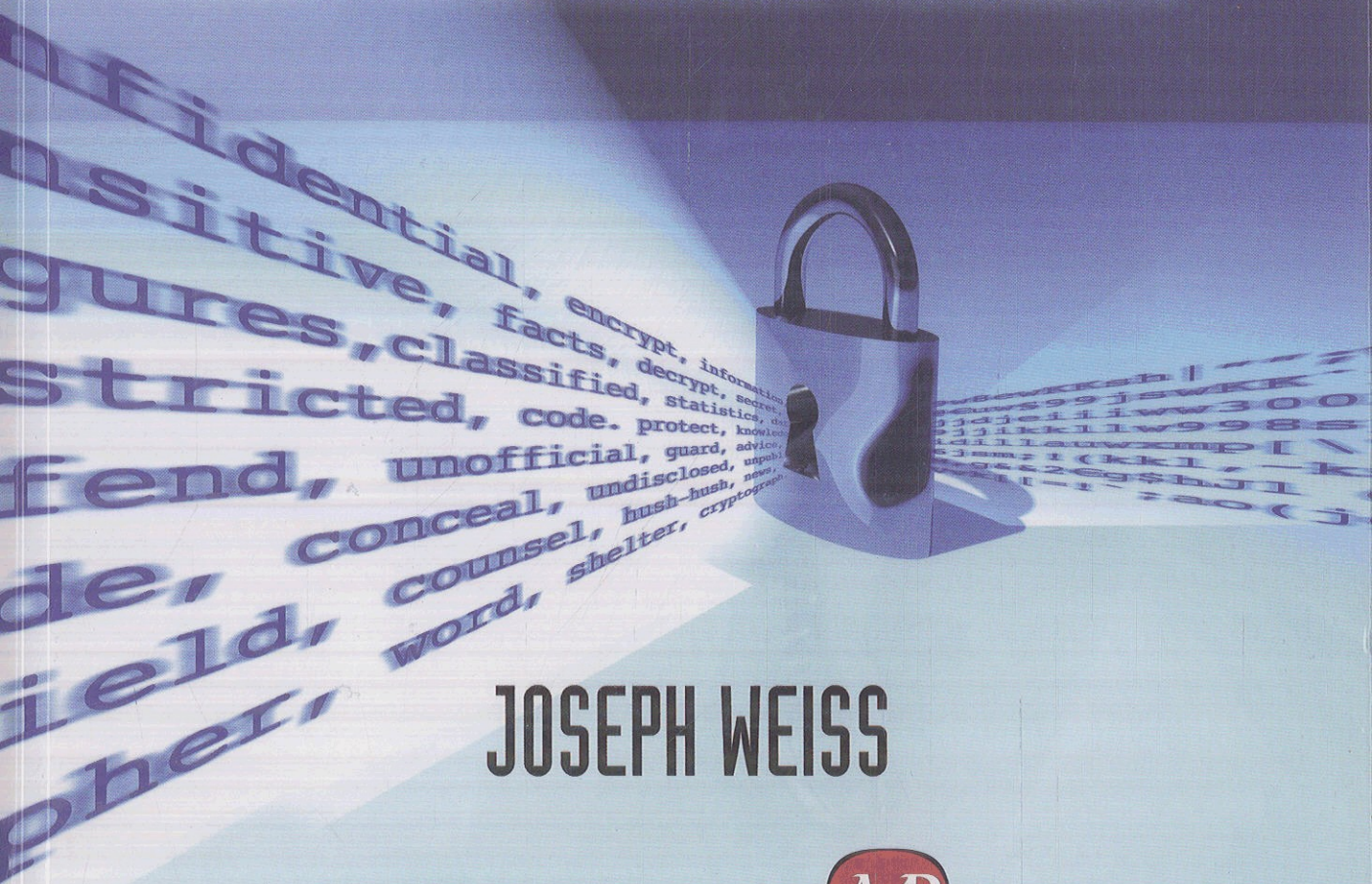


# PROTECTING INDUSTRIAL CONTROL SYSTEMS FROM ELECTRONIC THREATS



JOSEPH WEISS



MOMENTUM PRESS

# Contents

Acknowledgments		vii
Preface		ix
Chapter 1	Background	1
Chapter 2	Definitions	5
Chapter 3	Industrial Control System Descriptions	7
Chapter 4	Convergence of Industrial Control Systems and Information Technology	25
Chapter 5	Differences between Industrial Control Systems and Information Technology	29
Chapter 6	Electronic Threats to Industrial Control Systems	43
Chapter 7	Myths	53
Chapter 8	Current Personnel Status and Needs	59
Chapter 9	Information Sharing and Disclosure	63
Chapter 10	Industrial Control System Cyber Risk Assessments	87
Chapter 11	Selected Industry Activities	89
Chapter 12	Industrial Control System Security Trends and Observations	95
Chapter 13	Industrial Control System Cyber Security Demonstrations	101

## vi Contents

Chapter 14	Selected Case Histories: Malicious Attacks	107
Chapter 15	Selected Case Histories: Unintentional Incidents	123
Chapter 16	Industrial Control System Incident Categorization	147
Chapter 17	Recommendations	159
Appendix 1	Acronyms	167
Appendix 2	Glossary	171
Appendix 3	Comparison of Key Definitions	197
Appendix 4	CSIS White Paper on Industrial Control Systems	205
Appendix 5	Typical Distributed Control System Procurement Specification	223
Notes		301
Further Reading		313
Index		317