### DIGITAL SYSTEMS INTERFACE SYMBOLS



**COMPUTER OR DISTRIBUTED** CONTROL SYSTEM FUNCTION BLOCK

LETTERS, TAG NUMBERS, **ABBREVIATIONS** 

DATA INTERFACE TO CONTROL SYSTEM FUNCTIONS. **DIRECTION OF ARROW DENOTES** INPUT OR OUTPUT SIGNAL NOTE: NO ARROW HEAD INDICATES INPUT/OUTPUT SIGNALS VIA **COMMUNICATIONS LINKS** 

► ARROW DENOTES ANALOG/DIGITIAL INPUT/OUTPUT (AI/AO/DI/DO) AT THE RESPECTIVE PLC



FIELD MOUNTED OPERATOR DEVICE



SHARED DISPLAY/CONTROL ACCESSIBLE TO OPERATOR ON MAIN CONTROL CONSOLE



CONNECTION TO/FROM A PLC OR RTU IN AN AUXILIARY LOCATION NORMALLY ACCESSIBLE TO **OPERATOR** 

#### CONTROL DEVICE DESIGNATIONS



HAND SELECTOR SWITCH (OR PUSH **BUTTON) - MAINTAINED CONTACTS** (CONTROLLED DEVICE WILL RESTART ON RETURN OF POWER AFTER POWER FAILURE)



SPRING RETURN SWITCH (OR PUSHBUTTON) - MOMENTARY CONTACTS (CONTROLLED DEVICE WILL NOT RESTART ON RETURN OR POWER AFTER POWER FAILURE)

**EXAMPLE** 



REPRESENTS A LOCAL/REMOTE SELECTOR SWITCH

#### ABBREVIATIONS AND LETTERS (XX)

LOCAL-REMOTE POTENTIOMETER KEY SELECTOR SWITCH OVERI OAD Οl KS RVSS SOFT STARTER CR CONTROL RELAY CLOSE VFD VARIABLE FREQUENCY DRIVE VIBRATION OPEN REV REVERSE TEMPERATURE TMP LKG LEAKAGE FWD FORWARD

PROGRAMMABLE LOGIC CONTROLLER PLC POWER SUPPLY UNIT

UNINTERRUPTIBLE POWER SUPPLY UPS EMERGENCY STOP PUSH BUTTON

ETM ELAPSED TIME METER

#### GENERAL INSTRUMENT SYMBOLS

FIELD MOUNTED INSTRUMENT



**INSTRUMENT MOUNTED** BEHIND OR INSIDE OF PANEL (IN CONTROL ROOM)



INSTRUMENT MOUNTED ON FACE OF LOCAL PANEL/MCC



INSTRUMENT MOUNTED BEHIND OR INSIDE OF LOCAL PANEL/MCC



SINGLE INSTRUMENT HOUSING CONTAINING TWO (OR MORE) INSTRUMENTATION FUNCTIONS



PILOT LIGHT MOUNTED ON FACE OF PANEL IN CONTROL ROOM

NOTE COLOUR X: R = RED

G = GREEN A = AMBER+





PILOT LIGHT MOUNTED ON FACE OF LOCAL PANEL/MCC

NOTE COLOUR X: R = RED

G = GREEN A = AMBER

W = WHITE



CONTROL INTERLOCK FUNCTION, SEE SCHEMATICS AND SYSTEM SPECIFICATIONS FOR SPECIFIC **FUNCTION** 



LOCAL CONTROL PANEL SEE CONTROL WIRING AND/OR **EQUIPMENT PACKAGE SPECIFICATIONS** 

X: INDICATES PANEL DESIGNATION AS REQUIRED ON THE RESPECTIVE **DRAWING** 

## P&ID PIPE AND INSTRUMENT SYMBOLS



MANUAL ISOLATION VALVE



MANUAL ISOLATION VALVE (NORMALLY CLOSED)



**AUTOMATIC ISOLATION VALVE** (NORMALLY OPEN)



**AUTOMATIC ISOLATION VALVE** (NORMALLY CLOSED)



**CHECK VALVE** 



SURGE RELIEF VALVE



AIR VALVE



SLUICE GATE VALVE



SLUICE GATE VALVE WITH CHANNEL



CAMLOCK HOSE CONNECTION



**BLIND FLANGE** 

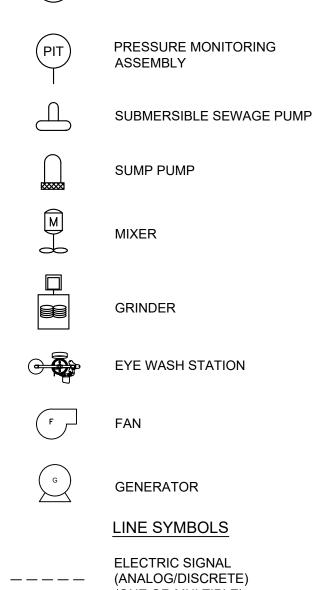


FLOAT SWITCH



FLOW METER





LIT

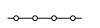
PΕ

# LINE SYMBOLS **ELECTRIC SIGNAL** (ANALOG/DISCRETE) (ONE OR MULTIPLE)

P&ID PIPE AND INSTRUMENT SYMBOLS

**HYDROSTATIC** 

LEVEL TRANSMITTER



INTERNAL SYSTEM SIGNAL LINK (SOFTWARE OR DATA LINK)



DATA LINK FOR FIELDBUS **FUNCTION** 

INSTRUMENT LINE OR **CONNECTION TO PROCESS** 



**PUBLIC WORKS** STANDARD DRAWING

**SEWAGE PUMPING STATION P&ID LEGEND** 

REV. DATE: JULY 2021

APPROVED BY DRAWN BY **ERAMOSA** 

STD. DWG. NUMBER SCALE SPS-301

Not to Scale

