SOFTWARE

KR C...

Error messages / troubleshooting

KUKA System Software (KSS)

Contents

1 Error messages / troubleshooting

Messages of all categories are displayed in the message window. These can be either informative messages that do not need to be acknowledged or messages that have to be acknowledged.

A message consists of the following items of information, for example:

Message group

Message time

Message number

Originator

Message text
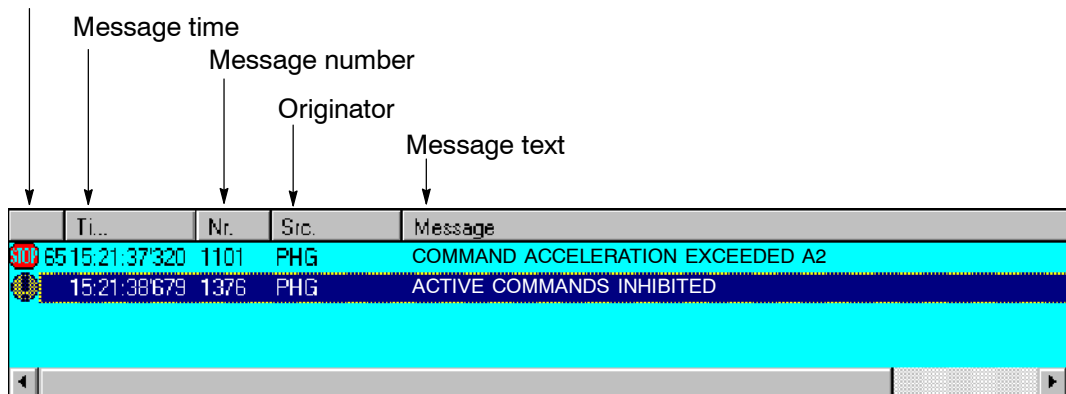
1.1 Message groups

Hint messages

provide the operator with explanatory information, for example, if an illegal key has been pressed.

Operational messages

signal the status of the system that has led to a control reaction, e.g. Emergency Stop. The message is cleared once its cause has been eliminated. In some cases, a secondary signal that has to be acknowledged is set for reasons of safety.

Acknowledgement messages

indicate a situation that must in all instances be recognized and acknowledged with the acknowledge key. They are often a consequence of a status (operational) message. An acknowledgement message stops a movement or prevents further operation.

Dialog messages

require confirmation by the operator ("Yes" or "No" softkeys). The message is cleared after it has been confirmed.

1.2 Message time

The message time indicates the time at which the message was generated.

1.3   Message number

With the aid of the message number, the corresponding cause, effect and remedy can quickly be located in the list of error messages.

1.4   Originator

The origin of the error is indicated in this field.

1.5   Message text

The text of the error message is shown here.

1.6   List of error messages

To make it easier to find error messages in the following list, the message number is shown first, unlike on the display. By referring to this message number, it is possible to obtain further information on an error and the appropriate remedial action. This information is subdivided into:

Message text

is the actual text of the error message as displayed.

Cause

gives a detailed description of the cause of the error.

Monitor

indicates when the conditions for generation of the message are checked.

Effect

describes how the controller reacts to the error.

Remedy

describes what action the user can take to eliminate the error.

1	**Message text**	EMERGENCY STOP
	Cause	– Emergency Stop pushbutton pressed.
		– Emergency Stop initiated by the software.
	Monitor	– Cyclic.
	Effect	– Path–maintaining stop.
		– All active commands inhibited.
	Remedy	– Check the Emergency Stop pushbutton and Emergency Stop circuit.
		– Release the Emergency Stop pushbutton.
		– Rectify and acknowledge the signalled fault.

2	**Message text**	Internal error
	Cause	– Internal KRL software test.
	Monitor	– Within the KRL software.
	Effect	– All active commands inhibited.
	Remedy	– Acknowledge message.

3	**Message text**	MESSAGE BUFFER OVERFLOW
	Cause	– The message buffer, which contains the currently active messages (acknowledgement and status messages), is full up to a specific limit.
	Monitor	– Cyclic.
	Effect	– Ramp–down braking.
		– All active commands inhibited.
	Remedy	– Rectify and acknowledge the signalled faults.

4	**Message text**	BUFFER BATTERY VOLTAGE LOW xx
	Cause	– Voltage of the backup battery too low.
	Monitor	– At "Power off".
		– Cyclic.
	Effect	– The battery voltage is checked when the power is switched off. When the message is displayed, it is necessary to wait until the battery has recharged. Only then may the controller be switched off.
		– Cyclic –> none.
	Remedy	– Change the battery.
		– After the battery has been charged, the message "Ackn. batt. voltage" is displayed –> acknowledge.

5	**Message text**	Malfunction <HPU or RCP>
	Cause	– KCP defective.
	Monitor	– Cyclic.
	Effect	– Ramp–down braking.
		– All active commands inhibited.
	Remedy	– Replace KCP.

6		**Message text**	Transmission error <HPU or RCP>
		Cause	– Fault in KCP connection.
		Monitor	– Cyclic.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Check the KCP cable.
7		**Message text**	TPBASIS
		Cause	– The point could not be created
8		**Message text**	System time invalid
		Cause	– The system time is invalid after TIME_HW_FAILURE and has been set to the initial value.
		Monitor	– When the controller is booted.
		Effect	– The system time is initialized with 01.01.93 00:00:00,00.
		Remedy	– Update the system time with the form "systime".
9		**Message text**	MFC overtemperature
		Cause	– The temperature sensor on the MFC has been triggered.
		Monitor	– Cyclic.
		Effect	– Path–maintaining braking.
		Remedy	– Check fan. Exchange MFC if necessary.
10		**Message text**	ERROR DIGITAL OUTPUTS @P1@
		Cause	– Short circuit at outputs 1–8 or 9–16.
		Monitor	– Cyclic.
		Effect	– Maximum braking.
		Remedy	–
11		**Message text**	PROGRAM STACK OVERFLOW
		Cause	– KRL program contains too many nested structures or too many recursive subprogram calls! The C–stack of the R–INT would otherwise overflow.
		Monitor	– In program processing.
		Effect	– Ramp–down braking.
		Remedy	– Change the structure of the program.
12		**Message text**	TOO MANY MESSAGES
		Cause	– Too many messages have been cyclically generated.
		Monitor	– When a message is generated.
		Effect	– All active commands are cancelled and cannot be restarted.
		Remedy	– The KRC has to be booted.

13		**Message text**	ERROR SAFETY LOOP
		Cause	– A channel has failed or more than one enabling switch has been pressed.
		Monitor	– Cyclic.
		Effect	– Path–maintaining braking, active commands inhibited.
		Remedy	–
14		**Message text**	SOFTPLC: @P1@
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
15		**Message text**	OUTPUT MONITORING DC BUS VOLTAGE KPS: @P1@
		Cause	– DC bus voltage of a KPS overloaded.
		Monitor	–
		Effect	–
		Remedy	–
16		**Message text**	Error while reading "O file"
		Cause	– Error during loading/reading of "ident_vx.o": memory or file not found.
		Monitor	– In the write function "w_ident_state".
		Effect	– Jump to the end in load data program.
		Remedy	– Copy the file "ident_vx.o" to the directory "/ir_spec/l_ident", or increase memory by changing the value "VxWinRAM" in the registry.
17		**Message text**	WRONG/UNKNOWN HARDWARE FOUND
		Cause	– During setup, the wrong control hardware (KR C1, KR C1A, KR C2) was selected or the hardware configuration is invalid.
		Monitor	–
		Effect	– The controller is inoperable.
			– Robot traversing not possible.
		Remedy	– Carry out setup again or make appropriate changes to hardware configuration.
18		**Message text**	Servobus DSE–No. %1 participant No. %2 unknown
		Cause	– An unknown device which cannot be supported has been inserted in Interbus
		Monitor	– DSE ID, device ID
		Effect	– The robot can no longer be traversed
		Remedy	– Remove unknown device from servo bus

19		**Message text**	FAILURE OF MOTOR PHASE <axis>
		Cause	– Power module, intermediate circuit voltage discharged.
		Monitor	– Cyclic.
		Effect	– Dynamic braking.
			– All active commands inhibited.
		Remedy	– Switch on drives.
			– Check power module, DSE.

20		**Message text**	EXTERNAL EMERGENCY STOP PRESSED
		Cause	– Emergency Stop button pressed.
			– Emergency braking triggered by software.
		Monitor	– Cyclic.
		Effect	– Path–maintaining braking.
			– All active commands inhibited.
		Remedy	– Check the Emergency Stop pushbutton.
			– Rectify and acknowledge the signalled fault.

21		**Message text**	Second motorcable not connected
		Cause	– Second motor cable is not connected or is incorrectly connected; the additional cable contains two wires which are connected to the robot; the return signal is connected to the KPS X114, pin 7
		Monitor	– Cyclic.
		Effect	– The robot cannot be traversed
		Remedy	– Check second motor cable and return signal at KPS X114, pin 7

100	**Message text**	RDW ** BOOT UP FAILURE
	Cause	– The resolver/digital converter (RDW) could not be initialized when the controller was booted.
	Monitor	– At runup.
	Effect	–
	Remedy	– Replace RDW, DSE or cable between RDW and DSE.
101	**Message text**	DSE ** BOOT UP FAILURE
	Cause	– The DSE could not be initialized when the controller was booted.
	Monitor	– At runup.
	Effect	– Maximum braking (dynamic braking).
	Remedy	– Replace DSE, MFC or motherboard.
102	**Message text**	ENCODER CABLE FAILURE **
	Cause	– Cable defective (e.g. loose connection).
		– RDW defective.
		– Encoder defective.
	Monitor	– Cyclic.
	Effect	– Maximum braking (dynamic braking).
		– Low signal at "$ALARM_STOP" output.
		– All active commands inhibited.
	Remedy	– Check encoder cable.
		– Check motor, resolver.
		– Possibly replace RDW.
103	**Message text**	WATCHDOG INTERPOLATION CYCLE **
	Cause	– DSE has not triggered software watchdog in the DP–RAM.
	Monitor	– Cyclic.
	Effect	– Maximum braking.
		– Low signal at "$ALARM_STOP" output.
		– All active commands inhibited.
	Remedy	– Replace DSE or MFC.
		– Software error.
104	**Message text**	SYNCHRONIZATION ERROR WITH DSE **
	Cause	– DSE has not received feed command value for 1 interpolation cycle although servo–control is active.
	Monitor	– Cyclic.
	Effect	– Maximum braking.
		– Low signal at "$ALARM_STOP" output.
		– All active commands inhibited.
	Remedy	– Error in the DSE or PC area.
		– Software error.

105	**Message text**	TRANSMISSION ERROR DSE – RDW **
	Cause	– Open–circuit between RDW and DSE.
		– Transmission malfunctions.
	Monitor	– Cyclic.
	Effect	– Maximum braking.
		– Low signal at "$ALARM_STOP" output.
		– All active commands inhibited.
	Remedy	– Check shielding of encoder cable.
		– Check serial interface DSE–RDW.

106	**Message text**	PERFORM MASTERING ** !
	Cause	– Position actual value difference after restart too great and sensor mastering not possible because sensor location run has not been performed.
	Monitor	– At "Power on".
		– During mastering.
	Effect	– All active commands inhibited.
	Remedy	– Perform mastering.

107	**Message text**	EMERGENCY STOP DUE TO DIAL ADJUSTMENT
	Cause	– Softkeys for dial adjustment pressed.
		– Value assignment "$TURN = 1".
		– Encoder setting, absolute or incremental.
	Monitor	– When "$TURN" instruction is executed.
	Effect	– Dynamic braking.
		– 0 signal at "$ALARM_STOP" output
		– All active commands inhibited.
	Remedy	– Leave the mastering menu by pressing the Recall key twice.

108	**Message text**	DYNAMIC BRAKING ACTIVE
	Cause	– If the controller detects a request for maximum (dynamic) braking, it geneates the status (operational) message "DYNAMIC BRAKING ACTIVE", which remains active until all axies have stopped.
	Monitor	– Cyclic.
	Remedy	– The status message "DYNAMIC BRAKING ACTIVE" is reset by the controller when the robot is at standstill without a secondary message being generated.

109	**Message text**	CLEAR FAST MEASURING INPUT @P1@
	Cause	– Rapid gauging has been switched on.
	Monitor	– During rapid gauging.
	Effect	– Rapid gauging becomes active when measuring tool has been moved free.
	Remedy	– Move measuring tool free.

110		**Message text**	ADVANCED PATH PROFILE NOT POSSIBLE WITH LINKED EXTER-NAL AXES
		Cause	– Coupling of external axes in higher motion profile.
		Monitor	– During command and program execution.
		Effect	–
		Remedy	–
111		**Message text**	TEPRO INACTIVE
		Cause	– SBC no longer sending a signal to KRC.
		Monitor	– Cyclic.
		Effect	– SBC interface inoperable.
		Remedy	– Re–initialize SBC program.
112		**Message text**	INVALID $TOOL: WORKING ENVELOPE SURVEILLANCE NOT POSSIBLE
		Cause	– "$TOOL" invalid when working envelope monitoring is activated.
		Monitor	– Cyclic.
		Effect	– None.
		Remedy	– Assign "$TOOL" or switch off working envelope monitoring.
113		**Message text**	RANGE OVERFLOW ** **
		Cause	– Overflow of the actual value of an endless axis: actual value > +/– 90*10E15 increments or –99999000 < $REVO_NUM < 999999000
		Monitor	– Cyclic in the interpolation cycle.
		Effect	– Path–maintaining Emergency Stop.
		Remedy	– Turn back or remaster the axis concerned.
114		**Message text**	WORKING ENVELOPE NO. @P1@ VIOLATED
		Cause	– TCP is inside a working envelope with MODE INSIDE STOP or outside a working envelope with MODE OUTSIDE STOP.
		Monitor	– Cyclic.
		Effect	– Path–maintaining braking;
			– All active commands inhibited.
		Remedy	– Switch off working envelope or use key on the KCP to override work envelope monitoring, move free in T1 mode.
115		**Message text**	DRIVE FREE WORK ENVELOPE %1
		Cause	– TCP is inside a working envelope with MODE INSIDE STOP or outside a working envelope with MODE OUTSIDE STOP and the working envelope monitoring is overridden.
		Monitor	– Cyclic.
		Effect	–
		Remedy	– Free work envelope.

116		**Message text**	DSE WATCHDOG COMMAND **
		Cause	– DSE has not executed a command.
		Monitor	
		Effect	– Ramp–down braking.
		Remedy	– Check hardware in the DSE, MFC area.

117		**Message text**	TORQUE EXCEEDED AXIS @P1@
		Cause	
		Monitor	
		Effect	
		Remedy	

118		**Message text**	HEAT SINK TEMPERATURE **
		Cause	– Thermostatic switch on the heat sinks of the servo output stage is tripped due to overheating of the output stage transistors.
		Monitor	– Cyclic.
		Effect	– Ramp–down braking. Program processing stopped.
		Remedy	– Eliminate the fault and reset it by pressing the acknowledge key on the KCP.
			– Clean the heat sinks.

119		**Message text**	MOTOR TEMPERATURE **
		Cause	– PTC thermistor (measuring shunt) in the motor winding has been tripped (motor temperature too high).
		Monitor	– Cyclic.
		Effect	– Ramp–down braking. Program processing stopped.
		Remedy	– Eliminate the fault and reset it by pressing the acknowledge key on the KCP.
			– Program more movement breaks.

120		**Message text**	ACKN. MOTOR BLOCKED **
		Cause	– As soon as the torque command value supplied by the speed controller exceeds 30% of the max. torque command value, integration is started, and when the value of i*t reaches approx. 0.75 [(torque command value / max. torque command value) * sec] the control is switched off (i*t – monitoring).
		Monitor	– Cyclic.
		Effect	– Ramp–down braking. Program processing stopped.
		Remedy	– Eliminate the fault and reset it by pressing the acknowledge key on the KCP.
			– Check that the axis is moving freely.

121		**Message text**	OVERCURRENT **
		Cause	– The current of each axis is monitored and the amplifier–internal current protection is tripped if the power consumption is too high.
		Monitor	– Cyclic.
		Effect	– Ramp–down braking. Program processing stopped.

		Remedy	– Eliminate the fault and reset it by pressing the acknowledge key on the KCP.
122	ℹ	**Message text**	BRAKE FAULT **
		Cause	– The brake cable is monitored for short–circuit, overload and cable break.
			– With the PM6, all axes are supplied from one brake driver.
		Monitor	– Cyclic.
		Effect	– Ramp–down braking. Program processing stopped.
		Remedy	– Eliminate the fault and reset it by pressing the acknowledge key on the KCP.
123	ℹ	**Meldungstext**	UNDERVOLTAGE <axis number>
		Cause	– The internal operating voltage (+15V) of the servo output stage is monitored. Undervoltage results in power failure.
		Monitor	– Cyclic.
		Effect	– Ramp–down braking. Program processing stopped.
		Remedy	– Eliminate the fault and reset it by pressing the acknowledge key on the KCP.
124	ℹ	**Message text**	OVERVOLTAGE <power module number>
		Cause	– The intermediate–circuit voltage is too high. Possible causes are a defective ballast (feedback) resistor or ballast fuse, a defective power module, brake ramp too steep etc.
		Monitor	– Cyclic.
		Effect	– Ramp–down braking. Program processing stopped.
		Remedy	– Eliminate the fault and reset it by pressing the acknowledge key on the KCP.
125	ℹ	**Message text**	i^2–t MONITORING, CURRENT LIMIT OF THE MOTOR CABLE <string1> AFTER <string2> s EXCEEDED 100%
		Cause	– Axis overloaded. The value for the maximum permissible limit current is specified in the machine data by "$CURR_MON[]".
		Monitor	– Cyclic.
		Effect	– Ramp–down braking, active commands inhibited.
		Remedy	– Reduce load.
126	ℹ	**Message text**	REGULATOR LIMIT EXCEEDED <axis number>
		Cause	– Following error too great. The axis does not follow the command value.
		Monitor	– Cyclic in the position controller.
		Effect	– Maximum braking.
		Remedy	– Check the axis.
127	ℹ	**Message text**	<axis number> DETACHED EXTERNAL AXIS
		Cause	– Auxiliary (external) axis is operated as an asynchronous axis.
		Monitor	– Cyclic.
		Effect	

		Remedy	
128		**Message text**	SOFTWARE LIMIT SWITCH OF DETACHED EXTERNAL AXIS <motion direction> <axis number>
		Cause	– Asynchronous axis has tripped the pos. or neg. software limit switch.
		Monitor	– The software limit switch is checked cyclically if the axis is operated as an asynchronous axis.
		Effect	
		Remedy	
129		**Message text**	i^2–t MONITORING, CURRENT LIMIT OF THE MOTOR CABLE <string1> AFTER <string2> s EXCEEDED 95%
		Cause	– Axis overloaded. The value for the maximum permissible limit current is specified in the machine data by "$CURR_MON[]".
		Monitor	– Cyclic.
		Effect	– Ramp–down braking, active commands inhibited.
		Remedy	– Reduce load.
130		**Message text**	K1 CONTACT FAIL TO OPEN <KPS number>
		Cause	– The K1 contact is welded.
		Monitor	–
		Effect	– The energy supply system is not interrupted.
		Remedy	– Exchange contactor, KPS.
131		**Message text**	BUS VOLTAGE CHARGING UNIT IS DEFECTIVE <KPS number>
		Cause	– The optocoupler on the KPS is not registering current flow.
		Monitor	–
		Effect	– Intermediate circuit cannot be loaded.
		Remedy	– Exchange KPS.
132		**Message text**	BRAKE DEFECTIVE <axis ...>
		Cause	– Wear on brakes, defective brake.
		Monitor	–
		Effect	– Axis moves in an uncontrolled manner.
		Remedy	– Exchange motor.
133		**Message text**	MONITORING OF THE ACTUAL VELOCITY @P1@
		Cause	– Fault in control loop: – motor cables of two axes interchanged; – error in the axis assignment; – power module defective; – resolver unmastered.
		Monitor	– Cyclic.
		Effect	– Robot remains motionless.
		Remedy	– Rectify the corresponding error in the control loop.

134		**Message text**	DN CH ... WRONG FASTWRITE MACID IN INI FILE
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
135		**Message text**	DN CH ... MODULE ERROR ...
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
136		**Message text**	DN CH ... SLAVE ERROR ...
		Cause	–
		Monitor	–
		Effect	–
		Remedy	– Exchange contactor, KPS.
137		**Message text**	DN CH ... FIRMWARE ERROR
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
138		**Message text**	DN CH ... HARDWARE ERROR
		Cause	–
		Monitor	–
		Effect	–
		Remedy	– Exchange contactor, KPS.
139		**Message text**	DN CH ... BUS ERROR ...
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
140		**Message text**	DN CH ... WATCHDOG ERROR
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–

141	**Message text**	DN CH ... USER ERROR ...
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

142	**Message text**	DN CH ... CONFIGURATION MODE ENABLED
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

143	**Message text**	Ixt servo drive %1 exceed value %2 %%
	Cause	– If the defined Ixt monitoring warning value of a drive servo is exceeded, the robot must be brought to a standstill; otherwise, the drive servo is deactivated when the maximum value of 100% is exceeded
	Monitor	– Cyclic, the warning bit on the drive servo
	Effect	– The robot is stopped in a controlled manner.
	Remedy	– Verify load data
		– If necessary, reduce the load cycle (wait time)
		– Use stronger robot

146	**Message text**	Wrong amplifier %1
	Cause	– Drive module of a slave axis does not correspond to drive module on the associated master axis
	Monitor	– Cyclic.
	Effect	– Traversing not possible
	Remedy	– Shut down controller, exchange drive module for one corresponding to the master axis and reboot controller

147	**Message text**	DRIVE FREE AXIS WORK ENVELOPE NO. %1
	Cause	– The robot is inside a working envelope with MODE INSIDE STOP or outside a working envelope with MODE INSIDE STOP and the working envelope monitoring is overridden.
	Monitor	– Cyclic.
	Effect	–
	Remedy	– Free axis work envelope

148	**Message text**	Axis work envelope No. %1 violated
	Cause	– The robot is inside a working envelope with MODE INSIDE STOP or outside a working envelope with MODE OUTSIDE STOP
	Monitor	– Cyclic.
	Effect	– Path–maintaining braking, all active commands inhibited
	Remedy	– Switch off axis working envelope or override work envelope monitoring in T1 mode and move free

155	**Message text**	<axis> DECOUPLED AUXILIARY AXIS
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

200	**Message text**	DRIVES CONTACTOR OFF
	Cause	– Power module, intermediate–circuit voltage discharged.
	Monitor	– Cyclic.
	Effect	– Maximum braking.
		– All active commands inhibited.
	Remedy	– Switch drives on.
		– Check power module, check DSE.
		– Emergency Stop is active, drives circuit is interrupted.

201	**Message text**	KCP DEADMAN SWITCH
	Cause	– The safety (deadman) switch has been released during an active function (motion of an axis) in mode T1 or T2.
	Monitor	– Cyclic.
	Effect	– Maximum braking.
		– All active commands inhibited.
	Remedy	– Press safety switch.
		– Check KCP, safety logic.

202	**Message text**	I/O RECONFIGURATION
	Cause	– An I/O reload command has been transmitted via the KCP.
	Monitor	–
	Effect	– Path–maintaining braking.
	Remedy	– After successful reconfiguration, the normal operating state is automatically restored.

203		**Message text**	GENERAL MOTION ENABLE
		Cause	– Low signal at $MOVE_ENABLE input.
		Monitor	– Cyclic.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Check the input.
204		**Message text**	HARDWARE LIMIT SWITCH / +24V MISSING
		Cause	– The hardware limit switch has been tripped.
		Monitor	– Cyclic.
		Effect	– Maximum braking.
		Remedy	– Shunt out the hardware limit switch and move axis off limit switch.
205		**Message text**	SOFTWARE LIMIT SWITCH <motion direction> <axis number>
		Cause	– The software limit switch of the axis indicated has been tripped in the direction indicated. (The message is effective only after "Robot synchronized").
		Monitor	– Cyclic.
		Effect	– Maximum braking.
			– Movement in the direction indicated is inhibited.
		Remedy	– Move the axis in the opposite direction (no change to the robot–specific coordinate system takes place).
206		**Message text**	SERVO PARAMETERS <axis> LINE <integer> INCORRECT
		Cause	– The parameters in the servo file are incorrect.
		Monitor	– While loading machine data.
		Effect	–
		Remedy	– Correct the parameters.
207		**Message text**	OPERATOR SAFETY / GATE OPEN
		Cause	– Operator safety has been tripped in the AUTOMATIC or EXTERNAL mode (input at the peripheral interface).
		Monitor	– Cyclic.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Switch to mode T1 or T2 (in these modes the robot can be moved when the signal is low).
			– Close the safety gate.
			– Check the input.
208		**Message text**	FAILURE IN ESC SAFETY LOOP
		Cause	– Emergency Stop button pressed.
			– Emergency braking triggered by software.
		Monitor	– Cyclic.

		Effect	– Path–maintaining braking.
			– All active commands inhibited.
		Remedy	– Check the Emergency Stop pushbutton;
			– Rectify and acknowledge the signalled fault.
209		**Message text**	PASSIVE STOP <RCP or teach pendant>
		Cause	– Stop from a passive operator control unit (the message is displayed only if an active process has been stopped).
		Monitor	– Cyclic.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Acknowledge the message "Passive Stop".
210		**Message text**	STOP KEY <RCP or teach pendant>
		Cause	– The start key or a traversing key has been actuated while the stop key is depressed.
		Monitor	– Cyclic.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Check the stop key.
211		**Message text**	CHECK SAFETY LOGIC. DRIVES OFF TIMEOUT DURING EMERGENCY STOP OCCURRED
		Cause	–
		Monitor	–
		Effect	–
			–
		Remedy	–
212		**Message text**	ERROR WRITING TO PERCEPTRON
		Cause	–
		Monitor	–
		Effect	–
			–
		Remedy	–
213		**Message text**	ERROR WRITING TO BOSCH
		Cause	–
		Monitor	–
		Effect	–
			–
		Remedy	–
214		**Message text**	COMMON DRIVES ERROR <axis number>
		Cause	–
		Monitor	–

		Effect	–
			–
		Remedy	–
215		**Message text**	COMMON DRIVES ERROR <axis number>
		Cause	–
		Monitor	–
		Effect	–
			–
		Remedy	–
216		**Message text**	DRIVES ERROR ... NO.: ...
		Cause	– The Start key or a direction key was activated while the Stop key was pressed.
		Monitor	– Cyclic.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Check Stop key.
217		**Message text**	EMERGENCY STOP FROM KRC (ALARM STOP)
		Cause	– An alarm stop has been initiated by the KRL system software; another serious error has occurred.
		Monitor	– Cyclic.
		Effect	– Maximum braking. All active commands inhibited.
		Remedy	– Eliminate and acknowledge the signalled fault (serious error).
218		**Message text**	FEEDBACK SWITCH TOO LONG ON **
		Cause	– The energy of the axis to be braked was too high.
		Monitor	
		Effect	– Ramp–down braking.
		Remedy	– Power module ballast (feedback) switch defective.
			– Brake ramp in the program too steep.
219		**Message text**	CABINET TEMPERATURE TOO HIGH **
		Cause	– The cabinet temperature has risen above the permissible limit value.
		Monitor	– Cyclic.
		Effect	– Ramp–down braking.
		Remedy	– Reduce the external temperature.
			– Change the site of installation.
			– Check the fans.
			– Clean the heat exchanger.

220	**Message text**	DRIVES CONTACTOR OFF, INTERMEDIATE CIRCUIT LOADED !!!
	Cause	– The drives contactor drops out. The energy in the intermediate circuit is sufficient to ensure a path–maintaining stop. Caution: the intermediate circuit is still charged! The intermediate circuit is discharged after about 2 minutes. The message "DRIVES NOT READY" is then displayed.
	Monitor	– Cyclic.
	Effect	– Path–maintaining Emergency Stop
	Remedy	– Switch drives on again. – Check drives circuit for faults.
221	**Message text**	MODE NOT ALLOWED
	Cause	– E2 keyswitch in AUTO mode.
	Monitor	
	Effect	
	Remedy	
222	**Message text**	PARITY ERROR POWERMODULE **
	Cause	– A parity error has occurred more than five times in succession when reading the power module register.
	Monitor	– Cyclic.
	Effect	– Ramp–down braking.
	Remedy	– Too much interference at the power module interface, or power module defective. Check cable, check shielding, replace power module.
223	**Message text**	POWER MODULE AXIS ** NOT OR WRONGLY PLUGGED
	Cause	– The axis is incorrectly plugged into the power module or not connected at all.
	Monitor	– At runup.
	Effect	– Active commands inhibited.
	Remedy	– Connect the axis correctly (high or low power).
224	**Message text**	POWER FAIL
	Cause	– The cabinet voltage has been switched off, the mains voltage is interrupted.
	Monitor	
	Effect	– Path–maintaining Emergency Stop, buffering of the mastering data, saving all data on HDD.
	Remedy	– Check the mains voltage.
225	**Message text**	MOTOR CABLE **
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

226	**Message text**	FAILURE OF HEAT SINK TEMPERATURE SENSOR **
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

227	**Message text**	FAILURE OF CABINET INTERIOR TEMPERATURE SENSOR <AXIS NUMBER>
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

228	**Message text**	DRIVES PARAMETER DATA ** INVALID
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

229	**Message text**	FAILURE OF MOTOR TEMPERATURE SENSOR <AXIS NUMBER>
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

230	**Message text**	WRONG DRIVES PARAMETER <AXIS NUMBER> **
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

231	**Message text**	ERROR SYNC. INPUT DRIVE <AXIS>
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

232	**Message text**	SYNCHRONISATION ERROR DRIVE <AXIS>
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

233	**Message text**	<AXIS> WITHOUT POWER
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
234	**Message text**	COMMON DRIVES ERROR <AXIS NUMBER>
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
235	**Message text**	COMMON DRIVES ERROR <AXIS NUMBER>
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
236	**Message text**	COMMON DRIVES ERROR <AXIS NUMBER>
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
237	**Message text**	COMMON DRIVES ERROR <AXIS NUMBER>
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
238	**Message text**	COMMON DRIVES ERROR <AXIS NUMBER>
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
239	**Message text**	LOADING ** SERVO PARAMETERS **
	Cause	– Loading drive servo parameters
	Monitor	–
	Effect	–
	Remedy	–

240		**Message text**	PLEASE SWITCH OFF THE CABINET
		Cause	– The drive servo parameters have been loaded, but will not take effect until the next reboot.
		Monitor	–
		Effect	–
		Remedy	–
241		**Message text**	SERVOFILE CONFIGURATION ** DOES NOT FIT THE ** RELEASE **
		Cause	– The servo file configuration contains parameters for the drive servos which are not supported by the firmware.
		Monitor	–
		Effect	–
		Remedy	– Upgrade drive servo firmware or servo files.
242		**Message text**	** FIRMWARE RELEASE **
		Cause	– Information about the firmware release of the axis in question.
		Monitor	–
		Effect	–
		Remedy	– Upgrade drive servo firmware or servo files.
243		**Message text**	SOFTWARE OF DSE ** DOES NOT FIT THE HARDWARE OR DEFECTIVE DSE
		Cause	– The wrong software was configured for the DSE DSEAT and KR C1A/KR C2.
		Monitor	–
		Effect	–
		Remedy	– Configure the correct software.
244		**Message text**	** SOFTWARE VERSION INCORRECT
		Cause	– DSE software and kernel system do not work together.
		Monitor	–
		Effect	–
		Remedy	– Configure the correct DSE software.
245		**Message text**	SERVO BUS DISTURBANCE DSE **
		Cause	– Defective bus cable. Defective bus module. Defective bus driver.
		Monitor	– Rectify fault.
		Effect	–
		Remedy	–
246		**Message text**	SERVO BUS DISTURBANCE DSE **, NO BUFFERING AND AUTOMATIC DATA STORAGE POSSIBLE
		Cause	– Buffering is activated via the servo bus on the KPS. If communication with the KPS is faulty, the buffering cannot be activated and switch–off takes place immediately.

		Monitor	–
		Effect	–
		Remedy	– Re–establish communication with the KPS.
247		**Message text**	SERVO BUS DISTURBANCE **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
248		**Message text**	SERVO BUS DISTURBANCE **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
249		**Message text**	$MOVE_ENABLE INPUT (1025) NOT ALLOWED
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
250		**Message text**	INCORRECT SERVO PARAMETER <AXIS>
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
251		**Message text**	<variable> OVERLAPPING OUTPUT SIGNALS
		Cause	– Interface unit outputs assigned twice.
		Monitor	– At "Power On". After editing the machine data. After loading the machine data.
		Effect	– No RC Ready.
		Remedy	– Value assignment.
252		**Message text**	<variable> INTERFACE–I/O ASSIGNMENT ERROR <correct index>
		Cause	– Double assignment of interface controller output.
		Monitor	– At "Power on". – After editing the machine data. – After loading the machine data.
		Effect	– No RC ready.
		Remedy	– Correct the indicated machine datum.

253		**Message text**	ERRONEOUS DSE AXIS ASSIGNMENT <axis number>
		Cause	– Machine datum $IFACE_DRV[6] has been assigned twice to a drive interface, or a non–existent interface has been addressed.
			– KTL encoders have been entered in IFACE_DRV[6] without connecting APC interfaces, or ADAR axes have been entered in $ADAR_AXIS without connecting ADAR interfaces.
		Monitor	– At "Power on".
			– After editing the machine data.
			– After loading the machine data.
		Effect	– No RC ready.
		Remedy	– Correct the machine datum.
254		**Message text**	DSE FILE <program name> NOT AVAILABLE
		Cause	– The DSE program entered in the RD_HWINF.INI file does not exist.
		Monitor	
		Effect	
		Remedy	– Enter or alter the DSE program.
255		**Message text**	<$ variable> INVALID VALUE
		Cause	– The machine data loader has detected that a variable contains an incorrect value: a) Limit monitoring tripped. b) Machine data not logically coherent.
		Monitor	– At "Power on".
			– After editing the machine data.
			– After loading the machine data.
		Effect	– No RC ready.
		Remedy	– Correct the value assignment.
256		**Message text**	CHECK MACHINE DATA !
		Cause	– It cannot be assured that the machine data loaded during a cold start are valid for the connected robot.
		Monitor	– Generated at cold start.
		Effect	– No RC ready.
			– Controller is in its initial state, i.e. tasks dependent on machine data are not generated.
		Remedy	– Either edit or copy the machine data or option data file.

257	**Message text**	ERRONEOUS USER DATA
	Cause	– The user data loader has detected that a variable contains an incorrect value: a) Limit monitoring tripped. b) Data not logically coherent.
	Monitor	– At "POWER ON".
		– After editing the user data.
		– After loading the user data (DEFDAT $CUSTOM PUBLIC).
	Effect	– No RC ready.
	Remedy	– Correct value assignment of the indicated variable.
258	**Message text**	ERRONEOUS OPTION DATA
	Cause	– The option data loader has detected that a variable contains an incorrect value: a) Limit monitoring tripped. b) Data not logically coherent.
	Monitor	– At "POWER ON".
		– After editing the option data.
		– After loading the option data (DEFDAT $OPTION PUBLIC).
	Effect	– No RC ready.
	Remedy	– Correct value assignment of the indicated variable.
259	**Message text**	** MACHINE DATA LOADER ABORTED
	Cause	– The errors detected by the machine data loader exceed the capacity of the message buffer.
	Monitor	– At "POWER ON".
		– After editing the machine data.
		– After loading the machine data.
	Effect	– No RC ready.
	Remedy	– Correct value assignment of the indicated variable.
260	**Message text**	USER DATA LOADER ABORTED
	Cause	– The errors detected by the user data loader exceed the capacity of the message buffer. a) Limit monitoring tripped. b) Data not logically coherent.
	Monitor	– At "POWER ON".
		– After editing the user data.
		– After loading the user data.
	Effect	– No RC ready.
	Remedy	– Correct value assignment of the indicated variable.

261		**Message text**	OPTION DATA LOADER ABORTED
		Cause	– The errors detected by the option data loader exceed the capacity of the message buffer. a) Limit monitoring tripped. b) Data not logically coherent.
		Monitor	– At "POWER ON". – After editing the option data. – After loading the option data.
		Effect	– No RC ready.
		Remedy	– Correct value assignment of the indicated variable.
262		**Message text**	ERRONEOUS <path> MACHINE DATA
		Cause	– The machine data loader has detected a variable with an illegal value. a) Limit monitoring tripped. b) Data not logically coherent.
		Monitor	– At "POWER ON". – After editing the machine data. – After loading the machine data.
		Effect	– No RC ready.
263		**Message text**	ERRONEOUS CORRECTION DATA
		Cause	– The correction data loader has detected a variable with an illegal value. a) Limit monitoring tripped. b) Data not logically coherent.
		Monitor	– POWER ON after editing the correction data, after loading the correction data (DEFDAT $ROBCOR).
		Effect	– No RC ready.
		Remedy	– Correct value assignment of the indicated variable.
264		**Message text**	<path> CORRECTION DATA LOADER ABORTED
		Cause	– The errors detected by the correction data loader exceed the capacity of the message buffer.
		Monitor	– At "POWER ON". – After editing the correction data. – After loading the correction data.
		Effect	– No RC ready.
		Remedy	– Correct value assignment of the indicated variable.
265		**Message text**	RDW FILE <program name> NOT AVAILABLE
		Cause	– The RDW program entered in the RD_HWINF.INI file does not exist.
		Monitor	
		Effect	
		Remedy	– Enter the RDW program correctly in the INI file.

266		**Message text**	OVERTEMPERATURE FEEDBACK RESISTOR <power module no.> OR FAN
		Cause	– The ballast (feedback) resistor has overheated. In the motion program the robot is cyclically accelerated and decelerated without a break.
		Monitor	– Cyclic.
		Effect	– Ramp–down braking.
		Remedy	– Insert wait times into the program, reduce the acceleration.
267		**Message text**	WATCHDOG POWER MODULE <power module number>
		Cause	– The watchdog on the power module has dropped out. The watchdog is triggered by the DSE every 0.125ms.
		Monitor	– Cyclic.
		Effect	– Dynamic braking.
		Remedy	– Troubleshooting in the DSE and power module area.
268		**Message text**	MEMORY TEST ERROR DSE <DSE number 1–4>
		Cause	– The memory test on the DP–RAM of the DSE detected an error.
		Monitor	– Runup.
		Effect	– Active commands inhibited.
		Remedy	– Replace DSE or MFC.
269		**Message text**	DSE <DSE number 1–4> NOT AVAILABLE
		Cause	– The bit on the MFC indicating whether a DSE is inserted is not set although axes are allocated to this DSE.
		Monitor	– At runup.
		Effect	– Active commands inhibited.
		Remedy	– Insert DSE, replace MFC or DSE.
270		**Message text**	INCORRECT POWER MODULE SETTING <axis>
		Cause	– Double assignment of $PMCHANNEL or incorrect channel.
		Monitor	– When loading the robot machine data.
		Effect	– Machine data loader aborted.
		Remedy	– Correct $PMCHANNEL.
271		**Message text**	ROBOT NO. ** DOES NOT CORRESPOND TO CALIBRATION FILE **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–

272	**Message text**	NO ROBOT NUMBER PROGRAMMED
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
273	**Message text**	MORE THAN ONE CALIBRATION FILE AVAILABLE
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
274	**Message text**	Check robot number
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
275	**Message text**	SET ROBOT NUMBER – PROGRAM ROBOT NAME
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
276	**Message text**	WRONG MACHINE DATA FOR THIS ROBOT TYPE
	Cause	– The machine data do not correspond to the robot type stored in the robot base.
	Monitor	– Run–up.
	Effect	–
	Remedy	– Load the correct machine data. – Reprogram the robot type.
277	**Message text**	AUTOMATIC REPOSITIONING
	Cause	– $MOT_STOP_OPT = TRUE. Robot not on path. In EXTERN, $MOT_STOP (flag that the robot is not on path) has been set by the user (via the GUI) to FALSE, so that the robot automatically moves on path at process velocity.
	Monitor	–
	Effect	– Only a message that the robot is moving on the path in EXTERN.
	Remedy	– The message is deleted as soon as BCO is reached.

286		**Message text**	Warning: PC fan below nominal speed
		Cause	– PC controller cooling is still sufficient, but could soon become critical
		Monitor	– Cyclic.
		Effect	– None
		Remedy	– Check PC fan and exchange if necessary

287		**Message text**	PC fan error
		Cause	– PC controller cooling is no longer sufficient; continued operation could cause damage to components
		Monitor	– Cyclic.
		Effect	– The robot is stopped and can no longer be traversed
		Remedy	– Check PC fan immediately and exchange if necessary

288		**Message text**	Over temperature feedback resistor %1
		Cause	– The feedback resistor has got too hot
			– The robot is cyclically accelerated and braked in the motion program without a pause
		Monitor	– Cyclic.
		Effect	– Ramp–down braking
		Remedy	– Reduce acceleration, introduce wait times

289		**Message text**	Overtemperature fan %1
		Cause	– One of the two fans in the cabinet is defective
		Monitor	– Cyclic.
		Effect	– Ramp–down braking
		Remedy	– Exchange the fan in question

300		**Message text**	OPERATING MODE CHANGE
		Cause	– The mode selector switch is set to an illegal position.
		Monitor	– In command processing.
		Effect	– Maximum braking.
			– All active commands inhibited.
		Remedy	– Set mode selector switch to a permissible position. The status (operational) message is then reset.

301		**Message text**	STOP WHILE MEASUREMENT ACTIVE – MOVEMENT WILL BE HANDLED AS TEST
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
302		**Message text**	*<command name> ACTIVE
		Cause	– OBJH command is being executed.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– Wait until OBJH is free again.
303		**Message text**	LIMIT <signal name>
		Cause	– The value for the corresponding analog output lies outside the standard range and has therefore been limited to the maximum or minimum value.
		Monitor	– Cyclic, when writing to analog outputs.
		Effect	– None.
		Remedy	– The message remains set until the value of the analog output concerned lies within the standardized range and therefore no limitation occurs.
304		**Message text**	START UP
		Cause	– Startup (setup) menu selected.
		Monitor	– In command processing.
		Effect	– Program processing not possible.
		Remedy	– Quit the setup menu using the ESC key.
305		**Message text**	COMPLETE COMPILATION ACTIVE
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
306		**Message text**	SELECTION ACTIVE
		Cause	– New selection requires deselection/linking.
		Monitor	– Command processing (RUN command).
		Effect	– None.
		Remedy	– Wait until the linking procedure is finished, i.e. until the message disappears.
307		**Message text**	ERRORS AT COMPLETE COMPILATION – ERR FILES EXIST
		Cause	–
		Monitor	–

		Effect	–
		Remedy	–
308		**Message text**	PALLETIZING MODE: MOVE AXIS <axis> <motion direction> INTO POSITION
		Cause	– Axes 4 and 5 have palletizing mode ($PAL_MODE = TRUE), but not the right position, i.e. A4=0 degrees and A5=90 degrees.
		Monitor	– Cyclic.
		Effect	– None.
		Remedy	– Move axes into position in the specified direction.
309		**Message text**	BLOCK SELECT : BCO REACHING IN T1/T2 REQUIRED
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1000		**Message text**	USER–MEMORY DELETED (**)
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1001		**Message text**	INTERNAL ERROR (DEFAULT MESSAGE)
		Cause	– Internal; the message data have not been correctly set.
		Monitor	
		Effect	
		Remedy	
1002		**Message text**	REBOOT AFTER POWERFAIL
		Cause	– Controller is turned on again or voltage has returned.
		Monitor	–
		Effect	–
		Remedy	–
1003		**Message text**	LEVEL OVERFLOW <IP,PCP>
		Cause	– Computing time overload of CPU.
		Monitor	– Cyclic.
		Effect	– Maximum braking. – Low signal at "$ALARM_STOP" output. – All active commands inhibited.
		Remedy	– Increase basic cycle. – Increase interpolation cycle or position control cycle, depending on the indicated parameter.

1004		**Message text**	CAN CONTROLLER @P1@ FAILURE
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1005		**Message text**	NO MORE SYSTEM MEMORY AVAILABLE
		Cause	– There is not enough memory available for the command "SHOW VAR" or "SET INFO" to be executed (the control requires a certain amount of memory for these commands, dependent on the length of the output value.)
		Monitor	– In form processing.
		Effect	– Command is not executed.
		Remedy	– Save and delete programs that are not required.
1006		**Message text**	NO MORE USER MEMORY AVAILABLE
		Cause	– No more memory is available for copying objects.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Delete objects that are not required.
1007		**Message text**	CHANNEL <channel name> CANNOT BE ASSIGNED
		Cause	– The selected channel cannot be assigned.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Free channel at another point (should occur only with printer channel).
1008		**Message text**	CONTROLLER BOOTED
		Cause	– Controller is booted for the first time (not reboot after power failure).
		Monitor	–
		Effect	–
		Remedy	–
1009		**Message text**	POINT CONVERSION IMPOSSIBLE WITHOUT ABSOLUTE ACCURACY MODEL
		Cause	– $ABS_ACCUR = FALSE and $ABS_CONVERT = TRUE conversion impossible without model. If $ABS_CONVERT is TRUE, then $ABS_ACCUR must also be TRUE!
		Monitor	–
		Effect	–
		Remedy	– $ABS_ACCUR = TRUE or $ABS_CONVERT = FALSE

1010	**Message text**	INTERNAL ERROR <system error number> (<task ID>, <status>)
	Cause	– Internal test of KRC. – Software.
	Monitor	– Within the KRC. – Software.
	Effect	– RC Ready reset during processing.
	Remedy	– Acknowledge message.

1011	**Message text**	SYNTAX ERROR IN FILE <filename> IN ROW <contents of the line>
	Cause	– Syntax error when interpreting the parameter file (absolutely accurate robot).
	Monitor	– When loading $OPTION.DAT or defining $LOAD or $LOAD_A3.
	Effect	–
	Remedy	– Load file, boot controller.

1012	**Message text**	GENERAL ERROR: <error no.> <function> <additional info>
	Cause	– Unknown feedback from a function in the object.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– Inform service department.

1013	**Message text**	FILE <file name> NOT FOUND
	Cause	– Parameter file for absolutely accurate robot is not available.
	Monitor	– When loading $OPTION.DAT.
	Effect	–
	Remedy	– Load file, boot controller.

1014	**Message text**	UNKNOWN COMPILER ERROR: <error class>
	Cause	– Compiler software has detected an error.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– Inform service department.

1015	**Message text**	OBJH ERROR: <localization>
	Cause	– Internal error in the OBJH.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– Inform service department.

1016	STOP	**Message text**	HARDWARE LIMIT–SWITCH / +24V MISSING
		Cause	– The interface module monitoring function has detected that a common input for hardware limit switches has been set.
		Monitor	– Cyclic in interface module monitoring.
		Effect	– The roboter is stopped with maximum braking and the active commands are inhibited until this message has been acknowledged.
		Remedy	– Move robot off limit switch and acknowledge message. !!!Caution!!! Moving the robot off the limit switch correctly is the operator's responsibility, since no axis–specific interlocks are set.

1017	STOP	**Message text**	ABSOLUTE ACCURACY ROBOT: POINT CONVERSION ONLY POSSIBLE IN T1 MODE
		Cause	– $ABS_CONVERT = TRUE and no T1 mode Point conversion must be carried out carefully.
		Monitor	–
		Effect	– Ramp–down braking. Active commands inhibited.
		Remedy	– Set variable $ABS_CONVERT in $CUSTOM.DAT to FALSE or select T1 mode.

1018	!	**Message text**	ERROR OCCURRED WHILE READING IDF FILE
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–

1019	!	**Message text**	PALLETIZING MODE NOT POSSIBLE WITH THIS ROBOT TYPE
		Cause	– Palletizing is only possible with floor and ceiling–mounted robots. If $ROBROOT A or B <> 0, palletizing is not possible.
		Monitor	– Write function.
		Effect	– Maximum braking.
		Remedy	– Enter correct $ROBROOT or $PAL_MODE = FALSE.

1020	!	**Message text**	INTERNAL ERROR <error number> (<task ID>, <return status>)
		Cause	– Internal software error.
		Monitor	
		Effect	
		Remedy	

1021	!	**Message text**	INTERNAL ERROR WHEN ACCESSING <object name>
		Cause	– An internal error has occurred when accessing a file (acknowledgement message already set). The action was not correctly carried out.
		Monitor	– In object processing.
		Effect	
		Remedy	

1022	**Message text**	COMMUNICATION <operator control device> – KRC INTERRUPTED
	Cause	– Communication between the active operator control unit and the KRC has been interrupted while a motion was being executed in the test mode.
	Monitor	– In command processing.
	Effect	– Maximum braking.
	Remedy	– Re–establish the connection.
1023	**Message text**	INPUT BUFFER OVERFLOW **
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
1024	**Message text**	ERROR DURING READING OF INI FILE ** **
	Cause	– Error in INI file.
	Monitor	– At system start.
	Effect	– All commands are inhibited.
	Remedy	– Correct INI file.
1025	**Message text**	CONFIGURATION ERROR I/O DRIVER <driver name>
	Cause	– Error in the INI file.
	Monitor	– In system runup.
	Effect	
	Remedy	– Check io_int.ini.
1026	**Message text**	ERROR DIGITAL INPUT READING PORT: **
	Cause	
	Monitor	
	Effect	
	Remedy	– Check I/O components.
1027	**Message text**	ERROR WRITE DIGITAL OUTPUTS PORT: **
	Cause	
	Monitor	
	Effect	– Maximum braking.
	Remedy	– Check the corresponding I/O hardware.
1028	**Message text**	ERROR RESTART I/O <bus/driver name>
	Cause	– Field bus error is still present.
	Monitor	
	Effect	– Bus I/O still not available.
	Remedy	– Eliminate field bus error (hardware).

1029		**Message text**	SEN: <string> ** **
		Cause	– Hint message of a sensor that does not require a stop.
		Monitor	
		Effect	
		Remedy	
1030		**Message text**	SEN: <string> ** **
		Cause	– Sensor error that requires ramp–down braking.
		Monitor	
		Effect	
		Remedy	– Depends on sensor concerned.
1031		**Message text**	SEN: <string> ** **
		Cause	– Sensor error that requires ramp–down braking.
		Monitor	
		Effect	
		Remedy	
1032		**Message text**	SEN: **
		Cause	– Sensor error that requires ramp–down braking.
		Monitor	
		Effect	
		Remedy	
1033		**Message text**	ERROR ON READING, DRIVER: ** **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1034		**Message text**	ERROR ON WRITING, DRIVER: ** **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1035		**Message text**	SINGULARITY–LESS MOTION: MAX. ORIENTATION ERROR
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–

1036	**Message text**	CHECK SAFETY LOGIC. DRIVES OFF TIMEOUT DURING EMERGENCY STOP
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

1037	**Message text**	LOCAL EMERGENCY STOP BUTTON PRESSED
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

1038	**Message text**	INVALID OPERATING MODE
	Cause	– START MINUS was pressed in AUT or EXT. Only possible in T1 or T2.
	Monitor	– Command execution.
	Effect	–
	Remedy	–

1039	**Message text**	BACKWARD MOTION EXECUTION NOT POSSIBLE: TRACE EMPTY
	Cause	– All recorded motions have already been executed.
	Monitor	– Command execution.
	Effect	–
	Remedy	– Forward motion.

1040	**Message text**	BACKWARD MOTION EXECUTION NOT POSSIBLE: NO TRACE
	Cause	– No points were executed and recorded in the forwards direction, or the traces were rejected.
	Monitor	– Command execution.
	Effect	–
	Remedy	– Forward motion.

1041	**Message text**	SOFTPLC: **
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

1042	**Message text**	ACKN K1 CONTACT FAIL TO OPEN <KPS number>
	Cause	– The K1 contact is welded.
	Monitor	–
	Effect	– The energy supply is not interrupted.
	Remedy	– Exchange contactor, KPS.

1043		**Message text**	ACKN BUS VOLTAGE CHARGING UNIT IS DEFECTIVE <KPS number>
		Cause	– The optocoupler on the KPS is not registering current flow.
		Monitor	–
		Effect	– Intermediate circuit cannot be loaded.
		Remedy	– Exchange KPS.
1044		**Message text**	ACKN BRAKE DEFECTIVE **
		Cause	– Wear on brakes, defective brake.
		Monitor	–
		Effect	– Axis moves in an uncontrolled manner.
		Remedy	– Exchange motor.
1045		**Message text**	SERVO INDEPENDENT COMMAND EXECUTION
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1046		**Message text**	BLOCKING OF OUTPUTS IN AUT/EXT IS ENABLED
		Cause	– Variable $BLK_IO_AUT is set to TRUE (setting outputs in AUT/EXT is blocked). The user nevertheless tries to set the outputs by hand.
		Monitor	–
		Effect	–
		Remedy	–
1047		**Message text**	SERVO INDEPENDENT COMMAND EXECUTION ONLY POSSIBLE IN TESTING MODE
		Cause	– Robot simulation not allowed in operating modes #AUT or #EXT.
		Monitor	–
		Effect	– No program execution/simulation possible.
		Remedy	– Change operating mode.
1048		**Message text**	ACKN. OUTPUT MONITORING DC BUS VOLTAGE KPS: **
		Cause	– DC bus voltage of a KPS overloaded.
		Monitor	–
		Effect	–
		Remedy	–
1049		**Message text**	PROFIBUS MASTER IS IN STATE AUTOCLEAR. PLEASE EXECUTE RESET COMMAND
		Cause	– Bus error in Profibus. Option AUTOCLEAR is set. This means that the bus no longer starts again automatically. A Profibus reset is necessary.
		Monitor	–
		Effect	– Indication that a bus reset is necessary since the bus does not start again automatically (the corresponding option is not set).
		Remedy	– Rectify bus error and carry out RESET via the menu.

1050		**Message text**	PROFIBUS : ERROR IN MASTER CIRCUIT ** **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1051		**Message text**	PROFIBUS: ERROR IN SLAVE CIRCUIT
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1052		**Message text**	KCP: CAN BUS ERROR
		Cause	– Transmission error in CAN BUS.
		Monitor	– Teach pendant task.
		Effect	– Path–maintaining braking.
		Remedy	– Acknowledge.
1053		**Message text**	CP VEL. REDUCTION POINT ** ** BY **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1054		**Message text**	ACKN. DN CH ** TOO MANY MODULE ERRORS **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1055		**Message text**	TRACE BUFFER EMPTY, START WITH BACKWARD SCAN
		Cause	– Empty trace for backward motion, switching to SCAN method.
		Monitor	– When START minus is pressed.
		Effect	– Active commands inhibited.
		Remedy	– Acknowledge.
1056		**Message text**	ACKN. SERVOBUS DSE–NO.: <DSE no.> PARTICIPANT NO.: <IBS device> UNKNOWN
		Cause	– An unknown device which is not supported was inserted in Interbus.
		Monitor	– DSE ID, device ID.
		Effect	–
		Remedy	– Remove the device causing the fault from the bus system.

1057	STOP	**Message text**	ACKN. FAILURE OF MOTOR PHASE <axis>
		Cause	– Backup battery voltage low.
		Monitor	– At "Power on".
			– Cyclic.
		Effect	– At "Power on" –> automatic general reset, and in addition the message "User memory deleted" is displayed (machine data, user data, application programs must be reloaded).
			– Cyclic –> none.
		Remedy	– Exchange battery. After exchange, the message "Ackn. check accumulator" appears –> acknowledge.

1058	(!)	**Message text**	BCO MOTION: PRESS START PLUS
		Cause	– An attempt was made to carry out BCO motion with START MINUS.
		Monitor	– When START MINUS is pressed.
		Effect	– The robot does not start.
		Remedy	– Use START PLUS or set Implicit_BCO = TRUE in BACKWARD.INI.

1059	STOP	**Message text**	FINISHED SUBROUTINE: SKIP MOTIONS
		Cause	– During backward motion, the interpreter encounters a subprogram which has already been completely executed.
		Monitor	– Each time before backward motion is started.
		Effect	– Active commands inhibited.
		Remedy	– Acknowledge.

1060	STOP	**Message text**	$BWDSTART NOT IN FOLD. NO TOOL AND BASE INFORMATION FOUND
		Cause	– Backward motion in SCAN method: a $BWDSTART assignment must be programmed as the first instruction in a motion fold. From this line onwards, all following instructions up to the motion are executed before backward motion is carried out.
		Monitor	– Each time before backward motion is started.
		Effect	– Active commands inhibited.
		Remedy	– Correct program or set the entry BACKWARDSTART = FALSE in BACKWARD.INI. In this case, however, BASE and TOOL changes cannot be carried out during backward motion.

1061	(!)	**Message text**	Rapid EMERGENCY STOP with fixed braking ramps
		Cause	– In the event of EMERGENCY STOP with dynamic model, the fixed braking ramp strategy is used as this brakes the robot significantly more quickly
		Monitor	– In the event of EMERGENCY STOP with dynamic model
		Effect	– EMERGENCY STOP brakes the robot more quickly than the strategy based on the dynamic model
		Remedy	– Verify load data and correct if necessary
			– Verify machine data

1062	STOP	**Message text**	Ackn. second motorcable not connected
		Cause	– Second motor cable was not connected or was connected incorrectly
		Monitor	–
		Effect	–
		Remedy	– Acknowledge message

1063	STOP	**Message text**	Ackn. over temperature feedback resistor %1
		Cause	– The feedback resistor has got too hot
			– The robot is cyclically accelerated and braked in the motion program without a pause
		Monitor	– Cyclic.
		Effect	–
		Remedy	– Acknowledge message

1064	STOP	**Message text**	Ackn.: over temperature fan %1
		Cause	– One of the two fans in the cabinet is defective
		Monitor	– Cyclic.
		Effect	– Ramp–down braking
		Remedy	– Acknowledge message

1065	STOP	**Message text**	Ackn. mainboard overtemperature
		Cause	– The cabinet fan has failed
			– The ambient temperature is too high
		Monitor	– Cyclic.
		Effect	–
		Remedy	– Acknowledge message

1066	ℹ	**Message text**	Mainboard temperature reached warning level
		Cause	– PC controller cooling is still sufficient, but could soon become critical
		Monitor	– Cyclic.
		Effect	– None
		Remedy	– Check fan
			– Exchange fan filter

1067	ℹ	**Message text**	Mainboard temperature check not available
		Cause	– Motherboard does not support temperature monitoring
		Monitor	– Once
		Effect	– No monitoring
		Remedy	– Exchange motherboard
			– Switch temperature monitoring off

1068	**Message text**	INTERBUS: Watchdog Time expired!
	Cause	– The Interbus driver read function was not called in the time defined
	Monitor	– Cyclic.
	Effect	– Inputs and outputs are not set
	Remedy	– Terminate the Watchdog by reconfiguring the I/Os
		– De–energize controller board
		– Watchdog cycle time possibly set too low
		– Fault in the KRC system since the read function of the driver was not called cyclically

1071	**Message text**	MOTOR HOLDING TORQUE %1 EXCEEDED
	Cause	– The motor holding torque of the axis is not sufficient to keep the robot motion permanently stopped at a point.
	Monitor	– Not cyclic, during path planning
	Effect	– Interpreter stop
	Remedy	– Correct or reduce load data
		– Verify machine data

1072	**Message text**	BRAKE HOLDING TORQUE %1 EXCEEDED
	Cause	– The brake holding torque on the axis is not sufficient to keep the robot motion permanently stopped at a point.
	Monitor	– Not cyclic, during path planning
	Effect	– Interpreter stop
	Remedy	– Correct or reduce load data
		– Verify machine data

1073	**Message text**	COMMANDED GEAR TORQUE %1
	Cause	– Permissible gear torque exceeded, dependent on dynamic data $DYN_DAT()
	Monitor	– Cyclic.
	Effect	– Path–maintaining braking
		– Output "$ALARM_STOP" 0 signal
		– Active commands inhibited.
	Remedy	– Verify load data and reduce if necessary, reduce programmed acceleration, reduce programmed velocity; acknowledge message

1074	**Message text**	COMMANDED MOTOR TORQUE %1
	Cause	– Permissible motor torque exceeded, dependent on dynamic data $DYN_DAT()
	Monitor	– Cyclic.
	Effect	– Path–maintaining braking
		– Output "$ALARM_STOP" 0 signal
		– Active commands inhibited.
	Remedy	– Verify load data and reduce if necessary, reduce programmed acceleration, reduce programmed velocity; acknowledge message
1075	**Message text**	MAXIMUM KINETIC ENERGY %1
	Cause	– Permissible kinetic energy for crash exceeded, dependent on dynamic data $DYN_DAT()
	Monitor	– Cyclic.
	Effect	– Path–maintaining braking
		– Output "$ALARM_STOP" 0 signal
		– Active commands inhibited.
	Remedy	– Verify load data and reduce if necessary, reduce programmed velocity; acknowledge message
1078	**Message text**	Ackn. servobus DSE–No. %1 participant No. %2 not available
	Cause	– The device number in the servo bus was too low
	Monitor	–
	Effect	–
	Remedy	– Acknowledge message
1079	**Message text**	Ackn. servobus DSE–No. %1 participant No. %2 not available
	Cause	– The device number in the servo bus was higher than the number defined in the machine data
	Monitor	–
	Effect	–
	Remedy	– Acknowledge message
1100	**Message text**	STOPPED <axis number>
	Cause	– Axis has beeen moved out of the standstill position according to the machine data. Positioning window ($IN_POS_MA) times standstill window minus factor ($IN_STILL_MA).
	Monitor	– With robot "in position".
	Effect	– Maximum braking.
		– Low signal at "$ALARM_STOP" output.
		– All active commands inhibited.
	Remedy	– Check manipulator.
		– Check output stage, check motor brake.
		– Acknowledge message.

1101 🛑 **Message text**   COMMAND ACCELERATION EXCEEDED <axis number>

Cause   – Permissible command acceleration exceeded; e.g. because robot has been moved through singularity in cartesian mode.

Monitor   – Cyclic.

Effect   – Maximum braking.

– Low signal at "$ALARM_STOP" output.

– All active commands inhibited.

Remedy   – Check program for alpha5 transitions (singularity).
– Reduce path velocity.
– Reduce path acceleration.
– Acknowledge message.

1102 🛑 **Message text**   COMMAND VELOCITY EXCEEDED <axis number>

Cause   – Permissible command velocity exceeded; e.g. because robot has been moved through singularity in cartesian mode.

Monitor   – Cyclic.

Effect   – Maximum braking.

– Low signal at "$ALARM_STOP" output.

– All active commands inhibited.

Remedy   – Reduce path velocity.
– Reduce path acceleration.

1103 🛑 **Message text**   DATA EXCHANGE WITH TEPRO MISSING

Cause   – The SBC is not transmitting cyclic data on time (TEPRO = Technological Process).

Monitor   – Cyclic by transfer task.

Effect   – Ramp–down braking; interruption of the SBC interface.

Remedy   – Re–initialize the SBC program or eliminate the error in the SBC program.

1104 🛑 **Message text**   ACKN. REGULATOR LIMIT EXCEEDED <axis number>

Cause   – The set value of the machine datum $COM_VAL_MI has been exceeded. The position controller output has gone into limitation. The axis does not follow the command value.

Monitor   – Cyclic.

Effect   – Maximum braking.

– Low signal at "$ALARM_STOP" output.

– All active commands inhibited.

Remedy   – Check power module.
– The brake control must be checked (LED on PM) if the error occurs on more than one axis.

1105 🛑 **Message text**   POSITIONING MONITOR <axis number>

Cause   – Positioning window $IN_POS_MA has not been reached within the set positioning time $TIME_POS.

Monitor   – When positioning.

	Effect	–	Maximum braking.
		–	All active commands inhibited.
		–	The axis has the status "in position" after the message has been acknowledged.
	Remedy	–	Enlarge positioning window.
		–	Lengthen positioning time.
		–	Check power module.
		–	Acknowledge message.
		–	Check manipulator.

1106	**Message text**	TOOL WEIGHT NOT YET LEARNT
	Cause	– During EMT mastering a check run was carried out for a tool whose weight has not yet been learnt.
	Monitor	– During EMT mastering.
	Effect	–
	Remedy	– "Learn" tool weight.

1107	**Message text**	WORKING ENVELOPE SURVEILLANCE CAN ONLY BE OVERRIDDEN IN T1 MODE
	Cause	– An attempt was made to define the variable $WBOXDISABLE in mode T2, AUT, EXT.
	Monitor	– Cyclic.
	Effect	–
	Remedy	– Change operating mode.

1108	**Message text**	DYNAMIC BRAKING ERROR <axis number>
	Cause	– Actual value does not decrease although braking ramp is predefined in terms of command values.
	Monitor	– Cyclic.
	Effect	– Short–circuit braking.
		– Low signal at "$ALARM_STOP" output.
		– All active commands inhibited.

1109	**Message text**	COMMUNICATION WITH TEPRO FAULTY
	Cause	– The SBC is not collecting cyclic data on time.
	Monitor	– Cyclic by transfer task.
	Effect	– Ramp–down braking; interruption of the SBC interface.
	Remedy	– Re–initialize the SBC program.

1110	**Message text**	SENSOR LOCATION SEARCH FOR <axis>
	Cause	– During the sensor location search, the sensor switching point was detected.
	Monitor	– Command execution.
	Effect	– None.
	Remedy	– None.

1111	**Message text**	DRIFT COMPLETED
	Cause	– Drift is completed.

		Monitor	–
		Effect	– None.
		Remedy	– None.

1112	STOP	**Message text**	PERFORM SENSOR LOCATION SEARCH <axis number> !
		Cause	– Sensor location search was not carried out or $ROBCOR.DAT not available.
		Monitor	– During command execution.
		Effect	– None.
		Remedy	– Notify customer support.

1113	STOP	**Message text**	SENSOR LOCATION SEARCH INVALID <axis number>
		Cause	– Command "Sensor location search": a) axis was not mastered b) last mastering type was sensor adjustment
		Monitor	– When command "ADJUST SENSOR".
		Effect	– Command is not executed.
		Remedy	– Master axis with EMT or dial gauge.
			– Leave menu via Recall.
			– Acknowledge message.

1114	!	**Message text**	INVALID MASTERING SEQUENCE
		Cause	– Mastering sequence defined in machine datum $SEQ_CAL has not been observed.
		Monitor	– In mastering.
		Effect	
		Remedy	– Master axis with EMT probe or depth gauge.
			– Press ESC to quit menu.
			– Acknowledge message.

1115	STOP	**Message text**	SERVO PARAMETERS NOT TRANSFERRED!
		Cause	– Servo parameters were not sent to DSE.
		Monitor	– When defining the structure $SERVOPARA.
		Effect	–
		Remedy	– Define $SERVOPARA correctly.

1116	STOP	**Message text**	SENSOR ADJUSTMENT INVALID <axis number>
		Cause	– When selecting sensor adjustment for an axis with incremental or absolute encoder.
		Monitor	– During sensor adjustment.
		Effect	– Command is not executed.
		Remedy	– Set axis with DIAL or TURN.

1117	STOP	**Message text**	ACYCLIC DATA NOT RELEASED BY TEPRO
		Cause	– Semaphore is inhibiting access to acyclic data.
		Monitor	– In acyclic data transfer.
		Effect	– Ramp–down braking; interruption of the SBC interface.

		Remedy	– Eliminate the error in the SBC program.
1118	STOP	**Message text**	CYCLIC DATA NOT RELEASED BY TEPRO
		Cause	– Semaphore is inhibiting access to acyclic data.
		Monitor	– Cyclic by transfer task.
		Effect	– Ramp–down braking; interruption of the SBC interface.
		Remedy	– Eliminate the error in the SBC program.
1119	STOP	**Message text**	WRONG DATA TYPE FROM TEPRO
		Cause	– SBC is cyclically sending incorrect data.
		Monitor	– Cyclic by transfer task.
		Effect	– Ramp–down braking; interruption of the SBC interface.
		Remedy	– Eliminate the error in the SBC program.
1120	!	**Message text**	INCOMPLETE INSTRUCTION
		Cause	– The interface with the SBC is not initialized.
		Monitor	– In KRL interface instruction.
		Effect	– None.
		Remedy	– Initialize the interface.
1121	STOP	**Message text**	DATA EXCHANGE
		Cause	– The SBC stops data exchange because of an error.
		Monitor	– Cyclic by transfer task.
		Effect	– Ramp–down braking; interruption of the SBC interface.
		Remedy	– Eliminate the error in the SBC program.
1122	!	**Message text**	ANALOG OUTPUT : DELAY REDUCTION
		Cause	– The memory provided internally for the output function with a delay is not adequate for the programmed delay.
		Monitor	
		Effect	– The programmmed delay is automatically reduced.
		Remedy	– Program a shorter delay.
1123	!	**Message text**	APPROXIMATION NOT POSSIBLE
		Cause	– Approximation (approximate positioning) is not possible for computing time reasons.
		Monitor	– When the approximate positioning criterion is reached in the interpolator.
		Effect	– None.
		Remedy	– Program $ADVANCE > 0. – Switch off axis simulation.
1124	STOP	**Message text**	WRONG START POSITION
		Cause	– 1. EMT mastering starts in the groove rather than before it. – 2. Cable for EMT mastering connected during sensor location run or sensor mastering.
		Monitor	– In command processing.

		Effect	– Command aborted.
		Remedy	– 1. Move axis to correct starting position. – 2. Disconnect cable for EMT mastering.
1125	STOP	**Message text**	EMT SENSOR FAULTY
		Cause	– Sensor supplies a zero signal because it is not properly tightened.
		Monitor	– In command processing.
		Effect	– Command aborted.
		Remedy	– Check screwed connection of sensor. – Check robot–EMT connection. – Check A3/DSE module.
1126	STOP	**Message text**	STOP COMMAND IGNORED
		Cause	– Axis does not stop within a certain time after a stop command.
		Monitor	– After command processing.
		Effect	– Command aborted.
		Remedy	–
1127	(!)	**Message text**	MASTERING PERFORMED <axis number>
		Cause	– Attempt to remaster an axis that has already been mastered.
		Monitor	– After command processing.
		Effect	– Ramp–down braking.
		Remedy	– Press ESC to cancel. – Repeat measurement.
1128	STOP	**Message text**	STOP, APPROXIMATION NOT POSSIBLE
		Cause	– Approximation not possible for reasons of planning or time. Robot stops because $STOP_NOUES = TRUE is set and operating mode = T1 or T2.
		Monitor	–
		Effect	– Ramp–down braking.
		Remedy	– Reduce the velocity and/or acceleration in the instruction until approximation is possible.
1129	STOP	**Message text**	TOO MANY ASYPTP COMMANDS
		Cause	–
		Monitor	– During program execution of ASYPTP commands.
		Effect	– Program execution is stopped.
		Remedy	– Fewer ASYPTP commands.
1130	STOP	**Message text**	ACKN. MOTOR TEMPERATURE <axis number>
		Cause	– A motor temperature fault is signalled by the DSE board if the temperature exceeds 155 degrees.
		Monitor	– Cyclic in the interpolation cycle.
		Effect	
		Remedy	– Acknowledge message.

1131	STOP	**Message text**	ACKN. TORQUE EXCEEDED <axis>
		Cause	– The motor torque is not located in the specified monitoring tunnel.
		Monitor	– Cyclic in interpolation cycle.
		Effect	– Motion is stopped.
		Remedy	– Verify load data, increase size of tunnel.
1132	⚠	**Message text**	REFPO DETERMINES AXIS <axis>
		Cause	– Output after reference point for axes 1–6 has been calculated.
		Monitor	– In program mode.
		Effect	– None.
		Remedy	– None.
1133	STOP	**Message text**	GEAR TORQUE EXCEEDED AXIS <axis>
		Cause	– The calculated gear torque is larger than the maximum permissible gear torque.
		Monitor	– Cyclic in interpolation cycle.
		Effect	– Motion and program are stopped.
		Remedy	– Reteach points.
1134	STOP	**Message text**	ACKNOWLEDGE ERROR 6SC620 <axis number>
		Cause	– Malfunction/error in drive module or on processor module in Simodrive 6SC620 acknowledgement.
		Monitor	– Cyclic.
		Effect	– None.
		Remedy	– Acknowledge message.
1135	STOP	**Message text**	TORQUE MODE VELOCITY LIMIT EXCEEDED <axis>
		Cause	– Velocity limit exceeded in torque mode.
		Monitor	– In torque mode.
		Effect	– Short–circuit braking.
		Remedy	–
1136	STOP	**Message text**	ACKN. HEATSINK TEMPERATURE <axis number: AX>
		Cause	– A heat sink temperature fault is signalled by the DSE board if the temperature exceeds 80 degrees.
		Monitor	– Cyclic in the interpolation cycle.
		Effect	
		Remedy	– Acknowledge message. – Clean heat sink.
1137	⚠	**Message text**	EMT MASTERING DISTANCE EXCEEDED
		Cause	– Groove not located, axis position not before groove prior to start.
		Monitor	
		Effect	– Axis stops.
		Remedy	– Move axis into mastering position; check EMT and groove.

1138	**STOP**	**Message text**	DYNAMIC BRAKING
		Cause	– If during an activated Emergency Stop a fault occurs that permits only maximum (dynamic) braking, this message is additionally displayed.
		Monitor	– With the following messages: 100, 101, 102, 103, 104, 105, 110, 111, 114, 200, 202, 206, 1100, 1108.
		Effect	– Maximum braking.
		Remedy	– Acknowledge message.
1139	(!)	**Message text**	SYNACT NOT POSSIBLE <block number>
		Cause	– The programming of synchronous actions with the variable $M_TIME or $M_TIME_APO causes the message to be output when the program is resumed after ramp–down braking, a path–maintaining Emergency Stop ramp or maximum braking.
1140	(!)	**Message text**	BLOCK CHANGE AT STOP
		Cause	– Maximum braking or a path–maintaining stop and a simultaneous block change which makes calculation of $POS_RET and the system time impossible, with the result that the system time and $POS_RET are determined by the beginning of a new block.
		Monitor	– (e.g. cyclic; in command processing; in mastering).
		Effect	– (e.g. ramp–down braking; program processing stopped; etc.).
		Remedy	– (e.g. eliminate fault, correct operator action).
1141	**STOP**	**Message text**	TTS NOT EXISTING
		Cause	– The X–axis of the tool coordinate system and the path tangent are parallel. (TTS = tool–based technological system).
		Monitor	– Cyclic in the interpolation cycle when calculating the path correction.
		Effect	– Maximum braking.
		Remedy	– Reprogram the movement. Correct the point.
1142	**STOP**	**Message text**	DEVIATION AT TARGET POINT
		Cause	– An exact stop point has been approached with a deviation.
		Monitor	– Function generator becomes active during positioning.
		Effect	– Ramp–down braking.
		Remedy	– SCALE_IN must be corrected.
1143	(!)	**Message text**	REFERENCE OFFSET NOT VALID
		Cause	– Mastering is not possible by transferring the reference offset as this is not valid in $ROBCOR.DAT.
		Monitor	
		Effect	
		Remedy	

1144	STOP	**Message text**	V–GROOVE HAS WRONG PROFILE
		Cause	– The mastering groove for EGP adjustment does not have a V or U profile.
		Monitor	– In EMT mastering.
		Effect	– Ramp–down braking; mastering procedure is aborted.
		Remedy	– Replace EMT groove. – Clean EMT.
1145	STOP	**Message text**	STOP DUE TO VALUE OUT OF RANGE OVERFLOW, <motion direction> <axis number>
		Cause	– Overflow of the actual value of an endless axis.
		Monitor	– Cyclic in the interpolation cycle.
		Effect	– The motion is stopped by a path–maintaining Emergency Stop.
		Remedy	– Remaster the axis concerned.
1146	STOP	**Message text**	ACKN. MOTOR BLOCKED <axis number>
		Cause	– I*t monitoring is signalled by a DSE.
		Monitor	– Cyclic in the interpolation cycle.
		Effect	
		Remedy	– Acknowledge message.
1147	STOP	**Message text**	PERFORM INITIAL MASTERING <axis number>
		Cause	– An attempt was made to carry out a sensor location search for an axis on which initial mastering has not yet been performed.
		Monitor	– When selecting the function "dat_ueb" for the corresponding axis.
		Effect	– The sensor location search is not carried out.
		Remedy	– Perform initial mastering (e.g. dial gauge or EMT mastering) for the corresponding axis.
1148	STOP	**Message text**	INVALID AXIS COUPLING RATIO <axis number>
		Cause	– An attempt was made to carry out "Extended sensor adjustment" for an axis when the coupling axes are not in the same position as was reported in the data transfer.
		Monitor	– When selecting the function "Extended sensor adjustment" for the corresponding axis.
		Effect	– The function "Extended sensor adjustment" is not carried out.
		Remedy	– Move coupling axes to the same position as in the data transfer.
1149	STOP	**Message text**	ADJUSTMENT PROCEDURE NOT POSSIBLE <axis number>
		Cause	– An attempt is made to carry out sensor adjustment or the axis is not equipped with a KTL encoder and DSE.
		Monitor	– When selecting the function "Extended sensor adjustment" for the corresponding axis.
		Effect	– The sensor adjustment is not carried out.
		Remedy	– Cancel via Recall or master axis with EMT / dial gauge.
1150	STOP	**Message text**	DATA TRANSFER INVALID <axis number>

		Cause	– An attempt is made to carry out a sensor location search for an axis which is not equipped with a KTL encoder and DSE.
		Monitor	– When selecting the sensor location search function for the corresponding axis.
		Effect	– The sensor location search for the axis is not carried out.
		Remedy	– Cancel via Recall.
1151	STOP	**Message text**	PERFORM DATA TRANSFER <axis number>
		Cause	– An attempt was made to carry out sensor adjustment for an axis on which no sensor location search has been performed.
		Monitor	– When selecting the function "Extended sensor adjustment" for the corresponding axis.
		Effect	– The function "Sensor location search" is not carried out.
		Remedy	– Carry out sensor location search for the corresponding axis.
1152	!	**Message text**	DATA TRANSFER PERFORMED <axis number>
		Cause	– The sensor location search has been properly carried out.
		Monitor	– When the function "Sensor location search" for the corresponding axis is selected and the Enter key is pressed.
		Effect	– None.
		Remedy	–
1153	STOP	**Message text**	DEVIATION IN THE START POINT
		Cause	– A PTP motion is to be executed with a sensor offset value.
		Monitor	– Interpolator.
		Effect	– Ramp–down braking.
		Remedy	– Sensor offset must be eliminated before a PTP block is executed.
1154	STOP	**Message text**	SBC ERROR: <Watchd.,Transf.,Corr>
		Cause	– Error in communication between SBC and KRC32.
		Monitor	– Cyclic in the TEP task.
		Effect	– Maximum braking.
		Remedy	– Check SBC (SW, HW).
1155	!	**Message text**	APPROXIMATION NOT POSSIBLE, TORQUE TOO HIGH
		Cause	– For an approximate positioning block to be executed, the velocity must already be reduced in the preceding block. However, this block is not long enough to allow that.
		Monitor	– Not cyclic, in motion planning.
		Effect	– Interpreter.
		Remedy	– Increase the length of the individual block by: decreasing the approximate positioning radius at the end point of the current motion block or, if the start point is approximated, by decreasing this approximate positioning radius. Decreasing the velocity and acceleration of the individual block.

1156		**Message text**	APPROX. NOT POSSIBLE INTERNAL ERROR IN PTP MOTION PLAN
		Cause	– Error in planning of the approximate positioning block.
		Monitor	– Not cyclic, in motion planning.
		Effect	– Approximate positioning is not executed; exact stop.
		Remedy	– Modify profile data (rounding factor, velocity, acceleration). Please consult KUKA.
1157		**Message text**	OVERLOAD OF GEAR TORQUE <axis number> BY <percentage value>
		Cause	– The max. gear torque of the axis is statically exceeded by ....%.
		Monitor	– Not cyclic, in motion planning.
		Effect	– Interpreter stop.
		Remedy	– Check load data (mass, center of gravity, moments of inertia).
1158		**Message text**	STATIC MOTOR TORQUE OVERLOAD <axis number> BY <percentage value>
		Cause	– The max. motor torque of the axis is statically exceeded by ....%.
		Monitor	– Not cyclic, in motion planning.
		Effect	– Interpreter stop.
		Remedy	– Check load data (mass, center of gravity, moments of inertia).
1159		**Message text**	INTERNAL ERROR IN PTP MOTION PLANNING <number>
		Cause	– Error in planning of the PTP motion profile.
		Monitor	– Not cyclic, in motion planning.
		Effect	– Interpreter stop.
		Remedy	– Modify profile data (rounding factor, velocity, acceleration). Please consult KUKA.
1160		**Message text**	TRACE: RECORDING TIME IS TOO LONG
		Cause	– The recording time in TRACE.DEF is too long. There is not enough memory available for recording.
		Monitor	– When starting the TRACE.
		Effect	– TRACE is not recorded.
		Remedy	– Shorten TRACE recording time or reduce the number of channels.
1161		**Message text**	ACKN MONITORING OF THE ACTUAL VELOCITY **
		Cause	– Fault in control loop: – motor cables of two axes interchanged; – error in the axis assignment; – power module defective; – resolver unmastered.
		Monitor	– Cyclic.
		Effect	– Robot remains motionless.
		Remedy	– Rectify the corresponding error in the control loop.

1162	**Message text**	SEPARATE BREAK CONTROL OF AUXILIARY AXIS NOT ENABLED
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
1163	**Message text**	AXIS COUPLING NOT POSSIBLE (DSE/PM–CHANNEL ASSIGNMENT)
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
1164	**Message text**	COUPLE PROCESS ACTIVE
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
1165	**Message text**	ERROR ON AXIS COUPLING
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
1166	**Message text**	ERROR ON AXIS DECOUPLING
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
1167	**Message text**	<axis> DECOUPLED AUXILIARY AXIS
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
1168	**Message text**	<axis> DECOUPLED AUXILIARY AXIS, MOVE NOT PERMITTED
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
1169	**Message text**	<axis> DECOUPLED AUXILIARY AXIS, MASTERING NOT PERMITTED

		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1170		**Message text**	ASYPTP COMMAND INCLUDES DECOUPLED AUXILIARY AXIS
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1171		**Message text**	VALUE OF $ASYNC_AXIS CONTAINS DECOUPLED AUXILIARY AXIS
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1172		**Message text**	VALUE CANNOT BE CHANGED, PROGRAM IS SELECTED
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1173	STOP	**Message text**	Ackn. deviation warning master–slave %1
		Cause	– Positional deviation between master and slave exceeds lower limit value
		Monitor	– Cyclic.
		Effect	– None
		Remedy	– Acknowledge message
1174	STOP	**Message text**	Ackn. deviation alarm master–slave %1
		Cause	– Positional deviation between master and slave exceeds middle limit value
		Monitor	– Cyclic.
		Effect	– Maximum braking
		Remedy	– Acknowledge message; the drives synchronize themselves automatically
1175	STOP	**Message text**	Ackn. deviation critical master–slave %1
		Cause	– Positional deviation between master and slave exceeds upper limit value
		Monitor	– Cyclic.
		Effect	– Maximum braking
			– Loss of mastering of the corresponding axis
		Remedy	– Dial mastering of the axis

1176	STOP	**Message text**	Ackn. speed deviation master–slave %1
		Cause	– Speed deviation between master and slave exceeds limit value
		Monitor	– Cyclic.
		Effect	– Maximum braking
		Remedy	– Acknowledge message
1200	STOP	**Message text**	ACKN. EMERGENCY STOP
		Cause	– Emergency Stop was active.
		Monitor	– Cyclic.
		Effect	– All active commands inhibited.
		Remedy	– Acknowledge message.
1201	STOP	**Message text**	BUFFER BATTERY VOLTAGE LOW **
		Cause	– The battery voltage is too low for backup purposes. Do not switch off until battery has recharged.
		Monitor	– Cyclic.
		Effect	– None.
		Remedy	– Acknowledge message.
1202	STOP	**Message text**	ACKN. RDW <axis number> BOOT UP FAILURE
		Cause	– Secondary message following the status (operational) message "RDW BOOT UP FAILURE".
		Monitor	
		Effect	
		Remedy	– Acknowledge message.
1203	STOP	**Message text**	ACKN. DSE <DSE number> BOOT UP FAILURE
		Cause	– Secondary message following the status (operational) message "DSE BOOT UP FAILURE".
		Monitor	– Runup.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Replace encoder.
			– Acknowledge message.
1204	STOP	**Message text**	ACKN. ENCODER CABLE FAILURE <axis number>
		Cause	– Secondary message following the status (operational) message "ENCODER CABLE FAILURE".
		Monitor	– Cyclic.
		Effect	– Maximum braking.
			– Low signal at "$ALARM_STOP" output.
			– All active commands inhibited.
		Remedy	– Acknowledge message.

1205	STOP	**Message text**	ACKN. WATCHDOG INTERPOLATION CYCLE <DSE number>
		Cause	– Secondary message following the status (operational) message "WATCHDOG INTERPOLATION CYCLE".
		Monitor	– Cyclic.
		Effect	– Maximum braking.
			– Low signal at "$ALARM_STOP" output.
			– All active commands inhibited.
		Remedy	– Replace DSE or MFC.
			– Acknowledge message.
1206	STOP	**Message text**	ACKN. SYNCHRONIZATION ERROR WITH DSE <axis number>
		Cause	– DSE has not received feed command value for 1 interpolation cycle although servo–control is active.
		Monitor	– Cyclic.
		Effect	
		Remedy	– Acknowledge message.
1207	STOP	**Message text**	ACKN. TRANSMISSION ERROR DSE – RDW <DSE number>
		Cause	– Open–circuit between RDW and DSE.
			– Transmission malfunction
		Monitor	– Cyclic.
		Effect	– Maximum braking.
			– Low signal at "$ALARM_STOP" output.
			– All active commands inhibited.
		Remedy	– Check shielding of encoder cable.
			– Check serial interface DSE–RDW.
			– Acknowledge message.
1208	STOP	**Message text**	ACKN. MASTERING PERFORMED <axis number>
		Cause	– Follow–up message for status message "PERFORM MASTERING"
		Monitor	– Cyclic.
		Effect	– All active commands inhibited.
		Remedy	– Perform mastering
			– Acknowledge message.
1209	STOP	**Message text**	ACKN. GENERAL SERVO ENABLE
		Cause	– There was a low signal at $SERVO_RDY input.
		Monitor	– Cyclic.
		Effect	– All active commands inhibited.
		Remedy	– Acknowledge message.
1210	STOP	**Message text**	ACKN. GENERAL MOTION ENABLE
		Cause	– There was a low signal at $MOVE_ENABLE input.
		Monitor	– Cyclic.
		Effect	– All active commands inhibited.

		Remedy	– Acknowledge message.
1211	STOP	**Message text**	STOP DUE TO SOFTWARE LIMIT SWITCH <motion direction> <axis number>
		Cause	– Overrun of a sofware limit switch (command value) has been detected.
		Monitor	– Cyclic, not with axis–specific manual traversing.
		Effect	– Maximum braking.
		Remedy	– If necessary acknowledge message, move robot in the opposite direction.
1212	STOP	**Message text**	ACKN. OPERATOR SAFETY
		Cause	– Operator safety has been tripped in the AUTOMATIC or EXTERNAL mode.
		Monitor	– Cyclic.
		Effect	– All active commands inhibited.
		Remedy	– Acknowledge message. (The robot can then be started in the AUTOMATIC or EXTERNAL mode again.)
1213	STOP	**Message text**	ACKN. PASSIVE STOP <RCP or teach pendant>
		Cause	– The originator of the passive stop has acknowledged the message.
		Monitor	– Cyclic.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Acknowledge message. (Acknowledgement possible only on active unit.)
1214	!	**Message text**	POWER FAILURE
		Cause	– The cabinet voltage has been switched off, the mains voltage is interrupted.
		Monitor	–
		Effect	– Path–maintaining Emergency Stop, buffering of the mastering data, saving all data on HDD.
		Remedy	– Check the mains voltage.
1215	!	**Message text**	<command name> <action>
		Cause	– OBJH command finished.
		Monitor	– Command processing.
		Effect	– None.
		Remedy	– None.
1216	STOP	**Message text**	ACKN. DRIVES ERROR <axis number> NO.: **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–

1217	**Message text**	ACKN. SBX–HPU CONNECTED INPUT
	Cause	– Safety box has detected a fault in signal input "teach pendant plugged in".
	Monitor	– Cyclic.
	Effect	– Ramp–down braking. All active commands inhibited.
	Remedy	– Acknowledge message.
1218	**Message text**	ACKN. SBX–HPU DEPOSITED INPUT
	Cause	– Safety box has detected a fault in the input unit of the permanently installed input.
	Monitor	– Cyclic.
	Effect	– Ramp–down braking. All active commands inhibited.
	Remedy	– Acknowledge message.
1219	**Message text**	ACKN. SBX–HPU CONNECTED
	Cause	– The software has detected that in the dual–channel evaluation of the signal "Teach pendant plugged in" the two channels (MPC interface and safety box) have different statuses.
	Monitor	– Cyclic.
	Effect	– Ramp–down braking. All active commands inhibited.
	Remedy	– Acknowledge message.
1220	**Message text**	ACKN. EMERGENCY STOP DUE TO DIAL MASTERING
	Cause	– Softkeys for dial mastering pressed.
	Monitor	– When $TURN instruction is executed.
	Effect	– Dynamic braking.
		– All active commands inhibited.
		– Low signal at "$ALARM_STOP 0" output; ramp–down braking.
	Remedy	– Press the Recall key twice.
1221	**Message text**	ACKN. POWER MODULE AXIS <axis number> NOT /OR INCORRECTLY CONNECTED
	Cause	– The axis is incorrectly plugged into the power module or not connected at all.
	Monitor	– At runup.
	Effect	– Active commands inhibited.
	Remedy	– Connect axis correctly.
		– Acknowledge message.
1222	**Message text**	ACKN. BRAKE ERROR <axis number>
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
1223	**Message text**	ACKN. UNDERVOLTAGE <power module>

		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1224	STOP	**Message text**	ACKN. OVERVOLTAGE \<power module\>
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1225	STOP	**Message text**	ACKN. OVERCURRENT \<axis number\>
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1226	STOP	**Message text**	ACKN. E\<2 or 7 keyswitch\> SWITCH CLOSED
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1227	STOP	**Message text**	ACKN. E\<2 or 7 keyswitch\> SWITCH OPEN
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1228	STOP	**Message text**	ACKN. FEEDBACK SWITCH ON TOO LONG **
		Cause	– The energy of the axis to be braked was too high.
		Monitor	
		Effect	– Ramp–down braking.
		Remedy	– Power module ballast (feedback) switch defective. – Brake ramp in the program too steep.
1229	STOP	**Message text**	ACKN. WATCHDOG POWER MODULE \<number\>
		Cause	– The watchdog on the power module has dropped out. The watchdog is triggered by the DSE every 0.125ms.
		Monitor	– Cyclic.
		Effect	– Maximum braking.
		Remedy	– Troubleshooting in the DSE and power module area.
1230	STOP	**Message text**	ACKN. OVERTEMPERATURE, BALLAST RESISTOR \<number\> OR FAN
		Cause	– The ballast (feedback) resistor has overheated. In the motion program the robot is cyclically accelerated and decelerated without a break.

		Monitor	– Cyclic.
		Effect	– Ramp–down braking.
		Remedy	– Insert wait times into the program, reduce the acceleration.
1231	STOP	**Message text**	ACKN. CABINET OVER TEMPERATURE **
		Cause	– The cabinet temperature has risen above the permissible limit value.
		Monitor	– Cyclic.
		Effect	– Ramp–down braking.
		Remedy	– Reduce the external temperature. – Change the site of installation. – Check the fans. – Clean the heat exchanger.
1232	STOP	**Message text**	ACKN. MOTOR CABLE **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1233	STOP	**Message text**	ACKN. FAILURE OF HEAT SINK TEMPERATURE SENSOR <axis number>
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1234	STOP	**Message text**	ACKN. CABINET INTERIOR TEMPERATURE SENSOR FAILURE <axis number>
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1235	STOP	**Message text**	ACKN. DRIVES PARAMETER DATA <axis number> INVALID
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1236	STOP	**Message text**	ACKN. FAILURE OF MOTOR TEMPERATURE SENSOR <axis number>
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–

1237		**Message text**	ACKN. WRONG DRIVES PARAMETER <axis number> **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1238		**Message text**	ACKN. ERROR SYNC. INPUT DRIVE <axis>
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1239		**Message text**	ACKN. SYNCHRONISATION ERROR DRIVE <axis>
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1240		**Message text**	ACKN. <axis> WITHOUT POWER
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1241		**Message text**	ACKN. i^2 t MONITORING, CURRENT LIMIT OF THE MOTOR CABLE <string> AFTER <string>s EXCEEDED 100%
		Cause	– Axis overloaded. The value for the maximum permissible limit current is specified in the machine data by "$CURR_MON[]".
		Monitor	– Cyclic.
		Effect	– Ramp–down braking, active commands inhibited.
		Remedy	– Reduce load.
1242		**Message text**	ACKN. i^2 t MONITORING, CURRENT LIMIT OF THE MOTOR CABLE ** AFTER ** EXCEEDED 95%
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1243		**Message text**	LINE ** IN ** TOO LONG. LINE WAS CUT OFF.
		Cause	– An excessively long program line was cut off in order to avoid deletion of the rest of the program.
		Monitor	– Triggered during line compilation.
		Effect	– The line is cut off. The program is retained.
		Remedy	– Modify the incorrect line in expert mode.

1244	STOP	**Message text**	SUCCESS LOADING ** SERVO PARAMETERS **
		Cause	– Completed loading of servo parameters.
		Monitor	–
		Effect	–
		Remedy	–
1245	STOP	**Message text**	ACKN SERVO BUS DISTURBANCE DSE **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1246	STOP	**Message text**	ACKN SERVO BUS DISTURBANCE DSE **, NO BUFFERING AND AUTOMATIC DATA STORAGE POSSIBLE
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1247	STOP	**Message text**	ACKN SERVO BUS DISTURBANCE **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1248	STOP	**Message text**	ACKN SERVO BUS DISTURBANCE **
		Cause	–
		Monitor	–
		Effect	–
		Remedy	–
1254	STOP	**Message text**	Ackn. PC fan error
		Cause	– PC fan speed was below the alarm threshold and is now back in the nominal range
		Monitor	– Cyclic.
		Effect	– None
		Remedy	– Acknowledge message
1255	STOP	**Message text**	Ackn. Ixt servo drive %1 exceed value of %2 %%
		Cause	– If the defined Ixt monitoring warning value of a drive servo is exceeded, the robot must be brought to a standstill; otherwise, the drive servo is deactivated when the maximum value of 100% is exceeded
		Monitor	–
		Effect	–
		Remedy	– Acknowledge message

1300		**Message text**	PARITY ERROR
		Cause	– Parity incorrectly set.
		Monitor	– On transmission.
		Effect	– None.
		Remedy	– Check parity setting on controller and operator control unit (PC).
1301		**Message text**	PROCEDURE ERROR
		Cause	– Transmission error in LSV2 procedure which was not detected by the parity monitor.
		Monitor	– On transmission.
		Effect	– None.
		Remedy	– Repeat transmission. – Increase procedure repetition counter. – Check cable.
1302		**Message text**	CHANNEL NOT AVAILABLE
		Cause	– Procedure monitoring time elapsed.
		Monitor	– On transmission.
		Effect	– None.
		Remedy	– Increase procedure monitoring time.
1303		**Message text**	SCC OVERFLOW
		Cause	– Baud rate set too high (SCC = Serial Communication Controller).
		Monitor	– On transmission.
		Effect	– None.
		Remedy	– Reduce baud rate.
1304		**Message text**	REFERENCING AXIS <axis number> INADMISSIBLE
		Cause	– Attempt to reference a non–incremental axis.
		Monitor	– During single–axis referencing.
		Effect	– The specified axis is not referenced.
		Remedy	– Master the axis.
1305		**Message text**	RCP SWITCH POSITION INADMISSIBLE
		Cause	– Too many transfer processes started (a maximum of 4 transfer processes can be started.)
		Monitor	– During transfer.
		Effect	– None.
		Remedy	– Wait until one process has been completed. – Stop one process.

1306	**Message text**	DEVICE NOT READY
	Cause	– Cable defective or not connected.
		– Device switched off (e.g. printer).
	Monitor	– During transfer.
	Effect	– None.
	Remedy	– Check cable and device.

1307	**Message text**	FORMAT ERROR
	Cause	– Hardware error of the interface on I–CPU.
	Monitor	– During transfer.
	Effect	– None.
	Remedy	– If the error occurs repeatedly, change the board (interface CPU).

1308	**Message text**	CHANNEL NOT ALLOWED IN COMMAND
	Cause	– Command does not support any channels.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– None.

1309	**Message text**	OBJECT IS NOT AVAILABLE
	Cause	– Objects that are not available in the KRC cannot be addressed.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Wrong object selected.

1310	**Message text**	TOO MANY OBJECTS ARE SELECTED
	Cause	– Too many objects selected.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Select only the permitted number of objects (approx. 150).

1311	**Message text**	<object name> NOT CORRECTLY COPIED
	Cause	– Errors have been detected in the line analysis.
	Monitor	– In command processing.
	Effect	– Error token in the object.
	Remedy	– Correct object.

1312	**Message text**	<object name> ASSIGNED
	Cause	– Object cannot be processed in this state (object already assigned).
		– Module package cannot be linked since at least one of the objects of the module package is assigned.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– None.
1313	**Message text**	INVALID STATEMENT
	Cause	– The source and target specifications do not conform to the convention for "COPY".
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Specify the source and target correctly.
1314	**Message text**	DATA NOT ALLOWED
	Cause	– Extension not compatible.
		– copy *.* (copy *.* is possible into a directory only).
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Specify extension correctly.
1315	**Message text**	<module name> IS NOT A MODULE
	Cause	– The name represents a directory.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Take a different module.
1316	**Message text**	RUNTIME VALUES FOR TRIGGER IN SUBROUTINES INADMISSIBLE
	Cause	– In a subroutine a trigger is defined which is possibly not activated until the main program. If runtime values are used in trigger assignment, they are not valid at the time of activation.
	Monitor	– During program execution.
	Effect	– Ramp–down braking, all active commands inhibited.
	Remedy	– Alter program, use only global variables, acknowledge message.
1317	**Message text**	DELETING OF SYSTEM FILES IS INADMISSIBLE
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

1318	**Message text**	FILE DESCRIPTION CANNOT BE PROCESSED
	Cause	– Module information that cannot be evaluated has been received in a COPY operation from an external source.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Check interface software.
1319	**Message text**	<object> CANNOT BE CORRECTED
	Cause	– An invalid extension has been specified (only "DAT" is allowed).
		– An attempt has been made to transmit or edit a protected file.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Select data list.
		– Set INIT switch on I–CPU to position 3.
1320	**Message text**	EXTENSION NOT ALLOWED
	Cause	– An extension has been specified in a command where it is not allowed (e.g. analyse otto.src).
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Correct command.
1321	**Message text**	<path> IS NOT A DIRECTORY
	Cause	– Command contains an invalid subdirectory (e.g. dir /R1/otto/abc, /abc not allowed).
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Correct command.
1322	**Message text**	<module> NOT LINKED
	Cause	– "UNLINK" has been applied to an object that is not a program.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– None.
1323	**Message text**	<path> INVALID DATA MODULE NAME OR EXTENSION
	Cause	– An invalid path, module name or extension has been specified.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Correct command.

1324	**Message text**	<object> NOT AVAILABLE
	Cause	– An object that is not available has been addressed.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Create the object.

1325	**Message text**	<object> CANNOT BE PROCESSED
	Cause	– An object that has already been assigned has been addressed.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Free the assignment (/R1/CONFIG>DAT).

1326	**Message text**	<object> : <number of errors> COMPILATION ERROR
	Cause	– The indicated number of errors have been detected in the indicated object during total compilation.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Correct the errors.

1327	**Message text**	<module> LINKING ERROR
	Cause	– One or more errors have been detected in the indicated module during linking.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Using the error list, correct the error(s).

1328	**Message text**	FAULTY FILE
	Cause	– Module is not correct for TTS calculation.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	–

1329	**Message text**	ACCESS TO IMPORTED VARIABLE IS NOT POSSIBLE
	Cause	– The search path has not been extended to the external data list.
	Monitor	– In command processing.
	Effect	– Command has not been executed.
	Remedy	– Extend the search path.

1330	**Message text**	SOURCE AND TARGET OBJECT ARE IDENTICAL
	Cause	– The source and target specifications define the same object.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Change target object.

1331		**Message text**	<module> NOT CORRECT
		Cause	– An incorrect module has been selected in a linking operation.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Correct the error in the indicated module (perform ANALYSE).
1332		**Message text**	Line selection not possible: too many Interrupts
		Cause	– An attempt has been made to carry out a block selection in a local subprogram that is not in the caller stack. At this point, the maximum permissible number of interrupts that can be declared or activated was exceeded.
		Monitor	–
		Effect	– Block selection to the subprogram is not possible.
		Remedy	– Reduce the number of KRL interrupts accordingly.
1333		**Message text**	<object> CANNOT BE DELETED
		Cause	– Object cannot be deleted because it is write–protected.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– None.
1334		**Message text**	MORE THAN 16 INTERRUPTS DEFINED
		Cause	– Program instruction INTERRUPT ON can switch on a maximum of 16 defined interrupts but more than 16 are defined.
		Monitor	– Program processing.
		Effect	– Ramp–down braking.
		Remedy	– Reduce number.
1335		**Message text**	<module> SELECTED
		Cause	– Program cannot be unlinked; module is selected with "RUN".
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Terminate program run (CANCEL).
1336		**Message text**	COR ARE FOR DATA LISTS ONLY
		Cause	– COR is allowed for data lists only.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Select a data list.
1337		**Message text**	TOO COMPLEX
		Cause	– Copying from one channel to another (not allowed in SWP1).
		Monitor	– In command processing.
		Effect	– Command is not executed.

		Remedy	– None.
1338	⚠	**Message text**	BLOCK CANNOT BE CORRECTED
		Cause	– TTS or BASE calculation cannot be performed. (TTS = tool–based technological system).
		Monitor	– In command processing.
		Effect	– None.
		Remedy	
1339	⚠	**Message text**	UNKNOWN EXTERNAL MESSAGE (<external message number>)
		Cause	– It has not been possible to convert an external message (e.g. from the interface CPU, PSX) into an RCX message.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– Acknowledge message.
1340	⚠	**Message text**	NOT ALLOWED REFERENCE SYSTEM
		Cause	– The reference system for manual motion is not possible for the kinematic system.
		Monitor	– At start.
			– With traversing keys.
		Effect	–
		Remedy	– Select a different reference system (TRANSSYS).
1341	⚠	**Message text**	REFERENCE SYSTEM DEFINITION NOT COMPLETE
		Cause	– At least one frame required for calculating the reference matrix has not been assigned.
		Monitor	– In cartesian motion commands (e.g. MOVE, PTP, LIN).
		Effect	
		Remedy	
1342	🛑	**Message text**	WORK ENVELOPE EXCEEDED
		Cause	– Working zone limit has been exceeded.
		Monitor	– Cyclic.
		Effect	– Maximum braking.
			– All active commands inhibited.
		Remedy	– Acknowledge message.
1343	⚠	**Message text**	SYNC()–CALL NOT PROGRAMMED
		Cause	– In IRSTOPMESS, the user has failed to respond to $Power–Fail by calling the SYNC() function.
		Monitor	– During power failure.
		Effect	– None.
		Remedy	– Correct the application program.
1344	⚠	**Message text**	Robot system is not available

		Cause	– No second robot system activated in the machine data (command: $HOME = "/R2")
		Monitor	– During command execution.
			– During program execution.
		Effect	– In command execution
			a) The command is not executed.
			– In program execution – Ramp–down braking – All active commands inhibited.
		Remedy	– Alter machine data.
			– Acknowledge message.
1345	⚠	**Message text**	CHANGE REFERENCE DIRECTION <axis number>
		Cause	– During single–axis referencing the wrong direction key was pressed, depending on machine datum $DIR_CAL.
			– All axes are mastered.
		Monitor	– During referencing.
		Effect	– Axis cannot be referenced in this direction.
		Remedy	– Carry out referencing in the other direction.
1346	⚠	**Message text**	INADMISSIBLE MASTERING SEQUENCE
		Cause	– The mastering sequence was not adhered to (depending on machine datum $SEQ_CAL).
		Monitor	– During mastering.
		Effect	– Axis cannot be mastered.
		Remedy	– Observe mastering sequence.
1347	⚠	**Message text**	ROBOT NOT MASTERED
		Cause	– Selection of a program without the robot being mastered.
			– Start of a program without the robot being mastered.
		Monitor	– In command processing.
			– In program processing.
		Effect	–
		Remedy	– Master the robot. – Acknowledge message.
1348	⚠	**Message text**	<axis number> AXIS SYNCHRONIZED
		Cause	– In single–axis referencing, an attempt has been made to reference an axis which has already been referenced.
		Monitor	– During referencing.
		Effect	– The axis is not referenced.
		Remedy	– Select the next axis which has not been referenced.
1349	⚠	**Message text**	ROBOT MASTERED
		Cause	– All axes mastered.

		Monitor	– In mastering.
		Effect	– Robot is mastered.
		Remedy	–
1350	⚠	**Message text**	BCO REACHED
		Cause	– After the first position in the user program has been reached.
			– After repositioning ($POS_RET, $AXIS_RET, $POS_FOR, $AXIS_FOR, etc.).
		Monitor	– With BCO travel.
		Effect	– Signalling that BCO has been achieved.
		Remedy	– None.
1351	⚠	**Message text**	DRIFT COMPENSATION ABORTED
		Cause	– The drift compensation was interrupted by a stop (Stop key, message triggering a stop).
		Monitor	– Cyclic for the duration of drift compensation.
		Effect	– Drift compensation failed (dynamic braking).
		Remedy	– Repeat drift compensation.
1352	⚠	**Message text**	AXIS <axis number> INHIBITED
		Cause	– An attempt has been made to move an axis in the inhibited direction (inhibited by software limit switch).
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Move axis off limit switch in other direction.
1353	⚠	**Message text**	KEY COMBINATION <KCP> INADMISSIBLE
		Cause	– Simultaneous pressing of more than one key on the KCP.
		Monitor	– Cyclic.
		Effect	– KCP operation momentarily interrupted.
		Remedy	– Release all keys on the KCP.
1355	⚠	**Message text**	DEADMAN SWITCH REQUIRED
		Cause	– The safety (deadman) switch has not been pressed while actuating the start or traversing key in mode T1 or T2.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Press safety switch.
1356	⚠	**Message text**	START KEY REQUIRED
		Cause	– The "START" command has been entered textually.
			– Execution of the command requires the start key to be pressed.
		Monitor	– In command processing.
		Effect	– None.

		Remedy	– Press start key.
			– External computer: check job identification.
1357		**Message text**	RESET REQUIRED
		Cause	– RUN has been applied to a process in the end state.
		Monitor	– In command processing.
			– In program processing.
		Effect	– In command processing – Command is not executed.

			– In program processing
			  – Ramp–down braking
			  – All active commands inhibited.

		Remedy	– RESET program.
			– In program processing the message has to be acknowledged.
1358		**Message text**	SELECTION REQUIRED
		Cause	– Start key pressed without a program being selected.
			– "RUN" without path specification and no program is selected.
		Monitor	– When start key is pressed.
			– At RUN command.
		Effect	– Command is not executed.
		Remedy	– Select program.
1359		**Message text**	TTS CANNOT BE DETERMINED
		Cause	– Termination of search for the path direction point. (TTS = tool–based technological system).
		Monitor	– In command processing.
		Effect	– None.
		Remedy	–
1360		**Message text**	SELECTION NOT ALLOWED
		Cause	– Selected block does not exist in the program.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Select correct block number.
1361		**Message text**	STOP DUE TO NODE SWITCHOVER
		Cause	– The node setting has been changed during actuation of a traversing key or execution.
		Monitor	– In command processing.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Acknowledge message.
1362		**Message text**	STOP DUE TO OPERATING MODE CHANGE
		Cause	– Active processes are stopped if the mode is changed.
		Monitor	– Cyclic.

		Effect	– Path–maintaining Emergency Stop.
		Remedy	– Acknowledge message.
1363		**Message text**	OPERATOR CONTROL UNIT DISABLED
		Cause	– Command cannot be executed because the KCP settings do not fulfil the conditions. a) For RCP and stationary KCP the mode AUT is required. b) For non–stationary KCP the mode T1 or T2 is required. c) For host computers the mode EXT is required.
		Monitor	– In command processing.
		Effect	– Command cannot be executed.
		Remedy	– Fulfil the "active" conditions.
1364		**Message text**	OUT PARAMETERS INADMISSIBLE
		Cause	– Trigger with subprogram call where reference parameters are transferred.
		Monitor	–
		Effect	–
		Remedy	– Correct program, acknowledge.
1365		**Message text**	PATH TRIGGER WITH PTP MOTION INADMISSIBLE
		Cause	– Path triggers are not permissible with PTP motions.
		Monitor	–
		Effect	– Program execution is stopped.
		Remedy	– Correct program, acknowledge, reboot.
1366		**Message text**	CARTESIAN TARGET NOT POSSIBLE
		Cause	– When using a 5–axis robot ($DEF_A4FIX=TRUE) and palletizing mode is deactivated ($PAL_MODE=FALSE), only PTP motions with an axis–specific target may be carried out.
		Monitor	– In the line interpreter.
		Effect	– Path–maintaining braking.
		Remedy	–
1367		**Message text**	ACTIVE STATUS REQUIRED
		Cause	– The command entered may only be issued from an active operator control unit (modes T1, T2, AUT).
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Switch operator control unit to active status.
1368		**Message text**	<operator control device> IS ACTIVE
		Cause	– Indicated operator control unit is active.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Switch indicated operator control unit to passive status.

1369		**Message text**	ACTIVE ALLOWED IN <mode> ONLY
		Cause	– For RCP and stationary KCP the mode AUT is required.
			– For non–stationary KCP the mode T1 or T2 is required.
			– For host computers the mode EXT is required.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Set the correct mode.
1370		**Message text**	PASSIVE STOP
		Cause	– Stop from a passive operator control unit (the message is displayed only if an active process has been stopped).
		Monitor	– Cyclic.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Acknowledge message (acknowledgement possible only on the originating unit, even in passive status).
1371		**Message text**	STOP DUE TO UNIT PASSIVE
		Cause	– The operator control unit has been deactivated during actuation of the start key or a traversing key in mode T1 or T2, or during the BCO run.
		Monitor	– In command processing.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Switch operator control unit to active status.
			– Acknowledge message.
1372		**Message text**	PROCESS ACTIVE
		Cause	– An attempt has been made to start an active command during an active process.
		Monitor	– In command processing.
			– In program processing.
		Effect	– In command processing – Command is not executed.
			– In program processing – Ramp–down braking – All active commands inhibited.
		Remedy	– Wait until end of processing. – Stop active processing. – In program processing the message has to be acknowledged.
1373		**Message text**	PROCESS BUSY
		Cause	– Program already selected.
		Monitor	– In command processing.
			– In program processing.

		Effect	– In command processing – Command is not executed. – In program processing – Ramp–down braking – All active commands inhibited.
		Remedy	– Deselect program already selected. – In program processing the message has to be acknowledged.
1374	⚠	**Message text**	PROCESS DISABLED
		Cause	– All selected processes have the program mode "DISABLED" or a non–disabled process is finished.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Alter program mode.
1375	⚠	**Message text**	COMMAND NOT ALLOWED
		Cause	– Impermissible or unknown command.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– Enter command correctly.
1376	⚠	**Message text**	ACTIVE COMMANDS INHIBITED
		Cause	– A message which causes the active commands to be inhibited has been set.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Acknowledge active messages in the message window.
1377	⚠	**Message text**	COMMAND EXECUTION NOT POSSIBLE
		Cause	– A preceding command is still being processed.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Cancel command. – Wait until end of preceding command.
1378	⚠	**Message text**	COMMAND NOT BEING PROCESSED
		Cause	– The command that is to be cancelled has already been processed.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– None.
1379	⚠	**Message text**	COMMAND ABORTED
		Cause	– The command has been cancelled. – During editing abort has been selected by the editor kernel before the command concerned (ERASE,GET,FIND) is called.

	Monitor	–	In command processing.
		–	In editing.
	Effect	–	
	Remedy	–	

1380	**Message text**	BACKGROUND PROCESS BUSY WITH <operator control device>
	Cause	– The background is exclusively assigned to another operator.
	Monitor	– In command processing.
	Effect	– Background cannot be exclusively assigned.
	Remedy	– Cancel the exclusive assignment of the indicated device. – Provide complete specifications in $OPTION.DAT.

1381	**Message text**	BACKGROUND OCCUPIED
	Cause	– A command is already being processed in the background.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Cancel command. – Wait until command has been executed.

1382	**Message text**	ABORTED
	Cause	– "BREAK" has been repeated.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– None.

1383	**Message text**	** IS NOT A MEMORY DUMP
	Cause	– When writing a data block (a file received from the controller or a temporary file created by the server), it has been discovered that there is not enough space available on the storage medium (hard disk).
	Monitor	
	Effect	– The currently edited file is deleted.
	Remedy	– Create space on the storage medium (delete files that are no longer required).

1384	**Message text**	PARAMETER NOT PROCESSED
	Cause	– A RUN command with a parameter has been executed for a program that is already selected.
	Monitor	– In command processing.
	Effect	– The parameter is not evaluated.
	Remedy	– Cancel and reselect the program.

1385	**Message text**	PROTOCOL ERROR
	Cause	– Error in the protocol software of the operator control unit or output device.
	Monitor	– In command processing.
	Effect	– The command is aborted.

		Remedy	– Check protocol software.
1386	STOP	**Message text**	INTERRUPT–UP: MAX. 10 ARGUMENTS ADMISSIBLE
		Cause	– More than 10 arguments have been specified.
		Monitor	–
		Effect	–
		Remedy	– Reduce the number of arguments to the maximum permissible number.
1387	(!)	**Message text**	VARIABLE TOO LARGE
		Cause	– The variable specified in SHOW VAR or SET INFO is too complex or too large (e.g. field is larger than the display).
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Subdivide the request into several sections.
1388	(!)	**Message text**	<string> VARIABLE WRITE PROTECTED IN MODULE <string> LINE <string>
		Cause	– In a program module an attempt was made to change a write–protected variable.
		Monitor	– In program mode.
		Effect	–
		Remedy	–
1389	(!)	**Message text**	OPTION <option name> MISSING
		Cause	– The option has not been entered.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Enter the option.
1390	(!)	**Message text**	CIRC ANGLE NOT ACCEPTED
		Cause	
		Monitor	
		Effect	– None.
		Remedy	
1391	(!)	**Message text**	Access to component not allowed
		Cause	– Illegal access to a component of the program/motion trace (e.g. SHOW VAR $PRO_TRACE[5].NAME[2]).
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	
1392	(!)	**Message text**	WRITE PROTECTION DUE TO PROCESS STATUS
		Cause	– Write access to a "$" variable with an illegal process status (active, not active, RC Ready).
		Monitor	– In command processing.

		Effect	– Command is not executed.
		Remedy	– Set a permissible process status.
1393	⚠	**Message text**	WRITE PROTECTION DUE TO OPERATOR CONTROL UNIT STATUS
		Cause	– An attempt has been made to write a "$" variable with the operator control unit status incorrectly set.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Switch operator control unit to "active" status.
1394	⚠	**Message text**	READ PROTECTION DUE TO PROCESS STATUS
		Cause	– Reading of a "$" variable with an inadmissible process status (active, not active, RC ready).
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Set a permissible process status.
1395	⚠	**Message text**	READ PROTECTION DUE TO OPERATOR CONTROL UNIT STATUS
		Cause	– Reading of a "$" variable with the operator control unit status incorrectly set.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– Switch operator control unit to "active" status.
1396	⚠	**Message text**	PROGRAM NOT LINKED
		Cause	– Selection of a non–linked program.
		Monitor	– At selection.
		Effect	– In command processing – Command is not executed. – In program processing – Ramp–down braking – All active commands inhibited.
		Remedy	– Link the program. – In program processing the message has to be acknowledged.
1397	🛑	**Message text**	MEMORY REQUEST FOR PARAMETER LIST TOO LARGE
		Cause	– The transfer parameters of the program require too much memory.
		Monitor	– During command execution.
		Effect	–
		Remedy	– Acknowledge message, correct program, reselect program.
1398	⚠	**Message text**	Check rcp selector switch
		Cause	– The selector switch on the RCP is not set to "RUN" in the case of selection or start from another operator control unit.
		Monitor	– In command processing.
		Effect	– Command is not executed.

		Remedy	– Turn the selector switch on the RCP to "RUN".
1399		**Message text**	MESSAGE CANNOT BE ACKNOWLEDGED
		Cause	– Acknowledgement of a status (operational) message.
		Monitor	– In command processing.
		Effect	– Command is not executed.
		Remedy	– None. Read the message.
1400		**Message text**	Message not available
		Cause	– Textual acknowledgement of a message that is not available.
		Monitor	– In command processing.
		Effect	– Command cannot be executed.
		Remedy	–
1401		**Message text**	Control structure next block <block number>
		Cause	– Selection into a control structure.
		Monitor	– In program processing.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
			– The control structure is exited when the end is identified.
		Remedy	– Acknowledge message.
1402		**Message text**	Select startup
		Cause	– A command has been entered that is only allowed in the startup mode.
		Monitor	– With all commands of the startup mode.
		Effect	– Command is not executed.
		Remedy	– Select the startup mode.
			– Acknowledge message.
1403		**Message text**	Interrupt instruction aborted
		Cause	– Motion instruction in the interrupt routine that is executed after an error stop. The interrupt module that is called after an error stop may not contain any motion instructions.
		Monitor	– In program processing.
		Effect	– Ramp–down braking.
		Remedy	– Modify interrupt module accordingly.
			– Acknowledge message.
1404		**Message text**	Edit commands now allowed
		Cause	– The user is in the mode "Editing without implicit block selection", and after completion of the current motion block has received an editor enable. The object is write–protected.
		Monitor	– During command execution.
		Effect	–
		Remedy	– Note: editing is now possible.

1405	**Message text**	\<object name\> is write protected
	Cause	– Object is write–protected.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Check object status (e.g. unlink or deselect object).

1406	**Message text**	Error in path
	Cause	– Error in path specification e.g. /R5.
	Monitor	– In command processing.
	Effect	– Command is not executed.
	Remedy	– Check and correct path specification.

1407	**Message text**	Edit commands inadmissible, finish movement first
	Cause	– The user tries to edit a program while in mode "Editing without implicit block selection". The user is still located in a motion instruction.
	Monitor	– During command execution.
	Effect	– Editing is not possible.
	Remedy	– Press the Start key again until the message "Edit commands now allowed" appears. Editing is then possible.

1408	**Message text**	Line compilation or decompilation error
	Cause	– Message will soon be deleted.
	Monitor	
	Effect	– No effect.
	Remedy	

1409	**Message text**	No trigger allowed in ISR or *.SUB
	Cause	– Trigger was programmed in interrupt or SUB module.
	Monitor	– Program execution.
	Effect	– Program execution stopped, all active commands inhibited.
	Remedy	– Correct program, acknowledge message.

1410	**Message text**	Program line does not exist
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–

1411   **Message text**   Line selection beyond buffer: Next start deletes buffer.

Cause	– Line selection outside the trace.
Monitor	– During line selection.
Effect	– When the Start key is pressed, the buffer for backward motion is deleted.
Remedy	– Before pressing the Start key, make another line selection within the buffer. After that the backward motion can be carried out.

1412   **Message text**   Axis <axis number> acceleration not programmed

Cause	– No value has been assigned to the program datum "$ACC_AXIS".
Monitor	– When starting a PTP block.
Effect	– All active commands inhibited.
Remedy	– Alter the program accordingly. – Acknowledge message.

1413   **Message text**   Axis <axis number> velocity not programmed

Cause	– No value has been assigned to the program datum "$VEL_AXIS".
Monitor	– When starting a PTP block.
Effect	– All active commands inhibited.
Remedy	– Alter the program accordingly. – Acknowledge message.

1414   **Message text**   Path acceleration not programmed

Cause	– No value has been assigned to the program datum "$ACC.CP".
Monitor	– At the first CP block.
Effect	– All active commands inhibited.
Remedy	– Alter the program accordingly. – Acknowledge message.

1415   **Message text**   Path velocity not programmed

Cause	– No value has been assigned to the program datum "$VEL.CP".
Monitor	– At the first CP block.
Effect	– All active commands inhibited.
Remedy	– Alter the program accordingly. – Acknowledge message.

1416   **Message text**   Orientation acceleration not programmed

Cause	– No value has been assigned to the program data "$ACC.ORI1" and "$ACC.ORI2".
Monitor	– At the first CP block.
Effect	– Ramp–down braking. – All active commands inhibited.
Remedy	– Alter the program accordingly. – Acknowledge message.

1417		**Message text**	Orientation velocity not programmed
		Cause	– No value has been assigned to the program data "$VEL.ORI1" and "$VEL.ORI2".
		Monitor	– At the first CP block.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Alter the program accordingly.
			– Acknowledge message.

1418		**Message text**	<X,Y,Z,A,B,C> BASE not programmed
		Cause	– No value has been assigned to the program datum "$BASE". – in a user program – after overall reset of the control for a cartesian command.
		Monitor	– With a cartesian motion.
		Effect	– In command processing – Command is not executed.
			– In program processing – Ramp–down braking. – All active commands inhibited.
		Remedy	– In command processing – Assign a value to "$BASE". – In program processing – Alter the program accordingly – Acknowledge message.

1419		**Message text**	<X,Y,Z,A,B,C> TOOL not programmed
		Cause	– No value has been assigned to the program datum "$TOOL" – in a user program – after overall reset of the control for a cartesian command.
		Monitor	– With a cartesian motion.
		Effect	– In command processing – Command is not executed.
			– In program processing – Ramp–down braking. – All active commands inhibited.
		Remedy	– In command processing – Assign a value to "$TOOL". – In program processing – Alter the program accordingly – Acknowledge message.

1420		**Message text**	Approximation not programmed <approximation criterion>
		Cause	– No value has been assigned to the program data "$APO.VEL", "$APO.ROB", "$APO.DIS", and/or "$APO.ORI".
		Monitor	– When starting the first motion block with approximate positioning.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Alter the program accordingly.
			– Acknowledge message.

1421	**Message text**	<file> : <number> compilation error
	Cause	– Compilation error due to unrecognized data type can occur in the case of global self–defined data types and ENUMs. This means that the GUI must initiate a second download.
	Monitor	– During command execution.
	Effect	– When this error is caused by global types, it can be corrected by downloading the files twice.
	Remedy	– The GUI filters out the error number and initiates the double download for the file in question.

1422	**Message text**	<$ variable> invalid value
	Cause	– Read access to a variable that is not initialized or that has an invalid value, e.g. reading of "$POS_INT" outside an interrupt routine.
	Monitor	– In command processing. – In program processing.
	Effect	– In command processing – Command is not executed. – In program processing – Ramp–down braking – All active commands inhibited.
	Remedy	– Alter the program. – Acknowledge message.

1423	**Message text**	Overflow
	Cause	– Value is not compatible with the specified data type, e.g. value assignment of a number >255 to the data type "char".
	Monitor	– In command processing. – In program processing.
	Effect	– In command processing – Command is not executed. – In program processing – Ramp–down braking – All active commands inhibited.
	Remedy	– Alter data type. – Acknowledge message in program processing.

1424	**Message text**	PROGRAM STACK OVERFLOW
	Cause	– The nesting depth for subprograms and functions has been exceeded.
	Monitor	– In program processing.
	Effect	– Ramp–down braking. – All active commands inhibited.
	Remedy	– Alter the program accordingly. – Acknowledge message.

1425	**Message text**	Instruction not allowed
	Cause	– Program instruction that is not allowed as a command.
		– Program instruction that is only allowed in an interrupt routine.
	Monitor	– In command processing.
		– In program processing.
	Effect	– In command processing – Command is not executed.
		– In program processing – Ramp–down braking – All active commands inhibited.
	Remedy	– Alter the program accordingly.
		– Acknowledge message.

1426	**Message text**	Variable stack depth exceeded
	Cause	– The nesting depth of the variable has been exceeded.
	Monitor	– In program processing.
	Effect	– Ramp–down braking.
		– All active commands inhibited.
	Remedy	– Alter the variable accordingly.
		– Acknowledge message.

1427	**Message text**	$OUT_C[N] IS NOT PERMISSIBLE IN INTERRUPT PROGRAMS
	Cause	– Instruction not permissible here
	Monitor	–
	Effect	– Interpreter stop
	Remedy	– Revise SRC file and acknowledge message

1428	**Message text**	Function value not defined
	Cause	– RETURN instruction missing in the function module.
	Monitor	– In the program.
	Effect	– Ramp–down braking.
		– All active commands inhibited.
	Remedy	– Insert a RETURN instruction.

1429	**Message text**	String too long
	Cause	– In a value assignment to arrays, the string consists of more characters than the existing array.
	Monitor	– In command processing.
		– In program processing.
	Effect	– In command processing – Command is not executed.
		– In program processing – Ramp–down braking – All active commands inhibited.
	Remedy	– Alter the program accordingly.
		– Acknowledge message.

1430 | **Message text** | <Interrupt or Trigger> not defined

Cause	–	An interrupt that has not been defined has been switched on.
Monitor	–	In command processing.
	–	In program processing.
Effect	–	In command processing – Command is not executed.
	–	In program processing – Ramp–down braking – All active commands inhibited.
Remedy	–	Define interrupt.
	–	Acknowledge message.

1431 | **Message text** | Selection not possible

Cause	–	Selection of the editor is not possible. The file may not exist or it may have the attribute "hidden".
Monitor		
Effect		
Remedy	–	Check whether the file exists (e.g. when attempting to open a file in the view mode) or has the attribute "hidden".

1432 | **Message text** | Max. no. of interrupts defined

Cause	–	More than 32 interrupts have been defined.
Monitor	–	In command processing.
	–	In program processing.
Effect	–	In command processing – Command is not executed.
	–	In program processing – Ramp–down braking – All active commands inhibited.
Remedy	–	Acknowledge message.
	–	Alter the program accordingly.

1433 | **Message text** | Max. no. of interrupts on

Cause	–	More than 8 interrupts have been switched on.
Monitor	–	In command processing.
	–	In program processing.
Effect	–	In command processing – Command is not executed.
	–	In program processing – Ramp–down braking – All active commands inhibited.
Remedy	–	Acknowledge message.
	–	Alter the program accordingly.

1434	⚠	**Message text**	Target point not reached
		Cause	– The contour cannot be determined when selecting a CIRC block with a circle angle. A LIN motion to the programmed target point is executed when the robot is started.
		Monitor	– In program processing.
		Effect	– The next motion is also a BCO run.
		Remedy	– None.

1435	⚠	**Message text**	Read protection
		Cause	– A "$" variable that is not admissible for the selected interpreter type has been read.
		Monitor	– In command processing.
			– In program processing.
		Effect	– In command processing – Command is not executed.
			– In program processing – Ramp–down braking – All active commands inhibited.
		Remedy	– In program processing the message has to be acknowledged.

1436	⚠	**Message text**	Disk write protected
		Cause	– The write protection is activated.
		Monitor	
		Effect	– It is not possible to save data on the floppy disk.
		Remedy	– Remove the write protection.

1437	🛑	**Message text**	Reposition
		Cause	– BCO was not achieved on returning from the interrupt routine. The robot must be repositioned to the interrupt point before the end of the interrupt routine, e.g. with LIN $POS_RET.
		Monitor	– In program processing.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Alter the program accordingly. – Acknowledge message.

1438	⚠	**Message text**	Data storage device not ready: ...
		Cause	– There is no disk inserted or the floppy disk drive is defective.
		Monitor	
		Effect	– It is not possible to save to floppy disk.
		Remedy	– Insert floppy disk into the disk drive in; check disk drive.

1439 | **Message text** | <variable name> argument inadmissible

Cause	– At least one argument in the function is inadmissible; e.g. SQRT (negative value).
Monitor	– In interpretation of C functions.

Effect	– In command processing
	  – Command is not executed.
	
	– In program processing
	  – Ramp–down braking
	  – All active commands inhibited.

Remedy	– Alter the program accordingly. – Acknowledge message.

1440 | **Message text** | Mailbox identification not allowed

Cause	– An incorrect MBX_ID is specified in the C function "MBX_REC".
Monitor	– In interpretation of "MBX_REC".
Effect	– Ramp–down braking.
	– All active commands inhibited.
Remedy	– Alter the program accordingly. – Acknowledge message.

1441 | **Message text** | Interrupt priority not allowed

Cause	– Interrupt priority greater than 128 or less than 1
Monitor	– In command processing.
	– In program processing.

Effect	– In command processing
	  – Command is not executed.
	
	– In program processing
	  – Ramp–down braking
	  – All active commands inhibited.

Remedy	– Acknowledge message. – Alter the program accordingly.

1442 | **Message text** | Approximation not allowed for instructions

Cause	– "DRIFT", "$TOOL" or "$FILTER" is programmed between two motion instructions.
Monitor	– In program processing.
Effect	– Approximate positioning is not performed for the motion instructions.
Remedy	– Alter the program accordingly.

1443	STOP	**Message text**	Start movement not allowed
		Cause	– The first motion instruction in the program is relative.
			– The first motion instruction in the program is not programmed completely, e.g. PTP [33.33].
		Monitor	– In program processing.
		Effect	– No program motion.
		Remedy	– Alter the program.
			– Acknowledge message.
1444	(!)	**Message text**	Array index inadmissible
		Cause	– An attempt has been made to access an array element that does not exist.
		Monitor	– In command processing.
			– In program processing.
		Effect	– In command processing – Command is not executed.
			– In program processing – Ramp–down braking – All active commands inhibited.
		Remedy	– Alter the program accordingly. Acknowledge message.
1445	STOP	**Message text**	Angle status inadmissible
		Cause	– After repositioning with LIN the angle status does not agree with the status of the programmed block.
		Monitor	– In program processing.
		Effect	– Ramp–down braking.
			– All active commands inhibited.
		Remedy	– Acknowledge message.
			– Perform repositioning with PTP.
1446	(!)	**Message text**	Value assignment not allowed
		Cause	– Inadmissible value assignment for predefined variables, e.g. $SPEED.ORI1 <= 0.0 or > $SPEED_MA.ORI1.
			– Assigned $BASE or $TOOL not possible for the kinematic system.
		Monitor	– In command processing.
			– In program processing.
		Effect	– In command processing – Command is not executed.
			– In program processing – Ramp–down braking – All active commands inhibited.
		Remedy	– Alter the program accordingly.
			– Acknowledge message.

1447	**Message text**	Software limit <motion direction> <axis number> out of range
	Cause	– Target point cannot be reached due to a software limit switch.
	Monitor	– In command processing.
		– In program processing.
	Effect	– In command processing – Command is not executed.
		– In program processing – Ramp–down braking – All active commands inhibited.
	Remedy	– Alter the program.
		– Acknowledge message.
1448	**Message text**	<Name> ambiguous
	Cause	– The specified memory dump name contains wildcards. Expansion of these wildcards has resulted in more than one valid file name. This is not allowed however.
	Monitor	
	Effect	– Data transfer is not carried out.
	Remedy	– Specify an unambiguous name.
1449	**Message text**	<$variable> variable write protected
	Cause	– Write access to a write–protected variable e.g. "$POS_ACT".
	Monitor	– In command processing.
		– In program processing.
	Effect	– In command processing – Command is not executed.
		– In program processing – Ramp–down braking – All active commands inhibited.
	Remedy	– Alter the program.
		– Acknowledge message.
1450	**Message text**	Transformation not configured
	Cause	– $BASE or $TOOL has been assigned although no transformation is configured.
	Monitor	– In command processing.
		– In program processing.
	Effect	– In command processing – Command is not executed.
		– In program processing – Ramp–down braking – All active commands inhibited.
	Remedy	– Alter the program.
		– Acknowledge message.

1451		**Message text**	Division by 0
		Cause	– An attempt has been made to divide a value by "0".
		Monitor	– In command processing.
			– In program processing.
		Effect	– In command processing – Command is not executed.
			– In program processing – Ramp–down braking – All active commands inhibited.
		Remedy	– Alter the program. – Acknowledge message.
1452		**Message text**	Backward motions not active
		Cause	– Backward motion is deactivated ($VW_BACKWARD = FALSE).
		Monitor	– When START MINUS key is pressed.
		Effect	– Command is rejected.
		Remedy	– Set variable $VW_BACKWARD to TRUE.
1454		**Message text**	Start continue not possible
		Cause	– BSTEP
		Monitor	– In command processing.
		Effect	– None.
		Remedy	–
1455		**Message text**	Inadmissible in this edit mode
		Cause	– A command that would alter the object has been entered in the listing mode of the editor.
			– An attempt has been made in the data correction mode to delete or copy a range of blocks or to delete a block consisting of only one line.
		Monitor	– In the editor.
		Effect	– The attempted action is not executed.
		Remedy	– Edit in full edit mode.
1456		**Message text**	Start point equal to end point
		Cause	– Distance between start point and end point is too small.
		Monitor	– During preparation.
		Effect	– Ramp–down braking.
			– Active commands inhibited.
		Remedy	– Reprogram start point and/or end point. – Acknowledge message.

1457	STOP	**Message text**	Start point equal to mid point
		Cause	– Distance between start point and auxiliary point is too small.
		Monitor	– During preparation.
		Effect	– Ramp–down braking.
			– Active commands inhibited.
		Remedy	– Reprogram start point and/or auxiliary point.

1458	STOP	**Message text**	Mid point equal to end point
		Cause	– Distance between auxiliary point and end point is too small.
		Monitor	– During preparation.
		Effect	– Ramp–down braking.
			– Active commands inhibited.
		Remedy	– Reprogram auxiliary point and/or end point.

1459	!	**Message text**	Backward motions not possible: finished subroutine
		Cause	– An attempt was made to carry out backward a motion located inside a subprogram which has already been executed. Switching to forwards in this subprogram would not be possible. Backward motion is thus also disabled.
		Monitor	– When the "Start backwards" key is pressed.
		Effect	– Command is not executed.
		Remedy	– Forward motion.

1460	!	**Message text**	Deleting Trace: no backward motions possible
		Cause	– Editing was carried out or a block selection was made at a position which causes the trace to be discarded. From now on backward motion is no longer possible.
		Monitor	– When the "Start backwards" key is pressed.
		Effect	– Command is not executed.
		Remedy	– Forward motion.

1462	!	**Message text**	Command syntax error
		Cause	– The command contains a syntax error.
		Monitor	– In the editor.
		Effect	– Command is not executed.
		Remedy	– Correct the command.

1463	!	**Message text**	Object not ready
		Cause	– Program cannot be processed by the editor.
		Monitor	– In the editor.
		Effect	– Command is not executed.
		Remedy	– Select program with "Edit".

1464	STOP	**Message text**	$OUT_C[N] IS NOT PERMISSIBLE IN SUBMIT
		Cause	– Instruction not permissible here
		Monitor	–
		Effect	– Interpreter stop
		Remedy	– Revise SRC file and acknowledge message
1465	STOP	**Message text**	ONLY 8 $OUT_C[N] ASSIGNMENTS PER MOTION PERMISSIBLE
		Cause	– Instruction not permissible here
		Monitor	–
		Effect	– Interpreter stop
		Remedy	– Revise SRC file and acknowledge message
1468	!	**Message text**	Key not assigned
		Cause	– An unassigned softkey or function key has been pressed during prompted operation.
		Monitor	– When a softkey is pressed.
			– When a function key is pressed.
		Effect	– None.
		Remedy	– None.
1472	!	**Message text**	Key not allowed
		Cause	– Impermissible key (e.g. softkey) pressed in textual operation.
			– Alphanumeric key pressed in prompted operation when no input field is available.
		Monitor	– When a key is pressed.
		Effect	– Entry is ignored.
		Remedy	– Acknowledge the message.
1474	!	**Message text**	Change of direction not possible
		Cause	
		Monitor	– In command processing.
		Effect	– None.
		Remedy	
1477	!	**Message text**	Main process not available
		Cause	– Main run display (motion trace) selected but no main run block interpreted yet.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– Start the program.

1478	Message text	Pre process not available
	Cause	– Advance run display (program trace) selected but no program is in the STOP or END state.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– Start the program.

1481	Message text	No runtime data access
	Cause	– Access to an invalid or non–existent object value memory or runtime data area via the hierarchy table (search path).
	Monitor	– In the interpreter (prim – init).
	Effect	– None.
	Remedy	– Set the search path to the current interpreter environment.

1482	Message text	Volume too small
	Cause	– Monitoring of the dispensed volume has been triggered. Insufficient adhesive has been dispensed.
	Monitor	– From the PCL application program (bonding technology).
	Effect	– Ramp–down braking. All active commands inhibited.
	Remedy	– Check the adhesive application hardware, purge it if necessary.

1483	Message text	Excessive volume
	Cause	– Monitoring of the dispensed volume has been triggered. Too much adhesive has been dispensed.
	Monitor	– From the PCL application program (bonding technology).
	Effect	– Ramp–down braking. All active commands inhibited.
	Remedy	– Check the adhesive application hardware, purge it if necessary.

1484	Message text	Wrong adhesive pressure
	Cause	– The initial pressure of the adhesive is continuously monitored by the PLC during dispensing. A pressure value outside the permissible tolerance range has been detected. Possibly there are bubbles in the adhesive supply line, or the outlet nozzle is clogged.
	Monitor	– From the PCL application program (bonding technology).
	Effect	– Ramp–down braking, all active commands inhibited.
	Remedy	– Check the adhesive application hardware, purge it if necessary.

1485	Message text	Oil filter dirty
	Cause	– The hydraulic pressure is no longer adequate because the hydraulic oil filter is dirty.
	Monitor	– From the PCL application program (bonding technology).
	Effect	– Ramp–down braking. All active commands inhibited.
	Remedy	– Clean or replace oil filter.

1486	STOP	**Message text**	Max. oil temperature exceeded
		Cause	– The maximum permissible hydraulic oil temperature has been exceeded.
		Monitor	– From the PCL application program (bonding technology).
		Effect	– Ramp–down braking. All active commands inhibited.
		Remedy	– Wait until the hydraulic oil has cooled down. – If this situation occurs frequently, check the hydraulic unit.
1487	STOP	**Message text**	General system air pressure
		Cause	– The required air supply pressure for the pneumatic valves is not available.
		Monitor	– From the PCL application program (bonding technology).
		Effect	– Ramp–down braking. All active commands inhibited.
		Remedy	– Ensure that the air pressure and quantity are sufficient.
1488	STOP	**Message text**	Vacuum error
		Cause	– Vacuum missing or insufficient. In the application of adhesive to glass, the glass is held in position by means of a vacuum. If this vacuum is not available, the glass cannot be held in position after it has been centered.
		Monitor	– From the PCL application program (bonding technology).
		Effect	– Ramp–down braking. All active commands inhibited.
		Remedy	– Check the vacuum pump and hoses.
1489	STOP	**Message text**	Centering error
		Cause	– The workpiece is not correctly positioned or clamped. There is possibly a fault in the feed equipment, or the fixture is defective.
		Monitor	– From the PLC application program (bonding technology).
		Effect	– Ramp–down braking. All active commands inhibited.
		Remedy	– Check fixture, feed equipment or workpiece position.
1490	STOP	**Message text**	Component check error
		Cause	– Component damaged or no longer clamped to the fixture.
			– In the application of adhesive to glass, the adhesive nozzle is pressed onto the glass. If this pressure is missing during adhesive application, the glass might be damaged or might no longer be clamped to the fixture. In this case, the robot motion and adhesive application must be stopped immediately!
		Monitor	– From the PLC application program (bonding technology).
		Effect	– Maximum braking. All active commands inhibited. Emergency Stop.
		Remedy	– Check the workpiece.

1491	STOP	**Message text**	CP/PTP approximation not feasible
		Cause	– In the CP block the traversing distance of an axis is greater than 180 degrees; S change in the CP block; software limit switch violated in travel along "shortest path".
		Monitor	
		Effect	
		Remedy	
1492	(!)	**Message text**	Channel not compatible with protocol
		Cause	– PLC protocol is set and channel declaration is not set to SER1.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– Alter the channel declaration protocol.
1493	(!)	**Message text**	Channel assigned to PLC
		Cause	– An attempt has been made to access the channel that has already been parameterized for the PLC link.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– Reparameterize the channel. Close the channel and open it again.
1495	STOP	**Message text**	Timeout during filling
		Cause	– The maximum time for filling the dispenser with adhesive has been exceeded.The time for filling the dispensing unit with adhesive is monitored by the PLC. If the maximum time is exceeded, there is a fault in the adhesive application hardware.
		Monitor	– From the PLC application program (bonding technology).
		Effect	– Ramp–down braking. All active commands inhibited.
		Remedy	– Check the adhesive application hardware.
1496	(!)	**Message text**	Adhesive level
		Cause	– The adhesive drum is empty.
		Monitor	– From the PLC application program (bonding technology).
		Effect	– None.
		Remedy	– Prepare a new adhesive drum or switch over to a filled drum.
1497	(!)	**Message text**	All analog functions assigned
		Cause	– More than 2 cyclic analog outputs have been switched on.
		Monitor	– In program processing.
		Effect	– Ramp–down braking.
		Remedy	– Set ANOUT OFF, or cancel the instruction.

1498	Message text	<Signal name> not an analog output
	Cause	– Non–existent analog output signal or incorrect signal index accessed.
	Monitor	– In command and program processing.
	Effect	– Ramp–down braking.
		– All active commands inhibited.
	Remedy	– Acknowledge message.
1499	Message text	Analog output already assigned
	Cause	– A cyclic analog output is assigned a second time in the program, e.g. SIGNAL SIG1 $ANOUT[1]; SIGNAL SIG2 $ANOUT[1]; ANOUT ON SIG1 = ...; ANOUT ON SIG2 = ...
	Monitor	– In the program.
	Effect	– Ramp–down braking.
	Remedy	– Switch off cyclic analog output: ANOUT OFSIG.
1504	Message text	Invalid SYNACT variable <variable name> <block number>
	Cause	– In logical comparison of value assignments during cyclic Synact monitoring, an error occurred when accessing a variable, e.g. variable write–protected.
	Monitor	– Cyclic.
	Effect	– Ramp–down braking, all active commands inhibited.
	Remedy	– Correct the data or the program.
		– Acknowledge the message.
1505	Message text	Combination of variables not allowed <block number>
	Cause	– In a synact instruction, variables for individual blocks and approximate positioning blocks are combined in the logic comparison or value assignment.
	Monitor	– In program processing.
	Effect	– Ramp–down braking, all active commands inhibited.
	Remedy	– Program synact instruction differently.
1506	Message text	CIRC parameter not allowed
	Cause	– Distance between starting point and/or auxiliary point and/or end point is too small, or all points lie on a straight line. Formation of a circle is not possible.
	Monitor	– In the individual CIRC block.
	Effect	– CIRC block is not executed;
		– Ramp–down braking;
		– All active commands inhibited.
	Remedy	– Program auxiliary point and/or end point correctly.

1507	Message text	Hydraulic level
	Cause	– The oil level in the hydraulic system has fallen below the minimum limit.
	Monitor	– In PLC program processing.
	Effect	– None.
	Remedy	– Top up hydraulic oil and check hydraulic system for leaks.
1508	Message text	No file available
	Cause	– No file is available that meets the search criteria specified in the DIR command.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– Check specifications and spelling in the DIR command.
1509	Message text	Program exec. mode inadmissible
	Cause	– The selected program execution mode is not permissible.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– Change program execution mode.
1510	Message text	Error at format selection no. <number of incorrect format selection>
	Cause	– Parameter inconsistent with format specification, or incorrect format specification in CWRITE instruction.
	Monitor	– Program processing in S_INT function CWRITE.
	Effect	– Program execution is stopped.
	Remedy	– Program the correct format specification.
1511	Message text	Access denied
	Cause	–
	Monitor	–
	Effect	–
	Remedy	–
1513	Message text	Range for <path> <axis number> exceeded
	Cause	– 32–bit word is exceeded.
	Monitor	– In program processing.
	Effect	– Ramp–down braking.
	Remedy	– Alter the program accordingly.
1514	Message text	Insert another disk
	Cause	– Request for next floppy disk.
	Monitor	–
	Effect	–
	Remedy	– Insert floppy disk in the disk drive.

1515		**Message text**	<object> copy refused (–S.)
		Cause	– System file has been transmitted via an interface without the option "–S" being set "–S" is the code for the download command.
		Monitor	– In command processing.
		Effect	– File is not transmitted.
		Remedy	– Set the option "–S".
1516		**Message text**	Reference system not programmed
		Cause	– $BASE is programmed incompletely or not at all.
		Monitor	– In program processing.
		Effect	– Ramp–down braking, all active commands inhibited.
		Remedy	– Program $BASE correctly.
1517		**Message text**	BCO move to aux. point required
		Remedy	– Carry out BCO run to end point.
1518		**Message text**	Default parameter
		Cause	– A default parameter or no parameter has been transferred to a pre-defined C function.
		Monitor	– In program processing.
		Effect	– Ramp–down braking, all active commands inhibited.
		Remedy	– Call the C function with a parameter.
1519	STOP	**Message text**	Pressure sensor cable failure
		Cause	– The current flow of the analog signal for pressure sensing has fallen below the minimum limit (4 – 20 mA interface).
		Monitor	– In command processing.
		Effect	– Ramp–down braking.
		Remedy	– Check connecting cable, connectors and current source.
1520	STOP	**Message text**	Volume actual value cable failure
		Cause	– The current flow of the analog input channel for volume sensing has fallen below the minimum limit (4 – 20 mA interface).
		Monitor	– In command processing.
		Effect	– Ramp–down braking.
		Remedy	– Check connecting cable, connectors and current source.
1521		**Message text**	Change of segment is erroneous
1522	STOP	**Message text**	Selected axis is not adjustable
		Cause	– The axis selected for mastering is inactive.
		Monitor	– In command processing.
		Effect	– The command is aborted.
		Remedy	– Master only active axes.

1523	⚠	**Message text**	EXTFCTP instruction inadmissible
		Cause	– An EXTFCTP instruction has been programmed in the program.
		Monitor	– In program processing.
		Effect	– Ramp–down braking.
		Remedy	– Delete the EXTFCTP instruction in the program.
1524	🛑	**Message text**	Max. active triggers reached
		Cause	– Too many Trigger commands programmed in a block.
		Effect	– Command is not executed.
		Remedy	– Reduce number of active Trigger commands in the program.
1525	🛑	**Message text**	Invalid trigger – "PRIO"
		Cause	– An inadmissible value was entered for Trigger–PRIO.
		Remedy	– Correct the value.
1526	🛑	**Message text**	Max. triggers (50) defined
		Cause	– The maximum number of Trigger commands has been defined.
		Remedy	– Alter the program.
1527	🛑	**Message text**	Sensor mastering inadmissible
		Cause	– No sensor location run has been performed for the axis.
		Monitor	– In command processing.
		Effect	– Command is aborted.
		Remedy	– Perform sensor location run for the axis.
1528	🛑	**Message text**	Brakes open during mastering selection
		Cause	– A brake is still open after the preceding motion.
		Monitor	– In command processing.
		Effect	– Ramp–down braking, all active commands inhibited.
		Remedy	– Wait until all brakes are closed and the servos are disabled.
1529	⚠	**Message text**	Segment exchange successful
1530	⚠	**Message text**	Reduced velocity during sensor location search
		Cause	– The velocity defined by the user for the sensor loction run in $RED_JUS_UEB is greater than the possible maximum at which the sensor can be detected. The controller automatically reduces the velocity to allow the sensor to be detected.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– Reduce the permissible velocity for manual traversing in the machine data.

1531	STOP	**Message text**	Adjustment possible only in mode T1
		Cause	– The operating mode of the controller is not set to mode T1.
		Monitor	– In command processing.
		Effect	– Ramp–down braking, all active commands inhibited.
		Remedy	– Set the mode to T1. Perform mastering again.
1532	STOP	**Message text**	CIRC is executed as LIN
		Cause	– An attempt has been made to execute a CIRC motion as a BCO run.
		Monitor	– In program processing.
		Effect	– Program execution is stopped.
		Remedy	– Acknowledge message, after the start the CIRC block is then executed as a LIN motion.
1533	!	**Message text**	Program line changed
		Cause	– Message that the program line has been corrected.
		Monitor	–
		Effect	–
		Remedy	–
1534	STOP	**Message text**	COR.dat check sum error
		Cause	– The correction data have been altered.
		Monitor	– In command processing.
		Effect	– Ramp–down braking, all active commands inhibited.
		Remedy	– Sensor location run/referencing, execution/archiving of the correction data.
1535	STOP	**Message text**	Delay <block number> inadmissible
		Cause	– Neg. delay in the synact instruction has not been used in combination with one of the 4 position trigger variables (M_SC_F, M_SC_B, M_SCAPO_F, M_SCAPO_B).
		Monitor	– In the program.
		Effect	– Ramp–down braking, all active commands inhibited.
		Remedy	– Change the logic condition of the synact instruction.
1536	STOP	**Message text**	Array parameter inadmissible
		Cause	– Undefined array parameter or complete "call–by–value" array in the list of current parameters when function is called.
		Monitor	– In program processing.
		Effect	– Ramp–down braking. All active commands inhibited.
		Remedy	– Do not use undefined array parameters and transfer complete arrays as current parameters only on a "call–by–reference" basis.
1537	STOP	**Message text**	Stop due to loading new custom data
		Cause	– Loader for the file "$CUSTOM.DAT" has been called. No process may be active at the same time since the system is fully occupied with the loader.

		Monitor	– In command processing.
		Effect	– Maximum braking. All active commands inhibited.
		Remedy	– Acknowledge message. Do not edit "$CUSTOM.DAT" during an "active process"
1538	STOP	**Message text**	Invalid "DISTANCE" value
		Cause	– The value for "DISTANCE" is not permissible.
		Remedy	– Acknowledge message; enter permissible value.
1539	STOP	**Message text**	Invalid "DELAY" value
		Cause	– The value for "DELAY" is not permissible.
		Remedy	– Acknowledge message; enter permissible value.
1540	STOP	**Message text**	Interrupt expression complexity exceeded
		Cause	– In total more than 16 "slow" variables have been used in the logical expressions of the INTERRUPT DECL instructions on the control and robot levels.
		Monitor	– Program processing.
		Effect	– Ramp–down braking.
		Remedy	– Use fewer predefined variables.
1541	(!)	**Message text**	Machine data error
		Cause	– Machine data have not yet been checked.
		Monitor	– With active commands.
		Effect	– None.
		Remedy	– Edit the machine data or copy the machine data or option data file.
1542	STOP	**Message text**	Error in "UPCALL" token
1543	STOP	**Message text**	No more dynamic analog inputs available
		Cause	– A third dynamic analog input has been switched on in the program.
		Monitor	– In program processing.
		Effect	– Stop.
		Remedy	– One of the dynamic analog inputs must first be switched off.
1544	STOP	**Message text**	Digital input already assigned
		Cause	– A digital input has been cyclically switched on in the program for a second time.
		Monitor	– In program processing.
		Effect	– Stop.
		Remedy	– Switch off the dynamic digital input.
1545	(!)	**Message text**	All pulse outputs assigned
		Cause	– More than 16 impulse outputs have been switched on.
		Monitor	– In program processing.
		Effect	– Ramp–down braking; program execution stopped.

		Remedy	–	Alter program accordingly.
1546	⚠	**Message text**		Invalid pulse duration
		Cause	–	The permissible range for the pulse duration extends from 0.05 to 3049. A value outside this range has been specified.
		Monitor	–	In program processing.
		Effect	–	Ramp–down braking; program execution stopped.
		Remedy	–	Program values in the permissible range.
1547	⚠	**Message text**		Target variable must be of type REAL
		Cause	–	Incorrect data type of a target variable or wrong format in a CREAD or SREAD instruction.
		Monitor	–	
		Effect	–	
		Remedy	–	Correct CREAD or SREAD instruction: change format specification or use variable of type REAL.
1548	STOP	**Message text**		\<name of the displayed program\> reselection not possible
		Cause	–	Program that must be linked for reselection causes linking error.
		Monitor	–	Command processing (RUN command).
		Effect	–	None.
		Remedy	–	Eliminate the error using the error list containing the linking errors.
1549	⚠	**Message text**		Invalid handle
		Cause	–	An invalid HANDLE has been programmed into CWRITE or CREAD.
		Monitor	–	Program.
		Effect	–	Ramp–down braking.
		Remedy	–	Specify a valid HANDLE.
1550	⚠	**Message text**		No more data/variables available
		Cause	–	With SREAD/CREAD there is no more text to be read or there are no variables available for storing the values.
		Monitor	–	
		Effect	–	
		Remedy	–	
1552	⚠	**Message text**		Channel already open
		Cause	–	An attempt has been made to open a channel that is alraedy open.
		Monitor	–	In command processing.

1553	⚠	**Message text**	Channel cannot be opened/closed
		Cause	– The operator has attempted to open a SINEC H1 channel by means of the OPEN command or to close it by means of the CLOSE command.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– None; SINEC H1 channels are opened and closed automatically.
1554	⚠	**Message text**	Wrong type of parameter variable
		Cause	– The parameter variable for the channel is of the wrong type.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– Correct CHANNEL declaration for the channel.
1555	⚠	**Message text**	Channel parameters faulty or incomplete
		Cause	– At least one channel parameter in the parameter variable of the channel in "$CUSTOM.DAT" is faulty or not initialized.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– Correct or initialize the parameter variable.
1556	⚠	**Message text**	SINEC L2 bus channel not opened
		Cause	– An attempt has been made to open a SINEC L2 connection without the SINEC L2 bus channel being open.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– Open SINEC L2 bus channel.
1557	⚠	**Message text**	Channel already fully assigned
		Cause	– The maximum number of jobs have already been assigned to the channel.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– Wait until at least one of the jobs is finished.
1558	⚠	**Message text**	Channel has to be opened/closed
		Cause	– The channel parameters used for assigning the channel do not correspond to the current channel parameters.
		Monitor	– In command processing.
		Effect	– None.
		Remedy	– Close the channel prior to assignment.

1559	**Message text**	Channel specification inadmissible
	Cause	– An attempt has been made to transmit a productive command via the SINEC L2 bus channel.
		– An attempt has been made to output the listing or the message buffer through the SINEC H1 channel to a third station.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– None.
1560	**Message text**	Channel already closed
	Cause	– An attempt has been made to close a channel that is already closed.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– Abort.
1561	**Message text**	SINEC L2 communication channels not closed
	Cause	– An attempt has been made to close the SINEC L2 bus channel without all the SINEC L2 communication channels being closed first.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– Close all the SINEC L2 communication channels.
1562	**Message text**	<SINEC L2, SINEC H1> board not available
	Cause	– An attempt has been made to access a SINEC L2 or SINEC H1 channel without the corresponding board being installed.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– Install the corresponding board.
1564	**Message text**	Value range exceeded
	Cause	– The wait time in the WAIT_SEC command, expressed in basic clock rate cycles, exceeds the long range, i.e. is greater than 2147483647.
	Monitor	– Program processing.
	Effect	– Ramp–down braking.
	Remedy	– Enter shorter wait times.
1565	**Message text**	SINEC L2 CONFIGURATION ERROR **
	Cause	– The opening or closing of a SINEC L2 channel is refused on account of a configuration error detected by the SINEC L2 module.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– Check and correct the channel parameters (e.g. baud rate).

1566	⚠	**Message text**	SINEC L2 TRANSMISSION ERROR <error no. SINEC L2–M>
		Cause	– Data transmission via SINEC L2 is not possible on account of an error detected by the SINEC L2 module.
		Monitor	– In data transmission.
		Effect	– None.
		Remedy	– Check the transmission link and rectify the error.
1567	⚠	**Message text**	NO CONNECTION TO SINEC L2 BOARD
		Cause	– The connection of the IFC to the SINEC L2 board is faulty.
		Monitor	– Cyclic
		Effect	– None.
		Remedy	– Carry out warm start; – If fault recurs, exchange board (IFC with SINEC L2 board).
1568	⚠	**Message text**	Maximum no. of processes assigned to channel
		Cause	– Too many processes are running through the serial interface.
		Monitor	–
		Effect	–
		Remedy	– Wait until a process is finished.
1569	⚠	**Message text**	Parameter change inadmissible, channel assigned
		Cause	– An attempt has been made to allocate parameters differing from the current ones to a channel that is already assigned.
		Monitor	–
		Effect	–
		Remedy	– Correct the data used for the channel as required, or close the channel and re–open it with the appropriate parameters.
1570	⚠	**Message text**	Invalid parameter value
		Cause	– The maximum value of a channel parameter has been exceeded.
		Monitor	–
		Effect	–
		Remedy	– Correct the channel parameter.
1571	⚠	**Message text**	Baud rate summation exceeded
		Cause	– The aggregate baud rate of both channels has been exceeded (it is limited to 19200 bauds).
		Monitor	–
		Effect	–
		Remedy	– Alter the baud rate.

1572	**Message text**	Protocol timeout
	Cause	– The defined protocol time has been exceeded.
	Monitor	–
	Effect	–
	Remedy	– Check whether the physical connection to the periphery still exists. Increase the timeout setting appropriately if it is too low.

1573	**Message text**	IFC syntax error
	Cause	– During an attempt to open or close a channel, a syntax error has occurred in the interface CPU with regard to the command generated by the control.
	Monitor	–
	Effect	–
	Remedy	– Close and re–open the channel.

1574	**Message text**	KRC system error <error number> <originator>
	Cause	– KRC system error (core system, not acknowledgeable). "KRC system error 0" indicates that a task has crashed.
	Monitor	–
	Effect	– Maximum braking, all active commands inhibited.
	Remedy	– Reboot the KRC controller.

1576	**Message text**	BASE change inadmissible
	Cause	– During conveyor operation an attempt has been made to change the BASE.
	Monitor	–
	Effect	– Maximum braking.
	Remedy	– Alter the program accordingly.

1577	**Message text**	<Name> already exists
	Cause	– A SUB module cannot be created in the editor if an SCR module of the same name already exists and vice versa.
	Monitor	– Command processing.
	Effect	–
	Remedy	– Change the name of the module.

1578	**Message text**	<Value> inadmissible
	Cause	– An inadmissible value has been entered.
	Monitor	– Command processing.
	Effect	–
	Remedy	– Enter an admissible value.

1579		**Message text**	APS system error
		Cause	– Internal error in APS detected by APS.
		Monitor	–
		Effect	–
		Remedy	– Request confirmation from APS, reboot probably required.
1580		**Message text**	Tech. function $TECH[<parameters 1–3>].FCT inadmissible
		Cause	– The function parameters programmed in $TECH[i].FKT i=1..3, are incompatible with the function definition.
		Monitor	– The function parameters are checked by the interpreter in the advance run.
		Effect	– Ramp–down braking.
		Remedy	– Correct the function parameters.
1581		**Message text**	Tech mode inadmissible
		Cause	– The "CYCLE" mode has been programmed for the technology category "VEL".
		Monitor	– In the interpreter when changing CLASS or MODE.
		Effect	– Ramp–down braking.
		Remedy	– Alter the program.
1582		**Message text**	Kinematic instruction inadmissible
		Cause	– A non–existent external kinematic system has been assigned to the system variable "$BASE" with the function EK.
		Monitor	–
		Effect	–
		Remedy	–
1583		**Message text**	<SER_1> block size error
		Cause	– The received data block is too large.
		Monitor	–
		Effect	–
		Remedy	– Alter the buffer length in the external data storage device to the control–internal size or smaller.
1584		**Message text**	Program structure for resume inadmissible
		Cause	– An interrupt has occurred in the program section where the interrupt with RESUME was declared. The return is therefore executed to the advance run pointer, which is not defined.
		Monitor	–
		Effect	– Ramp–down braking.
		Remedy	– RESUME may be used only in conjunction with the subprogram technique. The interrupt must not be triggered on the level where the interrupt was declared.

1585	⚠	**Message text**	CA parameter out of range
		Cause	– Too large a value has been programmed for the parameter CA (complete angle) in the CIRC block.
		Monitor	–
		Effect	–
		Remedy	– Correct the value of the CA appropriately.
1586	⚠	**Message text**	SINEC AP/TF ERROR <SINEC AP/TF–Fhlcode>
		Cause	– See "SINEC AP Technological Functions, Part B".
		Monitor	– In command processing.
		Effect	–
		Remedy	– See "SINEC AP Technological Functions, Part B".
1587	⚠	**Message text**	Application comm. interrupted (File server)
		Cause	– The application communication with the file server has been interrupted or disconnected.
		Monitor	– In command processing.
		Effect	–
		Remedy	– Check the transmission link between the ACR and the file server.
1588	⚠	**Message text**	Path inadmissible
		Cause	– The path specification for SINEC H1 contains "wildcards".
		Monitor	– In command processing.
		Effect	–
		Remedy	– Copy just one file at a time.
1589	⚠	**Message text**	... closing channel inadmissible, channel active
		Cause	– The channel concerned cannot be closed during transmission.
		Monitor	–
		Effect	–
		Remedy	– Wait for the transmission to finish or abort the transmission.
1590	⚠	**Message text**	ENUM not declared in $CONFIG
		Cause	– A SET INFO is being applied to an ENUM variable from a user data list. The search path extension has been altered again –> no access to ENUM type information.
		Monitor	– Command processing.
		Effect	–
		Remedy	– Enter ENUM declaration and variable declaration in the "$CONFIG.DAT" file.

1591		**Message text**	MINIMUM MUST BE LESS THAN MAXIMUM
		Cause	– The minimum value defined for an ANOUT command was greater than the maximum
		Monitor	–
		Effect	– Interpreter stop
		Remedy	– Set minimum to a value less than the maximum
1595		**Message text**	Load dependent ACC. adaption not possible for PTP <...>
		Cause	– The simulation calculation of the integrated dynamic model exceeds the given limit values of the continuous gear torque.
		Monitor	– At every PTP preparation with activated load–dependent acceleration adaptation.
		Effect	– Operator information; no effect.
		Remedy	– If allowed: increase the max. permissible continuous gear torque "$DYN_DAT[50..]". – Lower the optimization limit "$OPTEXCLUDE".
1596		**Message text**	Tacho balance only possible for one axis
		Cause	– An attempt has been made to carry out a DSE tacho balance for several axes at the same time.
		Monitor	– On value assignment to "$PROG_EEPOT".
		Effect	– Value assignment is not carried out.
		Remedy	– Carry out tacho balance for one axis only.
1597		**Message text**	Not a DSE axis
		Cause	– An attempt to carry out a tacho balance for an axis which is not present on the DSE board.
		Monitor	– On value assignment to "$TACH_CHANGE".
		Effect	– Value assignment is not carried out.
		Remedy	– Carry out tacho balance for DSE axes only.
1598		**Message text**	Load not programmed
		Cause	– With the acceleration adaptation activated, the load has not been completely programmed.
		Monitor	– In every motion in the program or interrupt.
		Effect	– Program stop.
		Remedy	– Correctly program "$LOAD".
1599		**Message text**	No axis selected
		Cause	– An attempt has been made to carry out a tacho balance even though no axis has been selected.
		Monitor	– On value assignment to "$TACH_CHANGE".
		Effect	– Value assignment is not carried out.
		Remedy	– First select an axis, then carry out tacho balance.
1600		**Message text**	CONTROL : **

1601		**Message text**	No block coincidence, step mode first
		Cause	– No block coincidence when changing mode to AUTO.
		Monitor	–
		Effect	–
		Remedy	– Achieve block coincidence in the SINGLE–STEP mode first.
1602		**Message text**	BCO run in step mode required
1603		**Message text**	Safety fence open
1604		**Message text**	Error in trace definition
		Cause	– The trace has been incorrectly defined in the "TRACE.DEF" file.
		Monitor	– When starting a trace.
		Effect	–
		Remedy	– Correct "TRACE.DEF".
1605		**Message text**	Error reading TRACE.DEF
		Cause	– The "TRACE.DEF" file could not be read at the start of trace recording.
		Monitor	– When starting a trace.
		Effect	–
		Remedy	– Make "TRACE.DEF" available, start or check FTP server.
1606		**Message text**	InterBus : bus error <segment, position>
		Cause	– Error or malfunction in data transmission on the Interbus.
		Monitor	–
		Effect	– Data transmission on the Interbus is stopped, outputs are reset.
		Remedy	– Troubleshooting with CMD (Phoenix diagnostic tool).
1607		**Message text**	InterBus : bus warning <segment, position>
		Cause	– Malfunction in the bus module specified (Segment Position).
		Monitor	–
		Effect	– Outputs are reset.
		Remedy	– Eliminate the error in the specified module, diagnosis with CMD software (Phoenix).
1608		**Message text**	Assignment of function value to $CYCFLAG inadmissible
		Cause	– Return value of a BOOL function has been assigned directly to a $CYCFLAG.
		Monitor	– In program processing.
		Effect	– Ramp–down braking. All active commands inhibited.
		Remedy	– Alter the program, acknowledge message.

1609		**Message text**	Assignment of runtime value to $CYCFLAG inadmissible
		Cause	– A $CYCFLAG has been assigned local runtime data.
		Monitor	– In program processing.
		Effect	– Ramp–down braking. All active commands inhibited.
		Remedy	– Alter the program (use global variables only), acknowledge message.
1610		**Message text**	ERROR IN CONFIGURATION FILE
1611		**Message text**	MAC–ID IN USE
1612		**Message text**	ERROR DURING TASK START
1613		**Message text**	ERROR DURING ALLOCATE DEVICE **
1614		**Message text**	ERROR DURING SCAN DEVICE **
1615		**Message text**	"PRIO" 40–80 CLOSED
1616		**Message text**	Start locked <string>
		Cause	– Start is inhibited during insertion of one or more blocks in PROCOR.
1617		**Message text**	InterBus: bus error in slave ring
		Cause	– Bus error in the ring of the higher–level controller (PLC, etc.).
		Monitor	–
		Effect	– Automatic External interface deactivated.
		Remedy	– Rectify bus error in higher–level ring.
2000		**Message text**	NEW BLOCK IS NOT A DECLARATION
2001		**Message text**	BINARY OUTPUT SIGNAL EXPECTED
2002		**Message text**	INCORRECT INITIALIZATION
2003		**Message text**	FAULTY INITIALIZATION VALUE
2004		**Message text**	"DEFDAT" EXPECTED
2005		**Message text**	VARIABLE NOT INITIALIZED
2006		**Message text**	"CA" EXPECTED
2007		**Message text**	"DEF" OR "DEFFCT" EXPECTED
2008		**Message text**	BLOCK CANNOT BE MODIFIED

2009	Message text	GLOBAL SR/FCT CANNOT BE RENAMED
2010	Message text	DATA LIST CANNOT BE RENAMED
2011	Message text	DIFFERENT TYPES WITH CHANGE OF INITIAL VALUE
2012	Message text	SUB CANNOT BE LINKED TO SRC
2013	Message text	VARIABLE CANNOT BE RENAMED
2014	Message text	INDEX CANNOT BE CHANGED
2015	Message text	NOT A SYSTEM SUBROUTINE
2016	Message text	NOT A SYSTEM FUNCTION
2017	Message text	SYNTAX ERROR IN P_PATH
2018	Message text	UNUSED EXTERNALLY DECLARED SUBROUTINE
2019	Message text	EXPECTED EXT. SUBROUTINE, FOUND FUNCTION
2020	Message text	EXTERNAL FUNCTION EXPECTED, SUBROUTINE FOUND
2021	Message text	DATA LIST NOT "PUBLIC"
2022	Message text	IMPORTED VARIABLE NOT DECLARED IN DATA LIST
2023	Message text	IMPORTED VARIABLE NOT DECLARED IN DATA LIST
2024	Message text	IMPORTED VARIABLE TYPE/DIMENSION CONFLICT
2025	Message text	EXTERNAL AND SR/FCT DECLARATIONS DO NOT MATCH
2026	Message text	EXTERNAL AND SR/FCT DECLARATIONS DO NOT MATCH
2027	Message text	IMPORT INTERFACE NOT CORRECT
2028	Message text	EXT[FCT] AND DEF[FCT] PARAMETERS ARE INCOMPATIBLE
2029	Message text	SYNTAX ERROR IN MODULE
2030	Message text	MODULE USED BY ANOTHER PROCESS
2031	Message text	MODULE PACKAGE NOT AVAILABLE
2032	Message text	ILLEGAL COMMAND

2033	**Message text**	END OF BLOCK OR COMMENT EXPECTED
2034	**Message text**	INSERT BEFORE FIRST BLOCK NOT ALLOWED
2035	**Message text**	INVALID BLOCK NUMBER
2036	**Message text**	ONLY COMMENT MAY BE ENTERED AFTER "ENDDAT"
2037	**Message text**	ILLEGAL OR UNKNOWN BLOCK
2038	**Message text**	DECLARATION NOT IN DECLARATION SECTION
2039	**Message text**	INSTRUCTION NOT IN INSTRUCTION SECTION
2040	**Message text**	INITIAL VALUE BLOCK NOT INITIALIZATION SECTION
2041	**Message text**	ERROR IN "DEFDAT", INSERT NOT SUCCESSFUL
2042	**Message text**	"DEFDAT" NOT ALLOWED
2043	**Message text**	ERROR IN GLOBAL "DEF"/"DEFFCT"
2044	**Message text**	"DEF"/"DEFFCT" NOT ALLOWED
2045	**Message text**	"END"/"ENDFCT"/"ENDDAT" NOT ALLOWED HERE
2046	**Message text**	"EXT"/"EXTFCT"/"IMPORT" NOT ALLOWED HERE
2047	**Message text**	FILE NOT FOUND
2048	**Message text**	ERROR ON ENTERING THE DATA LIST
2049	**Message text**	INITIAL VALUE NOT ALLOWED HERE
2050	**Message text**	INITIAL VALUE SYNTAX INCORRECT
2051	**Message text**	NAME IN FIRST LINE MUST BE SAME AS MODULE NAME
2052	**Message text**	ARRAY NAME ENTERED NOT ALLOWED HERE
2053	**Message text**	INITIAL VALUE OF INDEX ALREADY EXISTS
2054	**Message text**	'=' EXPECTED
2055	**Message text**	REAL CONSTANT EXPECTED
2056	**Message text**	'{' EXPECTED

2057	Message text	COMPONENT NOT PART OF VARIABLE TYPE
2058	Message text	CONSTANT NAME NOT PART OF VARIABLE TYPE
2059	Message text	STRING CONSTANT TOO LONG
2060	Message text	ARRAY INDEX ENTERED INADMISSIBLE HERE
2061	Message text	AGGREGATE COMPONENT INITIALIZED MORE THAN ONCE
2062	Message text	INFORMATION LOSS POSSIBLE ON CHANGE OF TYPE
2063	Message text	INTEGER, REAL OR CHARACTER CONSTANT EXPECTED
2064	Message text	CHARACTER OR INTEGER CONSTANT EXPECTED
2065	Message text	"TRUE" OR "FALSE" EXPECTED
2066	Message text	ENUM CONSTANT TYPE DOES NOT MATCH ENUM VARIABLE
2067	Message text	COMPONENT ARRAY SPEC. MULTIDIMENSIONAL
2068	Message text	ARRAY SUBSCRIPT MISSING
2069	Message text	COMPONENT IS NO ARRAY
2070	Message text	'#' OR ENUM TYPE NAME EXPECTED
2071	Message text	STRUCTURE TYPE NAME EXPECTED
2072	Message text	TYPENAME INCOMPATIBLE WITH TEXT
2073	Message text	COMPONENT NEITHER PART OF "FRAME" OR "POS"
2074	Message text	ASCENDING INDICES EXPECTED
2075	Message text	NUMBER TOO LOW
2076	Message text	'IS' EXPECTED
2077	Message text	INTEGER CONSTANT EXPECTED
2078	Message text	IDENTICAL PREDEFINED SIGNAL NAMES EXPECTED
2079	Message text	COMPONENT TYPE UNKNOWN
2080	Message text	PROTOCOL VARIABLE DECLARED IMPLICITLY

2081		**Message text**	"POS", "FRAME", OR "AXIS" EXPECTED
2082		**Message text**	VARIABLE WITH STRUCTURE TYPE EXPECTED
2083		**Message text**	PREDEFINED SIGNAL EXPECTED
2084		**Message text**	PREDEFINED CHANNEL NAME EXPECTED
2085		**Message text**	'[' EXPECTED
2086		**Message text**	ARRAY LIMIT MISSING
2087		**Message text**	',' EXPECTED
2088		**Message text**	SIGNAL INDEX TOO LARGE
2089		**Message text**	'..' EXPECTED
2090		**Message text**	ONE DIMENSIONAL CHAR FIELD EXPECTED
2091		**Message text**	"IN" OR "OUT" EXPECTED
2092		**Message text**	SYNTAX ERROR IN ARRAY SPECIFICATION
2093		**Message text**	POS. INTEGER, "]" OR "," EXPECTED
2094		**Message text**	NO MORE THAN THREE DIMENSIONS ALLOWED
2095		**Message text**	RELATIVE P_PATH NOT COMPATIBLE WITH NODE
2096		**Message text**	"]" OR "," EXPECTED
2097		**Message text**	STRUCTURE TYPE VARIABLE NOT ALLOWED
2098		**Message text**	VARIABLE NOT DECLARED IN DATA LIST
2099		**Message text**	ARRAY INDEX EXCEEDS ARRAY LIMITS
2100		**Message text**	POSITIVE INTEGER EXPECTED
2101		**Message text**	ARRAY INDEX NOT COMPATIBLE WITH INDEX
2102		**Message text**	ARRAY LIMIT EXCEEDED
2103		**Message text**	NO VARIABLE EXISTS WITH THIS NAME
2104		**Message text**	PARAMETER SPECIFICATION NOT ALLOWED IN DATA LIST

2105	**Message text**	LOCAL PARAMETER TYPE DEFINED LOCALLY
2106	**Message text**	BLOCK CANNOT BE DELETED
2107	**Message text**	DELETE MODULE BY MEANS OF DEDICATED FUNCTION
2108	**Message text**	"ERROR" TOKEN IN I–CODE
2109	**Message text**	END STATEMENT MISSING
2110	**Message text**	INCORRECT END OF CONTROL STRUCTURE
2111	**Message text**	SUBROUTINE/FUNCTION INCORRECTLY COMPLETED
2112	**Message text**	IDENTIFIER NOT DECLARED
2113	**Message text**	PROTOCOL VARIABLE MUST BE OF STRUCTURE TYPE
2114	**Message text**	CORRECT TYPE ENTRY UNAVAILABLE
2115	**Message text**	COMPONENT TYPE NOT DEFINED OR CORRECTLY DEFINED
2116	**Message text**	TYPE OF A PARAMETER IS DEFINED LOCALLY
2117	**Message text**	ENDDAT STATEMENT MISSING
2118	**Message text**	TYPE CHANGE FOR INITIAL VALUE NOT POSSIBLE
2119	**Message text**	COMPILE LOC. NOT COMPATIBLE WITH CALL LOCATION
2120	**Message text**	OBJECT MUST BE DECLARED IN DATA LIST OR IMPLICITLY
2121	**Message text**	INCORRECT DIMENSION
2122	**Message text**	NAME NOT DECLARED AS ARRAY
2123	**Message text**	NAME NOT DECLARED AS FUNCTION
2124	**Message text**	VARIABLE NOT DECLARED IN DATA LIST
2125	**Message text**	COMPONENT NOT PART OF TYPE
2126	**Message text**	NO STRUCTURE DATA TYPE
2127	**Message text**	FORMAL PARAMETER DECLARATION MISSING
2128	**Message text**	MORE ACTUAL THAN FORMAL PARAMETERS SPECIFIED

2129	⚠	**Message text**	FORMAL PARAMETER NOT DEFINED
2130	⚠	**Message text**	NOT ALLOWED EXPRESSION AFTER RETURN INSTRUCTION
2131	⚠	**Message text**	EXPRESSION AFTER RETURNING INSTRUCTION MISSING
2132	⚠	**Message text**	NO INTERFACES ALLOWED
2133	⚠	**Message text**	TYPE MUST BE "POS","FRAME","AXIS"
2134	⚠	**Message text**	OBJECT TYPE NOT VALID
2135	⚠	**Message text**	NAME NOT DECLARED AS SUBROUTINE
2136	⚠	**Message text**	LOCAL SUBROUTINE NOT ALLOWED IN PROCESS COMMANDS
2137	⚠	**Message text**	NAME NOT DECLARED AS SIMPLE VARIABLE
2138	⚠	**Message text**	NO NAME OF SUCH A CONSTANT TYPE
2139	⚠	**Message text**	SPECIFIED TYPE IS NOT ENUM TYPE
2140	⚠	**Message text**	NO ENUM TYPE SPECIFIED
2141	⚠	**Message text**	INDEXING OR [] NOT ALLOWED
2142	⚠	**Message text**	INDEXING OR [] EXPECTED
2143	⚠	**Message text**	END OF CONTROL STRUCTURE NOT ALLOWED HERE
2144	⚠	**Message text**	"ENDLOOP" MISSING
2145	⚠	**Message text**	"ENDWHILE" MISSING
2146	⚠	**Message text**	"ENDFOR" MISSING
2147	⚠	**Message text**	"UNTIL" MISSING
2148	⚠	**Message text**	"ENDIF" MISSING
2149	⚠	**Message text**	"ENDSWITCH" MISSING
2150	⚠	**Message text**	"SWITCH" CONTAINS NO "CASE"
2151	⚠	**Message text**	NO "CASE" AFTER "SWITCH"
2152	⚠	**Message text**	"CASE"/"DEFAULT" AFTER "DEFAULT"

2153	Message text	"EXIT" NOT IN LOOP BODY
2154	Message text	NAME NOT DECLARED AS CHANNEL
2155	Message text	NAME NOT DECLARED AS LABEL
2156	Message text	JUMP DESTINATION NOT DECLARED LOCALLY
2157	Message text	JUMP DESTINATION NOT DECLARED GLOBALLY
2158	Message text	JUMP TO LABEL NOT ALLOWED
2159	Message text	THERE EXISTS AN INVALID JUMP TO THIS LABEL
2160	Message text	"THEN" EXPECTED
2161	Message text	"DO" EXPECTED
2162	Message text	INVALID INPUT CHARACTER
2163	Message text	COUNT EXCEEDED
2164	Message text	NO "/" IN P_PATH
2165	Message text	WILDCARD NOT ALLOWED
2166	Message text	NO FILE NAME
2167	Message text	NAME TOO LONG
2168	Message text	INVALID EXTENSION
2169	Message text	PATH INCORRECT
2170	Message text	BLANK CHARACTER INVALID
2171	Message text	EXTENSION NOT ALLOWED
2172	Message text	CHANNEL HANDLE EXPECTED
2173	Message text	ABSOLUTE PATH EXPECTED
2174	Message text	'TO' EXPECTED
2175	Message text	USER, DEVICE OR NODE TYPE NAME EXPECTED
2176	Message text	"OBJ", "NODE", "USER", "PERI" EXPECTED

2177	**Message text**	"NODE", "USER", "PERI" EXPECTED
2178	**Message text**	VALUE MISSING
2179	**Message text**	"NODE" MUST FOLLOW
2180	**Message text**	"BVS" OR "MSD" MUST FOLLOW
2181	**Message text**	"DEV" MUST FOLLOW
2182	**Message text**	CONSTANT OR VARIABLE EXPECTED
2183	**Message text**	OPTION ENTERED TWICE
2184	**Message text**	OPTION EXPECTED AFTER MINUS SIGN
2185	**Message text**	BLOCK NUMBER EXPECTED
2186	**Message text**	BLOCK NUMBER MUST BE POSITIVE
2187	**Message text**	STRING EXPECTED
2188	**Message text**	STRING EXPECTED
2189	**Message text**	INITIAL BLOCK NUMBER > FINAL BLOCK NUMBER
2190	**Message text**	ATTRIBUTE NAME MUST FOLLOW
2191	**Message text**	CONSTANT FOR KEY MUST FOLLOW
2192	**Message text**	EXTENSION MISSING
2193	**Message text**	EXTENSION OR '.*' INVALID
2194	**Message text**	"WHEN" EXPECTED
2195	**Message text**	CHANNEL NAME EXPECTED
2196	**Message text**	ABSOLUTE PATH AFTER DEVICE/CHANNEL NAME EXPECTED
2197	**Message text**	"INFO" EXPECTED
2198	**Message text**	"MESSAGE" EXPECTED
2199	**Message text**	INTEGER CONSTNT EXPECTED
2200	**Message text**	KI EXPECTED: 1<=I<=12

2201	Message text	"+" OR "–" EXPECTED
2202	Message text	"VAR" EXPECTED
2203	Message text	ONLY "I", "B", "H", "V" ALLOWED AS OPTION ONLY
2204	Message text	ERROR AT END OF BLOCK
2205	Message text	"SEC", "FOR" OR "CLOCK" EXPECTED
2206	Message text	CHANNEL NAME MISSING
2207	Message text	NAME NOT DECLARED AS CHANNEL
2208	Message text	"DEL" MUST FOLLOW
2209	Message text	TOO MUCH MEMORY REQUIRED FOR DYNAMIC VARIABLE
2210	Message text	"," EXPECTED
2211	Message text	SYMBOL IS NOT AT BEGINNING OF EXPR./VALUE ASSIGNMENT
2212	Message text	LABEL NOT DECLARED LOCALLY
2213	Message text	"WAIT CLOCK" NOT AVAILABLE IN PACKAGE 1
2214	Message text	ARRAY CONTAINS TOO MANY ELEMENTS
2215	Message text	TYPE TOO LARGE
2216	Message text	ENTRY IN SYMBOL TABLE IS NOT LABEL
2217	Message text	"USER", "ACCESS" OR "COMMENT" EXPECTED
2218	Message text	NESTING DEPTH EXCEEDED
2219	Message text	OPERAND OR EXPRESSION EXPECTED
2220	Message text	")" EXPECTED
2221	Message text	NAME OF LOOP VARIABLE EXPECTED
2222	Message text	EXPRESSION TYPE NOT EQUAL TO STAT_T
2223	Message text	EXPRESSION TYPE NOT EQUAL TO INT, REAL, CHAR, BOOL, ENUM
2224	Message text	CONSTANT EXPECTED

2225	Message text	POSITIVE INTEGER CONSTANT EXPECTED
2226	Message text	INVALID SIGN
2227	Message text	LEFT OPERAND NOT EQUAL TO INT, REAL
2228	Message text	RIGHT OPERAND NOT EQUAL TO INT, REAL
2229	Message text	BOTH OPERANDS NOT EQUAL TO INT, REAL
2230	Message text	LEFT OPERAND NOT EQUAL TO INT, CHAR
2231	Message text	RIGHT OPERAND NOT EQUAL TO INT, CHAR
2232	Message text	BOTH OPERANDS NOT EQUAL TO INT, CHAR
2233	Message text	LEFT OPERAND NOT EQUAL TO BOOL
2234	Message text	RIGHT OPERAND NOT EQUAL TO BOOL
2235	Message text	BOTH OPERANDS NOT EQUAL TO BOOL
2236	Message text	LEFT OPERAND NOT EQUAL TO INT, REAL, CHAR, ENUM
2237	Message text	RIGHT OPERAND NOT EQUAL TO INT, REAL, CHAR, ENUM
2238	Message text	BOTH OPERANDS NOT EQUAL TO INT, REAL, CHAR, ENUM
2240	Message text	LEFT OPERAND NOT EQUAL TO INT, REAL, BOOL, CHAR, ENUM
2241	Message text	RIGHT OPERAND NOT EQUAL TO INT, REAL, BOOL, CHAR, ENUM
2242	Message text	OPERANDS NOT EQUAL TO INT, REAL, BOOL, CHAR, ENUM
2243	Message text	OPERAND TYPES NOT COMPARABLE
2244	Message text	LEFT OPERAND NOT EQUAL TO POS, FRAME
2245	Message text	RIGHT OPERAND NOT EQUAL TO POS, FRAME
2246	Message text	OPERANDS NOT EQUAL TO POS, FRAME
2247	Message text	BOTH SIDES OF THE VALUE ASSIGNMENT ARE NOT COMPATIBLE
2248	Message text	EXPRESSION NOT EQUAL TO INT, REAL
2249	Message text	EXPRESSION NOT EQUAL TO INT

2250	**Message text**	EXPRESSION NOT EQUAL TO BOOL
2251	**Message text**	EXPRESSION NOT EQUAL TO POS, FRAME
2252	**Message text**	EXPRESSION NOT EQUAL TO POS, FRAME, AXIS
2253	**Message text**	VARIABLE OR ARRAY ELEMENT EXPECTED
2254	**Message text**	SELECTION INVALID HERE
2255	**Message text**	EXPRESSION NOT EQUAL TO CHAR, INT, ENUM
2256	**Message text**	OPERAND NOT EQUAL TO INT, REAL
2257	**Message text**	OPERAND NOT EQUAL TO, CHAR
2258	**Message text**	OPERAND NOT EQUAL TO BOOL
2259	**Message text**	LEFT OPERAND: ARRAY OR PATH INVALID
2260	**Message text**	RIGHT OPERAND: ARRAY INVALID
2261	**Message text**	RIGHT OPERAND: ARRAY WITH DIMENSION > 1 INVALID
2262	**Message text**	ARRAY AS OPERAND INVALID
2263	**Message text**	TYPE OF LOOP VARIABLE NOT EQUAL TO INT
2264	**Message text**	EXPRESSION TYPE NOT "MODUS_T"
2265	**Message text**	COMMA OR ")" EXPECTED
2266	**Message text**	TYPE COMPONENT INCOMPATIBLE WITH TYPE INITIAL VALUE
2267	**Message text**	LEFT SIDE: ARRAY INVALID
2268	**Message text**	RIGHT SIDE: ARRAY INVALID
2269	**Message text**	RIGHT STRING CONSTANT => LEFT INDEXING
2270	**Message text**	TYPE OF LEFT AND RIGHT HAND SIDE INCOMPATIBLE
2271	**Message text**	PATH EXPRESSION REQUIRED! (ARRAY!)
2272	**Message text**	PATH EXPRESSION INVALID
2273	**Message text**	ARRAY INVALID

2274	Message text	TYPE ACTUAL/FORMAL PARAMETER INCOMPATIBLE
2275	Message text	TYPE ACTUAL/FORMAL PARAMETER INCOMPATIBLE
2276	Message text	DIMENSION INCOMPATIBLE
2277	Message text	ARRAY DIMENSION GREATER THAN 1 NOT ALLOWED
2278	Message text	RETURN VALUE: STRING CONSTANT ARRAY INVALID
2279	Message text	TYPE RETURN VALUE INCOMPATIBLE WITH TYPE FUNCTION
2280	Message text	RIGHT OPERAND: PARENTHESES INVALID IN PATH EXPRESSIONS
2281	Message text	PARENTHESES NOT ALLOWED FOR PATH EXPRESSIONS
2282	Message text	FIRST CONSTANT INCOMPATIBLE WITH THIS CONSTANT
2283	Message text	CONSTANT TYPE INCOMPATIBLE WITH EXPR. TYPE IN SWITCH
2284	Message text	NO SELECTION OF ENTIRE ARRAYS
2285	Message text	COMPONENT NAME EXPECTED
2286	Message text	COMPONENT SPECIFIED TWICE
2287	Message text	"," OR "}" EXPECTED
2288	Message text	"]" EXPECTED
2289	Message text	INCORRECT RANGE SPECIFICATION
2290	Message text	CONSTANT EXPECTED
2291	Message text	NAME OF A STRUCTURE DATA TYPE EXPECTED
2292	Message text	NO DATA TYPE NAME: CREATION NOT ALLOWED
2293	Message text	COMPONENT NOT DECLARED AS ARRAY
2294	Message text	"#"EXPECTED
2295	Message text	ARRAY COMPONENTS CANNOT BE INDEXED
2296	Message text	NOT A NAME OF A CONSTANT OF THIS TYPE
2297	Message text	COMPONENT DECLARED AS ARRAY: INDEXING EXPECTED

2298	Message text	AGGREGATE TYPE (POS) INCOMPATIBLE WITH CONTEXT
2299	Message text	EXPECTED CONSTANT TYPE UNKNOWN
2300	Message text	NOT A NAME OF AN ENUM DATA TYPE
2301	Message text	NOT AN AXIS COMPONENT
2302	Message text	NOT A FRAME COMPONENT
2303	Message text	NOT A POS COMPONENT
2304	Message text	INCORRECT END OF PARAMETER LIST
2305	Message text	NAME OF A SUBROUTINE EXPECTED
2306	Message text	RELATIVE PATH INVALID
2307	Message text	ANALOG INPUT EXPECTED
2308	Message text	DIGITAL INPUT EXPECTED
2309	Message text	"(" EXPECTED
2310	Message text	DIGITAL INPUT NOT ALLOWED HERE
2311	Message text	TYPE OF FORMAL PARAMETER INVALID
2312	Message text	PROGRAM NOT AVAILABLE
2313	Message text	NO ERROR
2314	Message text	NO FILE NAME SPECIFIED
2315	Message text	FILE NAME TOO LONG
2316	Message text	FILE NAME MAY NOT CONTAIN "."
2317	Message text	HIERARCH. NO. NOT IN SEARCH PATH
2318	Message text	PARAMETERS TO BE DECLARED IN MODULE
2319	Message text	"ON","OFF","ENABLE","DISABLE","DECL" EXPECTED
2320	Message text	SIGNAL NAME CANNOT BE CHANGED
2321	Message text	PREDEFINED SIGNAL CANNOT BE CHANGED

2322	**Message text**	SIGNAL TYPES ARE DIFFERENT
2323	**Message text**	SIGNAL TYPE CANNOT BE CHANGED
2324	**Message text**	DUAL DECLARATION
2325	**Message text**	TYPE UNKNOWN
2326	**Message text**	NAME EXPECTED
2327	**Message text**	TYPE EXPNAME OF A SIGNAL EXPECTED
2328	**Message text**	":" EXPECTED
2329	**Message text**	COMBINED ANALOG SIGNALS INADMISSIBLE
2330	**Message text**	NAME OF A SIGNAL EXPECTED
2331	**Message text**	ANALOG OUTPUT EXPECTED
2332	**Message text**	ARRAY ELEMENT/VARIABLE NOT TYPE REAL
2333	**Message text**	"*" EXPECTED
2334	**Message text**	REAL CONSTANT, VARIABLE OR ARRAY ELEMENT EXPECTED
2335	**Message text**	COMBINED SIGNAL MORE THAN 32 BITS
2336	**Message text**	"ON" OR "OFF" EXPECTED
2337	**Message text**	ARRAY LIMITS INVALID IN PARAMETER SPECIFICATION
2338	**Message text**	ARRAY LIMITS INVALID IN PARAMETER SPECIFICATION
2339	**Message text**	TEACH–IN FOR TYPE INVALID
2340	**Message text**	RECOMPILE BLOCK
2341	**Message text**	INT. CONSTANT NOT EQUAL 0 EXPECTED
2342	**Message text**	NO MORE THAN 12 CHARACTERS
2343	**Message text**	NO GLOBAL PROCEDURE AVAILABLE
2344	**Message text**	"DISTANCE" EXPECTED
2345	**Message text**	"DELAY" EXPECTED

2346	**Message text**	"PRIO" EXPECTED
2347	**Message text**	"PRIO" BETWEEN 40 AND 80 NOT ALLOWED
2348	**Message text**	"DISTANCE": ONLY 1 OR 0 ALLOWED
2349	**Message text**	ASSIGNMENT TO CONSTANT NOT PERMISSIBLE
2350	**Message text**	RUNTIME DATA OF THE MAIN PROGRAM CANNOT BE USED
2351	**Message text**	RUNTIME DATA CANNOT BE USED
2700	**Message text**	<object name> BLOCK NOT AVAILABLE
2701	**Message text**	<object name> BLOCK TOO LONG
2702	**Message text**	<object name> BLOCK TOO LONG OR INCORRECTLY COMPLETED
2703	**Message text**	TOO MANY ELEMENTS IN <object name> ARRAY
2704	**Message text**	<object name> NO DYNAMIC MEMORY AVAILABLE
2705	**Message text**	BLOCK <object name> CANNOT BE FORMATED
2706	**Message text**	BLOCK <object name> CANNOT BE DECOMPILED
2707	**Message text**	BLOCK <object name> UNAVAILABLE
2708	**Message text**	STACKING DEPTH <object name> EXCEEDED
2709	**Message text**	<object name> LINK LIST CANNOT BE EXTENDED
2710	**Message text**	<object name> TOO MANY LOCAL SUBROUTINES
2711	**Message text**	<object name> has reached maximum size
	Cause	– When a module has reached the maximum size (65536 bytes) the message "SRC HAS REACHED MAXIMUM SIZE AND CANNOT BE ENLARGED", for example, is displayed.
2712	**Message text**	<object name> NOT ENOUGH MEMORY, FILE OPEN ERROR
2713	**Message text**	<object name> NO FREE PHYSICAL MEMORY
2714	**Message text**	<object name> NO FREE VIRTUAL MEMORY
2800	**Message text**	INTERNAL COMPILER ERROR <object name>
2801	**Message text**	<object name> ERROR IN MEMORY MANAGER <error number>

2803		**Message text**	UNDEFINED SYNTAX ERROR

2821		**Message text**	$ORI_TYPE implicitly set to #VAR
		Cause	– The external TCP is activated for operating mode "T1" or "T2" ($IPO_MODE = TCP) and the orientation control $ORI_TYPE is set to #JOINT. This combination is not permissible.
		Monitor	–
		Effect	– $ORI_TYPE is implicitly set to #VAR.
		Remedy	– Set $IPO_MODE to #BASE – Set $ORI_TYPE to #VAR or #CONSTANT

2822		**Message text**	Blending $ORI_TYPE=#VAR/#CONSTANT to $ORI_TYPE=#JOINT not possible
		Cause	– Inconsistent axis angle in CP–CP approximation from $ORI_TYPE = #VAR or #CONSTANT to $ORI_TYPE = #JOINT. This happens if one of the wrist axis angles turns too greatly during a non–OriJoint CP motion (see also message #1491).
		Monitor	–
		Effect	– Exact stop
		Remedy	– Avoid excessive rotation of the wrist axis angles during non–OriJoint motions.

2829		**Message text**	OriJoint not possible: Configuration of start and target position differs
		Cause	– This occurs when the TCP is moved over the extension of the line A 2 − A 3 ("elbow configuration"). This prevents the TCP from moving with a different orientation to a programmed point.
		Monitor	–
		Effect	– Ramp–down braking; the motion block cannot be executed with $ORI_TYPE = #JOINT.
		Remedy	– Set $ORI_TYPE to #VAR or "CONSTANT" – Change the orientation of the end point

4300		**Message text**	<object name> COMPILE ?

4301		**Message text**	<object name> COPY ?

4302		**Message text**	<object name> OVERWRITE ?
		Cause	– A file that is to be copied already exists.
		Monitor	– In command processing.

4303		**Message text**	<object> DELETE ?

4304		**Message text**	<object> LINK ?

4305		**Message text**	<object> UNLINK ?

4307	**Message text**	DELETE COMPLETE PROCEDURE ?
	Cause	– DEF block is to be deleted. The DEF block can be deleted only together with the complete procedure.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– None.
4308	**Message text**	DELETE COMPLETE INITIALIZATION ?
	Cause	– An array declaration is to be deleted for which there is a subsequent initialization (also subsequent blank lines). These have to be deleted too.
	Monitor	– In command processing.
	Effect	– None.
	Remedy	– None.
4309	**Message text**	<object name> PROGRAM, OVERWRITE ?
	Cause	– The file already exists and the operator intends to recreate it (COPY).
	Monitor	– None.
4310	**Message text**	<object name> SELECTED, OVERWRITE ?
	Cause	– The file already exists, is selected and the operator intends to recreate it.
	Monitor	– Command processing (COPY command).
	Effect	– None.
4311	**Message text**	<object name> PROGRAM DELETE ?
	Cause	– The file that is to be deleted is a program.
	Monitor	– Command processing (DELETE command).
	Effect	– None.
4312	**Message text**	<object name> SELECTED, DELETE
	Cause	– The file that is to be deleted is selected.
	Monitor	– Command processing (DELETE command).
	Effect	– None.
4314	**Message text**	DIRECTORY NOT FOUND ! CREATE ?
	Cause	– The destination directory has not yet been created on the PC.
	Monitor	–
	Effect	–
	Remedy	– Create the directory.
4315	**Message text**	<file name> ACTIVE : PROCESS STOP ?
	Cause	– Reloading of machine data.
	Monitor	–
	Effect	– Program processing is stopped.

		Remedy	–	The program must be restarted after the machine data have been loaded.

9000		**Message text**	******

	Cause	–	User–programmable message.
	Monitor	–	
	Effect	–	
	Remedy	–	