A1 SIZE – 594mm x 841mm

INSTRUMENT FUNCTIONAL DESIGNATIONS

	FIRST LETTER		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION				
C	CONDUCTIVITY			CONTROL	CLOSE
D	DENSITY	DIFFERENCE, DIFFERENTIAL			DEVIATION
E	VOLTAGE		SENSOR, PRIMARY ELEMENT		
F	FLOW, FLOW RATE	RATIO			FAILURE/FAULT
G			GLASS, GAUGE VIEWING DEVICE		
H	HAND (MANUAL)				HIGH
I	CURRENT		INDICATE		
J	POWER		SCAN		
K	TIME, SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MOISTURE, HUMIDITY				MIDDLE, INTERMEDIATE
N					
O	TORQUE		ORIFICE, RESTRICTION		OPEN
P	PRESSURE		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE, TOTALIZE	INTEGRATE, TOTALIZE		
R	RADIATION		RECORD		RUN
S	SPEED, FREQUENCY	SAFETY		SWITCH	STOP
T	TEMPERATURE			TRANSMITTER	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT, FORCE		WELL, PROBE		
X	UNCLASSIFIED	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE, OR PRESENCE	Y AXIS		AUXILIARY DEVICE	
Z	POSITION, DIMENSION	Z AXIS, SAFETY INSTRUMENTED SYSTEM		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

NOTES FOR INSTRUMENT AND DEVICE IDENTIFICATION TABLE:

1. THE LETTER X IS TO BE DEFINED AT THE TIME OF USE, AND MAY BE USED FOR MULTIPLE DEFINITIONS WHERE NO OTHER LETTER IS APPLICABLE.

COMMON INSTRUMENT FIELD DEVICE IDENTIFIERS

IDENTIFIER	DEFINITION	IDENTIFIER	DEFINITION
AA	ANALYSIS ALARM	ME	MOISTURE SENSOR
AAH	ANALYSIS ALARM – HIGH	MT	MOISTURE TRANSMITTER
AAHH	ANALYSIS ALARM – HIGH–HIGH	OSH	TORQUE SWITCH HIGH
AE	ANALYSIS ELEMENT	PCV	PRESSURE CONTROL VALVE
AIT	ANALYSIS INDICATING TRANSMITTER (ANALYTIC INST.)	PE	PRESSURE ELEMENT
ASH	ANALYSIS SWITCH – HIGH	PG	PRESSURE GAUGE
ASHH	ANALYSIS SWITCH – HIGH–HIGH	PI	PRESSURE INDICATOR
AT	ANALYSIS TRANSMITTER (ANALYTIC INST.)	PIC	PRESSURE INDICATING CONTROLLER
BCS	BURNER FLAME SWITCH	PIT	PRESSURE INDICATING TRANSMITTER
DE	DENSITY ELEMENT	PR	PRESSURE RECORDER
DR	DENSITY RECORDER	PS	PRESSURE SWITCH
DT	DENSITY TRANSMITTER	PSH	PRESSURE SWITCH HIGH
DX	DENSITY SOURCE (X = SOURCE)	PSHH	PRESSURE SWITCH HIGH (2ND STAGE)
EE	VOLTAGE ELEMENT/TRANSFORMER	PSL	PRESSURE SWITCH LOW
EG	VOLTAGE VIEWING DEVICE (CAPACITOR VOLTAGE INDICATOR)	PSV	PRESSURE SAFETY VALVE (RELIEF)
EI	VOLTAGE INDICATOR	PT	PRESSURE TRANSMITTER
EL	VOLTAGE LIGHT	PY	PRESSURE RELAY (I/I CONVERTER)
ET	VOLTAGE TRANSMITTER	SI	SPEED INDICATOR
FAL	FLOW ALARM LOW	ST	SPEED/VELOCITY TRANSMITTER
FCV	FLOW CONTROL VALVE	TE	TEMPERATURE ELEMENT
FE	FLOW ELEMENT	TG	TEMPERATURE GAUGE
FI	FLOW INDICATOR	TI	TEMPERATURE INDICATOR
FIC	FLOW INDICATING CONTROLLER	TIC	TEMPERATURE INDICATING CONTROLLER
FIT	FLOW INDICATING TRANSMITTER	TIT	TEMPERATURE INDICATING TRANSMITTER
FQI	FLOW TOTALIZING INDICATOR	TR	TEMPERATURE RECORDER
FQY	FLOW TOTALIZING/INTEGRATING RELAY	TS	TEMPERATURE SWITCH
FR	FLOW RECORDER	TSH	TEMPERATURE SWITCH HIGH
FSL	FLOW SWITCH LOW	TSL	TEMPERATURE SWITCH LOW
FT	FLOW TRANSMITTER	TT	TEMPERATURE TRANSMITTER
FV	FLOW VALVE	TV	TEMPERATURE VALVE
FZ	FLOW METER ULTRASONIC GENERATOR	TW	TEMPERATURE THERMOWELL
HS	HAND SWITCH	TY	TEMPERATURE RELAY (SOLENOID VALVE OR M/P)
HSR	HAND SWITCH – START/RUN	VE	VIBRATION ELEMENT
HSS	HAND SWITCH – STOP	VI	VIBRATION INDICATOR
HV	HAND VALVE	VIT	VIBRATION INDICATING TRANSMITTER
IS	CURRENT SWITCH	VT	VIBRATION TRANSMITTER
IE	CURRENT ELEMENT/TRANSFORMER	XV	ON/OFF VALVE (TYPICAL)
II	CURRENT INDICATOR	XY	ON/OFF RELAY OR SOLENOID
IY	CURRENT RELAY	YL	STATE INDICATOR
JIT	POWER INDICATING TRANSMITTER	ZI	POSITION INDICATOR
KY	TIMER RELAY	ZS	POSITION SWITCH
LCV	LEVEL CONTROL VALVE	ZSC	POSITION SWITCH CLOSED (LIMIT SWITCH)
LE	LEVEL ELEMENT	ZSO	POSITION SWITCH OPEN (LIMIT SWITCH)
LI	LEVEL INDICATOR	ZT	POSITION TRANSMITTER
LIC	LEVEL INDICATING CONTROLLER		
LIT	LEVEL INDICATING TRANSMITTER		
LR	LEVEL RECORDER		
LSL	LEVEL SWITCH LOW		
LSH	LEVEL SWITCH HIGH		
LSHL	LEVEL SWITCH HIGH/LOW		
LT	LEVEL TRANSMITTER		
LV	LEVEL VALVE		
LY	LEVEL RELAY (I/I CONVERTER)		

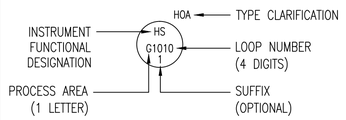
NOTES FOR INSTRUMENT FIELD DEVICE IDENTIFIERS:

1. THE LAST IDENTIFIER LETTER IS IN SOME CASES OPTIONAL (EG. FSL)
2. THIS TABLE IS DERIVED FROM THE INSTRUMENT & DEVICE IDENTIFICATION TABLE, AND IS NOT EXHAUSTIVE.

INSTRUMENT TYPE CLARIFICATION

IDENTIFIER	DEFINITION
(N)	N MULTIPLE INSTRUMENTS
AA	AUDIBLE ALARM
ACC	ACCELERATION
A/M	AUTO/MANUAL
C/H	COMPUTER/HAND
C/L	COMPUTER/LOCAL
CLS	CLOSE
C/O	COMPUTER/OFF
COB	COMPUTER/OFF/BYPASS
COH	COMPUTER/OFF/HAND
COT	COMPUTER/OFF/TIME
DCS	DISTRIBUTED CONTROL SYSTEM
DE BRG	DRIVEN END BEARING
DP	DIFFERENTIAL PRESSURE
DS	DECREASE SPEED
E/R	EXTEND/RETRACT
E/S	EMERGENCY STOP
FOR	FORWARD/OFF/REVERSE
H/A	HAND/AUTO
HOA	HAND/OFF/AUTO
HOR	HAND/OFF/REMOTE
I/D	INCREASE/DECREASE
INT/EXT	INTERNAL/EXTERNAL
IS	INCREASE SPEED
LCP	LOCAL CONTROL PANEL
LD	LOCKABLE DISCONNECT
LJB	LOCAL JUNCTION BOX
L/O	LOCAL/OFF
LOR	LOCAL/OFF/REMOTE
LOS	LOCK OFF STOP
L/R	LOCAL/REMOTE
LSR	LASER
MAG	MAGNETIC
O/A	OFF/AUTO
O/C	OPEN/CLOSE
OCC	OCCUPIED
O/M	OFF/MAINTENANCE
O/O	OFF/ON
O/S/C	OPEN/STOP/CLOSE
ODE BRG	OPPOSITE TO DRIVEN END BEARING
OPN	OPEN
PROX	PROXIMITY
RAD	RADAR
RST	RESET
RTD	RESISTIVE TEMPERATURE DEVICE
SEL	SELECTOR
S/F	SLOW/FAST
SOF	SLOW/OFF/FAST
SOL	SOLENOID
S/S	START/STOP
S/W	SUMMER/WINTER
TC	THERMOCOUPLE
US	ULTRASONIC
VEL	VELOCITY
ΔT	THERMAL DISPERSION

INSTRUMENT IDENTIFICATION



NO.	REVISIONS	DATE	DESIGN	CHECK
00	ISSUED FOR CITY USE	2013/11/29	EFB	TMC

SNC·LAVALIN INC.
148 Nature Park Way
Winnipeg, MB, Canada R3P 0X7
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DESIGNED BY: E. BOHNCKE | CHECKED BY: T. CHURCH
DRAWN BY: S. FUNK | APPROVED BY: E. RYCZKOWSKI
SCALE: NTS | RELEASED FOR CONSTRUCTION BY:
DATE: 2013/03/21 | DATE:
CONSULTANT NO.: 611003-0000-49DD

ENGINEER'S SEAL

THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT

SHOAL LAKE INTAKE & AQUEDUCT

PROCESS AND INSTRUMENTATION DIAGRAM
LEGEND AND DETAILS

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0600A-P0001	002	00	A1

1-0600A-P0001-002-00.dwg

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