

Rockwell Software Company  
6200 Series Software  
PLC-5 Programming Terminal Software  
Release 5.32.02  
Program Listing Report

Thu Oct 23, 2008 - 3:05:07 pm

File: C:\IPDS\ARCH\PLC5\6200PLC5

REPORT OPTIONS

Page Width:	80
Page Length:	66
Graphics Capabilities:	NO
Right Power Rail:	NO
Address Display:	SYMBOL
Address Comments:	YES
Rung Comments:	YES
Output Cross Reference:	NO
Ladder Cross Reference:	NONE
Starting Rung:	2:0
Ending Rung:	999:32767
Formatting Commands:	INACTIVE



Rung 3:0

This is a rung comment. This section of rungs show how BITS are converted.

This is					This is
the first					the first
input					output
INPUT_0					OUTPUT_0
I:000					O:000
+----] [-----] [-----] [-----] [-----] ( )-----					
00					00

Rung 3:1

Address	Address				Address
comment	comment				comment
for	for				for
I:000/01	I:000/02				O:000/01
INPUT_1	INPUT_2				OUTPUT_1
I:000	I:000				O:000
+----]/[-----]/[-----] [-----] [-----] (L)-----					
01	02				01
Address	Address				
comment	comment				
for	for				
I:000/03	I:000/04				
INPUT_3	INPUT_4				
I:000	I:000				
+----]/[-----]/[-----] [-----] [-----] (U)-----					
03	04				

Rung 3:2

Instructn	Instructn	They can			Address
comment	comments	be importd			comment
for XIC	do not	later			for
I:000/05	convert	during			O:000/01
		clean up.			
INPUT_5	INPUT_6	INPUT_7			OUTPUT_1
I:000	I:000	I:000			O:000
+----] [-----] [-----] [-----] [-----] (U)-----					
05	06	07			01

Rung 3:3

Comment	Comment	Comment	Comment		Output
for	for	for	for		comment
I:000/10	I:000/11	I:000/12	I:000/13		for
					O:000/17
INPUT_10	INPUT_11	INPUT_12	INPUT_13		OUTPUT_17
I:000	I:000	I:000	I:000		O:000
+----]/[-----]/[-----]/[-----]/[-----] ( )-----					
10	11	12	13		17
Comment	Comment	Comment	Comment		
for	for	for	for		
I:000/14	I:000/15	I:000/16	I:000/17		
INPUT_14	INPUT_15	INPUT_16	INPUT_17		
I:000	I:000	I:000	I:000		
+----] [-----] [-----] [-----] [-----] ( )-----					
14	15	16	17		

Rung 3:4

| One shot

| | Output  
| | for

| | One Shot

+--- [ONS] ----- ( ) -----

| | 0 | 1

Rung 3:5

| |----- [END OF FILE] -----

|

Rung 4:0

Timers

TON	TON	TON		TON
Timer with	Timer with	Timer with		Timer with
0.01 time	0.01 time	0.01 time		0.01 time
base	base	base		base
enable bit	timing bit	done bit		
T4:0	T4:0	T4:0		+TON-----+
+----] [-----]	[-----]	[-----]	[-----]	+TIMER ON DELAY +- (EN) -
EN	TT	DN		Timer T4:0
				Time base 0.01+- (DN)
				Preset 999
				Accum 0
				+-----+

Rung 4:1

				TOF
				Timer with
				1.0 time
				base
T4:1				+TOF-----+
+--]/ [-----]	[-----]	[-----]	[-----]	+TIMER OFF DELAY +- (EN) -
DN				Timer T4:1
				Time base 1.0+- (DN)
				Preset 999
				Accum 0
				+-----+

Rung 4:2

RTO				RTO
Retentive				Retentive
Timer with				Timer with
0.01 time				0.01 time
base TT				base
T4:2				+RTO-----+
+----] [-----]	[-----]	[-----]	[-----]	+RETENTIVE TIMER ON+- (EN) -
TT				Timer T4:2
				Time base 0.01+- (DN)
				Preset 32767
				Accum 0
				+-----+

Rung 4:3

	-----[END OF FILE]-----			

Rung 5:0

Counters

CTU		CTU
Counter		Counter
Up		Up
enable bit		
C5:5		
+----] [-----	+CTU-----	+-----
	+COUNT UP	+-(CU)-
CU	Counter C5:5	
	Preset 32000+-	(DN)
	Accum 0	
	+-----	+-----

Rung 5:1

CTD		CTD
Counter		Counter
Down		Down
enable bit		
C5:6		
+----] [-----	+CTD-----	+-----
	+COUNT DOWN	+-(CD)-
CD	Counter C5:6	
	Preset 10+-	(DN)
	Accum 0	
	+-----	+-----

Rung 5:2

CTD	CTD	CTD		CTD
Counter	Counter	Counter		Counter
over flow	under flow	done bit		Down
bit	bit			
C5:6	C5:6	C5:6		C5:6
+----] [-----] [-----] [-----				(RES)----
OV	UN	DN		

Rung 5:3

|

+-----[END OF FILE]-----

|

Rung 6:0

I/O instructions

BTR	BTR	BTR		BTR
enable bit	done bit	error bit		Control
				Block
N10:0	N10:0	N10:0		+BTR-----+
+-----]/[-----]/[-----]/[-----]				+BLOCK TRANSFER READ +- (EN) -
15	13	12		Rack 01
				Group 0+- (DN)
				Module 0
				Control block N10:0+- (ER)
				Data file N7:0
				Length 13
				Continuous N
				+-----+

Rung 6:1

BTW	BTW	BTW		BTW
enable bit	done bit	error bit		Control
				Block
N10:5	N10:5	N10:5		+BTW-----+
+-----]/[-----]/[-----]/[-----]				+BLOCK TRANSFER WRITE +- (EN) -
15	13	12		Rack 01
				Group 0+- (DN)
				Module 0
				Control block N10:5+- (ER)
				Data file N7:20
				Length 37
				Continuous N
				+-----+

Rung 6:2

MSG	MSG	MSG		MSG
enable bit	done bit	error bit		Control
				Block
N10:10	N10:10	N10:10		+MSG-----+
+-----]/[-----]/[-----]/[-----]				+SEND/RECEIVE MESSAGE +- (EN) -
15	13	12		Control block N10:10+- (DN)
				+- (ER)
				+-----+

Rung 6:3

				020
+-----]				----- (IIN) -

Rung 6:4

				021
+-----]				----- (IOT) -

Rung 6:5

+-----]				----- [END OF FILE] -----

Rung 7:0  
Compare and Compute instructions

	Compare		Compute
	+CMP-----+		+CPT-----+
+-+	COMPARE	+	COMPUTE
	Expression		Destination F8:0
	N11:0 < N11:1		0.000000
	+-----+		Expression
			N11:2 * 10000.00
			+-----+

Rung 7:1

	Limit		Add
	Test		
	+LIM-----+		+ADD-----+
+-+	LIMIT TEST (CIRC)	+	ADD
	Low limit 0		Source A N11:4
			0
	Test N11:3		Source B 1
	High limit 4095		Destination N11:5
			0
	+-----+		+-----+

Rung 7:2

	Masked		Subtract
	Equal		
	+MEQ-----+		+SUB-----+
+-+	MASKED EQUAL	+	SUBTRACT
	Source B3:1		Source A N11:6
	0000000000000000		0
	Mask 0FFF		Source B N11:7
			0
	Compare B3:2		Destination N11:8
	0000000000000000		0
	+-----+		+-----+

Rung 7:3

	Equal		Multiply
	+EQU-----+		+MUL-----+
+-+	EQUAL	+	MULTIPLY
	Source A N11:9		Source A N11:11
	0		0
	Source B N11:10		Source B 10
	0		
	+-----+		Destination N11:12
			0
			+-----+

Rung 7:4

	Not Equal		Divide
	+NEQ-----+		+DIV-----+
+-+	NOT EQUAL	+	DIVIDE
	Source A N11:13		Source A N11:14
	0		0
	Source B 0		Source B N11:15
			0
	+-----+		Destination N11:16
			0
			+-----+



```

Rung 7:5
|      Less Than                               Square
|                                             Root
| +LES-----+                               +SQR-----+
+--+LESS THAN +-----+                   +SQUARE ROOT +--+
| |Source A   N11:17| |Source   N11:19|
| |           0|    |           0|
| |Source B   N11:18| |Destination N11:20|
| |           0|    |           0|
| +-----+                               +-----+

```

```

Rung 7:6
|      Greater Than                           Negate
|                                             +NEG-----+
| +GRT-----+                               +NEGATE +--+
+--+GREATER THAN +-----+                   |Source   N11:23|
| |Source A   N11:21| |           0|
| |           0|    |           0|
| |Source B   N11:22| |Destination N11:24|
| |           0|    |           0|
| +-----+                               +-----+

```

```

Rung 7:7
|      Less than or equal                       To BCD
|                                             +TOD-----+
| +LEQ-----+                               +TO BCD +--+
+--+LESS THAN OR EQUAL+-----+                   |Source   N11:27|
| |Source A   N11:25| |           0|
| |           0|    |           0|
| |Source B   N11:26| |Destination 0:022|
| |           0|    |           0|
| +-----+                               +-----+

```

```

Rung 7:8
|      Greater than or equal                   From BCD
|                                             +FRD-----+
| +GEQ-----+                               +FROM BCD +--+
+--+GREATER THAN OR EQUAL +-----+                   |Source   I:023|
| |Source A   N11:28| |           0|
| |           0|    |           0|
| |Source B   N11:29| |Destination N11:30|
| |           0|    |           0|
| +-----+                               +-----+

```

```

Rung 7:9
|
+-----[END OF FILE]-----
|

```

Rung 8:0  
Move instructions

```

|
|                                     Move
|                                     +MOV-----+
+-----+
|                                     +MOVE      +-
|                                     |Source      T4:0.ACC|
|                                     |           0|
|                                     |Destination N12:0|
|                                     |           0|
|                                     +-----+

```

Rung 8:1

```

|
|                                     Move with
|                                     mask
|                                     +MVM-----+
+-----+
|                                     +MOVE WITH MASK +-
|                                     |Source        N12:1|
|                                     |           0|
|                                     |Mask           00FF|
|                                     |           |
|                                     |Destination N12:2|
|                                     |           0|
|                                     +-----+

```

Rung 8:2

```

|
|                                     Bitwise
|                                     And
|                                     +AND-----+
+-----+
|                                     +BITWISE AND      +-
|                                     |Source A         B3:3|
|                                     | 0000000000000000|
|                                     |Source B         B3:4|
|                                     | 0000000000000000|
|                                     |Destination B3:5|
|                                     | 0000000000000000|
|                                     +-----+

```

Rung 8:3

```

|
|                                     Bitwise
|                                     Or
|                                     +OR-----+
+-----+
|                                     +BITWISE INCLUSIVE OR +-
|                                     |Source A         B3:6|
|                                     | 0000000000000000|
|                                     |Source B         B3:7|
|                                     | 0000000000000000|
|                                     |Destination B3:8|
|                                     | 0000000000000000|
|                                     +-----+

```

Rung 8:4

```

|
|                                     Bitwise
|                                     Exclusive
|                                     Or
|                                     +XOR-----+
+-----+BITWISE EXCLUSIVE OR +-----+
|Source A          B3:9|
| 0000000000000000|
|Source B          B3:9|
| 0000000000000000|
|Destination       B3:9|
| 0000000000000000|
+-----+

```

Rung 8:5

```

|
|                                     Not
|                                     +NOT-----+
+-----+NOT +-----+
|Source          N12:3|
| 0|
|Destination     N12:4|
| 0|
+-----+

```

Rung 8:6

```

|
|                                     Clear
|                                     +CLR-----+
+-----+CLEAR +-----+
|Destination     N12:5|
| 0|
+-----+

```

Rung 8:7

```

|
|                                     Bit Field
|                                     Distribute
|                                     +BTD-----+
+-----+BIT FIELD DISTRIB +-----+
|Source          B3:10|
| 0000000000000000|
|Source bit       3|
|Destination     B3:11|
| 0000000000000000|
|Destination bit 10|
|Length          5|
+-----+

```

Rung 8:8

```

|
+-----[END OF FILE]-----+
|

```

Rung 9:0

File instructions

FAL with	FAL with	FAL with		FAL with
mode: ALL	mode: ALL	mode: ALL		mode: ALL
enable bit	done bit	error bit		
R6:2	R6:2	R6:2		+FAL-----+
+-----]	[-----]	[-----]	[-----]	+FILE ARITH/LOGICAL+- (EN) -
EN	DN	ER		Control R6:2
				Length 100+- (DN)
				Position 0
				Mode ALL+- (ER)
				Destination #N13:0
				0
				Expression
				#N14:0 + 32
				+-----+

Rung 9:1

FAL with	FAL with	FAL with		FAL with
mode: INC	mode: INC	mode: INC		mode: INC
enable bit	done bit	error bit		
R6:3	R6:3	R6:3		+FAL-----+
+-----]	[-----]	[-----]	[-----]	+FILE ARITH/LOGICAL +- (EN) -
EN	DN	ER		Control R6:3
				Length 150+- (DN)
				Position 4
				Mode INCREMENTAL+- (ER)
				Destination N13:101
				0
				Expression
				#N14:101 - #N13:0
				+-----+

Rung 9:2

FAL with	FAL with	FAL with		FAL with
mode: 50	mode: 50	mode: 50		mode: 50
enable bit	done bit	error bit		
R6:4	R6:4	R6:4		+FAL-----+
+-----]	[-----]	[-----]	[-----]	+FILE ARITH/LOGICAL+- (EN) -
EN	DN	ER		Control R6:4
				Length 200+- (DN)
				Position 0
				Mode 50+- (ER)
				Destination #N13:1
				0
				Expression
				N14:101 * #N13:120
				+-----+

Rung 9:3

FSC with	FSC with	FSC with		FSC with
mode: ALL	mode: ALL	mode: ALL		mode: ALL
enable bit	done bit	found bit		
R6:5	R6:5	R6:5		
+-----] [-----] [-----] [-----]	+FSC-----+			
EN	DN	FD		+FILE SEARCH/COMPARE +- (EN) -
				Control R6:5
				Length 30+- (DN)
				Position 0
				Mode ALL+- (ER)
				Expression
				#N13:200 > 75
				+-----+

Rung 9:4

FSC with	FSC with	FSC with		FSC with
mode: INC	mode: INC	mode: INC		mode: INC
enable bit	done bit	found bit		
R6:6	R6:6	R6:6		
+-----] [-----] [-----] [-----]	+FSC-----+			
EN	DN	FD		+FILE SEARCH/COMPARE +- (EN) -
				Control R6:6
				Length 30+- (DN)
				Position 0
				Mode INCREMENTAL+- (ER)
				Expression
				#N13:200 < 75
				+-----+

Rung 9:5

FSC with	FSC with	FSC with		FSC with
mode: 1	mode: 1	mode: 1		mode: 1
enable bit	done bit	found bit		
R6:7	R6:7	R6:7		
+-----] [-----] [-----] [-----]	+FSC-----+			
EN	DN	FD		+FILE SEARCH/COMPARE +- (EN) -
				Control R6:7
				Length 30+- (DN)
				Position 0
				Mode 1+- (ER)
				Expression
				#N13:200 = 75
				+-----+

Rung 9:6

				Copy
				+COP-----+
+-----] [-----] [-----] [-----]	+COPY FILE +-			
				Source #N13:0
				Destination #N14:0
				Length 100
				+-----+

Rung 9:7

				File fill
				+FLL-----+
+-----] [-----] [-----] [-----]	+FILL FILE +-			
				Source 0
				Destination #N13:1
				Length 99
				+-----+

Rung 9:8

|  
+-----[END OF FILE]-----  
|

Rung 10:0

Shift instructions

BSL	BSL	BSL		BSL
enable bit	done bit	Unload bit		Control
R6:10	R6:10	R6:10		+BSL-----+
+----]	[-----]	[-----]	[-----]	+BIT SHIFT LEFT +- (EN) -
EN	DN	UL		File #B15:0
				Control R6:10+- (DN)
				Bit address I:007/01
				Length 64
				+-----+

Rung 10:1

BSR	BSR	BSR		BSR
enable bit	done bit	unload bit		Control
R6:11	R6:11	R6:11		+BSR-----+
+----]	[-----]	[-----]	[-----]	+BIT SHIFT RIGHT +- (EN) -
EN	DN	UL		File #B15:5
				Control R6:11+- (DN)
				Bit address I:007/02
				Length 64
				+-----+

Rung 10:2

FFL	FFL	FFL		FFL
enable bit	done bit	empty bit		Control
R6:12	R6:12	R6:12		+FFL-----+
+----]	[-----]	[-----]	[-----]	+FIFO LOAD +- (EN) -
EN	DN	EM		Source B15:20
				FIFO #B15:10+- (DN)
				Control R6:12
				Length 10+- (EM)
				Position 0
				+-----+

Rung 10:3

FFU	FFU	FFU		FFU
enable bit	done bit	empty bit		Control
R6:13	R6:13	R6:13		+FFU-----+
+----]	[-----]	[-----]	[-----]	+FIFO UNLOAD +- (EU) -
EU	DN	EM		FIFO #B15:10
				Destination B15:21+- (DN)
				Control R6:13
				Length 10+- (EM)
				Position 0
				+-----+

Rung 10:4

|

+-----[END OF FILE]-----

|

Rung 11:0

Sequencer instructions

	SQL/SQO		SQL/SQO
	Control		Control
	+SQI-----+		+SQO-----+
+--	SEQUENCER INPUT	-----	SEQUENCER OUTPUT +- (EN) -
	File #B17:0		File #B17:9
	Mask OFF0		Mask OFF0+- (DN)
	Source I:026		Destination O:024
	Control R6:20		Control R6:20
	Length 8		Length 8
	Position 0		Position 0
	+-----+		+-----+

Rung 11:1

	Load		SQL
	sequence		Control
	file		
	input		
	condition		
	I:001		+SQL-----+
+---	] [-----		SEQUENCER LOAD +- (EN) -
	10		File #B17:0
			Source I:026+- (DN)
			Control R6:21
			Length 8
			Position 0
			+-----+

Rung 11:2

|

-----[END OF FILE]-----

|



```

Rung 12:0
| +SBR-----+
+--SUBROUTINE +-----+RETURN () +-
| |Input parameter | |Return parameter |
| +-----+

```

```

Rung 12:1
| Label 5 Label 5
| 5 5
+--- [LBL] --- [AFI] ----- (JMP) ---
|

```

```

Rung 12:2
| Input
| condition
| I:001
+----] [----- (MCR) -
| 11

```

```

Rung 12:3
|
+----- (TND) -
|

```

```

Rung 12:4
|
| JSR-----+
+-----+JUMP TO SUBROUTINE +-
| |Prog file number 12|
| |Input parameter |
| |Return parameter |
| +-----+

```

```

Rung 12:5
|
+----- (MCR) -
|

```

```

Rung 12:6
|
| RET-----+
+-----+RETURN () +-
| |Return parameter |
| +-----+

```

```

Rung 12:7
|
+----- [END OF FILE] -----
|

```



DDT  
Result  
Control

```

<+DDT-----+
<+DIAGNOSTIC DETECT      +- (EN) -
<|Source      #B18:0+- (DN)
|Reference    #B18:20+- (FD)
|Result      #N19:22+- (IN)
|Compare control  R6:32+- (ER)
|Length      9|
|Position    0|
|Result control  R6:33|
|Length      9|
|Position    0|
+-----+

```

Rung 13:2

PID	PID	PID		PID
enable bit	Set Output	mode		Control
	Mode			block
N20:0	N20:0	N20:0		+PID-----+
+----]	[-----]	[-----]	[-----]	+PID
15	4	1		Control block N20:0
				Process variable N7:4
				Tieback 0
				Control variable N7:235
				+-----+

Rung 13:3

```

|
+-----[END OF FILE]-----
|

```

Program Listing Report

PLC-5/25

File 6200PLC5

Rung 14:0

NO MORE FILES