

Description of Supplementary Content

This content is for the text, *Programmable Logic Controllers: An Emphasis on Design and Application*, 3rd Ed. by Kelvin T. Erickson, published in 2016 by Dogwood Valley Press LLC.

Sectionss:

1. PLC programs for chapter examples
2. Additional problems with solutions
3. PID tuning demonstrator program
4. Design documentation for the coal handler project in Chapter 22
5. Design documentation for the multi-unit chemical process in Chapter 22

1. Chapter Example PLC Programs

The programs are arranged by PLC processor. The zip files for the various processor families and the software used to generate the programs are:

Examples_CLogix	ControlLogix (RSLogix 5000 Rev 20)
Examples_GE Proficy	GE RX3i (Proficy ME Rev 7.5)
Examples_MLogix	MicroLogix (RSLogix 500 Rev 9)
Examples_Modicon Unity	Modicon M340 (Unity Pro 4.0)
Examples_S7_300 Classic	S7-300/400 (Step7 Classic Rev 5.5)
Examples_S7_300 TIA-1, -2, -3, -4	S7-300/400 (Step7 Portal Rev 11)
Examples_S7_1500	S7-1500 (Step7 Portal Rev 13)
Examples_SLC500	SLC-500 (RSLogix 500 Rev 9)

When the files in each downloaded zip file is extracted, the examples are organized by chapter. Each project has an associated pdf file to view a report/print-out/listing of the project, so one does not need the programming software to view the solution. For most of the pdf files, one will want to print it with the page scaling set to "Reduce to fit printer margins."

The project files for the Rockwell Automation processors may be viewed directly by the appropriate programming software by opening the project file:

ControlLogix (RSLogix 5000)	.acd file extension
SLC-500/Micrologix (RSLogix 500)	.rss file extension

For the other processors, one must restore/retrieve the project from a backup:

GE (Proficy Machine Edition)	Restore project from .zip file
Modicon (Unity)	Open .sta file (will restore project) Will probably receive a warning prompt about a different hardware catalog. Select "Yes" to continue conversion.

S7 (Step7 Classic) Retrieve project from .zip file (with Step7 Classic ver 5.5) Note that Pkzip or 7-zip will not restore

S7 (Step7 TIA)

the project. One MUST use "Retrieve" with Step7
Classic ver 5.5
Unzip project from .zip file (with 7-zip)

The sequences for Example 21.4 (for all processors) are in the file:

Example21_4_Sequences.xls
which is in each zip file.

2. Solved Problems

The problem statements are contained in the "ProblemStatements.zip" file which contains the following files:

Chapter 2	Chap2Solvedprobs.pdf
Chapter 3	Chap3Solvedprobs.pdf
Chapter 5	Chap5Solvedprobs.pdf
Chapter 6	Chap6Solvedprobs.pdf
Chapter 7	Chap7Solvedprobs.pdf
Chapter 9	Chap9Solvedprobs.pdf
Chapter 10	Chap10Solvedprobs.pdf
Chapter 13	Chap13Solvedprobs.pdf
Chapter 14	Chap14Solvedprobs.pdf
Chapter 21	Chap21Solvedprobs.pdf

Problem solutions that are not specific to a particular PLC processor are in the "Solved_Problems_AGeneral.zip" file which contains the following folders:

\Chap2	Chapter 2
\Chap3	Chapter 3
\Chap6_Function_Charts	Chapter 6 function charts
\Chap7_Function_Charts	Chapter 7 function charts and soln to SP7-1
\Chap10_PID_Tune	Chapter 10 PID tuning solutions

Problem solutions specific to a PLC processor are in the following zip files:

Solved_Problems_CLogix	ControlLogix
Solved_Problems_GE Proficy	GE RX3i
Solved_Problems_MLogix	MicroLogix
Solved_Problems_PLC5	PLC-5
Solved_Problems_Modicon Unity	Modicon M340
Solved_Problems_S7_300 Classic	S7-300/400
Solved_Problems_S7_300 TIA	S7-300/400
Solved_Problems_S7_1500 (future)	S7-1500
Solved_Problems_SLC500	SLC-500

When the files in each downloaded zip file is extracted, the solutions are organized by chapter. Each solution is shown as the pdf file of the report/print-out/listing of the solution. For most of the pdf files, one will want to print it with the page scaling set to "Reduce to fit printer margins."

3. PID Tuner

The "PID_Tune.zip" file contains a PID tuning demonstrator program. Within the zip file, the "AAPIDTune_InstallNotes_XPWin78_10.pdf" contains the installation instructions.

4. Coal Handler Control System Documents

The files in "Coal_Handler.zip" document the coal handling system. Read the document "AADescription of Project Files.pdf" for more details on the coal handling system documentation.

5. K Chemical Process Project Files

To be added later.