1.	Record Nr.	UNINA9910819538403321
	Autore	Bolton W (William), <1933->
	Titolo	Programmable logic controllers / / W. Bolton
	Pubbl/distr/stampa	Oxford, : Newnes, c2009
	ISBN	1-282-25838-9
		0-08-096185-1
	Edizione	[5th ed.]
	Descrizione fisica	1 online resource (xii, 400 p.) : ill
	Disciplina	629.895
	Soggetti	Programmable controllers
		Logic circuits
		Programmable logic devices
	Lingua di pubblicazione	Inglese
	Formato	Materiale a stampa
	Livello bibliografico	Monografia
	Note generali	Previous ed.: Amsterdam; London: Newnes, 2006.
		Includes index.
	Nota di contenuto	Front Cover -- Programmable Logic Controllers -- Copyright Page -- Contents -- Preface -- Prerequisite Knowledge Assumed -- Changes from the Fourth Edition -- Structure of the Book -- Acknowledgments -- Chapter 1 Programmable Logic Controllers -- 1.1. Controllers -- 1.2. Hardware -- 1.3. Internal Architecture -- 1.4. PLC Systems -- Summary -- Problems -- Lookup Tasks -- Chapter 2 Input/Output Devices -- 2.1. Input Devices -- 2.2. Output Devices -- 2.3. Examples of Applications -- Summary -- Problems -- Lookup Tasks -- Chapter 3 Digital Systems -- 3.1. The Binary System -- 3.2. Octal and Hexadecimal -- 3.3. Binary Coded Decimals -- 3.4. Numbers in the Binary, Octal, Hex, and BCD Systems -- 3.5. Binary Arithmetic -- 3.6. PLC Data -- 3.7. Combinational Logic Systems -- 3.8. Sequential Logic Systems -- Summary -- Problems -- Lookup Tasks -- Chapter 4 I/O Processing -- 4.1. Input/Output Units -- 4.2. Signal Conditioning -- 4.3. Remote Connections -- 4.4. Networks -- 4.5. Examples of Commercial Systems -- 4.6. Processing Inputs -- 4.7. I/O Addresses -- Summary -- Problems -- Lookup Tasks -- Chapter 5 Ladder and Functional Block Programming -- 5.1. Ladder Diagrams -- 5.2. Logic Functions -- 5.3. Latching -- 5.4. Multiple Outputs -- 5.5. Entering Programs -- 5.6. Function Blocks -- 5.7. Program Examples --

Sommario/riassunto	A programmable logic controllers (PLC) is a real-time system optimized for use in severe conditions such as high/low temperatures or an environment with excessive electrical noise. This control technology is designed to have multiple interfaces (I/Os) to connect and control multiple mechatronic devices such as sensors and actuators. Programmable Logic Controllers, Fifth Edition, continues to be a straight forward, easy-to-read book that presents the principles of PLCs while not tying itself to one vendor or another. Extensive examples and chapter ending problems utilize several popular PLCs currently on the market highlighting understanding of fundamentals that can be used no matter the specific technology. Ladder programming is highlighted throughout with detailed coverage of design characteristics, development of functional blocks, instruction lists, and structured text. Methods for fault diagnosis, testing and debugging are also discussed. This edition has been enhanced with new material on I/Os, logic, and protocols and networking. For the UK audience only: This book is fully aligned with BTEC Higher National requirements. *New material on combinational logic, sequential logic, I/Os, and protocols and networking *More worked examples throughout with more chapter-ending problems *As always, the book is vendor agnostic allowing for general concepts and fundamentals to be taught and applied to several controllers