








Data Types, Memory, and Numbering System

The following section explains how the CLICK PLC handles the available data types, memory addressing, and I/O numbering.

Data Types

The CLICK PLC supports the following data types. On the CLICK PLC programming software, each data type is indicated with a small icon.











Data Type	S/W Icon	Data Ranges
Bit		0, 1
Integer (Single Word)		-32,768 to 32,767
Integer2 (Double Word)		-2,147,483,648 to 2,147,483,647
Floating Point		-3.4028235E+38 to 3.4028235E+38
HEX (Hexadecimal)		0000h to FFFFh (The HEX data type requires the 'h' after the value.)
Text (Single Character)		Single ASCII character (ASCII code: 00h to FFh.)
ASCII Code		ASCII code \$00 to \$FF (The ASCII Code data type requires the '\$' before the value.)



NOTE: The CLICK PLC does not support Octal or BCD numbering systems (data types).

Memory Types

The following is the list of the memory types that the CLICK PLC system supports. See the memory map later in this chapter.

Memory Type	Symbol	Data Type	S/W Icon	Definition
Input Point	X	Bit		The Discrete Input points are represented by the “X” symbol.
Output Point	Y			The Discrete Output points are represented by the “Y” symbol.
Control Relay	C			The Control Relay bits are represented by the “C” symbol. These internal bits are typically used for ladder program control. They do not represent any real world inputs or outputs.
Timer	T			The Timers are represented by the “T” symbol. The Timer status bit is used to indicate when the Current Value of the timer equals its Preset Value.
Counter	CT			The Counters are represented by the “CT” symbol. The Counter status bit is used to indicate when the Current Value of the counter equals its Preset Value.
System Control Relay	SC			The internal System Control Relays, represented by the “SC” symbol, are pre-defined bits which represent the status of specific system functions.
Data Register	DS	Integer		Single word integer data registers are represented by the “DS” symbol.
	DD	Integer2		Double word integer data registers are represented by the “DD” symbol.
	DH	HEX		Single word Hex data registers are represented by the “DH” symbol.
	DF	Floating Point		Data Floating Point registers are IEEE format Real number values represented by the “DF” symbol as 32-bit words.
Input Register	XD	HEX		The Input Registers, represented by the “XD” symbol, contain groups of Discrete Input points in a 16-bit word format. XD0 is a Hexadecimal representation of X1-X16, XD1 of X101-X116, etc.
Output Register	YD			The Output Registers, represented by the “YD” symbol, contain groups of Discrete Output points in a 16-bit word format. YD0 is a Hexadecimal representation of Y1-Y16, YD1 of Y101-Y116, etc.
Timer Register	TD	Integer		The Timer Registers, represented by the “TD” symbol, contain the corresponding Timer’s accumulative value in a 16-bit data register.
Counter Register	CTD	Integer2		The Counter Registers, represented by the “CTD” symbol, contain the corresponding Counter’s accumulative value in a 32-bit data register.
System Data Register	SD	Integer		The internal System Data Registers, represented by the “SD” symbol, are pre-defined words which represent the status of specific system functions.
Text	TXT	Text		The Text data registers, represented by the “TXT” symbol, are used to store and manipulate ASCII text data.