

Instruction Set

In This Chapter. . . .

- Boolean Instructions
 - Comparative Boolean Instructions
 - Timer, Counter, and Shift Register Instructions
 - Accumulator Load and Output Instructions
 - Accumulator Logic Instructions
 - Math Instructions
 - Bit Operation Instructions
 - Number Conversion Instructions
 - Program Control Instructions
 - Network Instructions
 - Message Instructions
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Introduction

The DL305 CPUs offer a wide variety of instructions to perform many different types of operations. This chapter shows you how to use these individual instructions. The following table provides a quick reference listing of the instruction mnemonic and the page(s) defining the instruction. (The mnemonics are very similar to the instruction names and should be easy to become familiar with in a short time.) For example STR NOT (Comparative) is the mnemonic for Store Not Equal. Each instruction definition will show in parentheses the keystrokes used to enter the instruction.

There are two ways to quickly find the instruction you need.

- If you know the instruction category (Boolean, Comparative Boolean, etc.) just use the header at the top of the page to find the pages that discuss the instructions in that category.
- If you know the individual instruction mnemonic, use the following table to find the page that discusses the instruction.

The DL330 and DL340 instructions sets are very similar. However, the DL330P instruction set has several differences. Some of the instructions in this chapter will be labeled “DL330/DL340 Only.” There may be an equivalent instruction for the DL330P CPU, but it may also work slightly differently. The DL330P instructions that operate differently from these instructions are discussed in Chapter 12. Make sure you review the instructions carefully to make sure you can use the instruction with your CPU.

Instruction	Page
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AND NOT (Comparative)	11–21
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AND STR	11–13
AND T/C	11–11, 11–12
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DAND (F75)	11–30
DECO (F82)	11–46
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DOUT3 (F63)	11–28
DOUT5 (F65)	11–29
DSTR (F50)	11–25
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ENCO (F83)	11–44
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MCS	11–50
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OR (Comparative)	11–20
OR NOT	11–7
OR NOT (Comparative)	11–20
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OR STR	11–13
OR T/C	11–8, 11–9
OUT	11–15
RST	11–16
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SET	11–16
SET OUT	11–17
SET OUT RST	11–18
SHFL (F82)	11–42
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STR NOT	11–4
STR NOT (Comparative)	11–19
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NOTE: See Chapter 12 for RLL^{PLUS} instructions.