



## 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/DIGITAL 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

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

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

### EXAMPLE

 **HS L/R** REPRESENTS A LOCAL/REMOTE SELECTOR SWITCH

### ABBREVIATIONS AND LETTERS (XX)

L/R	LOCAL-REMOTE	POT	POTENTIOMETER
OL	OVERLOAD	KS	KEY SELECTOR SWITCH
RVSS	SOFT STARTER	CR	CONTROL RELAY
VFD	VARIABLE FREQUENCY DRIVE	C	CLOSE
VIB	VIBRATION	O	OPEN
TMP	TEMPERATURE	REV	REVERSE
LKG	LEAKAGE	FWD	FORWARD
ETM	ELAPSED TIME METER		
PLC	PROGRAMMABLE LOGIC CONTROLLER		
PSU	POWER SUPPLY UNIT		
UPS	UNINTERRUPTIBLE POWER SUPPLY		
ES	EMERGENCY STOP PUSH BUTTON		

## 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+  
W = WHITE

 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

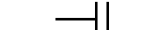
 SURGE RELIEF VALVE

 AIR VALVE

 SLUICE GATE VALVE

 SLUICE GATE VALVE WITH CHANNEL

 CAMLOCK HOSE CONNECTION

 BLIND FLANGE

 FLOAT SWITCH


 FLOW METER

 LEVEL TRANSMITTER

## P&ID PIPE AND INSTRUMENT SYMBOLS

 PIT PRESSURE MONITORING ASSEMBLY

 SUBMERSIBLE SEWAGE PUMP

 SUMP PUMP

 MIXER


 GRINDER

 EYE WASH STATION

 FAN

 GENERATOR

## LINE SYMBOLS

 ELECTRIC SIGNAL (ANALOG/DISCRETE) (ONE OR MULTIPLE)

 INTERNAL SYSTEM SIGNAL LINK (SOFTWARE OR DATA LINK)

 DATA LINK FOR FIELDBUS FUNCTION

 INSTRUMENT LINE OR CONNECTION TO PROCESS