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Nota di contenuto	Front Cover; Title Page; Copyright Page; Table of Contents; Preface; Contributors; Introduction; Part I. The Automation Knowledge Base; Chapter 1. The Automation Practicum; 1.1 Introduction; 1.2 Job Descriptions; 1.3 Careers and Career Paths; 1.3.1 ISA Certified Automation Professional (CAP) Classification System; 1.4 Where Automation Fits in the Extended Enterprise; 1.5 Manufacturing Execution Systems and Manufacturing Operations Management; 1.5.1 Introduction; 1.5.2 Manufacturing Execution Systems (MES) and Manufacturing Operations Management (MOM); 1.5.3 The Connected Enterprise Suggested ReadingChapter 2. Basic Principles of Industrial Automation; 2.1 Introduction; 2.2 Standards; 2.3 Sensor and System Design, Installation, and Commissioning; 2.3.1 The Basics; 2.3.2 Identification of the Application; 2.3.3 Selection of the Appropriate Sensor/Transmitter; 2.3.4 Selection of the Final Control Element; 2.3.5 Selection of the Controller and Control Methodology; 2.3.6 Design of the Installation; 2.3.7 Installing, Commissioning, and Calibrating the System; 2.4 Maintenance and Operation; 2.4.1 Introduction; 2.4.2 Life-cycle Optimization; 2.4.3 Reliability Engineering

2.4.4 Asset Management, Asset Optimization, and Plant Optimization
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Sommario/riassunto

The discipline of instrumentation has grown appreciably in recent years because of advances in sensor technology and in the interconnectivity of sensors, computers and control systems. This 4e of the Instrumentation Reference Book embraces the equipment and systems used to detect, track and store data related to physical, chemical, electrical, thermal and mechanical properties of materials, systems and operations. While traditionally a key area within mechanical and industrial engineering, understanding this greater and more complex use of sensing and monitoring controls and systems is
