

| ABBREVIATIONS | | | |
|---------------|--------------------------------------|-------|--|
| ALM | ALARM | NC | NORMALLY CLOSED |
| AM | AUTO/MANUAL | NO | NORMALLY OPEN |
| BRG | BEARING | O/A | OUTSIDE AIR |
| CH | COMPUTER/HAND | O/C | OPEN/CLOSED |
| CHOM | COMP./HAND/OFF/MAINT. | ODE | OPPOSITE DRIVE END |
| CHOMET | COMP./HAND/OFF/MAINT./ENGINE/TEST | OPN | OPEN |
| CL | COMPUTER/LOCAL | O/SIC | OPEN/STOP/CLOSE |
| COH | COMPUTER/OFF/HAND | PDV | PUMP DISCHARGE VALVE |
| CP | CONTROL PANEL | PF | POWER FACTOR |
| CURR | CURRENT | PLC | PROGRAMMABLE LOGIC CONTROLLER |
| DEC | DECREASE | PSD | PLANT SHUTDOWN |
| DE | DRIVE END | PV | PROCESS VARIABLE |
| DOR | DOOR | PWR | POWER |
| E/A | EXHAUST AIR | RSP | REMOTE SET POINT |
| ES | ELECTRICAL SUPPLY | RST | RESET |
| E/S | EMERGENCY STOP | RTD | RESISTANCE TEMPERATURE DETECTOR |
| ESD | EMERGENCY SHUTDOWN | SOL | SOLENOID |
| FC | FAIL CLOSE | SP | SAMPLE POINT OR SET POINT (DEPENDING ON APPLICATION) |
| FI | FAIL INDETERMINATE | STN | STATION |
| FLK | FAIL LAST | SPD | SPEED |
| FOP | FAIL OPEN | STDBY | STANDBY |
| F/R | FORWARD OR REVERSE | STP | STOP |
| G | GAS | STR | START |
| HI | HIGH | STS | STATUS |
| HP | HORSE POWER | SW | SWITCH |
| HVAC | HEATING/VENTILATION/AIR CONDITIONING | T | TRAP |
| I/P | CURRENT TO PRESSURE TRANSDUCER | TST | TEST |
| I/P | INPUT | TYP | TYPICAL |
| INC | INCREASE | UPS | UNINTERRUPTIBLE POWER SUPPLY |
| LCP | LOCAL CONTROL PANEL | V | VOLTAGE |
| LO | LOW | VAC | VACUUM |
| L/O/S | LOCAL/OFF/STOP | VIB | VIBRATION |
| L/R | LOCAL/REMOTE | VLV | VALVE |
| MCC | MOTOR CONTROL CENTRE | WS | WATER SUPPLY |
| MCP | MAIN CONTROL PANEL | WDG | WINDING |
| MLD | MEGALITERS PER DAY | 86 | EQUIPMENT LOCKOUT RELAY |

PROCESS LINE TYPE CODES

| | |
|---------|-------------------|
| — AS — | AIR SUPPLY |
| — CL2 — | CHLORINE |
| — CWS — | COLD WATER SUPPLY |
| — CWR — | COLD WATER RETURN |
| — GWD — | GLAND WATER DRAIN |
| — IA — | INSTRUMENT AIR |
| — NG — | NATURAL GAS |
| — PD — | PROCESS DRAIN |
| — SA — | SAMPLE |
| — WT — | WATER |

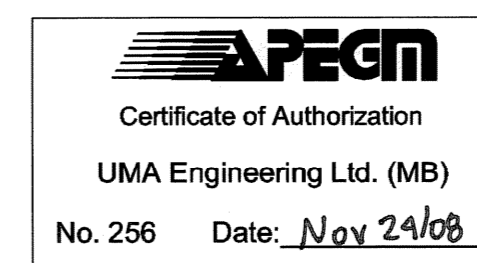
INSTRUMENT LINE SYMBOLS

| | |
|-----------------|--|
| ————— | INSTRUMENT SUPPLY OR CONNECTION TO PROCESS |
| — // // // // — | PNEUMATIC SIGNAL |
| ----- | ELECTRIC SIGNAL |
| — L L L L — | HYDRAULIC SIGNAL |
| — X X X X — | CAPILLARY TUBE |
| — # # # — | ELECTROMAGNETIC OR SONIC SIGNAL GUIDED |
| — > > > — | ELECTROMAGNETIC OR SONIC SIGNAL UNGUIDED |
| — > > > > — | ELECTRIC BINARY (ON/OFF) SIGNAL (OPTIONAL) |
| — X X X X — | PNEUMATIC BINARY SIGNAL (OPTIONAL) |
| — O O O O — | DATA / SERIAL LINK (OPTIONAL) |

IMPERIAL PIPE SIZE CHART (METRIC EQUIVALENT)

| IN | MM | IN | MM |
|-------|-------|----|--------|
| 1/8 | = 3 | 14 | = 350 |
| 1/4 | = 6 | 16 | = 400 |
| 3/8 | = 10 | 18 | = 450 |
| 1/2 | = 12 | 20 | = 500 |
| 3/4 | = 20 | 22 | = 550 |
| 1 | = 25 | 24 | = 600 |
| 1 1/4 | = 32 | 26 | = 650 |
| 1 1/2 | = 38 | 28 | = 700 |
| 2 | = 50 | 30 | = 750 |
| 2 1/2 | = 65 | 32 | = 800 |
| 3 | = 75 | 34 | = 850 |
| 3 1/2 | = 90 | 36 | = 900 |
| 4 | = 100 | 38 | = 950 |
| 4 1/2 | = 112 | 40 | = 1000 |
| 5 | = 125 | 42 | = 1050 |
| 6 | = 150 | 44 | = 1100 |
| 7 | = 175 | 46 | = 1150 |
| 8 | = 200 | 48 | = 1200 |
| 9 | = 225 | 50 | = 1250 |
| 10 | = 250 | 52 | = 1300 |
| 11 | = 275 | 54 | = 1350 |
| 12 | = 300 | | |

| | | | |
|------------|------------|-----------|-----------|
| <i>ec</i> | <i>sel</i> | <i>Dr</i> | <i>Dr</i> |
| DRN | CHK | DES | IDR |
| UMA REVIEW | | | |



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| HOR. SCALE | NTS | RELEASED FOR CONSTRUCTION | | | | | | | | | | | | | | | | | | | | | | | |
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| <p>CONSULTANT DRAWING NO. D265-199-00_02-IL0003_RX.dwg</p> | | | | <p>SHEET 3 OF 3</p> <p>CITY DRAWING NUMBER 1-0630M-A0028-003</p> <p>REV B</p> | | | | | | | | | | | | | | | | | | | | | |