrect setting of P97; incorrect setting of PG635 / PG675 / PG685 data format)
- F07** Syntax error during data reception via serial interface (For details, see the "Serial interface" instruction manual)
- F08** Faulty position setpoint input via connector X305 (applies only to spindle positioning option)

Machine-related faults

- F10** Overspeed indication (Responds if the speed set via parameter E21 is exceeded)
- F11** Tacho-monitor (e.g. open circuit, incorrect tacho-polarity)
- F12** $I > 300\%$
(Current actual value > 300% of rated converter current)
- F13** I2t monitor tripped (Motor overtemperature)
Remedy: Reduce load on motor
- F14** Exciter current monitor ($I_{Exc,act} \leq 50\%$ of $I_{Exc,set}$)
- F15** Drive blocked ($I_A > I_x$ at standstill)

F17

Gear speed selection ambiguous
(e.g. more than one gear speed selected at a time)

F18

Drive does not reach speed despite maximum field weakening
(e.g. because threshold e.m.f. (P77) set too low)

F19

Armature circuit interrupted
(e.g. blown fuse, broken line, EMF_{set} (P77) set too high, line undervoltage, α_G too high ($> 30^\circ$), etc.)

Control section faults

F21

Firing pulses suppressed
(trigger module terminal 700 not connected to terminal 763)

Internal fault indications

F22

- 1) Coupling fault between SINEC-L1 interface module Z1001 and basic unit
(The Z1001 module is not intended for SIMODRIVE and must not therefore be selected in parameter E00)
Remedy: Check Parameter E00

F23

- 1) Coupling fault between supplementary modules Z1004 (technology module) or Z1011 (interface module) and basic unit
(These supplementary modules are not intended for SIMODRIVE and must not therefore be selected in parameter E00)
Remedy: Check Parameter E00

F24

- 1) Supplementary power supply (C98130-A1070-A1) faulty
(applies only to spindle positioning option)

F26

- 1) Current cannot be reduced
(e.m.f. too high)

F28

FIFO overflow

F34

- 1) EEPROM fault
(cyclic RAM / EEPROM comparison)
Check: Jumper 5 on module A1200-L13 must be inserted:
(Up to software version 03, C1, ...)
Plug-in jumper EA - EB - EC on module A1200-L13 must be inserted in position EB - EC (from software version 04, D1, ... onwards). See also P87.

1) This fault indication can also appear when there is no DRIVE ENABLE signal
(i.e. when terminal 64 is open and the firing pulses have already been blocked).

Faults during startup

F30

Fault during field characteristic
(e.g. load surge during measurement of field characteristic,
field current reaches limit)

F32

Optimization run:
Remanence too high (drive rotates when $I_{FIELD_SET} = 0$)
Remedy: stall shaft

F35

Field-weakening blocked
(the block is activated if e.m.f._{SET} is not 0 and no characteristic has been
measured; the fault indication is suppressed in the CMD FIELD P90 = 2 mode)
Remedy: carry out field characteristic measurement

F36

Optimization run:
Current limit too low; the current limit is reached during automatic
optimization
(if permitted: increase current limit)

F37

Optimization run:
Optimization run aborted for external reasons
(e.g. active signals at DRIVE ENABLE or PULSE ENABLE or QUICK STOP
terminals interrupted)
Remedy: repeat optimization run

F38

Hardware not compatible with the option set with E00
or
the options set in E00 are mutually exclusive.

F39

Optimization run not possible when EEPROM disable is operative.
Remedy: set P87 to x3x or x0x.

F40

Erroneous input for automatic calculation of the parameters for speed-related
current limitation.
Remedy: Ensure that $n2 \geq n1$ and $i1 \geq i2$ and repeat calculation run.

F41

to
F46

Fault messages from thyristor diagnosis (only for service purposes)
Works setting: Parameter E39 = 0