

# ROCKWELL AUTOMATION RSLOGIX 5000 STRUCTURED TEXT PROGRAMMING SYNTAX GUIDE SHEET

## ASSIGNMENT

tag := expression;  
tag [:=] expression; //Non-retentive Assignment  
string1.data[0] := 65;

## EXPRESSION

### ELEMENTS OF EXPRESSIONS:

- Tag name
- Number
- Operator
- Function
  - ABS, ACOS, ASIN, ATAN, COS, DEG, LN, LOG, RAD, SIN, SQRT, TAN, TRUNC, ...

### ORDER OF EXECUTION

Order	Operation
1	()
2	function_name(...)
3	**
4	-(negate)
5	NOT
6	*,/,MOD
7	+,-(subtract)
8	<,<=,>,>=
9	=,<>
10	&,AND
11	XOR
12	OR

### INSTRUCTIONS

Must be in a standalone statement:  
OSRI(osri\_1); // instruction  
AOI1(backing\_tag, <parameters>); // AOI

## SUBROUTINE

### DEFINITION

SBR (value\_a, value\_b);  
...  
RET (float\_a);

### INVOCATION

JSR (st\_2, 2, int1, int2, int1);

## CONSTRUCTS

### IF...THEN

IF Boolean\_expression1 THEN  
...  
ELSEIF boolean\_expression2 THEN  
...  
ELSE  
...  
END\_IF ;

### CASE...OF

CASE numeric\_expression OF  
1:  
...  
2,3:  
...  
4..7:

...  
8,11..13:  
...  
ELSE  
...  
END\_CASE ;

### FOR...DO

FOR count := initial\_value TO  
final\_value  
BY increment  
DO  
...  
IF bool\_expression THEN  
EXIT ;  
END\_IF;  
END\_FOR ;

### WHILE...DO

WHILE bool\_expression1 DO  
...  
IF bool\_expression2 THEN  
EXIT ;  
END\_IF;  
END\_WHILE ;

### REPEAT...UNTIL

REPEAT  
...  
IF bool\_expression2 THEN  
EXIT ;  
END\_IF;  
UNTIL bool\_expression1  
END\_REPEAT;