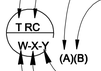
INSTRUMENT IDENTIFICATION

EXAMPLE SYMBOLS



- FIRST LETTER (S)
- SUCCEEDING LETTERS
- THE TOTAL NUMBER OF UNITS PER SET (Y VARIES FROM 1 TO A)
- THE TOTAL NUMBER OF SETS OF UNITS (Z VARIES FROM 1 TO B)
- UNIT NUMBER (USED WHEN THERE ARE MULTIPLE UNITS WITH THE SAME W-X DESIGNATIONS)
- LOOP NUMBER
- FACILITY NUMBER

TT — FIELD MOUNTED INSTRUMENT

FY I/P — REAR-OF-PANEL MOUNTED INSTRUMENT

FIC — PANEL MOUNTED INSTRUMENT

QL OO — MOTOR CONTROL CENTER MOUNTED INSTRUMENT

INSTRUMENT SOCIETY OF AMERICA TABLE

LETTER	FIRST LETTER (S)		SUCCEEDING LETTERS		
	PROCESS OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (+)		ALARM		
B	BURNER FLAME		USERS CHOICE (+)	USERS CHOICE (+)	USERS CHOICE (+)
C	CONDUCTIVITY			CONTROL	
D	DENSITY (S.G)	DIFFERENTIAL			
E	VOLTAGE		PRIMARY ELEMENT		
F	FLOW RATE	RATIO			
G	GAUGE		GLASS	GATE	
H	HAND (MANUAL)				HIGH
!	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME OR SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTION				MIDDLE
N	USERS CHOICE (+)		USERS CHOICE (+)	USERS CHOICE (+)	USERS CHOICE (+)
O	USERS CHOICE (+)		ORIFICE		
P	PRESSURE (OR VACUUM)		POINT (TEST CONNECTION)		
Q	QUANTITY OR EVENT(+)	INTEGRATE	INTEGRATE		
R			RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE (+)		MULTIFUNCTION (+)	MULTIFUNCTION (+)	MULTIFUNCTION (+)
V	VISCOSITY			VALVE OR DAMPER	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED (+)		UNCLASSIFIED (+)	UNCLASSIFIED (+)	UNCLASSIFIED (+)
Y	USERS CHOICE (+)			RELAY OR COMPUTE (+)	
Z	POSITION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

(+) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS AND LETTER SYMBOLS.

SPECIAL CASES

QL OO — ON AND OFF EVENT LIGHTS

ZL OC — OPENED AND CLOSED POSITION LIGHTS

ZS OC — OPENED AND CLOSED POSITION SWITCHES

HS OO — ON-OFF HAND SWITCH. MAINTAINED CONTACT SWITCH (CONTROLLED DEVICE WILL RESTART ON RETURN OF POWER AFTER POWER FAILURE).

HS SS — STOP-START HAND SWITCH MOMENTARY CONTACT SWITCHES (CONTROLLED DEVICE WILL NOT RESTART ON RETURN OF POWER AFTER POWER FAILURE).

HS OSC E — ELECTRIC ACTUATOR WITH INTEGRAL OPEN-STOP-CLOSE MOMENTARY CONTACT CONTROL SWITCH

FIHK CM — FLOW INDICATING, COMPUTER/MANUAL CONTROL STATION

FIC CAM — FLOW INDICATING, COMPUTER/AUTO/MANUAL CONTROL STATION

FIC SSC — FLOW INDICATING SUPERVISORY SET POINT (BY COMPUTER) , AUTO/MANUAL CONTROL STATION

X X — COMPUTER, ACCESSIBLE TO THE OPERATER

PROGRAMMABLE LOGIC CONTROLLER, ACCESSIBLE TO THE OPERATOR

(X) — PROGRAMMABLE LOGIC CONTROLLER, INPUT/OUTPUT (I/O) X=TOTAL NUMBER OF INPUT/OUTPUT POINTS

TRANSDUCERS

A	ANALOG	!	CURRENT
D	DIGITAL	P	PNEUMATIC
E	VOLTAGE	PF	PULSE FREQUENCY
F	FREQUENCY	PD	PULSE DURATION
H	HYDRAULIC	R	RESISTANCE

EXAMPLE:

FY I/P — CURRENT TO PNEUMATIC TRANSDUCER (BACK OF PANEL, IN A FLOW LOOP)

LINE LEGEND

- PROCESS (CLOSED CONDUIT, DASHED LINE INDICATES ALTERNATE FLOW STREAM)
- PROCESS (OPEN CHANNEL)
- A — ANALOG SIGNAL (4 TO 20 mAdc, ETC.)
- DISCRETE SIGNAL (ON/OFF, ETC.)
- PD — PULSE DURATION SIGNAL
- PF — PULSE FREQUENCY SIGNAL
- PNEUMATIC SIGNAL
- X X X — FILLED SYSTEM SIGNAL
- L L L — HYDRAULIC SYSTEM SIGNAL
- SOFTWARE-PLC PROGRAMMING
- BUILDING OR FACILITY BOUNDARY
- (4) (8) (3) — PARALLELING LINES (PARENTHETICAL NUMBER INDICATES THE NUMBER OF SIGNALS REPRESENTED)
- CONNECTING LINES
- NON-CONNECTING LINES

INTERFACE SYMBOLS

S A — A D

- = PROCESS INTERFACE
- = SIGNAL INTERFACE
- A = INTERFACE LETTER
- D = DESTINATION DRAWING NO.
- S = SOURCE DRAWING NO.
- N — PROCESS OR SIGNAL LINE CONTINUATION N=1,2,3,ETC
- INTERFACE TO OR FROM PROCESS EXTERNAL TO PROJECT
- INPUT TO PROGRAMMABLE CONTROLLER
- OUTPUT FROM PROGRAMMABLE CONTROLLER

GENERAL NOTES

1. COMPONENTS AND PANELS SHOWN WITH A SINGLE ASTERISK (*) ARE TO BE PROVIDED AS PART OF A PACKAGE SYSTEM
2. COMPONENTS AND PANELS SHOWN WITH A DOUBLE ASTERISK (**) ARE TO BE PROVIDED UNDER DIVISION 16, ELECTRICAL.
3. COMPONENTS AND PANELS SHOWN WITH A (▲) ARE TO BE PROVIDED BY THE OWNER.
4. THIS IS A STANDARD LEGEND. THEREFORE, NOT ALL OFF THIS INFORMATION MAY BE USED ON THIS PROJECT.

ABBREVIATIONS & LETTER SYMBOLS

AC	ALTERNATING CURRENT
ACK	ACKNOWLEDGE ALARM
ALKY	ALKALINITY
AM	AUTO-MANUAL
CAM	COMPUTER-AUTO-MANUAL
CCS	CENTRAL CONTROL SYSTEM
CL_2 etc.	CHLORINE (TYPICAL: USE STANDARD CHEMICAL ELEMENT ABBREVIATION)
CM	COMPUTER-MANUAL
COD	CHEMICAL OXYGEN DEMAND
CP-X	CONTROL PANEL NO. X
DC	DIRECT CURRENT
DO	DISSOLVED OXYGEN
D	DRAIN
FCL_2	FREE CHLORINE RESIDUAL
FOS	FAST-OFF-SLOW
FOSA	FAST-OFF-SLOW-AUTO
FOSR	FAST-OFF-SLOW-REMOTE
FP-W-X	FIELD PANEL NO. WX (W = UNIT PROCESS NUMBER X = PANEL NUMBER)
FR	FORWARD-REVERSE
HDNS	HARDNESS
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
LEL	LOWER EXPLOSIVE LIMIT
LOS	LOCKOUT STOP
LR	LOCAL-REMOTE
MA	MANUAL-AUTO
MBAS	METHYLENE BLUE ACTIVE SUBSTANCES
MC	MODULATE-CLOSE
MCC-X	MOTOR CONTROL CENTER NO. X
OC	OPEN-CLOSE (D)
OCR	OPEN-CLOSE-REMOTE
OCA	OPEN-CLOSE-AUTO
OO	ON-OFF
OOA	ON-OFF-AUTO
OOR	ON-OFF-REMOTE
OP	ORTHO PHOSPHORUS
ORP	OXIDATION REDUCTION POTENTIAL
OSC	OPEN-STOP-CLOSE
pH	HYDROGEN ION CONCENTRATION
RM-X	REMOTE MULTIPLEXING MODULE NO. X
RTU-X	REMOTE TELEMETRY UNIT NO. X
SF	SLOWER-FASTER
SS	START-STOP
SSC	SUPERVISORY SET POINT CONTROL
TCL_2	TOTAL CHLORINE RESIDUAL
TOC	TOTAL ORGANIC CARBON
TOD	TOTAL OXYGEN DEMAND
TURB	TURBIDITY
UD	UP-DOWN
VHC	VOLATILE HYDROCARBONS
VIB	VIBRATION
Δ	DIFFERENCE
Σ	SUM
X	MULTIPLY
÷	DIVIDE
f(x)	CHARACTERIZED
X^n	RAISE TO THE Nth POWER
$\sqrt{\ }$	SQUARE ROOT
AVG	AVERAGE
1:1	REPEAT OR BOOST
>	SELECT HIGHEST SIGNAL
<	SELECT LOWEST SIGNAL
}	BIAS
%	GAIN OR ATTENUATE

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NO.	DATE	REVISION	BY	APVD
3	01/20/08	RECORD DRAWING	BG	BG
2	09/08/06	RE-ISSUED FOR CONSTRUCTION	BG	PW
1	07/04/06	ISSUED FOR CONSTRUCTION	BG	PW
0	06/05/06	FOR FINAL REVIEW/ BUILDING PERMIT	DL	BG

DSGN R NATARAJAN | DR J SUNGA | CHK R BAKER | APVD B GACKSTATTER

STAMFORD WATER POLLUTION CONTROL AUTHORITY SOLIDS DRYING PROJECT

CH2MHILL

GENERAL

INSTRUMENTATION LEGEND (1)

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	JUNE 2006
PROJ	334058
DWG	G-13
SHEET	I0

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