| | INSTRU | JMENT AND D | DEVICE IDENTIFICATION TABLE SUCCEEDING—LETTERS | | | |
|---|---|------------------------|---|--|----------------------|--|
| | FIRST-LETTEF | 7 | | | | |
| | MEASURED OR INITIATING VARIABLE | MODIFIER | READOUT OR PASSIVE FUNCTION | OUTPUT FUNCTION | MODIFIER | |
| Α | ANALYSIS OR SAMPLER | | ALARM, TROUBLE | | | |
| В | BURNER FLAME | | | | CLOSE, DECREASE (1) | |
| С | CONDUCTIVITY | | | CONTROL | | |
| D | DENSITY | DIFFERENTIAL | | | OPEN, INCREASE (1) | |
| Ε | VOLTAGE (EMF) | | SENSOR (PRIMARY ELEMENT) | | | |
| F | FLOW RATE | RATIO (FRACTION) | FAILURE | | | |
| G | GAS | | GLASS, VIEWING DEVICE, GUAGE (2) | GENERATOR (ULTRASONIC) | | |
| Н | HAND (MANUAL) | | | | HIGH | |
| 1 | CURRENT (ELECTRICAL) | | INDICATE | | | |
| J | POWER | SCAN | | | | |
| K | TIME | TIME RATE OF CHANGE | | CONTROL STATION | | |
| L | LEVEL | | LIGHT (3) | | LOW | |
| М | MOTOR | MOMENTARY | OPERATE, ON/OFF | | MIDDLE, INTERMEDIATE | |
| Ν | MOISTURE | | | START | | |
| 0 | TORQUE | | ORIFACE, RESTRICTION | STOP, OVERLOAD | | |
| Р | PRESSURE, VACUUM | | POINT (TEST CONNECTION) | | | |
| Q | COMMON, QUANTITY | INTEGRATE, TOTALIZE | | | | |
| R | RADIOACTIVITY | | RECORD | | | |
| S | SPEED, FREQUENCY | SAFETY | | SWITCH | | |
| Τ | TEMPERATURE | | TRANSMITTER | | | |
| U | MULTIVARIABLE | | MULTIFUNCTION | MULTIFUNCTION | MULTIFUNCTION | |
| ٧ | VIBRATION, MECHANICAL ANALYSIS, VALVE, DAMPER (4) | | | VALVE, DAMPER, LOUVER | | |
| W | WEIGHT, FORCE | | WELL | | | |
| Χ | UNCLASSIFIED (5) | X AXIS | UNCLASSIFIED (5) | UNCLASSIFIED (5) | UNCLASSIFIED (5) | |
| Υ | EVENT, STATE, OR PRESENCE | Y AXIS | | RELAY, COMPUTE, CONVERT | | |
| Z | POSITION | Z AXIS | | DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT | | |

NOTES FOR INSTRUMENT AND DEVICE IDENTIFICATION TABLE:

- WHEN THE B AND D LETTERS ARE TO REPRESENT AN OPEN AND CLOSED COMMAND OR POSITION, THEY ARE CURRENTLY OFTEN USED NOT AS A MODIFIER, BUT RATHER AS A READOUT OR OUTPUT FUNCTION. FOR EXAMPLE, SB RATHER THAN SCB.
- 2. IN CURRENT DRAWINGS, THE LETTER G IS OFTEN USED TO REPRESENT A GAUGE AS IN TG (TEMPERATURE GAUGE). HOWEVER, SINCE A TEMPERATURE GAUGE USUALLY HAS A SCALE TO READ A SPECIFIC TEMPERATURE, IT WOULD MORE CORRECTLY BE CALLED AN INDICATOR (TI). GAUGE IS INCLUDED FOR HISTORICAL REASONS.
- 3. ON CURRENT NEWPCC P&ID DRAWINGS, THE PILOT LIGHTS USUALLY OMIT THE L DESIGNATION. FOR EXAMPLE, A VALVE OPEN PILOT LIGHT IS DESIGNATED AS ZD. TECHNICALLY, THE APPROPRIATE IDENTIFIER IS ZLD, BUT ZD HAS BEEN MAINTAINED FOR HISTORICAL REASONS.
- 4. THE USE OF V AS AN INITIAL LETTER HAS BEEN INCORRECTLY USED IN THE PAST TO REPRESENT A VALVE OR A DAMPER, AND IS MAINTAINED IN THE IDENTIFICATION TABLE DUE TO ITS COMMON USE AS SUCH. HOWEVER, THESE INSTRUMENTS SHOULD IDEALLY BE RENAMED TO THE APPROPRIATE IDENTIFIERS. FOR EXAMPLE, MOST VY INSTRUMENTS (PNEUMATIC RELAYS) ON THE CURRENT DRAWINGS COULD BE RELABELLED AS HY OR FY INSTRUMENTS.
- 5. 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.

| | INSTRUMENT FIELD | | |
|------------------------|---|---|---------------------------------|
| IDENTIFIER | DEFINITION | IDENTIFIER | |
| AAH | ANALYSIS ALARM — HIGH | PSHH | PRESSURE S |
| AAHH · = | ANALYSIS ALARM — HIGH—HIGH | PSL | PRESSURE S |
| AE AIT | ANALYSIS ELEMENT | PSV PT | PRESSURE SA |
| AIT AK | ANALYSIS INDICATING TRANSMITTER (ANALYTIC INST.) ANALYSIS (AMPLER) CONTROL STATION | PY | PRESSURE RI |
| ASH | ANALYSIS SWITCH — HIGH | SI | SPEED INDICA |
| ASHH | ANALYSIS SWITCH — HIGH—HIGH | SK | SPEED CONTR |
| ASY | ANALYSIS SAFETY RELAY | ST | SPEED TRANS |
| AT | ANALYSIS TRANSMITTER (ANALYTIC INST.) | TE | TEMPERATURE |
| AY BK | ANALYSIS RELAY BURNER CONTROL STATION | TG TI | TEMPERATURE |
| BS BS | BURNER FLAME SWITCH | TIC | TEMPERATURE TEMPERATURE |
| BV | BURNER VALVE | TIT | TEMPERATURE |
| DE | DENSITY ELEMENT | TR | TEMPERATURE |
| DR | DENSITY RECORDER | TSH | TEMPERATURE |
| DT | DENSITY TRANSMITTER | TSL | TEMPERATURE |
| DX EE | DENSITY SOURCE (X = SOURCE) VOLTAGE ELEMENT/TRANSFORMER | TT TV | TEMPERATURE TEMPERATURE |
| El | VOLTAGE INDICATOR | TW | TEMPERATURE |
| ET | VOLTAGE TRANSMITTER | TY | TEMPERATURE |
| FE | FLOW ELEMENT | XE | VELOCITY ELE |
| FG | FLOW METER ULTRASONIC GENERATOR | ΧI | VELOCITY IND |
| FI | FLOW INDICATOR | XK | UNCLASSIFIED |
| FIC | FLOW INDICATING CONTROLLER | XT | POWER FACTO |
| FIT FQI | FLOW INDICATING TRANSMITTER FLOW TOTALIZING INDICATOR | XT XX | VELOCITY TRA |
| FQY | FLOW TOTALIZING / INTEGRATING RELAY | YS | COMPUTER S |
| FR | FLOW RECORDER | YSA | STATE SAFET |
| FRC | FLOW RECORDING CONTROLLER | YSL | STATE SAFET |
| FRQ | FLOW RECORDING TOTALIZER | ZI | POSITION IND |
| FSL | FLOW SWITCH LOW | ZS | POSITION SWI |
| FT FV | FLOW TRANSMITTER FLOW VALVE | ZSB ZSDL | POSITION SWI |
| FY | FLOW COMPUTER / RELAY | ZSH | POSITION SWI |
| GE | GAS ELEMENT | ZSL | POSITION SWI |
| GS | GAS SWITCH MODULE | ZT | POSITION TRA |
| HK | HAND CONTROL STATION | NOTES F | UB INISTE |
| HS | HAND SWITCH | 1 | |
| HSS HV | HAND SAFETY SWITCH HAND VALVE | | T IDENTIFIER L |
| IS | CURRENT SWITCH | | BLE IS DERIVED AND IS NOT EX |
| ΙΕ | CURRENT ELEMENT/TRANSFORMER | 1,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 110 10 1101 27 |
| II | CURRENT INDICATOR |] | |
| <u>IY</u> | CURRENT RELAY | | |
| LCV | TIMER RELAY LEVEL CONTROL VALVE | - | |
| LE LE | LEVEL ELEMENT | - | |
| Ll | LEVEL INDICATOR | 1 | |
| LIC | LEVEL INDICATING CONTROLLER | | |
| LIT | LEVEL INDICATING TRANSMITTER | | |
| LR | LEVEL RECORDER | | |
| LSL LSH | LEVEL SWITCH LOW LEVEL SWITCH HIGH | - | |
| LSHL | LEVEL SWITCH HIGH/LOW | - | |
| LT | LEVEL TRANSMITTER | 1 | |
| LV | LEVEL VALVE | | |
| LY | LEVEL RELAY (I/I CONVERTER) |] | |
| MB | MOTOR DECREASE OR REVERSE | | |
| MD ME | MOTOR INCREASE OR FORWARD MOTOR FAILURE | - | |
| MF MM | MOTOR FAILURE MOTOR RUN | - | |
| NS | MOISTURE SWITCH | 1 | |
| PCV | PRESSURE CONTROL VALVE |] | |
| | PRESSURE ELEMENT |] | |
| PE | PRESSURE GAUGE | Ī | |
| PG | | - | |
| PG PI | PRESSURE INDICATOR | | |
| PG PI PIC | PRESSURE INDICATOR PRESSURE INDICATING CONTROLLER | | |
| PG PI | PRESSURE INDICATOR | | |
| PG PI PIC PIT | PRESSURE INDICATOR PRESSURE INDICATING CONTROLLER PRESSURE INDICATING TRANSMITTER | | |

| ENTIFIER | DEFINITION | IDENTIFIER | DEFINITION |
|----------|--|-------------|--|
| AAH | ANALYSIS ALARM — HIGH | PSHH | PRESSURE SWITCH HIGH (2ND STAGE) |
| ААНН | ANALYSIS ALARM — HIGH—HIGH | PSL | PRESSURE SWITCH LOW |
| AE | ANALYSIS ELEMENT | PSV | PRESSURE SAFETY VALVE (RELIEF) |
| AIT | ANALYSIS INDICATING TRANSMITTER (ANALYTIC INST.) | PT | PRESSURE TRANSMITTER |
| AK | ANALYSIS (AMPLER) CONTROL STATION | PY | PRESSURE RELAY (I/I CONVERTER) |
| ASH | ANALYSIS SWITCH — HIGH | SI | SPEED INDICATOR |
| ASHH | ANALYSIS SWITCH — HIGH—HIGH | SK | SPEED CONTROL STATION |
| ASY | ANALYSIS SAFETY RELAY | ST | SPEED TRANSMITTER |
| AST | ANALYSIS TRANSMITTER (ANALYTIC INST.) | TE | TEMPERATURE ELEMENT |
| | ANALYSIS RELAY | TG | TEMPERATURE GAUGE |
| AY | | | |
| BK | BURNER CONTROL STATION | TIC | TEMPERATURE INDICATING CONTROLLER |
| BS | BURNER FLAME SWITCH | TIC | TEMPERATURE INDICATING CONTROLLER |
| BV | BURNER VALVE | TIT | TEMPERATURE INDICATING TRANSMITTER |
| DE | DENSITY ELEMENT | TR | TEMPERATURE RECORDER |
| DR | DENSITY RECORDER | TSH | TEMPERATURE SWITCH HIGH |
| DT | DENSITY TRANSMITTER | TSL | TEMPERATURE SWITCH LOW |
| DX | DENSITY SOURCE $(X = SOURCE)$ | TT | TEMPERATURE TRANSMITTER |
| EE | VOLTAGE ELEMENT/TRANSFORMER | TV | TEMPERATURE VALVE |
| El | VOLTAGE INDICATOR | TW | TEMPERATURE THERMOWELL |
| ET | VOLTAGE TRANSMITTER | TY | TEMPERATURE RELAY (SOLENOID VALVE OR M/P) |
| FE | FLOW ELEMENT | XE | VELOCITY ELEMENT |
| FG | FLOW METER ULTRASONIC GENERATOR | ΧI | VELOCITY INDICATOR |
| FI | FLOW INDICATOR | XK | UNCLASSIFIED CONTROL STATION $(X = FIRE)$ |
| FIC | FLOW INDICATING CONTROLLER | XT | POWER FACTOR TRANSMITTER |
| FIT | FLOW INDICATING TRANSMITTER | XT | VELOCITY TRANSMITTER $(X = VELOCITY)$ |
| FQI | FLOW TOTALIZING INDICATOR | XX | UNCLASSIFIED (XX = ALARM ANNUNCIATOR) |
| FQY | FLOW TOTALIZING / INTEGRATING RELAY | YS | COMPUTER SWITCH |
| FR | FLOW RECORDER | YSA | STATE SAFETY ALARM |
| FRC | FLOW RECORDING CONTROLLER | YSL | STATE SAFETY LIGHT |
| FRQ | FLOW RECORDING TOTALIZER | ZI | POSITION INDICATOR |
| FSL | FLOW SWITCH LOW | ZS | POSITION SWITCH |
| FT | FLOW TRANSMITTER | _ | |
| | | ZSB | POSITION SWITCH CLOSED (LIMIT SWITCH) |
| FV | FLOW VALVE | ZSDL | POSITION SWITCH OPEN (LIMIT SWITCH) |
| FY | FLOW COMPUTER / RELAY | ZSH | POSITION SWITCH HIGH |
| GE | GAS ELEMENT | ZSL | POSITION SWITCH LOW |
| GS | GAS SWITCH MODULE | ZT | POSITION TRANSMITTER |
| HK | HAND CONTROL STATION | I NOTES E | OR INSTRUMENT FIELD DEVICE IDENTIFIERS: |
| HS | HAND SWITCH | INOILS | ON INSTITUTE TILLO DEVICE IDENTIFIENS. |
| HSS | HAND SAFETY SWITCH | 1. THE LAS | T IDENTIFIER LETTER IS IN SOME CASES OPTIONAL (EG. FSL) |
| HV | HAND VALVE | 2. THIS TAE | BLE IS DERIVED FROM THE INSTRUMENT & DEVICE IDENTIFICATION |
| IS | CURRENT SWITCH | | AND IS NOT EXHAUSTIVE. |
| ΙE | CURRENT ELEMENT/TRANSFORMER | | |
| | CURRENT INDICATOR | | |
| ΙΥ | CURRENT RELAY | | |
| KY | TIMER RELAY | | |
| LCV | LEVEL CONTROL VALVE | | |
| LE | LEVEL ELEMENT | 1 | |
| Ll | LEVEL INDICATOR | 1 | |
| LIC | LEVEL INDICATING CONTROLLER | 1 | |
| LIT | LEVEL INDICATING TRANSMITTER | 1 | |
| LR | LEVEL RECORDER | \dashv | |
| | LEVEL SWITCH LOW | \dashv | |
| LSL | | - | |
| LSH | LEVEL SWITCH HIGH | - | |
| LSHL | LEVEL SWITCH HIGH/LOW | - | |
| LT | LEVEL TRANSMITTER | | |

| INSTRUMENT IDENTIFICATION MODIFIER | | | | | |
|------------------------------------|-------------------------------------|--|--|--|--|
| IDENTIFIER | DEFINITION | | | | |
| (N) | N MULTIPLE INSTRUMENTS | | | | |
| AA | AUDIBLE ALARM | | | | |
| A/M | AUTO / MANUAL | | | | |
| C/L | COMPUTER / LOCAL | | | | |
| CLS | CLOSE | | | | |
| C/O | COMPUTER / OFF | | | | |
| COB | COMPUTER / OFF / BYPASS | | | | |
| СОН | | | | | |
| | | | | | |
| COND | CONDUCTIVITY | | | | |
| COT | COMPUTER / OFF / TIME | | | | |
| DCS | DISTRIBUTED CONTROL SYSTEM | | | | |
| DO | DISSOLVED OXYGEN | | | | |
| DS C/C | DECREASE SPEED | | | | |
| 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/0 | LOCAL / OFF | | | | |
| LOR | LOCAL / OFF / REMOTE | | | | |
| LOS | LOCK OFF STOP | | | | |
| L/R | LOCAL / REMOTE | | | | |
| LSR | LOCAL / STOP / REMOTE | | | | |
| MCC | MOTOR CONTROL CENTER | | | | |
| NO ₂ | NITRITE | | | | |
| NH ₃ | AMMONIA | | | | |
| 0/A | OFF / AUTO | | | | |
| 0/C | OPEN / CLOSE | | | | |
| 0/M | OFF / MAINTENANCE | | | | |
| 0/0 | OFF / ON | | | | |
| OPN | OPEN | | | | |
| RST | RESET PESISTING TEMPERATURE DEVICE | | | | |
| RTD | RESISTIVE TEMPERATURE DEVICE | | | | |
| SEL S/E | SELECTOR SLOW / FAST | | | | |
| S/F | 7 | | | | |
| SOF SOL | SLOW / OFF / FAST | | | | |
| | SOLENOID START / STOP | | | | |
| S/S S/W | | | | | |
| S/W | SUMMER / WINTER | | | | |
| TAH | TEMPERATURE ALARM HIGH | | | | |
| TAL | TEMPERATURE SWITCH HIGH | | | | |
| TSH | TEMPERATURE SWITCH HOW | | | | |
| TSL T/C | TEMPERATURE SWITCH LOW | | | | |
| T/C | THERMOCOUPLE | | | | |
| VIB | VIBRATION | | | | |

INSTRUMENT FIELD DEVICE NUMBERING INSTRUMENT IDENTIFICATION MODIFIER — PROCESS AREA IDENTIFIER — LOOP OR DEVICE NUMBER (001-999) — INSTRUMENT ID — MAX. OF 4 LETTERS AS PER IDENTIFICATION TABLE - DEVICE SUFFIX FOR MULTIPLE DEVICES ON THE SAME LOOP CONTROL SYSTEM (DCS) POINT TAG NUMBERING COMPUTER SYSTEM EQUIPMENT LOCATION IDENTIFIER (2 LETTERS: DA=PROCESS AREA D, PCU PANEL A) — LOOP OR DEVICE NUMBER (001 — 999) - INSTRUMENT OR DEVICE IDENTIFICATION PROCESS AREA IDENTIFIER PLC POINT TAG **NUMBERING** - PROCESS AREA IDENTIFIER - LOOP OR DEVICE NUMBER (001—999)

INSTRUMENT ID - MAX. OF 4 LETTERS AS PER IDENTIFICATION TABLE DEVICE SUFFIX FOR MULTIPLE DEVICES ON THE SAME LOOP

PLC EQUIPMENT IDENTIFIER (UP TO 3 LETTERS) — LOOP OR DEVICE NUMBER (001 — 999) √ W500 → INSTRUMENT OR DEVICE IDENTIFICATION - PROCESS AREA IDENTIFIER

THIS DRAWING IS BASED ON CITY OF WINNIPEG DRAWING NUMBER 1-0101A-D-A0001-002-06D

P4.02

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|---|---------------|------------------------------------|----------|-----|----------------|--------------|-------------------------------|--------|
| | | | | | | AE | COM | |
| | 05 | ISSUED FOR TENDER: BID OP 281-2018 | 18/04/12 | ES | DESIGNED BY | LAE | CHECKED SB | |
| | 04 | ISSUED FOR CONSTRUCTION: | 16/10/06 | SE | | | | |
| | 03 | ISSUED FOR TENDER: BID OP 547-2016 | 16/06/23 | SRG | DRAWN BY | LAE | APPROVED BY | |
| 2 | 02 | AS-CONSTRUCTED DRAWING | 09/02/19 | DEP | SCALE: | NONE | RELEASED FOR CONSTRUCTION BY: | |
| | 01 | ISSUED FOR CONSTRUCTION | 06/08/30 | GLG | | | | |
| | 00 | ISSUED FOR TENDER | 06/05/15 | GLG | | | | CONSUI |
| | NO. | REVISIONS | DATE | BY | DATE | 2006/01/16 | DATE | |

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LEGEND AND DETAILS

OMISSIONS CONTAINED THEREIN.