

# Error Codes

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In This Appendix. . . .  
— Error Code Table

**Handheld Programmer D3-HP & D3-HPP have been retired as of 03/2021 & 01/2018 respectively. Please consider Productivity, BRX, or CLICK series PLC systems as upgrades.**

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DL305 Error Code	Description
<b>E003</b> 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 use AUX 55 to extend the time allotted to the watchdog timer.
<b>E041</b> 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.
<b>E099</b> 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.
<b>E104</b> WRITE FAILED	A write to the CPU was not successful. Disconnect the power, remove the CPU, and make sure the EEPROM is not write protected. If the EEPROM is not write protected, make sure the EEPROM is installed correctly. If both conditions are OK, replace the CPU.
<b>E151</b> 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 EEPROM or the CPU.
<b>E155</b> RAM FAILURE	A checksum error has occurred in the system RAM. SP44 will be on and the error code will be stored in V7755. This problem may possibly be due to a low battery, electrical noise or a CPU RAM failure. Clear the memory and download the program again. Correct any grounding problems. If the error returns replace the CPU.
<b>E202</b> MISSING I/O MODULE	An I/O module has failed to communicate with the CPU or is missing from the base. 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.
<b>E210</b> POWER FAULT	A short duration power drop-out occurred on the main power line supplying power to the base.
<b>E250</b> COMMUNICATION FAILURE IN THE I/O CHAIN	A failure has occurred in the local I/O system. The problem could be in the base I/O bus or the base power supply. SP45 will be on and the error code will be stored in V7755. Run AUX42 to determine the base location reporting the error.
<b>E252</b> 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 run AUX45 to accept the new configuration. SP47 will be on and the error code will be stored in V7755.
<b>E262</b> 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.

DL305 Error Code	Description
<b>E312</b> HP COMM ERROR 2	A data error was encountered during communications with the CPU. Clear the error and retry the request. If the error continues check the cabling between the two devices, replace the handheld programmer, then if necessary replace the CPU. SP46 will be on and the error code will be stored in V7756.
<b>E313</b> HP COMM ERROR 3	An address error was encountered during communications with the CPU. Clear the error and retry the request. If the error continues check the cabling between the two devices, replace the handheld programmer, then if necessary replace the CPU. SP46 will be on and the error code will be stored in V7756.
<b>E316</b> HP COMM ERROR 6	A mode error was encountered during communications with the CPU. Clear the error and retry the request. If the error continues replace the handheld programmer, then if necessary replace the CPU. SP46 will be on and the error code will be stored in V7756.
<b>E320</b> HP COMM TIME-OUT	The CPU did not respond to the handheld programmer communication request. Check to insure cabling is correct and not defective. Power cycle the system if the error continues replace the CPU first and then the handheld programmer if necessary.
<b>E321</b> COMM ERROR	A data error was encountered during communication with the CPU. Check to insure cabling is correct and not defective. Power cycle the system and if the error continues replace the CPU first and then the handheld programmer if necessary.
<b>E4**</b> NO PROGRAM	A syntax error exists in the application program. The most common is a missing END statement. Run AUX21 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.
<b>E401</b> 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.
<b>E402</b> MISSING LBL	A GOTO, GTS, MOVMC or LDLBL instruction was used without the appropriate label. Refer to the programming manual for details on these instructions. SP52 will be on and the error code will be stored in V7755.
<b>E403</b> 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.
<b>E404</b> 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.

DL305 Error Code	Description
<b>E405</b> 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.
<b>E406</b> 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.
<b>E412</b> SBR/LBL>64	There is greater than 64 SBR, LBL or DLBL instructions in the program. This error is also returned if there is greater than 128 GTS or GOTO instructions used in the program. SP52 will be on and the error code will be stored in V7755.
<b>E413</b> FOR/NEXT>64	There is greater than 64 FOR/NEXT loops in the application program. SP52 will be on and the error code will be stored in V7755.
<b>E421</b> 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.
<b>E422</b> DUPLICATE SBR/LBL REFERENCE	Two or more SBR or LBL instructions exist in the application program with the same number. A unique number must be allowed for each Subroutine and Label. SP52 will be on and the error code will be stored in V7755.
<b>E423</b> NESTED LOOPS	Nested loops (programming one FOR/NEXT loop inside of another) is not allowed in the DL350 series. SP52 will be on and the error code will be stored in V7755.
<b>E431</b> INVALID ISG/SG ADDRESS	An ISG or SG 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.
<b>E432</b> 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.
<b>E433</b> INVALID SBR ADDRESS	A 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.
<b>E435</b> INVALID RT ADDRESS	A 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.

DL305 Error Code	Description
<b>E436</b> 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.
<b>E438</b> 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.
<b>E440</b> 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).
<b>E441</b> 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.
<b>E451</b> BAD MLS/MLR	MLS instructions must be numbered in ascending order from top to bottom.
<b>E452</b> X AS COIL	An X data type is being used as a coil output.
<b>E453</b> MISSING T/C	A timer or counter contact is being used where the associated timer or counter does not exist.
<b>E454</b> BAD TMRA	One of the contacts is missing from a TMRA instruction.
<b>E455</b> BAD CNT	One of the contacts is missing from a CNT or UDC instruction.
<b>E456</b> BAD SR	One of the contacts is missing from the SR instruction.
<b>E461</b> STACK OVERFLOW	More than nine levels of logic have been stored on the stack. Check the use of OR STR and AND STR instructions.
<b>E462</b> STACK UNDERFLOW	An unmatched number of logic levels have been stored on the stack. Insure the number of AND STR and OR STR instructions match the number of STR instructions.
<b>E463</b> LOGIC ERROR	A STR instruction was not used to begin a rung of ladder logic.
<b>E464</b> MISSING CKT	A rung of ladder logic is not terminated properly.
<b>E471</b> DUPLICATE COIL REFERENCE	Two or more OUT instructions reference the same I/O point.
<b>E472</b> DUPLICATE TMR REFERENCE	Two or more TMR instructions reference the same number.

DL305 Error Code	Description
<b>E473</b> DUPLICATE CNT REFERENCE	Two or more CNT instructions reference the same number.
<b>E480</b> 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).
<b>E481</b> CONFLICTING INSTRUCTIONS	An instruction exists between convergence stages.
<b>E482</b> MAX. CV INSTRUCTIONS EXCEEDED	Number of CV instructions exceeds 17.
<b>E483</b> INVALID CVJMP ADDRESS	CVJMP has been used in a subroutine or a program interrupt routine.
<b>E484</b> MISSING CV INSTRUCTION	CVJMP is not preceded by the CV instruction. A CVJMP must immediately follow the CV instruction.
<b>E485</b> NO CVJMP	A CVJMP instruction is not placed between the CV and the SG, ISG, BLK, BEND, END instruction.
<b>E486</b> INVALID BCALL ADDRESS	A BCALL is used in a subroutine or a program interrupt routine. The BCALL instruction may only be used in the main program area (before the END statement).
<b>E487</b> MISSING BLK INSTRUCTION	The BCALL instruction is not followed by a BLK instruction.
<b>E488</b> INVALID BLK ADDRESS	The BLK instruction is used in a subroutine or a program interrupt. Another BLK instruction is used between the BCALL and the BEND instructions.
<b>E489</b> DUPLICATED CR REFERENCE	The control relay used for the BLK instruction is being used as an output elsewhere.

DL305 Error Code	Description
<b>E490</b> MISSING SG INSTRUCTION	The BLK instruction is not immediately followed by the SG instruction.
<b>E491</b> INVALID ISG INSTRUCTION ADDRESS	There is an ISG instruction between the BLK and BEND instructions.
<b>E492</b> INVALID BEND ADDRESS	The BEND instruction is used in a subroutine or a program interrupt routine. The BEND instruction is not followed by a BLK instruction.
<b>E493</b> MISSING REQUIRED INSTRUCTION	A [CV, SG, ISG, BLK, BEND] instruction must immediately follow the BEND instruction.
<b>E494</b> MISSING BEND INSTRUCTION	The BLK instruction is not followed by a BEND instruction.
<b>E499</b> PRINT INSTRUCTION	Invalid PRINT instruct usage. Quotations and/or spaces were not entered or entered incorrectly.
<b>E501</b> BAD ENTRY	An invalid keystroke or series of keystrokes was entered into the handheld programmer.
<b>E502</b> BAD ADDRESS	An invalid or out of range address was entered into the handheld programmer.
<b>E503</b> BAD COMMAND	An invalid instruction was entered into the handheld programmer.
<b>E504</b> BAD REF/VAL	An invalid value or reference number was entered with an instruction.
<b>E505</b> INVALID INSTRUCTION	An invalid instruction was entered into the handheld programmer.
<b>E506</b> INVALID OPERATION	An invalid operation was attempted by the handheld programmer.
<b>E520</b> BAD OP-RUN	An operation which is invalid in the RUN mode was attempted by the handheld programmer.
<b>E521</b> BAD OP-TRUN	An operation which is invalid in the TEST RUN mode was attempted by the handheld programmer.
<b>E523</b> BAD OP-TPGM	An operation which is invalid in the TEST PROGRAM mode was attempted by the handheld programmer.
<b>E524</b> BAD OP-PGM	An operation which is invalid in the PROGRAM mode was attempted by the handheld programmer.

DL305 Error Code	Description
<b>E525</b> MODE SWITCH	An operation was attempted by the handheld programmer while the CPU mode switch was in a position other than the TERM position.
<b>E526</b> OFF LINE	The handheld programmer is in the OFFLINE mode. To change to the ONLINE mode use the MODE key.
<b>E527</b> ON LINE	The handheld programmer is in the ON LINE mode. To change to the OFF LINE mode use the MODE the key.
<b>E528</b> CPU MODE	The operation attempted is not allowed during a Run Time Edit.
<b>E540</b> CPU LOCKED	The CPU has been password locked. To unlock the CPU use AUX82 with the password.
<b>E541</b> WRONG PASSWORD	The password used to unlock the CPU with AUX82 was incorrect.
<b>E542</b> PASSWORD RESET	The CPU powered up with an invalid password and reset the password to 00000000. A password may be re-entered using AUX81.
<b>E601</b> MEMORY FULL	Attempted to enter an instruction which required more memory than is available in the CPU.
<b>E602</b> INSTRUCTION MISSING	A search function was performed and the instruction was not found.
<b>E604</b> REFERENCE MISSING	A search function was performed and the reference was not found.
<b>E610</b> BAD I/O TYPE	The application program has referenced an I/O module as the incorrect type of module.
<b>E620</b> OUT OF MEMORY	Incorrect structure of LDLBL, MOV, or MOVMC command. An attempt to transfer more data between the CPU and handheld programmer than the receiving device can hold.
<b>E621</b> EEPROM NOT BLANK	An attempt to write to a non-blank EEPROM was made. Erase the EEPROM and then retry the write.
<b>E622</b> NO HPP EEPROM	A data transfer was attempted with no EEPROM (or possibly a faulty EEPROM) installed in the handheld programmer.
<b>E623</b> SYSTEM EEPROM	A function was requested with an EEPROM which contains system information only.
<b>E624</b> V-MEMORY ONLY	A function was requested with an EEPROM which contains V-memory data only.
<b>E625</b> PROGRAM ONLY	A function was requested with an EEPROM which contains program data only.

<b>DL305 Error Code</b>	<b>Description</b>
<b>E627</b> BAD WRITE	An attempt to write to a write protected or faulty EEPROM was made. Check the write protect jumper and replace the EEPROM if necessary.
<b>E640</b> COMPARE ERROR	A compare between the EEPROM and the CPU was found to be in error.
<b>E650</b> HPP SYSTEM ERROR	A system error has occurred in the handheld programmer. Power cycle the handheld programmer. If the error returns replace the handheld programmer.
<b>E651</b> HPP ROM ERROR	A ROM error has occurred in the handheld programmer. Power cycle the handheld programmer. If the error returns replace the handheld programmer.
<b>E652</b> HPP RAM ERROR	A RAM error has occurred in the handheld programmer. Power cycle the handheld programmer. If the error returns replace the handheld programmer.

