

FactoryTalk Alarms and Events Logix-based Instructions

		S7
ALMD	Digital Alarm	-
ALMA	Analog Alarm	-

Bit Instructions

		S7
XIC	Examine If Closed	A
XIO	Examine If Open	AN
OTE	Output Energize	=
OTL	Output Latch	S
OUT	Output Unlatch	R
ONS	One Shot	P
OSR	One Shot Rising	P
OSF	One Shot Falling	N
OSRI	One Shot Rising with Input	P
OSFI	One Shot Falling with Input	N

Timer and Counter Instructions

		S7
TON	Timer On Delay	SD
TOF	Timer Off Delay	SF
RTO	Retentive Timer On	SS
TONR	Timer On Delay with Reset	SD
TOFR	Timer Off Delay with Reset	SF
RTOR	Retentive Timer On with Reset	SS
CTU	Count Up	CU
CTD	Count Down	CD
CTUD	Count Up/Down	-
RES	Reset	R

Input/Output Instructions

		S7
MSG	Message	-
GSV	Get System Value	-
SSV	Set System Value	-
IOT	Immediate Output	-

Compare Instructions

		S7
CMP	Compare	-
EQU	Equal To	==
GEQ	Greater Than or Equal To	>=
GRT	Greater Than	>
LEQ	Less Than or Equal To	<=
LES	Less Than	<
LIM	Limit	-
MEQ	Mask Equal To	-
NEQ	Not Equal To	-

Compute/Math Instructions

		S7
CPT	Compute	-
ADD	Add	+
SUB	Subtract	-
MUL	Multiply	*
DIV	Divide	/
MOD	Modulo	MOD
SQR	Square Root	SQR
NEG	Negate	NEGI
ABS	Absolute Value	ABS

Move/Logical Instructions

		S7
MOV	Move	L,T
MVM	Masked Move	-
MVMT	Masked Move with Target	-
BTD	Bit Field Distribute	-
BTDI	Bit Field Distribute with Target	-
CLR	Clear	-
SWPB	Swap Byte	-
AND	Bitwise AND	AW,AD
OR	Bitwise OR	OW,OD
XOR	Bitwise Exclusive OR	XOW,XOD
NOT	Bitwise NOT	-
BAND	Boolean AND	A
BOR	Boolean OR	O
BXOR	Boolean Exclusive OR	X
BNOT	Boolean NOT	NOT

Array (File)/Misc. Instructions

		S7
FAL	File Arithmetic and Logic	-
FSC	File Search and Compare	-
COP	Copy File	-
CPS	Synchronous Copy File	-
FLL	File Fill	-
AVE	File Average	-
SRT	File Sort	-
STD	File Standard Deviation	-
SIZE	Size In Elements	-

Array (File)/Shift Instructions

		S7
BSL	Bit Shift Left	-
BSR	Bit Shift Right	-
FFL	FIFO Load	-
FFU	FIFO Unload	-
LFL	LIFO Load	-
LFU	LIFO Unload	-

Sequencer Instructions

		S7
SQI	Sequencer Input	-
SQO	Sequencer Output	-
SQL	Sequencer Load	-

Program Control Instructions

		S7
JMP	Jump to Label	JMP
LBL	Label	LBL
JSR	Jump to Subroutine	CALL
SBR	Subroutine	-
RET	Return	-
JXR	Jump to External Routine	-
TND	Temporary End	RET
MCR	Master Control Reset	-
UID	User Interrupt Disable	SFCx
UIE	User Interrupt Enable	SFCx
AFI	Always False Instruction	-
NOP	No Operation	NOP
EOT	End of Transition	-
SFP	SFC Pause	-
SFR	SFC Reset	-
EVENT	Trigger Event Task	-

For/Break Instructions

		S7
FOR	For	LOOP
BRK	Break	-
RET	Return	-

Special Instructions

		S7
FBC	File Bit Comparison	-
DDT	Diagnostic Detect	-
DTR	Data Transitional	-
PID	Proportional Integral Derivative	FB41

Trigonometric Instructions

		S7
SIN	Sine	SIN
COS	Cosine	COS
TAN	Tangent	TAN
ASN	Arc Sine	ASIN
ACS	Arc Cosine	ACOS
ATN	Arc Tangent	ATAN

Advanced Math Instructions

		S7
LN	Natural Log	LN
LOG	Log Base 10	-
XPY	X to the Power of Y	-

Math Conversion Instructions

		S7
DEG	Degrees	-
RAD	Radians	-
TOD	Convert to BCD	ITB
FRD	Convert to Integer	BTI
TRN	Truncate	TRUNC

ASCII Serial Port Instructions

		S7
ABL	ASCII Test For Buffer Line	-
ACB	ASCII Chars in Buffer	-
ACL	ASCII Clear Buffer	-
AHL	ASCII Handshake Lines	-
ARD	ASCII Read	-
ARL	ASCII Read Line	-
AWA	ASCII Write Append	-
AWT	ASCII Write	-

ASCII String Instructions

		S7
CONCAT	String Concatenate	-
DELETE	String Delete	-
FIND	Find String	-
INSERT	Insert String	-
MID	Middle String	-

ASCII Conversion Instructions

		S7
STOD	String To DINT	-
STOR	String To REAL	-
DTOS	DINT to String	-
RTOS	REAL to String	-
UPPER	Upper Case	-
LOWER	Lower Case	-

Debug Instructions

		S7
BPT	Breakpoints	-
TPT	Tracepoints	-