

D4-454 ERROR CODES



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D4-454 Error Codes

D4-454 Error Code	Description
E001 CPU FATAL ERROR	You may possibly clear the error by power cycling the CPU. If the error returns, replace the CPU.
E003 SOFTWARE TIME-OUT	If the program scan time exceeds the time allotted to the watchdog timer, this error will occur. SP51 will be on and the error code will be stored in V7755. To correct this problem, add RSTWT instructions in FOR NEXT loops and subroutines or extend the time allotted to the watchdog timer using PLC Setup menu in <i>DirectSOFT</i> programming software.
E041 CPU BATTERY LOW	The CPU battery is low and should be replaced. SP43 will be on and the error code will be stored in V7757. The CPU indicator will blink if the battery is less than 2.5 VDC (refer to the table on page 3-5).
E042 NO CPU BATTERY	The CPU battery is not installed. SP43 will be on and the error code will be stored in V7757.
E099 PROGRAM MEMORY EXCEEDED	If the compiled program length exceeds the amount of available CPU RAM this error will occur. SP52 will be on and the error code will be stored in V7755. Reduce the size of the application program.
E104 WRITE FAILED	A write to the CPU was not successful. Power cycle the CPU. If the error returns, replace the CPU.
E151 BAD COMMAND	A parity error has occurred in the application program. SP44 will be on and the error code will be stored in V7755. This problem may possibly be due to electrical noise. Clear the memory and download the program again. Correct any grounding problems. If the error returns replace the CPU.
E2** I/O MODULE FAILURE	An I/O module has failed. Using <i>DirectSOFT</i> programming software, from the PLC menu, run Diagnostics -> I/O Diagnostics to determine the actual error.
E201 TERMINAL BLOCK MISSING	A terminal block is loose or missing from an I/O module. SP45 will be on and the error code will be stored in V7756.
E202 MISSING I/O MODULE	An I/O module has failed to communicate with the CPU or is missing from the slot. SP45 will be on and the error code will be stored in V7756. Using <i>DirectSOFT</i> programming software, from the PLC menu, run Diagnostics -> I/O Diagnostics to determine the slot and base location of the module reporting the error.
E203 BLOWN FUSE	A fuse has blown in an I/O module. SP45 will be on and the error code will be stored in V7756. Using <i>DirectSOFT</i> programming software, from the PLC menu, run Diagnostics -> I/O Diagnostics to determine the slot and base location of the module reporting the error.
E206 USER 24V POWER SUPPLY FAILURE	The 24 VDC power supply being used to power output modules has failed. SP45 will be on and the error code will be stored in V7756. Run AUX42 to determine the slot and base location of the module reporting the error.
E210 POWER FAULT	A short duration power drop-out occurred on the main power line supplying power to the CPU.
E250 COMM FAILURE IN THE I/O CHAIN	A failure has occurred in the I/O system. The problem could be in the base, expansion cable or I/O Expansion Unit power supply. Check all cabling between bases and replace faulty hardware, if necessary. SP45 will be on and the error code will be stored in V7755. Using <i>DirectSOFT</i> programming software, from the PLC menu, run Diagnostics -> I/O Diagnostics to determine the base location reporting the error.
E251 I/O PARITY ERROR	A communication parity error has occurred in the I/O communication chain.
E252 NEW I/O CFG	This error occurs when the auto configuration check is turned on in the CPU and the actual I/O configuration has changed, either by moving modules in a base, or changing types of modules in a base. You can return the modules to the original position/types or Using <i>DirectSOFT</i> programming software, from the PLC menu, run Diagnostics -> I/O Diagnostics to accept the new configuration. SP45 will be on and the error code will be stored in V7755.
E261 I/O ADDRESS CONFLICT	Overlapping addresses have been assigned while manually configuring the I/O. Correct the address assignments using <i>DirectSOFT</i> programming software, from the PLC menu, select the Configure I/O menu option. SP45 will be on and the error code will be stored in V7755.

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E262 I/O OUT OF RANGE	An out of range I/O address has been encountered in the application program. Correct the invalid address in the program. SP45 will be on and the error code will be stored in V7755.
E263 CONFIGURED I/O ADDRESS OUT OF RANGE	Out of range addresses have been assigned while manually configuring the I/O. Correct the address assignments using <i>DirectSOFT</i> programming software PLC menu, run Diagnostics -> I/O Diagnostics.
E264 DUPLICATE I/O REFERENCE	Duplicate addresses have been assigned while manually configuring the I/O. Correct the address assignments using <i>DirectSOFT</i> programming software, from the PLC menu, select Configure I/O menu option.
E321 COMM ERROR	A data error was encountered during communication with the CPU. Check to ensure cabling is correct and not defective. Power cycle the system and, if the error continues, replace the CPU.
E352 BACKGROUND COMM ERROR	A data error was encountered during communication with the CPU. Check to ensure cabling is correct and not defective. Power Cycle the system. If the error continues, replace the CPU.
E4** NO PROGRAM	A syntax error exists in the application program. The most common is a missing END statement. Using <i>DirectSOFT</i> programming software, from the PLC Diagnostics menu option, select System Information or Syntax Check to determine which one of the E4** series of errors is being flagged. SP52 will be on and the error code will be stored in V7755.
E401 MISSING END STATEMENT	All application programs must terminate with an END statement. Enter the END statement in appropriate location in your program. SP52 will be on and the error code will be stored in V7755. A program with the end statement included should be downloaded to PLC and PLC placed into RUN mode before error will clear.
E402 MISSING LBL	A GOTO, GTS, MOVMC, or LDLBL instruction was used without the appropriate label. Refer to Chapter 5 for details on these instructions. SP52 will be on and the error code will be stored in V7755.
E403 MISSING RET	A subroutine in the program does not end with the RET instruction. SP52 will be on and the error code will be stored in V7755.
E404 MISSING FOR	A NEXT instruction does not have the corresponding FOR instruction. SP52 will be on and the error code will be stored in V7755.
E405 MISSING NEXT	A FOR instruction does not have the corresponding NEXT instruction. SP52 will be on and the error code will be stored in V7755.
E406 MISSING IRT	An interrupt routine in the program does not end with the IRT instruction. SP52 will be on and the error code will be stored in V7755.
E412 SBR/LBL>256	There is greater than 256 SBR or DLBL instructions in the program. This error is also returned if there is greater than 256 GOTO instructions used in the program. SP52 will be on and the error code will be stored in V7755.
E421 DUPLICATE STAGE REFERENCE	Two or more SG or ISG labels exist in the application program with the same number. A unique number must be allowed for each Stage and Initial Stage. SP52 will be on and the error code will be stored in V7755.
E422 DUPLICATE LBL REFERENCE	Two or more LBL instructions exist in the application program with the same number. A unique number must be allowed for each label. SP52 will be on and the error code will be stored in V7755.
E423 NESTED LOOPS	Nested loops (programming one FOR/NEXT loop inside of another) are not allowed. SP52 will be on and the error code will be stored in V7755.
E431 INVALID ISG/SG ADDRESS	An ISG or SG instruction must not be placed after the end statement (such as inside a subroutine). SP52 will be on and the error code will be stored in V7755.
E432 INVALID JUMP (GOTO) ADDRESS	A LBL that corresponds to a GOTO instruction must not be programmed after the end statement such as in a subroutine. SP52 will be on and the error code will be stored in V7755.

Appendix A: D4-454 Error Codes

D4-454 Error Code	Description
E433 INVALID SBR ADDRESS	An SBR must be programmed after the end statement, not in the main body of the program or in an interrupt routine. SP52 will be on and the error code will be stored in V7755.
E434 INVALID RTC ADDRESS	An RTC must be programmed after the end statement, not in the main body of the program or in an interrupt routine. SP52 will be on and the error code will be stored in V7755.
E435 INVALID RT ADDRESS	An RT must be programmed after the end statement, not in the main body of the program or in an interrupt routine. SP52 will be on and the error code will be stored in V7755.
E436 INVALID INT ADDRESS	An INT must be programmed after the end statement, not in the main body of the program. SP52 will be on and the error code will be stored in V7755.
E437 INVALID IRTC ADDRESS	An IRTC must be programmed after the end statement, not in the main body of the program. SP52 will be on and the error code will be stored in V7755.
E438 INVALID IRT ADDRESS	An IRT must be programmed after the end statement, not in the main body of the program. SP52 will be on and the error code will be stored in V7755.
E440 INVALID DATA ADDRESS	Either the DLBL instruction has been programmed in the main program area (not after the END statement), or the DLBL instruction is on a rung containing input contact(s).
E441 ACON/NCON	An ACON or NCON must be programmed after the end statement, not in the main body of the program. SP52 will be on and the error code will be stored in V7755.
E451 BAD MLS/MLR	MLS instructions must be numbered in ascending order from top to bottom.
E452 X AS COIL	An X data type is being used as a coil output.
E453 MISSING T/C	A timer or counter contact is being used where the associated timer or counter does not exist.
E454 BAD TMRA	One of the contacts is missing from a TMRA instruction.
E455 BAD CNT/UDC	One of the contacts is missing from a CNT or UDC instruction.
E456 BAD SR	One of the contacts is missing from the SR instruction.
E461 STACK OVERFLOW	More than nine levels of logic have been stored on the stack. Check the use of OR STR and AND STR instructions.
E462 STACK UNDERFLOW	An unmatched number of logic levels have been stored on the stack. Ensure the number of AND STR and OR STR instructions match the number of STR instructions.
E463 LOGIC ERROR	An STR/STRN instruction was not used to begin a rung of ladder logic.
E464 MISSING CKT	A rung of ladder logic is not terminated properly.
E471 DUPLICATE COIL REFERENCE	Two or more OUT instructions reference the same I/O point.
E472 DUPLICATE TMR REFERENCE	Two or more TMR instructions reference the same number.

D4-454 Error Code	Description
E473 DUPLICATE CNT REFERENCE	Two or more CNT instructions reference the same number.
E480 INVALID CV ADDRESS	The CV instruction is used in a subroutine or program interrupt routine. The CV instruction may only be used in the main program area (before the END statement).
E481 CONFLICTING INSTRUCTION	An instruction exists between convergence stages.
E482 MAX. CV INSTRUCTIONS EXCEEDED	Number of CV instructions exceeds 17.
E483 INVALID CV JUMP ADDRESS	CVJMP has been used in a subroutine or a program interrupt routine.
E484 MISSING CV INSTRUCTION	CVJMP is not preceded by the CV instruction. A CVJMP must immediately follow the CV instruction.
E485 MISSING REQUIRED INSTRUCTION	A CV JMP instruction is not placed between the CV and the [SG, ISG, ST BLK, END BLK, END] instruction.
E486 INVALID CALL BLK ADDRESS	CALL BLK is used in a subroutine or a program interrupt routine. The CALL BLK instruction may only be used in the main program area (before the END statement).
E487 MISSING ST BLK INSTRUCTION	The CALL BLK instruction is not followed by a ST BLK instruction.
E488 INVALID ST BLK ADDRESS	The ST BLK instruction is used in a subroutine or a program interrupt. Another ST BLK instruction is used between the CALL BLK and the END BLK instructions.
E489 DUPLICATE CR REFERENCE	The control relay used for the BLK instruction is being used as an output elsewhere.
E490 MISSING SG INSTRUCTION	The BLK instruction is not immediately followed by the SG instruction.
E491 INVALID ISG INSTRUCTION ADDRESS	There is an ISG instruction between the ST BLK and END BLK instructions.
E492 INVALID END BLK ADDRESS	The END BLK instruction is used in a subroutine or a program interrupt routine. The END BLK instruction is not followed by a ST BLK instruction.
E493 MISSING END REQUIRED INSTRUCTION	A [CV, SG, ISG, ST BLK, END] instruction must immediately follow the END BLK instruction.
E494 MISSING END BLK INSTRUCTION	The ST BLK instruction is not followed by a END BLK instruction.
E499 PRINT INSTRUCTION	Invalid PRINT instruction usage. Quotations and/or spaces were not entered or entered incorrectly.
E501 BAD ENTRY	An invalid keystroke or series of keystrokes was entered into the handheld programmer.
E502 BAD ADDRESS	An invalid or out of range address was entered into the handheld programmer.
E503 BAD COMMAND	An invalid command was entered into the handheld programmer.
E504 BAD REF/VAL	An invalid value or reference number was entered with an instruction.

Appendix A: D4-454 Error Codes

D4-454 Error Code	Description
E505 INVALID INSTRUCTION	An invalid instruction was entered into the handheld programmer.
E506 INVALID OPERATION	An invalid operation was attempted by the handheld programmer.
E520 BAD OP-RUN	An operation which is invalid in the RUN mode was attempted by the handheld programmer.
E521 BAD OP-TRUN	An operation which is invalid in the TEST RUN mode was attempted by the handheld programmer.
E523 BAD OP-TPGM	An operation which is invalid in the TEST PROGRAM mode was attempted by the handheld programmer.
E524 BAD OP-PGM	An operation which is invalid in the PROGRAM mode was attempted by the handheld programmer.
E525 MODE SWITCH	An operation was attempted by the handheld programmer or <i>DirectSOFT</i> programming software while the CPU mode switch was in a position other than the TERM position.
E526 OFF LINE	The handheld programmer is in the OFFLINE mode. To change to the ONLINE mode use the MODE key.
E540 CPU LOCKED	The CPU has been password locked. To unlock the CPU, enter the password when prompted by <i>DirectSOFT</i> programming software. .
E541 WRONG PASSWORD	The password used to unlock the CPU <i>DirectSOFT</i> programming software was incorrect.
E542 PASSWORD RESET	The CPU powered up with an invalid password and reset the password to 00000000. A password may be re-entered using <i>DirectSOFT</i> programming software PLC Password menu option.
E601 MEMORY FULL	Attempted to enter an instruction which required more memory than is available in the CPU.
E602 INSTRUCTION MISSING	A search function was performed and the instruction was not found.
E603 DATA MISSING	A search function was performed and the data was not found.
E604 REFERENCE MISSING	A search function was performed and the reference was not found.
E610 BAD I/O TYPE	The application program has referenced an I/O module as the incorrect type of module.