XINJE

XR System Warning and Error Codes

Wuxi Xinje Electric Co., Ltd.
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Xinje Electric

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Catalog

Basic Description

- Thank you for purchasing Xinje Robot products.
- This manual provides comprehensive guidance on installing, operating, and maintaining the XINJE Robot operating system, helping users master the control of robotic arms.
- Before using the product, please read this manual carefully and use it only after fully understanding its contents.
- Deliver this manual to the end user.

Suitable object

- Client
- Sales engineer
- Installation and commissioning engineer
- Technical Support Engineer

How to get the manual

- Electronic version of the manual
  Log on to the official website of Xinje www.xinje.com .

Statement of responsibility

- The contents of the manual have been carefully checked, but errors are inevitable, and we cannot guarantee complete consistency.
- We will review the manual regularly and make corrections in future versions. Your valuable feedback is welcome.
- If the contents in the manual are changed, please understand that no separate notice will be given.

Contact way

If you have any questions about using this product, please contact the purchasing agent or office, or directly reach out to Xinje Company.

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- Fax: 0510-85111290
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XR Product Related Manuals List

Manual Name	Explain
RX3H-S Series Control Cabinet User Manual	This manual introduces the installation method of the control cabinet of the four-axis robot system of RX3H-S series, the specifications and functions of each part of the control system, and the detailed steps of the whole system from unpacking to installation and use, and the follow-up maintenance, so as to ensure that the user can complete the installation of the system.
RX3-A6 Series Control Cabinet Manual	This manual introduces the installation method of the control cabinet of the six-axis robot system of the RX3-A6 series, the specifications and functions of each part of the control system, and the detailed steps of the whole system from unpacking to installation and use, and the follow-up maintenance, so as to ensure that the user can complete the installation of the system.
XR Universal Robot System V4.0 User Manual	This manual is designed to help users quickly grasp the core functionalities and operational methods of the XR system. It provides product introductions and basic operation guides, using a combination of text and illustrations to demonstrate proper robot operation, ensuring users can fully utilize its features. Whether you're a beginner or an experienced user, this manual offers practical operational guidance.
XR Universal Robot System V4.0 Instruction Manual	This manual provides a detailed list of all robot support commands and their usage methods, suitable for developers or advanced users. It includes command syntax, parameter descriptions, and sample code. By using this manual, users can gain a deep understanding of the robot's commands to meet specific needs.
Warning and error codes	This manual provides all possible error codes for the robot and their solutions. Each error code includes an explanation of the cause, handling steps, and solutions. Users can quickly identify and resolve issues using this manual to ensure the robot operates normally.
Robot Body Manual	This manual provides a detailed introduction to the robot's hardware structure, technical specifications, and maintenance methods. It includes functional descriptions of each component, installation guides, and connection methods. By using this manual, users can gain a thorough understanding of the robot's hardware design, master proper maintenance techniques, and extend the equipment's service life.

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Catalog

1. Warning codes and error codes

If the code reaches 10000, the program will stop and disable the robot. If the code exceeds 10000, the program will stop but the robot will remain enabled.

1.1 XR System Error Class Abnormal Code

Code	Definition	Reason for reporting	Processing and solutions
2000	JSON data read error	Failed to parse the JSON data. The JSON sent by the host computer may contain errors.	Contact the host computer developer to verify the content of the JSON start address sent by the host computer and check if it matches the JSON communication table.
2001	JSON data address flag error	JSON data address flag error	Contact the manufacturer to collect the log files.
2002	JSON data address read error	JSON data address read error	Contact the manufacturer to collect the log files.
2003	The JSON data read is empty	The JSON data read is empty	Contact the manufacturer to collect the log files.
2004	JSON data parsing error	JSON data parsing error	Check if the communication content is correct
2005	The queue is full for JSON instructions	The queue is full for JSON instructions	Contact the manufacturer to collect the log files.
2006	Memory application failed	Memory application failed	Contact the manufacturer to collect the log files.
2007	Function registration limit exceeded	Function registration limit exceeded	Contact the manufacturer to collect the log files.
2008	Failed to create the message JSON	Failed to create the message JSON	Contact the manufacturer to collect the log files.
2009	Failed to join the queue	Failed to join the queue	Contact the manufacturer to collect the log files.
2010	Failed to write data	Failed to write data	Contact the manufacturer to collect the log files.
2011	Write data address end setting	Write data address end setting	Contact the manufacturer to collect the log files.
2012	Failed to create	Failed to create JSON	Contact the manufacturer to

Code	Definition	Reason for reporting	Processing and solutions
	JSON		collect the log files.
2013	The written data content is empty	The written data content is empty	Contact the manufacturer to collect the log files.
2014	Failed to copy the JSON	The data format is incorrect or memory is insufficient. Try retrieving the data again or optimize the code.	Contact the manufacturer to collect the log files.
2100	System mistake	No valid comparison expression was found while executing the command. The return address is empty.	Check the program and data. If the program data is correct, contact the manufacturer.
2101	System mistake	An error occurred while executing while_for_FlaseJump	Check the program and data. If the program data is correct, contact the manufacturer.
2102	System mistake	The point variable in the instruction is of incorrect type (not targetPos) when executing the analysisPoint function.	Check the program and data. If the program data is correct, contact the manufacturer.
2103	System mistake	The readVarConstValue function encountered an empty pointer when processing the variable name.	Check the program and data. If the program data is correct, contact the manufacturer.
2104	System mistake	The input point character address is empty when analyzing the analysisPoint function	Check the program and data. If the program data is correct, contact the manufacturer.
2105	System mistake	The speed character address is empty when the analysisSpeedCpTool function is executed	Check the program and data. If the program data is correct, contact the manufacturer.
2106	System mistake	The correct CP parameter character was not found when executing the analysisSpeedCpTool function.	Check the program and data. If the program data is correct, contact the manufacturer.
2107	System mistake	The correct tool parameter character was not found when executing the analysisSpeedCpTool function	Check the program and data. If the program data is correct, contact the manufacturer.
2108	System mistake	The speed-related variable given to the analysisSpeedCpTool function is not of the SPEED type.	Check the program and data. If the program data is correct, contact the manufacturer.
2109	System mistake	The speed variable was not found in the variable storage area when executing the analysisSpeedCpTool function.	Check the program and data. If the program data is correct, contact the manufacturer.
2110	System mistake	The analysisSpeedCpTool function failed to find the CP variable in the variable storage area.	Check the program and data. If the program data is correct, contact the manufacturer.
2111	System mistake	The given CP variable is not a Zone type when executing the analysisSpeedCpTool function.	Check the program and data. If the program data is correct, contact the manufacturer.
2112	System mistake	The Arch variable address was not found	Check the program and data. If

Code	Definition	Reason for reporting	Processing and solutions
		when executing the jump function.	the program data is correct, contact the manufacturer.
2113	System mistake	The given Arch variable is not of the ARCH type when the jump function is executed.	Check the program and data. If the program data is correct, contact the manufacturer.
2114	System mistake	The movejMovel function did not find the parameter character after the instruction	Check the program and data. If the program data is correct, contact the manufacturer.
2115	System mistake	No point or speed character was found after the command	Check the program and data. If the program data is correct, contact the manufacturer.
2116	System mistake	The movec function did not find the parameter character after the instruction	Check the program and data. If the program data is correct, contact the manufacturer.
2117	System mistake	The speed character was not found after executing the movejMovel function	Check the program and data. If the program data is correct, contact the manufacturer.
2118	System mistake	The movejMovel function failed to find the point character after the instruction	Check the program and data. If the program data is correct, contact the manufacturer.
2119	System mistake	No parameter character was found after the jump instruction	Check the program and data. If the program data is correct, contact the manufacturer.
2120	System mistake	The jump function failed to find the target address, speed, or arch parameter character after the instruction.	Check the program and data. If the program data is correct, contact the manufacturer.
2121	System mistake	The analysisBitPara function encountered an error in the parsed coil type, which is not one of X or Y.	Check the program and data. If the program data is correct, contact the manufacturer.
2122	System mistake	The getCoilValue function found a variable with the same name in the storage area that is not of the DI type.	Check the program and data. If the program data is correct, contact the manufacturer.
2123	System mistake	The getCoilValue function was executed but no coil variable was found in the storage area.	Check the program and data. If the program data is correct, contact the manufacturer.
2124	System mistake	The parseNumber function was called without finding the array variable in the storage area.	Check the program and data. If the program data is correct, contact the manufacturer.
2125	System mistake	The analysisPoint function was not found in the storage area.	Check the program and data. If the program data is correct, contact the manufacturer.
2126	System mistake	The loop variable was not found in the storage area when executing the	Check the program and data. If the program data is correct,

Code	Definition	Reason for reporting	Processing and solutions
		while_for_End function	contact the manufacturer.
2127	System mistake	The current line contains an invalid instruction	Check the program and data. If the program data is correct, contact the manufacturer.
2128	System mistake	The passed string instruction name is empty when executing the justSpaceNum function	Check the program and data. If the program data is correct, contact the manufacturer.
2129	System mistake	The string command name passed to the ifCommand function is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2130	System mistake	The address of the expression is empty when executing the justExpression function	Check the program and data. If the program data is correct, contact the manufacturer.
2131	System mistake	The getCompareValue function was not found for the variable to be evaluated	Check the program and data. If the program data is correct, contact the manufacturer.
2132	System mistake	The readVarConstValue function found an invalid variable type or the variable does not exist.	Check the program and data. If the program data is correct, contact the manufacturer.
2133	System mistake	The variable does not exist when searching for it during the execution of the readVarConstValue function.	Check the program and data. If the program data is correct, contact the manufacturer.
2134	System mistake	The addresses of expressions 1 and 2 were not found when executing the ifCommand function.	Check the program and data. If the program data is correct, contact the manufacturer.
2135	System mistake	Function nesting cannot exceed 9 levels	Check if the function call exceeds nine layers
2136	System mistake	The logic operator instruction format is incorrect when executing the ifCommand function. It is not one of and or.	Check the program and data. If the program data is correct, contact the manufacturer.
2137	System mistake	The function forCommand could not find one or more of the variable initial value, variable maximum value, or step size.	Check the program and data. If the program data is correct, contact the manufacturer.
2138	System mistake	The first address of the specified instruction was not found while executing the while_for_End function	Check the program and data. If the program data is correct, contact the manufacturer.
2139	System mistake	The specified line's instruction name was not found when executing the while_for_End function	Check the program and data. If the program data is correct, contact the manufacturer.
2140	System mistake	The left operand variable was not found when executing the executeValueCall function	Check the program and data. If the program data is correct, contact the manufacturer.
2141	System mistake	The address of the variable name and step	Check the program and data. If

Code	Definition	Reason for reporting	Processing and solutions
		size for the instruction parameter was not found when executing the while_for_End function.	the program data is correct, contact the manufacturer.
2142	System mistake	The goto command label address was not found when executing the gotoCommand function.	Check the program and data. If the program data is correct, contact the manufacturer.
2143	System mistake	The label address following the Label instruction was not found when executing the goToCommand function.	Check the program and data. If the program data is correct, contact the manufacturer.
2144	System mistake	The command format is not found when executing justCommandType. The current command does not match the design specifications or does not exist.	Check the program and data. If the program data is correct, contact the manufacturer.
2145	System mistake	The variable parameter address was not found when executing the executeValueCommand function	Check the program and data. If the program data is correct, contact the manufacturer.
2146	System mistake	When executing the executeValueCommand function, the assigned parameter is a constant.	Check the program and data. If the program data is correct, contact the manufacturer.
2147	System mistake	Cannot assign the second variable type to the executeValueCall function	Check the program and data. If the program data is correct, contact the manufacturer.
2148	System mistake	Cannot assign the third variable type when executing the executeValueCommand function	Check the program and data. If the program data is correct, contact the manufacturer.
2149	System mistake	Cannot assign the first variable type when executing the executeValueCommand function	Check the program and data. If the program data is correct, contact the manufacturer.
2150	System mistake	The variable being evaluated is not a Boolean type when calling the getCompareValue function.	Check the program and data. If the program data is correct, contact the manufacturer.
2151	System mistake	The integer variable for the array index was not found in the variable storage area when analyzing the analysisPoint function.	Check the program and data. If the program data is correct, contact the manufacturer.
2152	System mistake	The analysisPoint function failed to find the array variable name in the variable storage area	Check the program and data. If the program data is correct, contact the manufacturer.
2153	System mistake	The bool constant is not true or false when executing the setDoCommand function.	Check the program and data. If the program data is correct, contact the manufacturer.
2154	System mistake	The parseNuber function could not find the variable address in the expression	Check the program and data. If the program data is correct,

Code	Definition	Reason for reporting	Processing and solutions
			contact the manufacturer.
2155	System mistake	The number of left and right parentheses in the expression is not equal when parsing the parseFactor function.	Check the program and data. If the program data is correct, contact the manufacturer.
2156	System mistake	The getCompareValue function lacks a keyword after the expression	Check the program and data. If the program data is correct, contact the manufacturer.
2157	System mistake	The coil type in the instruction is not one of X or Y when executing the getCoilValue function.	Check the program and data. If the program data is correct, contact the manufacturer.
2158	System mistake	The variable in the current condition expression does not support operation with the specified comparator.	Check the program and data. If the program data is correct, contact the manufacturer.
2159	System mistake	The getCompareValue function was called without a Boolean variable to evaluate	Check the program and data. If the program data is correct, contact the manufacturer.
2160	System mistake	The array index is not an integer variable	Check the program and data. If the program data is correct, contact the manufacturer.
2161	System mistake	The variable in the for loop does not exist	Check the program and data. If the program data is correct, contact the manufacturer.
2162	System mistake	The variable in the for loop is not an integer variable	Check the program and data. If the program data is correct, contact the manufacturer.
2163	System mistake	Cannot assign a value to a constant	Check the program and data. If the program data is correct, contact the manufacturer.
2164	System mistake	The variable value type to write is not INT, FLOAT, or BOOL when executing the writeVarConstValue function.	Check the program and data. If the program data is correct, contact the manufacturer.
2165	System mistake	Variables that cannot participate in arithmetic operations	Check the program and data. If the program data is correct, contact the manufacturer.
2166	System mistake	Variables that cannot participate in comparison operations	Check the program and data. If the program data is correct, contact the manufacturer.
2167	System mistake	The initial value of the for loop variable is not an integer variable or constant	Check the program and data. If the program data is correct, contact the manufacturer.
2168	System mistake	The loop variable of the for instruction cannot be a constant	Check the program and data. If the program data is correct, contact the manufacturer.

Code	Definition	Reason for reporting	Processing and solutions
2169	System mistake	The end value of the for instruction is not an integer variable or constant	Check the program and data. If the program data is correct, contact the manufacturer.
2170	System mistake	The step size of the for instruction is not an integer variable or constant	Check the program and data. If the program data is correct, contact the manufacturer.
2171	System mistake	The executeValueCall function found no left or right value character	Check the program and data. If the program data is correct, contact the manufacturer.
2172	System mistake	The left value of the assignment expression is not a variable type supported by the system.	Check the program and data. If the program data is correct, contact the manufacturer.
2173	System mistake	The array dimension exceeds 3	Check the program and data. If the program data is correct, contact the manufacturer.
2174	System mistake	When executing the while_for_End function, the address of the step variable or constant is not found in the memory area.	Check the program and data. If the program data is correct, contact the manufacturer.
2175	System mistake	The address of the variable or constant for which the initial value is required was not found when executing the forCommand function.	Check the program and data. If the program data is correct, contact the manufacturer.
2176	System mistake	The address of the loop variable was not found when executing the forCommand function	Check the program and data. If the program data is correct, contact the manufacturer.
2177	System mistake	The end value variable or constant address was not found when executing the forCommand function.	Check the program and data. If the program data is correct, contact the manufacturer.
2178	System mistake	The current instruction code contains data errors. The instruction is not in the correct format or is empty.	Check the program and data. If the program data is correct, contact the manufacturer.
2179	System mistake	The address of the array index was not found when executing the readVarConstValue function.	Check the program and data. If the program data is correct, contact the manufacturer.
2180	System mistake	The block program does not contain line breaks.	Check the program and data. If the program data is correct, contact the manufacturer.
2181	System mistake	The expression character is empty when parsing the parseNumber function	Check the program and data. If the program data is correct, contact the manufacturer.
2182	System mistake	No For or While instruction matching Endfor or Endwhile was found	Check the program and data. If the program data is correct,

Code	Definition	Reason for reporting	Processing and solutions
			contact the manufacturer.
2183	System mistake	No Endfor or Endwhile instruction matching For or While was found	Check the program and data. If the program data is correct, contact the manufacturer.
2184	System mistake	The comparison expression contains unsupported comparison operators. Only>, <, <=, <=!, and = are supported.	Check the program and data. If the program data is correct, contact the manufacturer.
2185	System mistake	The IF statement format is incorrect because the lookupElseifElseEndif function cannot find one of the following: Elseif, Else, or Endif.	Check the program and data. If the program data is correct, contact the manufacturer.
2186	System mistake	When executing the setDoCommand function, either the IO name or the IO value is a null pointer.	Check the program and data. If the program data is correct, contact the manufacturer.
2187	System mistake	The comparison operator is not followed by a constant or variable	Check the program and data. If the program data is correct, contact the manufacturer.
2188	System mistake	No IO variables found after the SetDo instruction	Check the program and data. If the program data is correct, contact the manufacturer.
2189	System mistake	The address of processoutStr is a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2190	System mistake	The socketOpen function received an empty instruction address	Check the program and data. If the program data is correct, contact the manufacturer.
2191	System mistake	One of the sockets or IP addresses is a null pointer.	Check the program and data. If the program data is correct, contact the manufacturer.
2192	System mistake	The socket size exceeds 63.	Check the program and data. If the program data is correct, contact the manufacturer.
2193	System mistake	The IP address field exceeds 254	Check the program and data. If the program data is correct, contact the manufacturer.
2194	System mistake	The IP address field exceeds 3 bytes	Check the program and data. If the program data is correct, contact the manufacturer.
2195	System mistake	The socketClose function received an empty instruction address	Check the program and data. If the program data is correct, contact the manufacturer.
2196	System mistake	The initialization address of the Io is empty	Check the program and data. If the program data is correct,

Code	Definition	Reason for reporting	Processing and solutions
			contact the manufacturer.
2197	System mistake	The character in the setPallet command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2198	System mistake	The setPallet command has parameters with incorrect formatting	Check the program and data. If the program data is correct, contact the manufacturer.
2199	System mistake	Offset not found	Check the program and data. If the program data is correct, contact the manufacturer.
2200	System mistake	The format of the material tray parameter is incorrect	Check the program and data. If the program data is correct, contact the manufacturer.
2201	System mistake	No material tray or location number found	Check the program and data. If the program data is correct, contact the manufacturer.
2202	System mistake	Invalid WaitTime command format	Check the program and data. If the program data is correct, contact the manufacturer.
2203	System mistake	Invalid WaitCondition command format	Check the program and data. If the program data is correct, contact the manufacturer.
2204	System mistake	The time variable in the WaitCondition instruction is not found	Check the program and data. If the program data is correct, contact the manufacturer.
2205	System mistake	The time variable in WaitCondition must be an integer or an integer constant greater than or equal to 0	Check the program and data. If the program data is correct, contact the manufacturer.
2206	System mistake	The time variable in the WaitTime instruction is not found	Check the program and data. If the program data is correct, contact the manufacturer.
2207	System mistake	The time variable in WaitTime must be an integer or an integer constant greater than or equal to 0.	Check the program and data. If the program data is correct, contact the manufacturer.
2208	System mistake	The NetOpen command has a format error in its communication mode.	Check the program and data. If the program data is correct, contact the manufacturer.
2209	System mistake	The comparison character pointer passed to getExpressionAndVariableValue is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2210	System mistake	The compare pointer passed to the getCompareValue function is empty	Check the program and data. If the program data is correct, contact the manufacturer.

Code	Definition	Reason for reporting	Processing and solutions
2211	System mistake	The row start address in enumProgranRunRowAndAddr is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2212	System mistake	enumProgranRunRowAndAddr returns an empty result after parsing the first address	Check the program and data. If the program data is correct, contact the manufacturer.
2213	System mistake	The line start address is empty when enumProgranRunRowAndAddr searches for a subroutine	Check the program and data. If the program data is correct, contact the manufacturer.
2214	System mistake	The first address of the subroutine after the enumProgranRunRowAndAddr call instruction is null	Check the program and data. If the program data is correct, contact the manufacturer.
2215	System mistake	enumProgranRunRowAndAddr failed to find the first address of the subroutine	Check the program and data. If the program data is correct, contact the manufacturer.
2216	System mistake	The address of the lookElseifElseEndif instruction is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2217	System mistake	The compareLabel instruction address is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2218	System mistake	The label address in compareLabel is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2219	System mistake	compareLabel No label found	Check the program and data. If the program data is correct, contact the manufacturer.
2220	System mistake	The line start address in goToCommand is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2221	System mistake	The goToCommand command address is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2222	System mistake	The readWriteModbusReg station number address is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2223	System mistake	The readWriteModbusReg input instruction address is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2224	System mistake	The readWriteModbusReg start address or register count address is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2225	System mistake	The getLongExpressResult function	Check the program and data. If

Code	Definition	Reason for reporting	Processing and solutions
		cannot find the address of expression 1	the program data is correct, contact the manufacturer.
2226	System mistake	The number of DI or DO variables in the data storage area is 0	Check the program and data. If the program data is correct, contact the manufacturer.
2227	System mistake	The square brackets are not in the current instruction array variable	Check the program and data. If the program data is correct, contact the manufacturer.
2228	System mistake	The program failed to compile and cannot continue execution	Check the program and data. If the program data is correct, contact the manufacturer.
2229	System mistake	The subfunction to jump to is not found during the function call.	Check the program and data. If the program data is correct, contact the manufacturer.
2230	System mistake	The number of spaces in the command is not a multiple of 4	Check the program and data. If the program data is correct, contact the manufacturer.
2231	System mistake	The subfunction line number matches the current main function line number.	Check the program and data. If the program data is correct, contact the manufacturer.
2232	System mistake	The number of program instructions in the thread exceeds the capacity allowed by the host computer.	Check the program and data. If the program data is correct, contact the manufacturer.
2233	System mistake	The time variable in the WatiCondition condition does not exist	Check the program and data. If the program data is correct, contact the manufacturer.
2234	System mistake	The pointer to the instruction name in the WatiCondition instruction is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2235	System mistake	The GetCurPos instruction has a null pointer as input	Check the program and data. If the program data is correct, contact the manufacturer.
2236	System mistake	The point variable of the GetCurPos instruction is a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2237	System mistake	The point variable specified by GetCurPos was not found in the variable storage area.	Check the program and data. If the program data is correct, contact the manufacturer.
2238	System mistake	The while_for_FalseJump function did not find the loop variable character	Check the program and data. If the program data is correct, contact the manufacturer.
2239	System mistake	The instruction name in the while_for_FalseJump function is a null	Check the program and data. If the program data is correct,

Code	Definition	Reason for reporting	Processing and solutions
		pointer	contact the manufacturer.
2240	System mistake	The command name in the whileCommand function is a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2241	System mistake	The variable address passed to the getForVarValue function is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2242	System mistake	The command name in the forCommand function is a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2243	System mistake	The setPallet function cannot find the parameter address	Check the program and data. If the program data is correct, contact the manufacturer.
2244	System mistake	The variable name in findVar is a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2245	System mistake	IO variable address out of bounds	Check the program and data. If the program data is correct, contact the manufacturer.
2246	System mistake	The expression address in the parseFactor function is a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2247	System mistake	The expression address in the parseTerm function is a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2248	System mistake	The expression address in the parseExpression function is a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2249	System mistake	The expression address passed to lookupVarAddr is a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2250	System mistake	The coil address in the analysisBitPara function is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2251	System mistake	The coil address in the getCoilValue function is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2252	System mistake	The stringToInteger function received a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2253	System mistake	The mstrtof function received a null pointer as input	Check the program and data. If the program data is correct, contact the manufacturer.

Code	Definition	Reason for reporting	Processing and solutions
2254	System mistake	The name character in the returnNameLength function is a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2255	System mistake	The point character input by analysisPalletPara is a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2256	System mistake	The character argument of the analysisOffset function is a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2257	System mistake	The analysisOffset function pointer is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2258	System mistake	The name of the instruction passed to the watiTime function is a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2259	System mistake	The input pointer is empty when parsing the current command	Check the program and data. If the program data is correct, contact the manufacturer.
2260	System mistake	Variable address not found	Check the program and data. If the program data is correct, contact the manufacturer.
2261	System mistake	The current command parameter format is incorrect or the parameter address is not found	Check the program and data. If the program data is correct, contact the manufacturer.
2262	System mistake	Invalid register type for write or read	Check the program and data. If the program data is correct, contact the manufacturer.
2263	System mistake	The system variable ErrNo does not exist	Check the program and data. If the program data is correct, contact the manufacturer.
2264	System mistake	The output level type of processout is incorrect	Check the program and data. If the program data is correct, contact the manufacturer.
2265	System mistake	The system does not have the PosFound variable	Check the program and data. If the program data is correct, contact the manufacturer.
2266	System mistake	Invalid trajectory type	Check the program and data. If the program data is correct, contact the manufacturer.
2267	System mistake	The variable type for the instruction is incorrect	Check the program and data. If the program data is correct, contact the manufacturer.
2268	System mistake	The PosFound variable address is not	Check the program and data. If

Code	Definition	Reason for reporting	Processing and solutions
		initialized	the program data is correct, contact the manufacturer.
2269	Emergency stop trigger	The user pressed the emergency stop button or failed to connect the emergency stop cable.	Check if the emergency stop line or button is pressed. Connect the cable or turn up the emergency stop button to resolve the issue.
2270	System mistake	No variables found for external axis mode	Check the program and data. If the program data is correct, contact the manufacturer.
2271	System mistake	External axis mode data type error	Check the program and data. If the program data is correct, contact the manufacturer.
2272	System mistake	The GetWObj variable type is not an integer	Check the program and data. If the program data is correct, contact the manufacturer.
2273	System mistake	The GetWObj instruction does not have a valid GoTo keyword	Check the program and data. If the program data is correct, contact the manufacturer.
2274	System mistake	The MoveCnvSync command variable type is not an integer.	Check the program and data. If the program data is correct, contact the manufacturer.
2275	System mistake	The MoveCnvSync belt number variable does not exist	Check the program and data. If the program data is correct, contact the manufacturer.
2276	System mistake	MoveCnvSync command tool character format error	Check the program and data. If the program data is correct, contact the manufacturer.
2277	System mistake	The MoveCnvSync command tool keyword is not available	Check the program and data. If the program data is correct, contact the manufacturer.
2278	System mistake	The IO for belt follow setup is not available in the system	Check the program and data. If the program data is correct, contact the manufacturer.
2279	System mistake	Motion instructions cannot be executed in non-motion threads	Check the program and data. If the program data is correct, contact the manufacturer.
2280	System mistake	The address of the system error code variable is empty during compilation	Check the program and data. If the program data is correct, contact the manufacturer.
2281	System mistake	The input pointer to RecordPosFoundAdd is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2282	System mistake	The variable name in the	Check the program and data. If

Code	Definition	Reason for reporting	Processing and solutions
		getBoolVarValue function is empty	the program data is correct, contact the manufacturer.
2283	System mistake	The pointer to the stored variable value passed to the getBoolVarValue function is null	Check the program and data. If the program data is correct, contact the manufacturer.
2284	System mistake	The address of the stored result passed to the getForVarValue function is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2285	System mistake	The address of the stored result passed to the getLongExpressResult function is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2286	System mistake	The address of the storage row number passed to the lookupElseifElseEndif function is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2287	System mistake	The address of the stored result passed to the justSpaceNum function is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2288	System mistake	The rcPoint pointer is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2289	System mistake	The analysisOffset offset output result address is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2290	System mistake	The address of the getCompareValue function output is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2291	System mistake	The address of the output result from getexpressionAndVariableValue is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2292	System mistake	The analysisbitPara function returns an empty bit address	Check the program and data. If the program data is correct, contact the manufacturer.
2293	System mistake	The output type address of the analysisbitPara function is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2294	System mistake	The readVarConstValue function returns an empty address for the variable type	Check the program and data. If the program data is correct, contact the manufacturer.
2295	System mistake	The readVarConstValue function returns an empty variable address	Check the program and data. If the program data is correct, contact the manufacturer.
2296	System mistake	The address of the last row number output by lastRunRow is empty	Check the program and data. If the program data is correct,

Code	Definition	Reason for reporting	Processing and solutions
			contact the manufacturer.
2297	System mistake	The BaseParaPaserCommand function returns a null pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2298	System mistake	The BaseParaPaserCommand function returns a null speed pointer	Check the program and data. If the program data is correct, contact the manufacturer.
2299	System mistake	The Power function cannot run in a motion thread	Check the program and data. If the program data is correct, contact the manufacturer.
2300	System mistake	The thread number in the ThreadSwitch function does not exist	Check the program and data. If the program data is correct, contact the manufacturer.
2301	System mistake	The Remote system variable for Modbus TCP communication is not available	Check the program and data. If the program data is correct, contact the manufacturer.
2302	System mistake	The system time variable does not exist	Check the program and data. If the program data is correct, contact the manufacturer.
2303	System mistake	The socket ID parameter block address is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2304	System mistake	The SocketConnect command has parameters with incorrect formats	Check the program and data. If the program data is correct, contact the manufacturer.
2305	System mistake	The socket ID type in the SocketConnect command is incorrect.	Check the socket ID type (constant or variable)
2306	System mistake	The IP address type in the SocketConnect command is incorrect	Check the type of IP address (string constant or variable)
2307	System mistake	The target port address in the SocketConnect command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2308	System mistake	The target port address in the SocketConnect command is set incorrectly.	Check the target port type in the command (integer constant or variable)
2309	System mistake	The status variable in the SocketConnect command is an empty address.	Check the program and data. If the program data is correct, contact the manufacturer.
2310	System mistake	The status variable in the SocketConnect command is not found	Check the program and data. If the program data is correct, contact the manufacturer.
2311	System mistake	The address passed to the Socket command is empty	Check the program and data. If the program data is correct,

Code	Definition	Reason for reporting	Processing and solutions
			contact the manufacturer.
2312	System mistake	The socket address in the Socket command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2313	System mistake	The socket variable address in the Socket command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2314	System mistake	The socket type in the Socket command is not an integer.	Check the program and data. If the program data is correct, contact the manufacturer.
2315	System mistake	The address passed to the SocketSend command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2316	System mistake	The socket address in the SocketSend command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2317	System mistake	The socket address in the SocketSend command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2318	System mistake	The socket in the SocketSend command is not an integer variable	Check the program and data. If the program data is correct, contact the manufacturer.
2319	System mistake	The data sent in the Socket command is not a string type	Check the program and data. If the program data is correct, contact the manufacturer.
2320	System mistake	The address passed to the SocketRecive command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2321	System mistake	The SocketRecive command parameter block address is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2322	System mistake	The socket address in the SocketRecive command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2323	System mistake	The socket address in the SocketRecive command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2324	System mistake	The data type in the SocketRecive instruction is not an integer	Check the program and data. If the program data is correct, contact the manufacturer.
2325	System mistake	The time address in the SocketRecive command is empty	Check the program and data. If the program data is correct, contact the manufacturer.

Code	Definition	Reason for reporting	Processing and solutions
2326	System mistake	The time variable type in the SocketRecive command is not an integer	Check the program and data. If the program data is correct, contact the manufacturer.
2327	System mistake	The status variable address in the SocketRecive command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2328	System mistake	The address of the data size variable in the SocketRecive command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2329	System mistake	The data size variable in the SocketRecive command is not an integer.	Check the program and data. If the program data is correct, contact the manufacturer.
2330	System mistake	The GOTO pointer address in the SocketRecive instruction is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2331	System mistake	The address in the ReciveToStr instruction is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2332	System mistake	The parameter block address in the ReciveToStr instruction is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2333	System mistake	The socket address in the ReciveToStr command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2334	System mistake	The variable address in the ReciveToStr instruction is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2335	System mistake	The socket in the ReciveToStr command is not an integer	Check the program and data. If the program data is correct, contact the manufacturer.
2336	System mistake	The start address in the ReciveToStr instruction is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2337	System mistake	The address in the ReciveToStr command is empty	Check the program and data. If the program data is correct, contact the manufacturer.
2338	System mistake	The start address in the ReciveToStr instruction is not an integer	Check the program and data. If the program data is correct, contact the manufacturer.
2339	System mistake	The address in the ReciveToStr command exceeds 1000	Check the program and data. If the program data is correct, contact the manufacturer.
2340	System mistake	The data size address in the ReciveToStr	Check the program and data. If

Code	Definition	Reason for reporting	Processing and solutions
		instruction is empty	the program data is correct, contact the manufacturer.
2341	System mistake	The data size in the ReciveToStr instruction is not an integer	Check the program and data. If the program data is correct, contact the manufacturer.
2342	System mistake	The ReciveToStr instruction contains an incorrect number of bits	Check the program and data. If the program data is correct, contact the manufacturer.
2343	System mistake	The string data type in the ReciveToStr instruction is incorrect	Check the program and data. If the program data is correct, contact the manufacturer.
2344	System mistake	Do not use prohibited output formats, such as%s or%u.	Check the program and data. If the program data is correct, contact the manufacturer.
10600	Thread configuration error	No threads are open, or the open threads are set to run after startup.	Check if the thread properties and type are correct
10601	No motion thread	No active motion thread exists	Check for active threads
10602	Not enabled	The program was not enabled at startup	Enable before program startup
10603	Conditional statement error	IF condition without corresponding Endif statement indentation	Check if the if statement is complete
10604	Invalid condition expression	The divisor in the conditional expression cannot be 0	Change the divisor to a non-zero value
10605	Array index range exceeded	The product of array indices cannot exceed 200	Adjust array indices to a valid range
10606	Call instruction range exceeded	The maximum number of Call commands cannot exceed 255	Change the code logic and reduce the use of Call instructions
10607	Enable error	Enable timeout or mismatch between single-axis enable and axis controlled state prevents enabling	1. Check if the shaft is in the correct controlled state. 2. Check if the actual shaft is connected. 3. Check if the shaft simulation is enabled for the unconnected actual shaft.
10608	Delay time exceeds the limit	The WaitTime delay exceeds 65535 milliseconds or is negative.	Adjust delay time
10609	The wait time exceeds the limit	The maximum time for the WaitCondition command is not within 0 to 2147483648.	Minimize maximum time
10610	Communication error	Network communication error	Check if the network cable and IP settings are correct
10611	The go-to instruction has no corresponding jump label	The go-to instruction cannot find the corresponding jump label	Check for a corresponding jump tag
10612	Security door	Security door signal triggered	Check if the security door IO

Code	Definition	Reason for reporting	Processing and solutions
	activation		signal is triggered
10613	Array index range exceeded	Array index cannot be less than 1	Change the array index to a number greater than 0
10614	Subroutine does not exist	The subroutine called in the block program does not exist	Check if the subroutine exists
10615	Invalid number of motion threads	The number of active threads exceeds 1	Check if the number of check threads exceeds 1
10616	Compilation conditions not met	The current slave machine state does not allow program compilation (compilation conditions: manual mode, stopped).	Compile or download the program in manual mode or when the program is stopped
10617	Invalid variable type	The point variable type is incorrect when receiving the base coordinate position or joint coordinate command.	Check the type of the corresponding point variable
10618	The material tray number exceeds the allowed range.	The material tray number should be between 1 and 20	Change the disc number to 1 through 20
10619	The partition range of the material tray exceeds the limit.	The number of partitioned storage disks cannot be less than 0	Modify the number of partitioned disks to be greater than 0
10620	No tray is set	The material tray has no parameters set	Check if the tray setup command was added or if it was not executed
10621	The inventory item number exceeds the limit.	The inventory item sequence number is less than 1 or exceeds the total number of set points.	Check if the inventory position number exceeds the total number of positions
10622	Partition error in the material tray	The number of partitions cannot be 1 when the teaching tray is at 4 o'clock.	Check if the partition count is correct
10623	The material tray number or point sequence number is not an integer.	The material tray number or point sequence number is not an integer.	Check if the tray number or point sequence number is an integer
10624	Array index range exceeded	Array index out of bounds	Check if the array index value is valid
10625	Till instruction limit exceeded	The number of Till instructions exceeds the system's maximum limit	Reduce the use of Till instructions
10630	Instruction parsing error	Too many spaces in the query or write name	Check if the instruction format is correct
10631	Instruction parsing error	The variable name is incorrect when querying or writing	Check if the instruction format is correct
10633	The external axis system number exceeds the limit.	The external axis system number is not 1 or 2	Check if the external axis system number in the command is correct

Code	Definition	Reason for reporting	Processing and solutions
10642	Invalid variable type	The left value cannot be a constant or the left and right values must have different types.	Check if the data types on both sides of the equation are the same
10646	Register address error	The register address must be an integer variable or integer.	Set the register address to an integer
10647	Invalid variable type	The variable to be assigned must be an integer or floating-point number.	Change to the corresponding variable type
10648	register Range overrun	register Range overrun	Set the register address to a valid range
10649	Invalid variable type	The clock number must be an integer constant or variable	Set the clock number to a normal value
10650	Invalid variable type	The variable type in the current instruction is incorrect	Check if the variable type of the current instruction is correct
10651	Too many delay reversal instructions	The number of concurrent delay reversal instructions in this thread exceeds the limit	Reducing the Use of Delayed Inversion Instructions
10652	Timeout error	AskQuestion operation timed out	Check operations or settings by reason
10653	Range overrun	The output command value exceeds the decimal value of the selected IO.	Check if the output value is correct
10654	Too many delay instructions	The number of delayed output instructions exceeds the limit	Reducing the Use of Delayed Output Instructions
10655	Instruction capacity overrun	The total number of instructions in thread 1 exceeds the system line capacity.	Reduce the number of instructions
10656	Instruction capacity overrun	The total number of instructions in thread 2 exceeds the system line capacity.	Reduce the number of instructions
10657	Instruction capacity overrun	The total number of instructions in thread 3 exceeds the system line capacity.	Reduce the number of instructions
10658	Instruction capacity overrun	The total number of instructions in thread 4 exceeds the system line capacity.	Reduce the number of instructions
10659	Instruction capacity overrun	The total number of instructions in thread 5 exceeds the system line capacity.	Reduce the number of instructions
10660	Instruction capacity overrun	The total instruction bytes of thread 1 exceed the system's thread storage capacity.	Reduce the number of instructions
10661	Instruction capacity overrun	The total instruction bytes of thread 2 exceed the system's thread storage capacity.	Reduce the number of instructions
10662	Instruction capacity overrun	The total instruction bytes of thread 3 exceed the system's thread storage capacity.	Reduce the number of instructions
10663	Instruction capacity overrun	The total instruction bytes of thread 4 exceed the system's thread storage	Reduce the number of instructions

Code	Definition	Reason for reporting	Processing and solutions
		capacity.	
10664	Instruction capacity overrun	The total instruction bytes of thread 5 exceed the system's thread storage capacity.	Reduce the number of instructions
10665	Register address error	The register address cannot be odd	Set the register address to an even number
10666	Invalid operation value type	The output value of the current instruction cannot be a floating-point number	Change the output value of the current command to an integer
10667	SignalGo configuration error	SignalGo variables cannot have duplicate output ports	Check for duplicate values in the output port
10668	Data overflow	Invalid data assignment will cause data overflow	Check whether the left-hand value data type and the right-hand value result are within the valid range of the left-hand value.
10669	Speed setting error	The linear speed in the instruction cannot exceed the set baseline speed	decrease the line speed or increase the base speed in the instruction
10670	The number of inventory check points exceeds the limit.	The inventory item number is not within the range of 1 to 100000.	The inventory count must be between 1 and 100,000.
10671	Start error	The external stop signal is triggered during startup	Turn off external stop signal
10672	Stop error	The external start signal is triggered when the system stops.	Disable external startup signal
10673	Singular parameter type error	Singular parameter type error	Change the parameter type to an integer constant or integer variable
10674	The Singular parameter range is out of bounds	The Singular parameter value is outside the range 0 to 3	Change the parameter value to a range of 0 to 3
10675	Cannot be disabled now	The robot is currently enabled. Disabling it will continue the operation.	Turn off enable before proceeding
10676	Timer number limit exceeded	The timer number you entered is not between 1 and 10.	Change the number to the specified range
10677	Date setting error	The current date is incorrect relative to the start and end dates.	Check if the time order is correct
10678	Range overrun	The velocity coefficient is less than 1 or greater than 100	Change the speed coefficient from 1 to 100
10679	The instructor is disconnected from the controller	The instructor is disconnected from the controller	Check the connection cable between the controller and the teaching device.
10680	Range overrun	The maximum time range for	Change the maximum time to the

Code	Definition	Reason for reporting	Processing and solutions
		AskQuestion is not between 0 and 2147483648	corresponding range
10681	Character encoding error	AskQuestion title character is empty	Add character corresponding to the title
10682	Operation warning	The emergency stop button was pressed but not reset.	1. Reset the emergency stop button when the emergency stop X port simulation is enabled 2. If the button is invalid in state 1, you can press and reset the emergency stop button again 3. If neither operation 1 nor 2 works, power on the device again to restore
10683	Character encoding error	All AskQuestion buttons are empty	At least one key is set with a character.
10684	Range overrun	The belt or workpiece number exceeds the limit	Check the belt number and workpiece number values
10686	Incorrect speed range	The joint speed or TCP line speed of the current speed variable cannot be less than 0 or greater than 100	Adjust the speed value to a reasonable range
10687	The conveyor belt follow function is not enabled or the belt movement is not enabled	The conveyor follow function or belt movement is not enabled when executing the query command.	Enable conveyor follow or belt movement
10688	Do not modify line numbers	Do not modify the running line number during program execution	Check if the SDK has modified the line numbers
10689	The IO variable does not exist	The SetGout instruction cannot operate on the extended I/O.	Check if the extended IO module is installed
10690	Program startup failed	The robot is moving when the program starts	Wait for the end of the event before starting the program
10691	Invalid variable type	The result of the string operation must be stored in a String variable	Set StrDest to a String variable in the command
10692	Invalid variable type	String commands can only process string types	Check if the data type in the instruction is correct
10693	Invalid variable type	The length of the string must be an integer	Change the string length to an integer
10694	Invalid variable type	The variable storing the search result is not an integer.	Change the search result variable to an integer variable
10695	Invalid variable type	The numeric variable is not an integer, floating-point variable, or integer constant.	Change the input numeric variable to an integer, floating-point variable, or integer constant

Code	Definition	Reason for reporting	Processing and solutions
10696	Invalid variable type	The current instruction cannot convert variables of any type except point variables.	Change the variable to convert to a point variable
10697	Capacity exceeded	The replaced string exceeds the capacity of the string variable	Change the size of the replacement string
10698	The sum of the extracted characters cannot be 0 or greater than 256	The length variable for character truncation is set to a value between 0 and 256.	Modify the length of floating-point values
10699	The source string cannot be parsed	The source string is not in the correct format and cannot be parsed.	Enter the correct source string
10700	Custom user error		Check operations or settings by reason
10701	Socket communication error	Socket ID is invalid	The client socket ID ranges from 1 to 10, and the server socket ID ranges from 11 to 20.
10703	Socket communication error	Invalid communication type	Check communication type. The default is TCP.
10704	Socket communication error	TCP exceeds the maximum limit	The TCP count exceeds the maximum limit of 32.
10705	Socket communication error	UDP exceeded the maximum limit	The number of UDP connections exceeds the maximum limit of 32.
10706	Socket communication error	Client and server type settings are incorrect	The client and server type settings do not match the socket ID
10707	Socket communication error	Failed to call Send	Failed to call Send
10708	Socket communication error	Destination port error	The target port cannot be set to 502 or 503, and must be within the range 1-65534.
10709	Socket communication error	Local port error	The server port number is greater than 0
10710	Socket communication error	The connection is not established when receiving the data instruction	Establish a connection and then execute the receive command
10711	Socket communication	Connection timed out	1. Check socket communication settings 2. Block antivirus

Code	Definition	Reason for reporting	Processing and solutions
	error		software on the client
10712	Socket communication error	Remote IP configuration error	Check the remote IP address range from 1 to 254
10713	Socket communication error	Execution send connection not established	Check if a connection is established before sending the command
10720	Servo parameter read error	Failed to read P0-00 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10721	Servo parameter read error	Error reading P0-01 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10722	Servo parameter read error	Failed to read P0-04 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10723	Servo parameter read error	Failed to read P0-07 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10724	Servo parameter read error	Failed to read P0-11 parameters	Failed to read or modify servo parameters. Contact the manufacturer.
10725	Servo parameter read error	Failed to read P0-12 parameters	Failed to read or modify servo parameters. Contact the manufacturer.
10726	Servo parameter read error	Error reading P0-13 parameters	Failed to read or modify servo parameters. Contact the manufacturer.
10727	Servo parameter read error	Error reading P0-14 parameters	Failed to read or modify servo parameters. Contact the manufacturer.
10728	Servo parameter read error	Failed to read P0-24 parameters	Failed to read or modify servo parameters. Contact the manufacturer.
10729	Servo parameter read error	Failed to read P0-25 parameters	Failed to read or modify servo parameters. Contact the manufacturer.
10730	Servo parameter read error	Failed to read P0-26 parameters	Failed to read or modify servo parameters. Contact the manufacturer.
10731	Servo parameter read error	Error reading P0-79 parameters	Failed to read or modify servo parameters. Contact the manufacturer.

Code	Definition	Reason for reporting	Processing and solutions
10732	Servo parameter read error	Failed to read P1-00 parameter	Failed to read or modify servo parameters. Failed. Contact the manufacturer.
10733	Servo parameter read error	Failed to read P1-01 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10734	Servo parameter read error	Failed to read P1-02 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10735	Servo parameter read error	Failed to read P1-24 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10736	Servo parameter read error	Failed to read P1-25 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10737	Servo parameter read error	P2-00 parameter read error	Failed to read or modify servo parameters. Contact the manufacturer.
10738	Servo parameter read error	Failed to read P2-35 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10739	Servo parameter read error	Failed to read P2-41 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10740	Servo parameter read error	Failed to read P2-47 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10741	Servo parameter read error	Failed to read P2-49 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10742	Servo parameter read error	Failed to read P5-07 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10743	Servo parameter read error	Failed to read P5-44 parameter	Failed to read or modify servo parameters. Contact the manufacturer.
10744	Invalid variable type	The length of the string cannot be negative	Change the string length to a positive number
10745	Error in servo parameter initialization read	Error in servo parameter initialization read	Failed to read or modify servo parameters. Contact the manufacturer.
10746	Safe Area Error	The security zone number in the command is incorrect	Reset the security zone number in the command

Code	Definition	Reason for reporting	Processing and solutions
10750	Posfix variable read error	The pospos variable type is incorrect or the variable is not found	Failed to create the pospos variable. Contact the manufacturer or recreate the project.

1.2 Robot error class exception code

Code	Definition	Reason for reporting	Processing and solutions
2	Server error	The robot's axis servo failed or the driver lost connection	Check the single-axis alarm cause or servo status
5	Axis control configuration error	The robot axis configuration is incorrect.	Check the controlled configuration register of the robot axis
6	The servo is not enabled	Not all single axes are enabled when enabling robots	Check if the robot axis is enabled
7	Device error	The selected device model is not in the device library.	Set the robot type for configuration parameters to the current robot type
1001	Alarm for excessive movement of the soft limit of the current point joint	Move beyond the joint soft limit. The soft limit is determined and set based on a threshold.	Check the range of the joint soft limit setting
1006	The positive and negative limit settings are not reasonable.	The positive limit is less than the negative limit.	Set the interface check robot limit and external axis limit register value
1007	The positioning width setting is incorrect	The positioning width exceeds the range (0,10)	Check all positioning width settings in the trajectory and update them to (0,10)
1008	Articular tachycardia	The joint speed exceeds the maximum allowable value	The log analysis indicates that small displacement with large posture changes may cause joint overspeed (1008). To resolve this, reduce the robot's speed or minimize the magnitude of posture changes.
1009	Single bus layer alarm	The bus shaft has an alarm.	Power off the device or contact the manufacturer to troubleshoot.
1010	External shaft joint overtravel alarm	The external shaft feedback angle exceeds the maximum and minimum limits	Check the relationship between the current external shaft feedback angle and the maximum and minimum limit positions

Code	Definition	Reason for reporting	Processing and solutions
1011	External axis system enable failed	When enabling the external shaft system, the shaft is not fully enabled, resulting in no external shaft system servo being normally enabled.	Check if all external shafts are enabled successfully
1012	The motor parameter is set to 0	The robot or external axis has controlled-axis encoder pulses, motor displacement, or reduction ratio set to 0	Check if the encoder resolution settings in the motor configuration are correct, verify all shaft settings in the reduction ratio, and update them to theoretical values.
1013	The robot sends out pulse signals that are not numerical in nature.	Data error	Contact the manufacturer
1014	External axis pulse non-numeric	Data error	Contact the manufacturer
1020	Invalid belt type	Incorrect belt type setting	Set the correct belt type
1021	The coordinate system number of the belt-bonded workpiece is incorrect	The coordinate system number for the belt-bound workpiece is incorrect	Incorrect workpiece coordinate system sequence number
1022	The belt encoder pulse equivalent error	The pulse equivalent of the belt encoder is zero.	Ensure the calibration result of the belt encoder's pulse equivalent is not zero.
1023	The stop distance or boundary setting is incorrect	The relative position of the trailing line to the trigger lower boundary upstream or between boundaries is unreasonable	The follow stop line is positioned upstream of the work lower boundary, with a stop distance from the work lower boundary, ensuring the follow stop line is downstream of the trigger lower boundary. The order of the relevant boundaries from upstream to downstream is: work upper boundary, trigger lower boundary, follow stop line, work lower boundary.
1024	The belt speed is not reasonable	The belt speed is too high or too low.	Ensure the belt speed is between 10 mm/s and 500 mm/s
1025	The belt number for the workpiece	The belt for the workpiece is not in use	When multiple belts operate in rotation, avoid querying the

Code	Definition	Reason for reporting	Processing and solutions
	is incorrect		workpiece in synchronous mode.
1040	The initial values of the singular threshold, nominal damping coefficient, and error compensation coefficient are not set.	Initial value not set	Set initial values based on recommendations
1041	The robot is approaching the limit of its workspace.	The robot's workspace has exceeded its limits.	reverse point moving robot
1042	The robot enters two or more singular regions simultaneously	The robot enters multiple singular regions simultaneously	Dynamic robot with joint avoidance in multi-singular region
1043	Robotic shoulder singularity	Robot enters the shoulder strange zone	For Cartesian continuous point motion, it is recommended to enable the singular avoidance function for continuous point motion. For RcPath, it is recommended to reduce the Cartesian speed.
1044	Robot elbow singularity	Robot enters elbow singular region	For Cartesian continuous point motion, it is recommended to enable the singular avoidance function for continuous point motion. For RcPath, it is recommended to reduce the Cartesian speed.
1045	Robot wrist singularity	Robot enters the strange zone of wrist	For Cartesian continuous point motion, it is recommended to enable the continuous point motion singularity avoidance function. for RcPath, it is recommended to enable the mixed space singularity avoidance function.
1046	Robotic joint overspeed	Joint Overspeed of Robot After Processing by the Strange Avoidance Algorithm	Reduce the Cartesian point speed

Code	Definition	Reason for reporting	Processing and solutions
1047	RcPath wrist singular avoidance type setting error	The singular type is not in the range 0-3.	Set the correct singular avoidance type parameter

1.3 Robot warning exception code

Code	Definition	Reason for reporting	Processing and solutions
10001	Alarm for excessive movement of the joint soft limit in the trajectory planning point	The target point exceeds the soft limit of the joint.	Check the collected log to see if the inverse-engineered joint values exceed the soft limit.
10002	No speed is set	The command speed percentage is below a specified minimum speed threshold	Check the instruction speed setting
10007	Acceleration is not set	The command acceleration percentage is below a specified minimum speed threshold	Check the acceleration setting for the command.
10012	Tool ID settings exceed the limit	The tool ID must be 0, 1,..., 19	Check tool number value
10013	The workpiece coordinate system exceeds the limit	The workpiece number must be 0, 1,..., 19	Check the workpiece number
10014	Approach to a singularity	The Motion of the Descartes Trajectory to the Near of the Singular Region	The strange region is prone to overspeeding, so avoid moving through it.
10015	It is necessary to pass through the singularity to reach the target position	The starting and target points of the command pass through the singular region	Handover system is not supported
10020	The error message is not cleared when executing the motion command	You cannot execute the motion command if the error message is not cleared.	Check errors and clear alarms
10021	The robot is still moving when the motion command is executed.	Time sequence protection	The robot cannot trigger the motion command during movement.
10022	The robot is not enabled when executing movement commands	The robot cannot execute the motion command.	Check if the robot is enabled or the reason for enabling failure
10024	The position where the RB instruction is triggered does not meet the smoothness setting	Time sequence protection	Contact the manufacturer
10027	The robot cannot execute new RB commands until it has stopped during the execution of the	Time sequence protection	You cannot trigger the movement command before the robot stops completely.

Code	Definition	Reason for reporting	Processing and solutions
	deceleration command under the RB instruction.		
10031	Kinematic inverse error	The point robot is unreachable	Check based on log information
10032	Kinematic inverse error	The point robot is unreachable	Check based on log information
10035	Six-axis does not support Euler angle mode	The current model is a six-axis model, and Euler angle mode is used for motion.	Contact the manufacturer
10036	Bus cycle error	The bus synchronization period does not match the setting	Contact the manufacturer
10037	Trajectory planning error	The starting point, intermediate point, and target point cannot be fitted into an arc.	Check if the start, middle, and target points coincide
10063	Invalid swing parameter value	The input swing parameter contains a negative number, the unit swing distance is less than 0, or the dwell time at the upper, middle, and lower swing points is too large.	Reset swing parameters
10064	Parameter calculation error after length adjustment	After applying the integer pendulum correction, the calculated distance between the upper, middle, and lower pendulum points exceeds the limit.	Check based on log information
10082	Swing time calculation error	Data error	Contact the manufacturer
10083	Sway direction displacement interpolation error	Data error	Contact the manufacturer
10084	Non-transition adjacent trajectory angle transition	The point angle setting is incorrect	Reset swing angle
10086	The number of single pendulums exceeds the limit.	The total displacement of the multi-tappend pendulum is too large, and the number of single pendulums exceeds the limit.	Reduce the number of pendulum points, execute multiple instructions, or increase the pendulum length
10088	Arc plane calculation error	The forward segment trajectory coincides with the z-axis of the TCP coordinate system and is related to the welding posture.	Identify issues at the underlying level based on log information
10095	The selection of the plane	The plane interpolation calculation	The transition error

Code	Definition	Reason for reporting	Processing and solutions
	for the forward and backward interpolation points is too fast	protection is disabled because the main trajectory transition is too short or the main trajectory is moving too fast.	value can be increased if the main trajectory accuracy is allowed
10096	The arc mode supports only external axis motion modes 0 and 1	The external axis motion mode is not set correctly	Checkpoint external axis motion mode settings
10097	Collaborative arc property error	When the attitude is constant, the plane of the pendulum cannot follow the attitude change	Contact the manufacturer
10100	RCPATH instruction failed to execute	The RCPATH instruction module is not initialized or has an error in state machine switching.	Restart the PLC. If needed, contact the manufacturer.
10101	The RCPATH instruction sets an unreasonable number of machining point data	The number of processing points is set to a value less than 1	The instruction is not executed. Check the corresponding register assignment.
10102	RCPATH instruction data point exceeded limit. Contact the manufacturer.	Exceeds the maximum data point processing limit. Adjust the underlying settings.	Contact the manufacturer. Minimum 1, maximum 200
10103	The user set the track type incorrectly	The path type is incorrect	Contact the manufacturer
10104	The attitude setting is incorrect. The attitude change between adjacent processing points is too large.	The attitude changes too much relative to the position	Attitude changes cannot transition from A to B and back to A unless point B is set as the zero-speed point.
10105	Forward Planning Error	The input trajectory parameters are generally incorrect.	The collected log view typically shows that the acceleration or double-acceleration reference value is not set.
10106	Forward Backtracking Error	The input trajectory parameters are generally incorrect.	View collection logs
10107	Forward-backward backtracking failed. The backtracking to the maximum allowable small segment still does not meet the requirements.	The deceleration zone is usually too short to slow down sufficiently, causing the speed to drop too much.	Reduce the speed or increase the speed forecast window size
10108	The RC instruction is	Instruction protection prevents RC from	Do not interrupt the RC

Code	Definition	Reason for reporting	Processing and solutions
	executing when the motion command is being executed.	being interfered with by other instructions during execution.	instruction, only trigger an alarm
10109	Trajectory planning error	The axis position, speed, acceleration, or acceleration exceeds the limit.	Modify the appropriate parameter based on the alarm reason
10110	Trajectory planning error	The input parameters are invalid. The displacement length does not meet the speed change requirements.	The input data is invalid due to a trajectory calculation error.
10111	Error in solving a cubic equation	Speed planning calculation error	Contact the manufacturer
10112	Trajectory planning error	velocity model error	Contact the manufacturer
10113	Trajectory planning error	Most of them are caused by the calculation accuracy	Contact the manufacturer
10114	Trajectory interpolation error. The trajectory planning buffer is empty.	Forward processing is too slow	Contact the manufacturer
10115	Trajectory interpolation error	Data error	Contact the manufacturer
10116	Dynamic adjustment speed ratio is too small	The speed percentage is less than 0.01 (%).	Only report to police, without affecting current operations
10117	Error in the instruction execution status	The joint angle of the recovery robot or the external axis joint angle of the follow-up command is not at the position during the pause, and the joint deviation is within 0.001 degrees.	Contact the manufacturer
10119	The maximum operating speed of the first processing point is incorrect	No speed or percentage set beyond 100	Check the first point speed percentage
10120	The maximum operating acceleration of the first processing point is incorrectly set	Acceleration or percentage is not set or exceeds 100	Check the percentage of acceleration or deceleration at the first point
10121	The maximum operating acceleration setting for the first processing point is incorrect	No acceleration or percentage above 100 is set	Check the first point's acceleration percentage
10122	The pose for inputting machining data is not a	Input quaternion is not a unit quaternion	Check the attitude of the first point

Code	Definition	Reason for reporting	Processing and solutions
	unit quaternion		
10123	The path transitions incorrectly. The angle limit is likely unreasonable.	The default angle limit is set to 180 degrees	Contact the manufacturer
10124	The angle limit set during the transition of the fusion trajectory is unreasonable	This is usually caused by improper angle limit settings.	Contact the manufacturer
10125	The input data hand binding does not match the current point hand binding	The inconsistency of the starting and ending points of the Descartes trajectory	Cartesian trajectory does not support variable hand system
10126	Data transition module data calculation error	The planning data contains non-numeric or infinite values	Contact the manufacturer
10127	The foreground processing window size is improperly set	It is generally greater than the forward translation size per time.	Contact the manufacturer
10128	Incorrect judgment of the forward-looking attitude attribute	Incorrect judgment of the forward-looking attitude attribute	Contact the manufacturer
10129	Incorrect number of data reads set	It is generally greater than the number of projections per session	Contact the manufacturer
10133	Error in interpolation time calculation	The total interpolation time is less than the previous interpolation cycle's total time.	Contact the manufacturer
10134	Error in interpolation time calculation	The current segment interpolation time is less than 0 or the remaining interpolation time is less than 0. This usually occurs at the first interpolation point.	Contact the manufacturer
10135	Error in assigning the fusion trajectory attitude forward-looking type	Data error	Contact the manufacturer to collect the log files.
10136	The Jump instruction activates the external axis function	Jump instruction does not support external axis movement	Check for external shaft motion superimposed on the Jump instruction
10137	The Jump instruction activates the arc function	Jump instruction does not support arc motion	Check for arc motion superimposed on the Jump instruction
10138	Jump movement LimZ settings are incorrect	Setting the LimZ value causes the Jump midpoint to exceed the limit	reset limZ
10140	The external axis system is not enabled	The external axis system is not enabled for the current operation.	Check the controlled parameters of the

Code	Definition	Reason for reporting	Processing and solutions
			external shaft to ensure the switch status matches the actual wiring.
10141	External axis calibration error	The movement distance of each axis in the external axis calibration is too short, less than 10mm or degrees.	Verify that the actual movement of each external shaft during calibration does not exceed the recommended values of 200mm or 20 degrees.
10142	Calibration error of the positioner	The alignment of the positioner is either collinear or the axes of adjacent joints are parallel.	The calibration algorithm of the integrated position machine at the bottom does not support parallel axis calibration
10143	The external shaft system number is incorrect	The external axis system number is incorrect or does not match the part number set at the point.	Select system 1 or system 2 for external axis calibration, then proceed with calibration.
10144	Incorrect setting for the external shaft motion type	All external axis point motion types are inconsistent. A rc instruction supports only one motion type.	The movement types at all points must be consistent when the external axis executes the RCPATH instruction.
10145	The transformation of the external axis collaborative motion trajectory is too large	The external axis's movement duration is either too long or the robot's movement duration is too short, resulting in synchronization failure between the external axis and the robot.	You can increase the speed of the external axis, raise the transition percentage of the external axis, or re-teach to reduce the displacement of the external axis.
10146	The external axis is moving	The external axis is in motion and cannot execute other motion commands.	The external axis is in motion when the RCPATH instruction is executed.

Code	Definition	Reason for reporting	Processing and solutions
10147	External shaft overspeed	This typically occurs during the external axis CP transition when the overlay speed exceeds the limit.	For cooperative movement, try reducing the robot speed. For non-cooperative movement, try reducing the external axis speed.
10148	Orbit calibration error	An external axis is moving when a certain axis is timed, with a threshold of 0.1 degrees.	recalibrate the positioner
10149	Calibration error of the positioner	When calibrating one axis, if another external axis moves or one axis is not at zero position, the threshold is 0.1 degree or mm.	recalibrate the positioner
10150	External axis data read error	External axis data read error	Collect alarm logs and contact the manufacturer
10151	Spline parameter calculation error	Limit the iteration count of the radius to the maximum	Collect alarm logs and contact the manufacturer
10154	Spline parameter calculation error	The interpolation time t exceeds the maximum number of iterations.	Collect alarm logs and contact the manufacturer
10155	Spline parameter calculation error	The calculation of control points overlaps, and the iteration error causes	Collect alarm logs and contact the manufacturer
10156	PTP mode 2 interpolation error	The number of iterations in calculating the interpolation time t of PTP exceeds the limit	Collect alarm logs and contact the manufacturer
10157	The post-up/down model point is unreachable	The trajectory points of the rear elevation model after obstacle avoidance exceed the limits.	Coordinate the check point information with the connecting rod parameters.
10158	Error in calculating spiral line data for the upper and lower lifting mechanism	The input point information cannot form a spiral line	Collect alarm logs and contact the manufacturer
10160	The external axis coordinate system is incorrect	The reference coordinate system for the robot point is incorrect when the external axis is in coordinated motion. Set it to the workpiece coordinate system.	Under the RCPATH instruction, the point reference coordinate system for external axis collaborative motion can only be set to the

Code	Definition	Reason for reporting	Processing and solutions
			workpiece coordinate system.
10161	External axis motion type setting exceeds limits	The external axis motion type number exceeds the limit.	Check the motion type setting for the external axis at the error point. RC commands only support motion types 0, 1, 2, 3, or 5. The external axis cannot exceed 5.
10162	The external axis calibration axis has no forward motion	The external calibration axis can only move in the forward direction and checks only the current calibration axis.	Check if the external shaft rotates in the opposite direction
10163	The movement of the axis in the positioner exceeds the limit during calibration.	During calibration, each axis of the positioner must not rotate forward beyond 360 degrees.	Check if the angle change during external axis calibration exceeds 360 degrees
10164	External shaft system configuration error	The common ground orbit configuration is incorrect. Currently, only System 1 ground orbit axis is controlled and System 2 ground orbit axis is uncontrolled.	Check the external axis controlled configuration parameters
10165	External axis target point position with hyperarticulation soft limit	The joint angle of the target point exceeds the maximum and minimum limit settings	Reset target point
10166	Jump instruction coordinate system is incorrect	Jump commands support only robot base coordinate system and joint coordinate system	Checkpoint coordinate system settings
10167	The non-standard axis moves during the Longmen calibration.	When calibrating a specific axis, other axes cannot move.	Re-calibrate the external axis
10168	The configuration of the controlled axis in the two-axis gantry is incorrect.	The two-axis gantry only supports setting the third external axis as uncontrolled	Reconfigure external axis
10170	The point sequence number is not monotonically increasing	The point number in the point attribute record must be assigned in a monotonically increasing order	Check if the checkpoint numbers are in monotonic increasing order

Code	Definition	Reason for reporting	Processing and solutions
10171	The number of reading points is too large	The number of read points exceeds the maximum allowed value of 200	Check if the number of read points exceeds the maximum allowed value
10172	Cache read pointer movement error	Data error	Collect alarm logs and contact the manufacturer
10180	The Iteration Number of S-Type Acceleration and Deceleration Control Exceeds the Limit	Data error	Collect alarm logs and contact the manufacturer
10181	The given time is too short to complete time synchronization	Data error	Collect alarm logs and contact the manufacturer
10182	The Iteration Number Exceeding the Limit of S-type Acceleration and Deceleration Control Based on Time Synchronization	Data error	Collect alarm logs and contact the manufacturer
10190	The error in the teaching of intersection line points is large.	The demonstration point is incorrect or the user entered incorrect intersection line parameters	When the error value is large, check the user input parameter register or point input register. If the error value is within the acceptable range, you can modify the error threshold.
10191	The Newton iteration of the intersection line exceeds the limit.	The iteration calculation has not converged after the set number of iterations	Contact the manufacturer
10192	The angle parameter for the intersection line arc length calculation is incorrect.	A negative number appears under the square root when calculating rotation angle parameters based on arc length.	Check if the intersection line model meets the requirements and if the two pipe parameters are within the range.
10193	Invalid rotation type assignment for the intersection line	The rotation type of the intersection line is not clockwise and counterclockwise.	Contact the manufacturer
10194	The curvature of the intersection line is	The first derivative of the position is too small, and the denominator for curvature	Contact the manufacturer

Code	Definition	Reason for reporting	Processing and solutions
	calculated incorrectly.	calculation approaches 0.	
10195	The intersection line exceeds the allowed length	The overlength exceeds one quarter of the arc length	The overconnection length is set to decrease
10196	The intersection line offset exceeds the limit.	The absolute value of the offset exceeds the absolute difference between the main pipe radius and the branch pipe radius.	Check the offset setting register. If correct, this type of intersection line is not supported.
10197	The coordinate transformation matrix of intersection line is not orthogonal or non-numeric	The transformation matrix of the intersection line's main coordinate system relative to the robot's base coordinate system is a non-orthogonal unit matrix.	Contact the manufacturer
10198	The radius of the main branch line is less than or equal to that of the branch line.	The supervisor radius is no larger than the branch radius	Check the radius value setting register. If correct, this type of intersection line is not supported.
10199	The intersection line points are in incorrect order or have duplicate points	The teaching sequence does not follow a sequential pattern or include identical teaching points.	Check the order and size of the input points
10200	The robot is not at the zero position when triggering the Fourier trajectory.	The robot must be at the zero position when running the Fourier trajectory.	returning a robot to zero point
10201	No joint maximum torque is set	The point attribute is PTP mode 3, but the joint's maximum torque is not set.	Contact the manufacturer
10204	Cf parameter configuration error	The robot inverse solution cannot be selected in the configuration parameters of Cf.	Configure Cf at the checkpoint
10209	The first overspeed point cannot be avoided effectively	The first overspeed point cannot be avoided with the current configuration parameters	reducing point velocity
10210	The initial value of the calibration parameter is not set	The initial value of the algorithm is not set when trigger self-calibration calculation	Check if the convergence error setting is less than 1. Set it to 1 or greater.
10211	Error in the initial calibration point of the positioner	P2 and P3 are the same point	Measure P2 and P3 again
10212	Incorrect selection of the	No tool parameters for the selected tool	Check if the tool

Code	Definition	Reason for reporting	Processing and solutions
	calibration tool number for the positioner	were selected during the positioner calibration	selection is correct before calibrating the positioner
10213	The first parameter of the error model calibration is not obtained	The initial value for the first TCP calibration step was not obtained during the second step of error model calibration.	Check if the corresponding tool number register has a parameter
10214	The iteration result deviates from the true value.	The iteration result deviates too much. Modify the parameters and recalculate.	Modify parameters and recalculate
10215	Four-axis TCP repeatability	Four-axis TCP repeatability	Check input
10216	The teaching points for workpiece calibration may overlap.	The teaching points for workpiece calibration may overlap.	Check the teaching point and re-teach it.
10225	Tracking is not enabled	The follow function is not enabled when executing related motion commands	Enable belt tracking
10227	Trigger error during motion tracking	The wrong follow motion section was triggered	The first segment after an ordinary RC point must be a pursuit movement. after pursuit, it must be a synchronized movement or deceleration. after synchronized movement, it must be a synchronized movement or deceleration. after deceleration, it must be a pursuit movement or an ordinary RC command.
10228	The track type in the synchronization process is incorrect	RC Trajectory Type Error in the Synchronous Process of Following the Movement	The corresponding trajectory type must be one of the following: straight line, arc, three-line jump, or non-motion segment.
10229	Exceeding the Limit in the Process of Robot	The robot goes beyond the lower working limit or follows the stop line during the	Set the start position of the chase downstream

Code	Definition	Reason for reporting	Processing and solutions
	Following and Synchronization	synchronous movement	of the work upper boundary and advance it as much as possible. advance the trigger lower boundary appropriately
10250	The robot's end is about to leave or has already left the work area	The robot is about to move beyond the workspace	Replan the trajectory
10251	The robot's end is about to enter or has already entered the restricted area	The robot is about to enter the restricted area	Replan the trajectory
10252	The point loading process has exceeded the limit for the sequence number setting.	The processOut number exceeds the maximum limit	Contact the manufacturer
10253	Changing the processOut parameter during the process is invalid	You cannot modify the processOut parameter during the operation	Modify the processOut parameter after exercise
10260	The maximum value of the axial feedback torque exceeds the limit.	No rated torque is set	Check if the rated and maximum torque in the motor configuration are appropriate.
10261	The maximum value of the feedback torque from the motor exceeds the limit.	No rated torque is set	Check if the rated and maximum torque in the motor configuration are appropriate.

1.4 Motor Bus Error Code

For servo alarm detection, refer to Appendix 1: XINJE Servo Alarm Codes.

Code	Definition	Reason for reporting	Processing and solutions
20001	Maximum soft limit over travel	Maximum soft limit overtravel for the axis	Move the axis in reverse to exit the overtravel area, then manually clear the alarm flag and code.
20002	Minimum soft limit overtravel	minimum axial limit overrun	Move the axis forward to exit the overtravel area, then manually clear the alarm flag and code.
20003	Maximum electrical limit overtravel	Maximum electrical limit overtravel of the axis	Move the axis in reverse to exit the overtravel area, then manually clear the alarm flag and code.
20004	Minimum electrical limit overtravel	The minimum electrical limit for the axis i is beyond the specified range.	Move the axis forward to exit the overtravel area, then manually clear the alarm flag and code.
20005	Speed alarm	Axis I overspeed, decelerate and stop	Decreasing target speed of axis i instruction
20006	Position deviation alarm	The axis position is off.	Check if the axis servo P0-05 is correctly set to 0. Inspect the mechanism for causes of excessive position command and feedback deviation, such as locked rotor. After troubleshooting, re-enable the system.
20010	Servo alarm	The axis I servo panel is alarm.	Manual clearance of servo alarm messages is available through error confirmation or the F0-00 function on the servo panel. For non-clearable alarms, refer to the servo manual to disable the alarm. After deactivation, the alarm flag and code can be manually cleared.
20011	Servo communication error	The axis i and servo communication error, and the controller status is switched to online download	Check the communication parameters and connections of the axis.
20020	Over run alarm of target point of motion command	Axis i motion instruction target point out-of-range alarm	Change the axis to a reasonable target position

Code	Definition	Reason for reporting	Processing and solutions
20021	The target speed for the movement command has exceeded the limit.	The target speed of the axis i motion command exceeds the limit.	Change the axis to a reasonable target speed
20022	Too many multi-stage motion commands	The number of axis multi-segment motion instruction segments exceeds the limit.	Change the number of reasonable multi-segment instructions for the axis
20023	The movement command has exceeded the acceleration and deceleration time limits.	The acceleration and deceleration time limit for the axis i motion command is exceeded.	Change the acceleration and deceleration time of the axis for reasonable command movement
20025	The axis number is out of limit	The axis number of the bound axis exceeds the limit.	Check the axis number of the axis bound to the axis instruction
20026	The input point of the return-to-zero terminal is set beyond the limit.	The input point of the axis i return zero terminal is set beyond the limit.	Check the settings of the input points related to the axis zero return, including the near-point terminal and origin terminal.
20028	The closed-loop feedback counter port is misconfigured	The counting port settings for the axis i full closed-loop feedback are incorrect.	Contact the manufacturer
20030	The current motion state does not meet the conditions for instruction execution	The current motion state of the axis does not meet the condition for instruction execution.	Wait until the motion flag is OFF and the servo enable flag is ON before executing the command.
20031	The motion state of the bound axis does not meet the conditions for executing the binding command.	The motion state of the bound axis does not meet the conditions for executing the binding command.	Wait until the flag for the bound axis in motion is OFF and the servo enable flag is ON before executing the MOSYN command.
20032	The current axis motion mode is incorrect	Axis i motion mode is incorrect	Contact the manufacturer
20033	Continue to have	Axis i retention error	Contact the manufacturer
20034	The motor is already enabled when the user performs the enable operation.	The i-axis motor is already enabled when the user performs the enable operation.	Check the causes of servo enable, such as the axis i servo enable mode. Correct the issue and re-enable the operation.
20035	Motor type is not set	The axis i motor type is not set	Contact the manufacturer
20036	Failed to return to the origin. Try again. The movement stopped when	Failed to return to the origin. Movement stopped while searching	Return to origin

Code	Definition	Reason for reporting	Processing and solutions
	searching for the perihelion.	for the perihelion.	

XR System Warning Codes and Error Codes 2: Troubleshooting Common Issues

2. Handling Common Issues

Problem 1: Alarm 2269 triggered during the first system startup

Reason: The emergency stop is determined by the input variable DI. When users first use the system, the variable status differs from the controller's internal status, triggering an emergency stop alarm during controller connection or program download.

Solution: Upgrade to administrator or higher privileges, download the program, and complete initialization configuration. Refer to Chapter 4 of the XR Universal Robot System V4.0 User Manual for detailed steps.

XR System Warning Codes and Error Codes Appendix

Appendix

Appendix 1: XINJE Servo Alarm Codes

Appendix 1.1 EtherCAT Communication Correlation Abnormal Alarm

This chapter presents servo alarm codes using the DS5C2 servo driver as an example.

Code	Cause of error		Resolvent
E-800	Incorrect ESM request for exception protection	Accept conversion requests from states that cannot be converted from the current state: Init→Safeop Init→OP PreOP→OP Error status of ESM: Stays in the current state (Init, PreOP, SafeOP) when it occurs, and transitions to SafeOP during operation. ESC register AL Status Code: 0011h When the EC bus mode switches to normal mode, if the EtherCAT master station remains connected, it can only request the PREOP status. Otherwise, an E-800 error will be reported.	1. Confirm the state transition requirements of the upper device. 2. When using the EC bus mode, set P0-00 to 1. ② Verify the correctness of the master station's PDO configuration.
E-801	ESM requirements are not defined for exception protection	Accept state transition requests except those specified below: 1：Request Init State 2：Request Pre-Operational State 3：Request Bootstrap State 4：Reauest Safe-operational State 8：Request Operational State Error status of ESM: Stays in the current state (Init, PreOP, SafeOP) when it occurs, and transitions to	Confirm the state transition requirements of the upper device. Alarm can be cleared by setting F0-00=1 on the servo panel.

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Code	Cause of error		Resolvent
		SafeOP during operation. ESC register AL Status Code: 0012h	
E-802	The guidance state requires exception protection	Accept the following state transition requirements: 3：Request Bootstrap State Error status of ESM: Init ESC register AL Status Code: 0013h	Confirm the state transition requirements of the upper device. Alarm can be cleared by setting F0-00=1 on the servo panel.
E-803	PLL incomplete exception protection	After 1 second of synchronization processing, the phase combination between communication and servo (PLL lock) still cannot be completed. Error status of ESM: PreOP ESC register AL Status Code: 002Dh	Verify the DC settings and ensure propagation delay compensation and deviation compensation are correct. Set the servo panel F0-00=1 to clear the alarm.
E-804	PDO watchdog exception protection	During PDO communication (SafeOP or OP state), the bit10 of time 0220 (AL Event Request) is not ON when setting the ESC register addresses 0400 (Watchdog Divider) and 0420 (Watchdog Time Process Data). Error status: Safe OP ESC register AL Status Code: 001Bh PDO communication connection lost	1. Verify if the PDO's transmission time from the upper device is fixed or interrupted. 2. The PDO watchdog detected an excessively large delay value. 3. Check for wiring issues in the EtherCAT communication cable and excessive noise on the cable. Replace it with a high-quality network cable. 4. Reconnect the communication cables, leaving the network cable suspended and disconnected from the power line. 5. Shut down welding machines and other interference devices before restarting to eliminate interference issues. 6. Cross-test to identify

XR System Warning Codes and Error Codes Appendix

Code	Cause of error		Resolvent
			the fault point. Alarm can be cleared by setting F0-00=1 on the servo panel.
E-806	PLL exception protection	The ESM state occurs when the phase (PLL lock) between communication and servo fails to synchronize during SafeOP or OP operations. Error status of ESM: SafeOP ESC register AL Status Code: 0032h	Verify the DC settings and ensure propagation delay compensation and deviation compensation are correct. You can clear the alarm or reset the system by disconnecting the power supply through the servo panel F0-00=1.
E-807	Simultaneous signal abnormality protection	After the synchronization processing is completed, the SYNC0 or IRQ interrupt processing is triggered when the value exceeds the preset threshold. Error status of ESM: SafeOP ESC register AL Status Code: 002Ch	Verify the DC settings and ensure propagation delay compensation and deviation compensation are correct. You can clear the alarm or reset the system by disconnecting the power supply through the servo panel F0-00=1.
E-810	Synchronizatio n period setting exception protection	Unsupported sync cycles: When the synchronization period setting value is outside the range of 250,500,1000,2000,4000,8000, or 10000 μs, an error occurs and the ESM status is PreOP. ESC register AL Status Code: 0035h	Set the synchronization period correctly Clear the alarm via the servo panel F0-00=1
E-811	Set up email exception protection	Incorrect SM0/1 settings in the email: The email's sending/receiving area overlaps with SM2/3, and the address of the sending/receiving area is odd. The starting address of the mailbox is outside the range of SyncManager0: 1000h~10FFh and SyncManager1: 1200h~12FFh. Incorrect SyncManager0/1 length (ESC registers: 0802h,0803h/080Ah, 080Bh) configuration: SyncManager0: out of range (32~256 bytes) SyncManager1: out of range (40-256 bytes) Incorrect configuration of SyncManager0/1's	Set SyncManager correctly according to the ESI file description Clear the alarm via the servo panel F0-00=1

XR System Warning Codes and Error Codes Appendix

Code	Cause of error		Resolvent
		Control Register (ESC register: 0804h/080Ch): Set 100110b to 0804h: bit5-0 Set 100110b to 080Ch: bit5-0 Error status of ESM: Init ESC register AL Status Code: 0016h	
E-814	PDO watchdog setting exception protection	PDO watchdog configuration is incorrect. The PDO watchdog is active (SyncManager: bit6 of register 0804h is 1). The timeout thresholds detected by the PDO watchdog (registers 0400h and 0402h) do not meet the requirement of 'communication cycle * 2'. Error status of ESM: PreOP ESC register AL Status Code: 001Fh	Set the watchdog timeout correctly Clear the alarm via the servo panel F0-00=1
E-815	DC setting abnormal protection	The DC setting error. The bit2-0 of the ESC register 0981h (Activation) must be set to any value except those specified below. bit2-0=000b； bit2-0=011b Error status of ESM: PreOP ESC register AL Status Code: 0030h	Confirm DC settings Clear the alarm via the servo panel F0-00=1
E-816	SM event pattern setting exception protection	The unsupported SM time mode is set. The 1C32/1C33-01 chip sets values other than 00,01, or 02. The bit2-0 of the ESC register 0981 is set to 000b, and only the SM2 of 1C32h-01h and 1C33h-01h are enabled. Error status of ESM: PreOP ESC register AL Status Code: 0028h	Confirm that the settings for 1C32h-01h and 1C33h-01h are identical and the values are 00h,01h, or 02h. Clear the alarm via the servo panel F0-00=1
E-817	SyncManager 2/3 setting exception protection	SM2/3 is set to an incorrect value Incorrect physical address configuration for SM2/3 (ESC register: 0810h/0818h): The transmission/reception area overlaps with SM2/3, the starting address is odd, and the destination address is out of range. SM2/3 length configuration (ESC register: 0812h/081A) differs from RxPDO and TxPDO The control register (ESC register: 0814h/081Ch) of SM2/3 is improperly configured. Set all bits from 5 to 0 except 100110b Error status of ESM: PreOP ESC register AL Status Code: 001Dh/001Eh	Set SyncManager2/3 correctly according to the ESI file description Clear the alarm via the servo panel F0-00=1
E-850	TxPDO	The data size mapped by TxPDO exceeds 32 bytes	Ensure the TxPDO

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Code	Cause of error		Resolvent
	allocation exception protection	Error status of ESM: PreOP ESC register AL Status Code: 0024h	mapping data size is set to 32 bytes or less Clear the alarm via the servo panel F0-00=1
E-851	RxPDO allocation exception protection	The RxPDO mapping exceeds 32 bytes Error status of ESM: PreOP ESC register AL Status Code: 0025h	Confirm the RxPDO mapping data size is set to 32 bytes or less Clear the alarm via the servo panel F0-00=1
E-881	Control mode setting exception protection	When both the 6060h and 6061h settings are 0, the PDS status transitions to 'Operation enabled'. The control mode corresponding to 6060h is not set. Error after ESM status: Stopped at the current ESM status ESC register AL Status Code: 0000h	Confirm the 6060h setting Clear the alarm via the servo panel F0-00=1
E-882	ESM requires exception protection during operation	When the PDS status is either 'Operation enabled' or 'Quick stop active', it receives commands to transition to other ESM states. ESM status after error: Based on the status transition request from the host computer ESC register AL Status Code: 0000h	Verify the status transition request from the parent device Clear the alarm via the servo panel F0-00=1
E-883	Abnormal movement protection	When the input signals EXT1/EXT2 are not assigned, the external trigger is selected via the Touch probe function. Before calculating the electronic gear ratio, if the denominator or numerator exceeds 31 bits without sign. The calculation process of electronic gear ratio, when the denominator or numerator has no sign and exceeds 64 bits. The final calculation result of electronic gear ratio, when the denominator or numerator has no sign and exceeds 32 bits, or when it is outside the range of 8000 to 1/1000 times. Error after ESM status: Stop in the current ESM status ESC register AL Status Code: 0000h	Check if the probe's functional terminal assignments (P5-62/P5-63) are correct. Check if the electronic gear ratio is set correctly. Clear the alarm via the servo panel F0-00=1
E-899	The program cannot access the bus peripheral device	An abnormal bus EEPROM data load or hardware failure causing the bus-specific chip to malfunction may result in E-899.	EEPROM update bus Contact the agent or the manufacturer's after-sales service

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Appendix 1.2 EtherCAT Communication Non-Related Abnormal Alarm

The DS5 alarm code follows the E-XX□ format, where 'XX' indicates the alarm's category and' □' specifies the exact subcategory.

Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
EEEE	1	EEEE1	Panel communication error with CPU	①The power supply voltage fluctuates significantly, and the low voltage causes the panel to fail to refresh. ②The panel program is corrupted.	①Stable power supply, ensure the stability of power supply voltage. ②If the alarm cannot be resolved after power-off and power-on, contact the agent or manufacturer.
	2	EEEE2			
	3	EEEE3			
	4	EEEE4		①The power supply voltage fluctuates significantly, and low voltage causes panel refresh failure. ②The panel program is corrupted. ③ Communication enters a dead loop	①Stable power supply, ensure the stability of power supply voltage. ②If the alarm cannot be resolved after power-off and power-on, contact the agent or manufacturer. ③Unplug the communication terminal and run the program to confirm.
01	0	E-010	The firmware version does not match	The downloaded firmware version is incorrect	Contact the agent or manufacturer
	3	E-013	FPGA loading error	The program is corrupted. ② The device is damaged.	Contact the agent or manufacturer
	4	E-014	FPGA access error	The program is corrupted. ② Hardware damage ③ The intensity of external interference is too high.	Contact the agent or manufacturer

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
	5	E-015	Program error	Program error	Contact the agent or manufacturer
	7	E-017	Processor operation timed out	Program error	Contact the agent or manufacturer
	9	E-019	Incorrect system password	Program error	Contact the agent or manufacturer
02	0	E-020	Parameter loading error	Parameter self-check failed	Powering on again will restore the default settings. If the issue persists, contact your agent or manufacturer.
	1	E-021	Parameter range exceeded	The value is not within the specified range	Check parameters and reset
	2	E-022	Parameter conflict	TREF or VREF function settings conflict	①Check whether the parameter settings meet the requirements. When operating in P0-01=4 mode, setting P3-00 to 1 will trigger an alarm.
	3	E-023	Sampling channel configuration error	The custom output trigger channel or data monitoring channel is misconfigured	Check if the settings are correct
	4	E-024	Parameter lost	The grid voltage is too low.	①For single-phase 220V power supply, connect L1 and L3. ②If power is restored immediately after a power outage, the E-024 alarm will be triggered. Reset parameters
	5	E-025	Erase FLASH error	Parameter save failed during power loss	Contact the agent or manufacturer
	6	E-026	FLASH initialization error	Unstable power supply for FLASH chip	Contact the agent or manufacturer
	8	E-028	EEPROM write error	Voltage instability or chip malfunction	Contact the agent or manufacturer
03	0	E-030	The busbar voltage U0-05	The grid voltage is too high.	Check the power grid voltage fluctuations. The 220V driver

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
			exceeds the preset threshold. 220V power supply machine (U0-05≥402V) 380V power supply machine (U0-05≥780V)		operates within 200V-240V, while the 380V driver requires 360V-420V. For significant voltage variations, use the correct voltage source and regulator.
				Excessive load moment of inertia (insufficient braking capacity)	① Connect the external braking resistor (220V: discharge starts at U0-05=392 and ends at U0-05=377. 380V: discharge starts at U0-05=750 and ends at U0-05=720). ② Increase the acceleration and deceleration time. ③ Reduce the load inertia. ④ Reduce the start-stop frequency. ⑤Replace with a higher power driver and motor
				The braking resistor is damaged or has excessive resistance	Check the brake resistor and replace it with an external resistor of appropriate resistance.
				The acceleration and deceleration time is too short	Extend acceleration and deceleration time
				Hardware fault of the internal sampling circuit of the drive	Use the AC range of a multimeter to measure the input voltage of the servo LN (R/S/T). The normal value is 220V ±10%. If the measured value exceeds 220V ±10% (380V ±10%), check the supply voltage. If the supply voltage is normal, the servo is in BB status. Monitor U0-05. If the voltage measured by the multimeter (1.414 times the

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
					measured value) is less than U0-05 (within 10V error), the servo driver is faulty and needs to be returned for repair.
04	0	E-040	The busbar voltage U0-05 is lower than the preset threshold. 220V power supply machine (U0-05≤150V) 380V power supply machine (U0-05≤300V)	Alarm for low grid voltage during normal power-on	① Monitor the power grid's voltage fluctuations. The 220V driver operates within a normal voltage range of 200V to 240V. If significant voltage fluctuations occur, consider using a voltage stabilizer. ②Replace the transformer with a larger capacity
				Instant power outage	Wait for the voltage to stabilize before powering on again
				Hardware fault of the internal sampling circuit of the drive	Use the AC range of a multimeter to measure the input voltage of the servo LN (R/S/T). The normal value is 220V ±10%. If the measured value is <220V ± 10% (380V ±10%), check the supply voltage. If the supply voltage is normal, the servo is in BB status. Monitor U0-05. If the multimeter reading is 1.414 times the U0-05 voltage (within 10V error), the servo driver is faulty and must be returned for repair.
	1	E-041	Power failure of the drive	The drive power supply is disconnected.	Check the power supply
	3	E-043	Busbar voltage charging failed	Alarm for low grid voltage during normal power-on	Alarm for low grid voltage during normal power-on
				Hardware damage	When powering on the drive, check for any relay in the closed position.
	4	E-044	Three-phase	The three-phase input	Check the power supply

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
			voltage input with one phase missing	power supply is missing one phase.	
06	0	E-060	The module temperature is too high. Alarm for module temperature U0-06 ≥ 95℃ U0-06≥ 70℃ Warning)	Long-term operation under heavy load	Re-evaluate the motor capacity and monitor the U0-02 torque during operation to check if it remains above 100 for extended periods. If so, consider using a higher-capacity motor or reducing the load.
				The ambient temperature is too high.	①Enhance ventilation measures to lower ambient temperature. ② Check if the fan rotates during servo enable. if module temperature U0-06 reaches or exceeds 45℃, the fan will activate
				Fan damage	Replace the fan
	1	E-061	Motor overheating	Alarm when motor temperature exceeds 140℃	① Check if the motor fan is functioning properly. ②Contact the manufacturer for technical support.
	3	E-063	Thermocouple breakage alarm	Thermocouple break in motor with power of 11kW or above ② Alarm for incorrect activation of motor below 11kW due to detected wire breakage	Check the external thermocouple connection. Shielded thermocouple break alarm: P0-69.1=1
08	0	E-080	Over-speed (actual speed ≥ P3-21/P3-22) The maximum forward speed is P3-21, and	Motor code does not match	Check if the motor code (the number after MOTOR CODE) on the U3-00 drive and the motor label match. If they do not, adjust them to match and power on again.
				UVW wiring error	Check the UVW wiring of the

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
			the maximum reverse speed is P3-22.		motor and connect it according to the phase sequence.
				The motor is running too fast.	① The maximum speed limit P3-21/P3-22 is reduced. ② Check if any external force causes the motor to rotate too fast, if the pulse input frequency is too high, or if the electronic gear ratio is excessive.
				Encoder fault	①Check the encoder cable or replace the encoder cable. ② Set the servo driver to the bb mode and adjust the driver to U0-10. Slowly rotate the motor shaft by hand to verify the normal value change of U0-10, which should show an increasing value in one direction and a decreasing value in the other (displaying a 0-9999 cycle).
				Parameter setting	An alarm will be triggered if the actual speed exceeds the P3-21/P3-22 ratio.
		E-082	Encoder zero position deviation protection 1	① UVW phase sequence misalignment ② Zero position deviation of the motor encoder	① Check whether the three-phase power lines are connected in the UVW sequence. ② Check the encoder zero position. Contact the manufacturer's technical support.
10	0	E-100	Excessive positional deviation	When position control is active, the difference between the set position and the actual position exceeds the limit.	① Observe whether the motor is locked. ② reduce the position given speed.

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
					③ Increase the pulse limit value P0-23
	1	E-101	Position command mutation	Periodic position command error is too large	①Check the position command input and confirm whether the error in the input causes excessive changes in the position command. ②Check whether the electronic gear ratio is too large to cause the position command to change abruptly. ③ Confirm that the target position matches the position feedback before mode switching or when servo is enabled.
11	0	E-110	A short circuit in the external UVW was detected during self-test.	No motor code found	Check if the motor code (the number after MOTOR CODE) on the U3-00 drive and the motor label match. If they do not, adjust them to match and power on the system again.
				U, V, W wiring error	Check the motor's UVW wiring and ensure it is connected in the correct phase sequence (brown U, black V, blue W).
				The driver's UVW output is short-circuited or the motor is faulty.	①Check if the UVW phase resistance of the motor is balanced. Replace the motor if the resistance is unbalanced. ② Check for short circuits between the motor's UVW and PE terminals. Replace the motor if a short circuit is detected. ③ Measure the driver-side UVW output using a multimeter

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
					(diode mode): connect the black probe to P+ and the red probe to UVW. or use the reverse probes (red to P-, black to UVW). Replace the driver if any of the six voltage drop values is zero.
				The load part is stuck in place.	Run the motor with the shaft idle to troubleshoot the load issue
				Instant alarm for high-speed start/stop	Increase acceleration and deceleration time
				Encoder problem	①Check the encoder cable or replace the encoder cable. ② Set the servo driver to the bb mode and adjust the driver to U0-10. Slowly rotate the motor shaft by hand to verify the normal value change of U0-10, which should show an increasing value in one direction and a decreasing value in the other (displaying a 0-9999 cycle).
	2	E-112	U-phase current overcurrent protection	U, V, W wiring error	Check the motor's UVW wiring and ensure it is connected in the correct phase sequence (brown U, black V, blue W).
				The driver's UVW output is short-circuited or the motor is faulty.	① Check if the UVW phase resistance of the motor is balanced. If the resistance is unbalanced, replace the motor. ② Check for short circuits between the motor's UVW and PE terminals. Replace the motor if a short circuit is detected. ③ Measure the driver-side UVW output using a multimeter (diode mode): connect the black probe to P+ and the red probe to

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
					UVW. or use the reverse probes (red to P-, black to UVW). Replace the driver if any of the six voltage drop values is zero.
				The load part is stuck in place.	Run the motor with the shaft idle to troubleshoot the load issue
				Instant alarm for high-speed start/stop	Increase acceleration and deceleration time
				Encoder problem	①Check the encoder cable or replace the faulty cable. ② Set the servo driver to the bb mode and adjust the driver to U0-10. Slowly rotate the motor shaft by hand to verify the normal value change of U0-10, which should show an increasing trend in one direction and a decreasing trend in the other (displaying a 0-9999 cycle).
	3	E-113	V-phase current overcurrent protection	U, V, W wiring error	Check the motor's UVW wiring and ensure proper phase sequence (brown U, black V, blue W).
				The driver's UVW output is short-circuited or the motor is faulty.	① Check if the UVW phase resistance of the motor is balanced. If the resistance is unbalanced, replace the motor. ② Check for short circuits between the motor's UVW and PE terminals. Replace the motor if a short circuit is detected. ③ Measure the driver-side UVW output using a multimeter (diode mode): connect the black probe to P+ and the red probe to UVW. or use the reverse probes (red to P-, black to UVW). Replace the driver if any of the

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
					six voltage drop values is zero.
				The load part is stuck in place.	Run the motor with the shaft idle to troubleshoot the load issue
				Instant alarm for high-speed start/stop	Increase acceleration and deceleration time
				Encoder problem	①Check the encoder cable or replace the encoder cable. ② Set the servo driver to the bb mode and adjust the driver to U0-10. Slowly rotate the motor shaft by hand to verify the normal value change of U0-10, which should show an increasing trend in one direction and a decreasing trend in the other (displaying a 0-9999 cycle).
15	0	E-150	Power line break	The drive unit, cable, or motor experiences a broken power line in any of the U/V/W three-phase system.	Unplug the driver's power supply and check the power line connection. It is recommended to use a multimeter to test the conduction. After troubleshooting, power the device again.
16	1	E-161	Overload of the thermal power of the drive	Motor code does not match	Check if the motor code (the number after MOTOR CODE) on the U3-00 drive and the motor label match. If they do not, adjust them to match and power on again.
				The motor is overloaded, with actual operating torque exceeding the rated torque and sustained continuous operation. (Monitor U0-02 for actual operating torque. If the motor operates normally without stalling or	Increase the capacity of the drive and motor. Extend the acceleration and deceleration time, and reduce the load. Monitor U0-00 to check for overspeed operation.

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
				vibration, and U0-02 remains consistently above 100, this indicates improper motor selection.)	
				The machine is hit, the machine suddenly becomes heavy, or the machine twists.	Eliminate mechanical distortion and reduce load
				The motor activates when the brake is not released.	Measure the voltage of the brake terminal to determine the opening of the brake. The braking control method should be determined, and it is recommended to use the servo BK brake signal for control. If servo control is not used, the timing between brake opening and motor operation must be carefully considered.
				The encoder and power lines are miswired, or there are broken wires or loose connectors with pin shrinkage.	Check the wiring of the U, V, and W power lines to ensure correct phase sequence. Use a multimeter to check if all encoder wires are properly connected and if any are broken. Check for loose connectors, machine vibrations, and any pin shrinkage, poor soldering, or damage to the connectors.
				In multi-machine wiring, the motor wire was mistakenly connected to another shaft, resulting in incorrect wiring.	Check the servo wiring and connect the motor and encoder cables to their respective shafts.
				Gain adjustment issues cause motor vibration, back-and-forth movement, and abnormal noise.	Re-adjust the gain parameter
				Hardware failure in the	On-site servo cross-test indicates

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
				drive or motor	either motor shaft misalignment or motor shaft idle, causing F1-01 trial run and F1-00 stop-motion to fail in achieving uniform rotation. Replace the faulty drive or motor, and return the defective unit to the manufacturer for repair.
	5	E-165	Anti-rotation alarm If the current motor output torque exceeds the torque limit P3-38/39, and the duration reaches P0-74 (in milliseconds) while the speed remains below P0-75 (1 rpm), an alarm will be triggered.	①The machine is impacted, the machine is suddenly heavy, the machine is twisted. ②The motor operates when the brake is not released. ③ The parameter setting is unreasonable.	①Eliminate the mechanical distortion factors and reduce the load. ② Measure the voltage at the brake terminal to confirm the brake is released. The braking control mode should be determined, and it is recommended to use the servo BK brake signal for control. If servo control is not used, the timing between brake opening and motor operation must be carefully considered. ③ Monitor the actual output torque range of U0-02 and verify the rationality of the torque limit value settings.
20	0	E-200	Overload of braking resistor	The power grid voltage fluctuates significantly, resulting in excessive voltage.	Improved incoming voltage
				The braking resistor is too small in size.	Replace the brake resistor with a higher power rating
				The acceleration and deceleration time is too short	Extend acceleration and deceleration time
				Hardware damage	Use the AC range of a multimeter to measure the input voltage of the servo LN (R/S/T). The

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
					normal value is 220V ±10%. If the measured value exceeds 220V ±10% (380V ±10%), check the supply voltage. If the supply voltage is normal, the servo is in BB status. Monitor U0-05. If the voltage measured by the multimeter (1.414 times the measured value) is less than U0-05 (within 10V error), the servo driver is faulty and must be returned for repair.
22	0	E-220	Absolute value servo encoder communication error	Motor mismatch	Check if the motor matches correctly
				The encoder wire is not connected or has poor contact.	Check if the U0-54 value rises rapidly. If so, the encoder circuit is likely disconnected. Unplug the drive power and check the encoder cable connections for loose wires. Test the continuity with a multimeter. After resolving the issue, power on the device again. ① Hot swapping is strictly prohibited. ② For tank chains, use dedicated cables.
				The received encoder data is incorrect, and the number of errors exceeds the value in the P0-56 register for encoder error retries.	Check if the value of U0-54 increases and the value of U0-79 rises. If so, the encoder is likely to be interfered with. Do not route encoder wires through the same conduit as high-voltage circuits. Install a power filter on the servo driver's input side. Use magnetic ferrules for encoder wires. Discontinue operation of welding machines and other high-interference

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
					equipment.
	1	E-221	Too many CRC errors in encoder communication	The encoder is being interfered with.	When using XJ original cables, if they are not the original encoder cables, ensure they are twisted pair shielded cables. The wiring should separate strong and weak current circuits. Power cables and encoder cables must not be bundled together. Servo motors and drivers should be properly grounded. The encoder cable must be fitted with a magnetic ring. Close the welding machine and other equipment with large interference to judge the source of interference. isolate the interference source.
	2	E-222	Absolute servo encoder battery low voltage alarm (this alarm can be masked)	The battery voltage in the encoder line battery box is below 3V.	To prevent encoder position errors, replace the battery while keeping the servo drive powered on. Battery specifications: AA battery, 3.6V (model CP-B-BATT).
				The new machine power-on alert indicates the encoder position loss alarm.	①The absolute position memory of the motor during power failure relies on the battery in the encoder cable. If the encoder cable and motor are disconnected and power supply is lost, the current position of the motor will be lost, triggering alarm 222. Simply reset the alarm by setting F0-00=1 to restore normal operation. ②Using P0-79 can disable this alarm. When P0-79 is set to 1, the motor operates as an incremental type, with no multi-turn counting. Power-off will erase the current

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
					position.
	3	E-223	Absolute value servo encoder data access alarm	The multi-turn absolute value motor does not use encoder cables with battery boxes.	①Use the encoder cable with its battery compartment, or replace the normally used cable and perform cross-test.
				The encoder is faulty or the power supply is unstable.	② The encoder is malfunctioning, requiring replacement of the servo motor.
	7	E-227	The multi-turn signal data of the Shanghai Electric encoder is incorrect.	The issue is usually with the encoder itself or its unstable power supply.	① Check the encoder cable for functionality and replace any faulty cables. ②Replace the motor.
	8	E-228	Absolute value servo encoder value overflow	The absolute encoder rotation in positive direction exceeds 32767 or in negative direction exceeds 32768	① Set F1-06=1 and reset the absolute encoder's multi-turn count. ②For applications requiring multi-turn absolute position recording, set P0-79=2 to disable the alarm. for applications without such need, set P0-79=1.
	9	E-229	Encoder electrical angle deviation protection	① The phase sequence of the motor power line is wrong. ② Encoder zero position offset	① Check whether the three-phase sequence of the dynamic line is connected according to the phase sequence of UVW. ② Check the encoder's zero position. Contact the manufacturer's technical support for assistance.
24	0	E-240	The timing error in obtaining encoder position data	①The encoder communication of the servo driver is abnormal.	① Restart the drive. ② Check the wiring arrangement of the transmission

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
				② The encoder signal is interfered. ③ Encoder malfunction	cables to ensure the separation of high-voltage and low-voltage circuits. ③The high-current equipment is supplied separately. ④ Good grounding.
	1	E-241	The encoder responds with corrupted data.	①The received encoder data is incorrect. ② The encoder signal is interfered. ③ Encoder malfunction	① Check the wiring arrangement of the transmission cables to ensure the separation of high-voltage and low-voltage circuits. ②The high-current equipment is supplied separately. ③ Good grounding.
25	0	E-250	Error alarm for returning to the origin	①If the total time to return to the origin for P9-15 is not zero, it must exceed the time set for P9-15. ② The original function parameters of the new return are set incorrectly.	① Increase P9-15. ② Ensure the direction of the mechanical offset (P9-19, P9-20) is opposite to the direction of returning to the origin. ③ Check whether there is any problem with the origin signal. ④ Check the original function parameter settings of the new return.
26	0	E-260	Overtravel alarm	An out-of-range signal was detected, and the out-of-range processing mode is configured to trigger an alarm.	If you do not want to trigger an alarm immediately when exceeding the limit, you can modify the signal processing method.
	1	E-261	Out-of-range signal connection	① When the motor is running forward, it	Check the overtravel signal connection and terminal allocation.

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
			error	encounters a reverse overtravel signal. ② When the motor reverses, it encounters a forward overtravel signal.	
	2	E-262	Control stop timeout	① The inertia is too large. The timeout for stopping is too short	① Reduce inertia or use brake motor. ② Increase the stop timeout time P0-30.
	4	E-264	Excessive vibration	oscillation caused by external force ② Large load inertia, incorrect load inertia ratio setting, or insufficient gain may cause oscillation during positioning.	① Check the source of external forces and inspect the mechanical installation for any issues. ② Increase the servo gain to improve the anti-disturbance ability. ③ The analysis of the collection speed curve. When the first three peaks and valleys of the pulse command are in a convergent state (0.8*|first peak|>|second peak| and 0.8*|second peak|>|third peak|), the driver should not trigger an alarm. In such cases, the relevant thresholds can be adjusted. If the three peak speed values of the pulse command are not less than 300rpm for three times, the drive alarm will be triggered. ④Contact the manufacturer for technical support.
	5	E-265	The motor is running excessively.	The machine is vibrating.	Check the installation of the motor.

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
28	0	E-280	Failed to read motor parameters	① Motor mismatch. ② The encoder cable is not connected, or the wiring is incorrect, or the cable is loose.	① Professional personnel determine the driver and motor matching, and can be used together. ② Check the encoder line connections, test for continuity, or replace the line for verification. ③Check if the drive and motor are functioning properly. Replace them with new parts to determine if the issue lies with the drive or motor itself. If the problem is confirmed, return the faulty components to the manufacturer for inspection.
	1	E-281	An error occurred while writing data to the encoder EEPROM.	Failed to write to EEPROM	When the driver and motor are professionally matched and compatible, the system can be activated by setting P0-53=1 (to disable the motor parameter alarm) and configuring P0-33 motor code correctly.
31	0	E-310	The drive and motor power are mismatched	For example, a 750W drive with a 200W motor	Match the correct motor and driver, and set the P0-33 motor code properly before use.
	1	E-311	The motor parameters read during automatic motor code reading are 0, and the driver P0-33=0	Motor code not set	When the driver and motor are professionally matched and compatible, the system can be activated by setting P0-53=1 (to trigger the motor parameter alarm) and configuring P0-33 motor code correctly.
	2	E-312	The motor parameters have been corrupted.	CRC check failed	When professionals confirm the compatibility between the drive and motor and ensure they can work together, the system can be activated by setting P0-53=1 (to

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Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
					enable automatic motor parameter alarm reading) and correctly configuring the P0-33 motor code.
	3	E-313	The encoder software version is not compatible	The encoder software version is not compatible	① Update the driver firmware to optimize the performance of the current motor parameters. ②By setting P0-53=1 (to disable automatic motor parameter readout alarm) and configuring P0-33 motor code correctly, the motor parameters will be stored in the driver for normal operation, though this may affect certain performance characteristics.
	4	E-314	The motor code does not match the software version	The encoder hardware version is higher than the driver firmware version	Contact technical support to update the driver firmware
	5	E-315	The motor parameters read during automatic motor code reading are 0, and the driver P0-33=0	The motor code is 0	When the driver and motor are professionally matched and compatible, the system can be activated by setting P0-53=1 (to disable the motor parameter alarm) and configuring P0-33 motor code correctly.
	6	E-316	Auto-reading code error	The motor code read automatically does not match the one set in P0-33.	Check the U3-70 and the motor's nameplate for the MOTOR CODE. ①If two values match, update the P0-33 motor code or set P0-33 to 0 to automatically retrieve the motor code. ②If the values differ, contact the manufacturer's technical support
32	0	E-320	Driver cascade	Terminal emergency	Check if alarm output signals

XR System Warning Codes and Error Codes Appendix

Broad heading	Subd	Confirm Code	Explain	Possible reason	Resolvent
			alarm	alarm function	from other drives are connected to the SI input terminal of the drive, and prioritize processing this alarm. Correctly set parameter P5-68.
34	0	E-340	STO state is out of sync	STO1 and STO2 input states are inconsistent	① Ensure simultaneous disconnection of STO1 and STO2. ②If a STO circuit remains high after disconnecting the 24V power supply, contact the original manufacturer's technical support.
	2	E-342	STO buffer circuit malfunction alarm	STO buffer circuit malfunction	Contact the original manufacturer's technical support
	3	E-343	EDM circuit error	The EDM output signal is incorrect.	Contact the original manufacturer's technical support

Manual update log

Order number	Document id	Chapters and sections	Update content
1	RC07 20250620 1.0	-	The first edition of the manual has been released.
2	-	-	

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