

Code	Description	Reason
F.000	Gone past calibrated open position	• Too small a parameter value for upper emergency limit switch → increase P.239 • Upper limit switch range (limit switch band) too small → increase P.233 • Mechanical brake defective or improperly set
F.005	Gone past calibrated close position	• Too small a parameter value for lower emergency limit switch → increase P. 229 • Lower limit switch range (limit switch band) too small → increase P. 223 • Mechanical brake defective or improperly set
F.020	Run time exceeded (during opening, closing or deadman)	• current motor run time has exceeded set maximum run time (P.410 (Opening), P.415 (Closing), P.419 (Deadman move)), door may be sticking or is blocked • Door is blocked • If using mechanical limit switches, one may not have tripped
F.021	Emergency opening wrong testing	• The max. allowed run time (P.490) during testing has exceeded • Call Service
F.030	Lag error	• Check encoder magnet is tight on shaft • Check for missing teeth on track or drive gear (PF9000 only) • Check it manual operation for binding • Check motor wired correctly (Delta instead of Star) • Check that motor brake has released (brake motor only)
F.031	Moving in the wrong direction	• When using incremental encoders: Channel A and B reversed • Motor rotation direction reversed compared with calibration setting → teach in the limits new (P.210 = 5) • Too much „pancaking“ when starting, brake releases too soon, or too little torque, adjust boost (P.140 or P.145) as necessary.
F.033	Bad position transmitter protocol	• Fault on the bus of the position transmitter • No position data available over an extended period
F.063	Balance error on loop 3 (RFUxK expansion board only)	• Loop defective or not connected
F.064	Balance error on loop 4 (RFUxK expansion board only)	• Loop defective or not connected
F.067	Error on loop 3 (RFUxK expansion board only)	• Shortcut or intermitted loop connection wiring
F.068	Error on loop 4 (RFUxK expansion board only)	• Shortcut or intermitted loop connection wiring
F.080	Maintenance counter has been reached	
F.090	Controller not parameterized	• P.991 profile needs to be selected
F.211	E-Stop 1 open circuit	• E-Stop terminals 41 and 42 are open circuit
F.212	E-Stop 2 open circuit	• E-Stop terminals 31 and 32 are open circuit
F.320	Obstacle during opening	• During opening an obstacle has recognized
F.325	Obstacle during closing	• During closing an obstacle has recognized
F.360	Closing safety edge activated	• Short circuit detected on edge terminals 43 and 44
F.361	Closing safety edge trigger limit activated	• Check resistance for safety edge during operation • Limit can be adjusted with P.461
F.363	Interruption on edge input	• Connection cable defective or not connected • Termination resistor incorrect or missing • Jumper 1K2 / 8K2 incorrectly set
F.364	Safety edge testing failed	• Safety edge was not activated as expected when requesting a test. • The time between request for testing and actual testing not in agreement
F.369	Internal safety edge incorrectly parameterized	• P.460 set incorrectly or if no edge fitted remove cables from terminals 43 and 44
F.371	Stationary opening safety edge trigger limit activated	• Check resistance for safety edge during operation • Limit can be adjusted with P.461
F.373	Fault in the safety edge (message comes from module)	• Cable break to safety edge, no edge connected, edge termination resistor incorrect or defective • Jumper for termination resistor definition in wrong position. • Safety edge processing selected with Parameter P.470, but module not plugged in or wrong module.
F.374	Safety bar testing failed	• Pre-limit switch for safety edge incorrectly set or defective • Processing module defective • Safety edge defective
F.379	Safety edge detection defective (coding pin or parameter setting)	• No module plugged in but was reported as present by a parameter • The controller was started up with another module than the one currently plugged in
F.380	Opening safety edge activated	• Short circuit detected on edge terminals 63 and 65
F.383	Interruption on safety input	• Connection cable defective or not connected • Termination resistor incorrect or missing • Jumper incorrectly set
F.384	Safety input testing failed	• Safety edge was not activated as expected when requesting a test. • The time between request for testing and actual testing not in agreement
F.389	Safety input incorrectly parameterized	• P.50A set incorrectly or if no edge fitted remove cables from terminals 63 and 65
F.3F4	2. external safety edge - testing failed	• Pre-limit switch for safety edge incorrectly set or defective • Processing module defective • Safety edge defective
F.400	Controller hardware reset detected	• Excessive noise on supply voltage • Internal watchdog tripped • RAM error
F.401	Watchdog Error	• Internal Watchdog has released

Code	Description	Reason
F.409	RFUxK expansion board software incompatible	Only the expansion board RFUxK-F with the software version from V1. 11 can be operated in parallel with other expansion boards on a CAN- bus. - The software version of the expansion board RFUxK-A/E is less than V1. 11 - the expansion boards are connected to different CAN interfaces (e.g. RFUxK-A/E to CAN1 or CAN2 and RFUxK-F to CAN2 or CAN1)
F.40A	Internal Software Reset	unplanned software reset of the processor
F.40B	Communication error expansion board	• The communication between main board and expansion board is disturbed
F.40C	Unknown extension board (CAN connection)	• Incorrect hardware coding of the extension board • Control software does not support the expansion card • Expansion card defective
F.410	Over-current (motor current or DC-bus)	• Wrong motor data set (P.100 – P.103) • Non-adjusted voltage increase / boost set (P.140 or P.145) • Motor not properly dimensioned for door • Door sticks
F.420	Overvoltage in DC-bus Limit 1	• Brake chopper interference / defective / missing (brake motor only) • Feed voltage much too high • Motor is generating excessive voltage - brake chopper cannot dissipate the re-generated energy
F.425	Overvoltage line supply	• The supply voltage for the controller is too high
F.426	Undervoltage line supply	• The supply voltage for the controller is too low
F.430	Temperature heat sink outside of working range Limit 1	• Excessive load on power stage or brake chopper • Ambient temperature too low for controller operation • Clock frequency of power stage too high (Parameter P.160)
F.435	Housing temperature high	• The temperature inside the controller housing is too high
F.440	Overcurrent in DC-bus Limit 1	• Boost not adjusted • Motor incorrectly dimensioned for door • Door sticks
F.510	Motor / DC-bus overcurrent Limit 2	• Wrong motor data set (P.100 – P.103) • Non-adjusted voltage increase / boost set (P.140 or P.145) • Motor not properly dimensioned for door • Door sticks
F.511	No DC supply	• The DC voltage can not given to the motor (Overcurrent error, IGBT error F.519, 24 V error or over temperature)
F.512	Offset motor current / link current incorrect	• Hardware faulty
F.515	Motor protection function detected overcurrent	• Incorrect motor curve (motor rated current) set (P.101) • Too much boost (P.140 or P.145) • Motor incorrectly dimensioned
F.519	IGBT driver chip detected overcurrent	• Short circuit or ground fault on motor terminals • Motor rated current setting extremely wrong (P.100) • Extremely too much boost (P.140 or P.145) • Motor incorrectly dimensioned • Motor winding defective • Momentary interruption of the E-Stop circuit.
F.520	Overvoltage in DC-bus Limit 2	• Brake chopper interference / defective / missing (brake motor only) • Incoming mains voltage much too high • Motor is generating excessive voltage - brake chopper cannot dissipate the re-generated energy
F.521	Low voltage in DC-bus	• Input voltage supply too low, usually at load • Load too great / final stage or brake chopper fault
F.524	Ext. 24 V supply missing or too low	• Overload but no short circuit • When 24V is shorted the controller voltage does not ramp up and glow lamp V306 comes on.
F.525	Overvoltage at the incoming mains supply	• The incoming mains supply for the Controller is too high • The incoming mains supply fluctuates very extremely
F.530	Heatsink temperature outside of working range Limit 2	• Excessive load on final stages or brake chopper • Ambient temperature too low for controller operation • Clock frequency of final stage too high (Parameter P.160)
F.535	Housing temperature high	• The temperature inside the controller housing is too high
F.540	Overcurrent in DC-bus Limit 2	• Boost not adjusted • Motor incorrectly dimensioned for door • Door sticks
F.700	Limit switch issue	• Mechanical limits only • Both limit switches active at the same time
F.752	Loss of communication with encoder	• Interface cable defective / interrupted • supply voltage 12 Volt faulty, e.g. shortcut in spiral cable • Channel A and B connected over cross • Absolute encoder processor electronics defective • Defective hardware or electrically noisy environment • Use a shielded control cable • Install a RC element (100Ω+100nF) at the brake
F.766	Internal encoder error	• The position encoder has an error, recalibrate positions. P.210
F.768	Battery voltage	• The voltage of the encoder battery is too low → change battery (XL 055F T1 3.6v with 2 pin connector)
F.769	Rotation speed of PD shaft too high	• The rotation speed of the shaft where the encoder is mounted is too high → mount the encoder on another shaft
F.770	Encoder resolution set too high	• adjust P.202 to reduce the resolution and recalibrate positions

Code	Description	Reason
F.782	The expansion card cannot communicate via the encoder's bus	• Communication with expansion board is not possible • No expansion board plugged in • CAN Connection interrupted (Broken cable or no supply voltage for extension board) • Check that the RUN LED flashes
F.783	Expansion board software incompatible	The software version of the RFUxIO expansion board is not up-to-date or incompatible with the software of the door controller.
F.784	RFUxIO expansion board not activated.	RFUxIO is plugged in but not activated. Set Parameter P.800 = 8
F.7A2	Master cannot see slave controller connected	• If single gate or barrier change parameter A.820 to 0000 • Check dip switches on master slave cards are both in the same orientation (power off before changing) • Check cabling between master slave cards (terminal 4A to 4A, 4B to 4B, G to G) • Check software versions of both controllers are the same (P.925)
F.910	No communication to expansion board possible	• The communication to the expansion board is not possible • No expansion board plugged in • CAN Connection interrupted (Broken cable or no supply voltage for extension board)
F.920	Internal 2.5 V reference voltage incorrect	• Hardware defect
F.921	Internal 15 V voltage incorrect	• Hardware defect
F.922	E-Stop chain incomplete	• Check terminals 31, 32 and 41, 42 have either been linked out or have a normally closed going open stop button connected to them • Check internal 12v supply is not being used by anything other than the encoder, if it is then remove equipment and use meter to check for 12v across 33 and 36
F.925	Testing of the third shutdown method failed	• defective hardware
F.928	Faulty input testing	• The testing of an cyclic tested input was not successful • The connected device is not working • The cable connection between the connected device and the controller is broken
F.92A	If the motor wiring test is activated by P.112 the wiring will be tested during system tests.	• min. one of the motor cables is not good or nor connected • Motor cable damaged • Motor damaged
F.930	External watchdog incorrect	• Defective hardware or noise-saturated environment
F.931	ROM error	• Wrong EPROM code • Defective hardware or noise-saturated environment
F.932	RAM error	• Defective hardware or noise-saturated environment
F.933	Wrong frequency of CPU	• The clock frequency of the processor is wrong
F.935	Stack error	• UserSTack or SystemStack overflowed • Possible software error due to recursive invocations (e.g. profile)
F.960	Wrong parameter checksum	• New EPROM version with different parameters • Controller not yet initialized
F.961	Checksum from calibration values etc.	• New EPROM version with different EEPROM structure • Controller not yet initialized
F.962	Converter parameters not plausible	• New EPROM version • Controller not yet initialized
F.964	Program version / manufacturer code	• New EPROM version • Controller not yet initialized
F.966	Hardware unknown	• A wrong software was programmed to the controller • The programmed software does not know the hardware version • The controller hardware is broken
F.968	Programming error with Real time clock (RFUxK expansion board only)	• The Clock is not programmed plausible
F.969	Internal error Real time clock (RFUxK expansion board only)	• The clock has an error → Check battery, possibly empty. Make time and date settings again.
F.970	Plausibility Param.block error	• New EPROM version • Controller not yet initialized • Some parameter is implausible

Code	Description	Reason
General inputs		
E.000	Open key on membrane keypad	
E.050	STOP key on membrane keypad	
E.090	CLOSE key on membrane keypad	
E.101	Input 1	Stop button pressed
E.102	Input 2	Open command
E.103	Input 3	Close command
E.104	Input 4	Deadman keyswitch open command (gates only, input not available on barriers)
E.105	Input 5	Deadman keyswitch close command (gates only, input not available on barriers)
E.106	Input 6	Photocell activation (gates only, input not available on barriers)
E.107	Input 7	Photocell activation
E.108	Input 8	Barrier in open position (barrier with mechanical limits only, input not in use on gates)
E.109	Input 9	Barrier in closed position (barrier with mechanical limits only, input not in use on gates)
E.110	Input 10	Opening safety edge (gates only, input not available on barriers. If edge is triggered an E.38x code will show instead)
E.111	Input 11	Virtual input command, check partner controller for code (master slave setup only)
E.112	Input 12	Virtual input command, check partner controller for code (master slave setup only)
E.113	Input 13	Virtual input command, check partner controller for code (master slave setup only)
E.114	Input 14	Virtual input command, check partner controller for code (master slave setup only)
E.115	Input 15	Virtual input command, check partner controller for code (master slave setup only)
E.121	Input 21	Input not used by default (only available on TST RFUxK and RFUxIO expansion boards)
E.122	Input 22	Input not used by default (only available on TST RFUxK and RFUxIO expansion boards)
E.123	Input 23	Input not used by default (only available on TST RFUxK and RFUxIO expansion boards)
E.124	Input 24	Input not used by default (only available on TST RFUxK and RFUxIO expansion boards)
E.125	Input 25	Input not used by default (only available on TST RFUxK and RFUxIO expansion boards)
E.126	Input 26	Input not used by default (only available on TST RFUxK and RFUxIO expansion boards)
E.127	Input 27	Virtual input command, check partner controller for code (master slave setup only)
E.128	Input 28	Virtual input command, check partner controller for code (master slave setup only)
E.13A	Input 3A	Virtual input command, check partner controller for code (master slave setup only)
E.13B	Input 3B	Virtual input command, check partner controller for code (master slave setup only)
E.13C	Input 3C	Virtual input command, check partner controller for code (master slave setup only)
E.13D	Input 3D	Virtual input command, check partner controller for code (master slave setup only)
E.13E	Input 3E	Virtual input command, check partner controller for code (master slave setup only)
E.13F	Input 3F	Virtual input command, check partner controller for code (master slave setup only)
Safety- / emergency stop chain		
E.201	internal E-Stop "mushroom button" tripped	
E.211	external E-Stop 1 tripped	E-Stop terminals 41 and 42 are open circuit
E.212	external E-Stop 2 tripped	E-Stop terminals 31 and 32 are open circuit
Safety edge in general		
E.360	Triggering of the closing safety edge	Activation of safety edge terminals 43 and 44
E.363	Interruption of the closing safety edge	Incorrect resistance showing on safety edge terminals 43 and 44, remove cables from terminals before checking resistance with a meter. Should be 8.2k Ohms
E.370	Activation of stationary opening safety edge	Opening stationary safety edge triggered on plug in TST SUR4-6 expansion card (sliding gates only)
E.373	Stationary opening safety edge fault	Incorrect resistance showing on opening safety edge connected to TST SUR4-6 expansion card, remove cables from terminals before checking resistance with a meter. Should be 8.2k Ohms
E.379	TST SUR4-6 expansion card activated but not yet plugged in	TST SUR4-6 expansion card plugged in but P.802 not set correctly (Should be set to 0106. Sliding gates only)
E.380	Triggering of the opening safety edge	Activation of safety edge terminals 63 and 65
E.383	Interruption of the opening safety edge	Incorrect resistance showing on safety edge terminals 63 and 65, remove cables from terminals before checking resistance with a meter. Should be 8.2k Ohms
E.3F0	Activation of stationary closing safety edge	Closing stationary safety edge triggered on plug in TST SUR4-6 expansion card (sliding gates only)
E.3F3	Stationary closing safety edge fault	Incorrect resistance showing on closing safety edge connected to TST SUR4-6 expansion card, remove cables from terminals before checking resistance with a meter. Should be 8.2k Ohms
Induction loop detector		
E.501	Detector channel 1	Safety loop triggered or faulty on barriers. Open loop on Bi-Fold/Swing gates
E.502	Detector channel 2	Open loop triggered or faulty on Bi-Fold/Swing gates, Safety on barriers
E.503	Detector channel 3	Loop input not used by default (only available on TST RFUxK expansion board)
E.504	Detector channel 4	Loop input not used by default (only available on TST RFUxK expansion board)
Internal inputs		
E.900	Controller chip fault signal	

Code	Description	Reason
Information Messages		
I.021	Emergency open test is running	
I.080	Service counter will run off	Service counter reached set limit reached
I.100	Speed in open position to high	Lower opening speed P.310
I.150	Speed in close position to high	Lower opening speed P.350
I.160	Permanent open comand still active	
I.161	Priority still active	
I.170	Forced opening active	
I.180	Wait for foil key command	
I.185	Wait for reset by stop foil key	
I.199	Door counter wrong	
I.205	Synchronisation done	
I.210	Limit switch not plausible	
I.211	Limit switch not plausible	
I.310	Open command to door 2	
I.320	Obstacle during opening	
I.325	Obstacle during closing	
I.360	Disturbed N.C. safety edge	
I.363	Disturbed N.O. safety edge	
I.380	Faulty 2nd internal N.C. safety bar	
I.383	Faulty 2nd internal N.O. safety bar	
I.510	Correction drive finished	
I.515	Active correction drive	
I.520	Target speed for opening or closing move not reached	• Pre-limit switch reached before full speed was reached --> adjust ramps • Current limiter prevents movement at full speed --> Inverter or motor working at performance limit --> adjust ramps or limiter
I.555	Measuring rotation factor not ready	
I.700	In timer limit switch operating mode, the door position is not available. Deadman speed is maintained until the actual position becomes available again.	
I.856	The internal safety edge is tripped because of an WiCab radio problem.	• The radio connection of the WiCab system is gone for a short moment during door drive. Possible reasons for this are: • The Distance between mobile and stationary unit is larger than specified • No perfect Orientation of stationary and mobile antenna • The radio link is disturbed by external noise
I.A00	There is a new or unconfigured device on the CAN or RS485 bus.	
General messages;		
STOP	Stop	Reset state, wait for next incoming command
Ec	Close position	
□Ec□	Close position locked	Opening not possible (example; opening safety edge fault)
CLS	Closing active	
°Eo°	Open position	
□Eo□	Open position locked	Closing not possible (example; photocell or closing safety edge fault)
OPE	opening active	
-E1-	Intermediate position E1	Intermediate/pedestrian open position
□E1□	Intermediate position locked	closing not possible (example; photocell or closing safety edge fault)
FAIL	Fault	Only deadman travel is possible, automatic opening may also be possible
CALI	Calibration	Setting the limit positions in deadman travel mode (for absolute encoder) □ Start procedure using STOP key
□ES□	E-stop	Travel not possible, hardware safety chain interrupted
HdSA	E-travel	Deadman travel without regard for safety facilities, etc.
'Hd'	Manual	Deadman mode
ParA	Parameterization	
SYNC	Synchronization	Incremental encoder / limit switch position unknown
'Au'	Automatic	Indicates change from "Manual" to "Automatic" status
'Hc'	semi-automatic	Indicates change from "Manual" to "Semi-automatic"
FC	Power Up and self-test	Initial display after power up
Status messages during calibration;		
E.i.E.c.	calibration of the closed position requested (in deadman travel)	
E.i.E.o.	calibration of the open position requested (in deadman travel)	
E.i.E.1.	calibration of intermediate position E1 (in deadman travel)	

Code	Description	Reason
Status messages during synchronization:		
S.y.E.c.	Synchronization of lower limit position requested (deadman or wait for starting condition)	
S.y.E.o.	Synchronization of upper limit position requested (deadman or wait for starting condition)	
S.y.E.1.	Synchronization of intermediate stop position E1 (in deadman mode)	
S.y.op	Automatic opening up to mechanical stop, then automatic synchronization of upper limit position	
S.y.cL	Automatic closing taking into account safeties up to mechanical stop, followed by automatic synchronization of lower limit position	
S.y.c□	Automatic closing is locked due to request A	
Status messages during dead man movement:		
Hd.cL	Deadman closing (membrane key: CLOSE)	
Hd.oP	Deadman opening (membrane key: OPEN)	
Hd.Ec	Lower limit position reached, no further deadman closing possible	
Hd.Eo	Upper limit position reached, no further deadman opening possible	
Hd.Ao	Outside of permitted Eo position (no deadman opening possible)	
Information messages during the parameter configuration:		
noEr	Error memory: no error saved	
Er--	Error memory: if error but without associated message being found	
Prog	Programming message while carrying out original parameter or default set.	