



**DONCASTER OUTFALL GATE CHAMBER
UPGRADE
INSTRUMENTATION LIST**

Document No. 1-0242G-ALTI-G001

Revision
0



**THE CITY OF WINNIPEG
WATER AND WASTE DEPARTMENT**

Engineer's Seal

DONCASTER OUTFALL GATE CHAMBER UPGRADES
INSTRUMENTATION LIST

City Document No. TBD

KGS Project No. 24-0107-005

Notes / Comments

Revisions

Rev	Description	Date	By	Checked	Approved
0	ISSUED FOR CONSTRUCTION	2025-02-18	DG	JAB	

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Instrumentation List

INSTRUMENT TAG NUMBER	DESCRIPTION	LOCATION	PLAN DRAWING	P & ID DRAWING	SCHEMATIC/LOOP DRAWING	MOUNTING METHOD	SUPPLIED UNDER FORM B ITEM	SPECIFICATION	NOTES
LT-S651	CSO - Radar Level Transmitter	Water Level In Pipe Upstream of Weir	1-0242G-A0001-001	1-0242G-A0013-001	1-024G-A0009-001	SUSPENDE	ELECTRICAL AND AUTOMATION WORKS	409100 - Automation – Process Measurement Devices	
LT-S751	CSO - Hydrostatic Level Transmitter	Between Weir and Immediately Upstream of Flap Gate	1-0242G-A0001-001	1-0242G-A0013-001	1-024G-A0009-001	SUSPENDE	ELECTRICAL AND AUTOMATION WORKS	409100 - Automation – Process Measurement Devices	
LIT-S951	CSO - Ultrasonic Level Transmitter	Downstream of Sluice Gate	1-0242G-A0001-001	1-0242G-A0013-001	1-024G-A0009-001	SUSPENDE	ELECTRICAL AND AUTOMATION WORKS	409100 - Automation – Process Measurement Devices	
ZT-S851	CSO - Inclination transmitter	Outfall Chamber Flap Gate	1-0242G-A0001-001	1-0242G-A0013-001	1-024G-A0009-001	WALL	ELECTRICAL AND AUTOMATION WORKS	409100 - Automation – Process Measurement Devices	
TT-G681	Control Panel Temperature Transmitter	PLC Control Panel	1-0242G-A0002-001	1-0242G-A0013-001	1-0242G-A0006-001	PANEL	ELECTRICAL AND AUTOMATION WORKS	409100 - Automation – Process Measurement Devices	
ESL-G711	240V Power Fail Relay Status	Electrical Cabinet	1-0242G-E0004-001	1-0242G-A0013-001	1-0242G-A0011-001	WALL	ELECTRICAL AND AUTOMATION WORKS	262416.01 - Panelboards Breaker Type	
XS-G712	SPD Status Relay	Electrical Cabinet	1-0242G-E0004-001	1-0242G-A0013-001	1-0242G-A0010-001	WALL	ELECTRICAL AND AUTOMATION WORKS	262416.01 - Panelboards Breaker Type	
ESL-G713	Ground Fault Monitor	PLC Control Panel	1-0242G-A0002-001	1-0242G-A0013-001	1-0242G-A0012-001	WALL	ELECTRICAL AND AUTOMATION WORKS	262416.01 - Panelboards Breaker Type	

	Doncaster Outfall Chamber Upgrade DNP3 Mapping List CP-G81	Document Code	1-0242G-ALTI-G001
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Notes / Comments

Revisions					
Rev	Description	Date	By	Checked	Approved
0	Issued for Construction	2025-02-18	DG	JAB	<i>JAB</i>

DI - DISCRETE INPUT

Notes:

1. Zero (0) States and One (1) States are represented as positive logic not contact logic.

PLC Card	Fuse Number	Terminal Block	Terminal Number	Wire Tag	Rack	IO Module	Point	DNP3 Type	DNP3 Address	Software Tag	Alarm Tag	Equipment Tag	Description	Fail Safe (F/S)	0 State/ EU Minimum (Note 1)	1 State/ EU Maximum (Note 1)	I/O Type	Interface	Field Type	Notes	Wiring Drawing	
Discrete Input (BMX DDI 3202K)	F204A	TB03	0	I0	0	3	0	BI	0	XS_G712	XA_G712	XS-G712	SPD Status	F/S	Alarm	Normal	-	-	-			
	F204A	TB03	1	I1	0	3	1	BI	1	ESL_G711	EAL_G711	ESL-G711	240V Power Fail Relay Status	F/S	Alarm	Normal	DI (24Vdc - Wet, Non-Isolated)	N/A	24VDC Dry			
	F204A	TB03	2	I2	0	3	2	BI	2	ESL_G812	EAL_G812	ESL-G812	120V Power Fail Relay Status	F/S	Alarm	Normal	DI (24Vdc - Wet, Non-Isolated)	N/A	24VDC Dry			
	F204A	TB03	3	I3	0	3	3	BI	3	YA_G814	YA_G814	YA-G814	UPS Alarm	F/S	Alarm	Normal	DI (24Vdc - Wet, Non-Isolated)	N/A	24VDC Dry			
	F204A	TB03	4	I4	0	3	4	BI	4	YA_G814_1	YA_G814_1	YS-G814-1	UPS On Battery Mode	F/S	Normal	On Battery	DI (24Vdc - Wet, Non-Isolated)	N/A	24VDC Dry			
	F204A	TB03	5	I5	0	3	5	BI	5	YA_G814_2	YA_G814_2	YS-G814-2	UPS Battery Charging	F/S	Normal	Charging	DI (24Vdc - Wet, Non-Isolated)	N/A	24VDC Dry			
	F204A	TB03	6	I6	0	3	6	BI	6	EAL_G813	EAL_G813	ESL-G813	PS01 24VDC Power Fail Alarm	F/S	Alarm	Normal	DI (24Vdc - Wet, Non-Isolated)	N/A	24VDC Dry			
	F204A	TB03	7	I7	0	3	7	BI	7	PLC_G81_Rst			YS-G815	PLC Reset	-	Not Reset	Reset	DI (24Vdc - Wet, Non-Isolated)	N/A	24VDC Dry		
	F204A	TB03	8	I8	0	3	8	BI	8	ZA_G600	ZA_G600	ZS-G600	Electrical Enclosure Door Open	F/S	Alarm	Normal	DI (24Vdc - Wet, Non-Isolated)	N/A	24VDC Dry			
	F204A	TB03	9	I9	0	3	9	BI	9	EAL_G816	EAL_G816	ESL-G816	PS02 24VDC Power Fail Alarm	F/S	Alarm	Normal	DI (24Vdc - Wet, Non-Isolated)	N/A	24VDC Dry			
	F204A	TB03	10	I10	0	3	10	BI	10	EAL_G713	EAL_G713	ESL-G713	Ground Fault Alarm	F/S	Alarm	Normal	DI (24Vdc - Wet, Non-Isolated)	N/A	24VDC Dry			
	F204A	TB03	11	I11	0	3	11	BI	11				-	Spare	-	-	-	-	-			
	F204A	TB03	12	I12	0	3	12	BI	12				-	Spare	-	-	-	-	-			
	F204A	TB03	13	I13	0	3	13	BI	13				-	Spare	-	-	-	-	-			
	F204A	TB03	14	I14	0	3	14	BI	14				-	spare	-	-	-	-	-			
F204A	TB03	15	I15	0	3	15	BI	15				-	Spare	-	-	-	-	-				

AI - ANALOG INPUT

Notes:

1. Zero (0) States and One (1) States are represented as positive logic not contact logic.

PLC Card	Fuse Number	Terminal Block	Terminal Number	Wire Tag	Rack	IO Module	Point	DNP3 Type	DNP3 Address	Software Tag	Alarm Tag	Equipment Tag	Description	Fail Safe (F/S)	0 State/ EU Minimum (Note 1)	1 State/ EU Maximum (Note 1)	I/O Type	Interface	Field Type	Notes	Wiring Drawing
Analog Input (BMX AMI 0810)	F208	TB04	0	AI0	0	4	0	AI	0	LI_S951	LAH_S951	LT-S951	Water Level Downstream of Sluice Gate	-	226.078m	231.078 m	AI (Isolated, 4..20mA)	2-Wire	4-20mA - 2 Wire Isol		
	F208	TB04	1	AI1	0	4	1	AI	1	LI_S751	LAH_S751	LT-S751	Water Level Between Weir and Immediately Upstream of Flap Gate	-	226.481 m	231.481 m	AI (Isolated, 4..20mA)	2-Wire	4-20mA - 2 Wire Isol		
	F208	TB04	2	AI2	0	4	2	AI	2	LI_S651	LAH_S651	LT-S651	Water Level In Pipe Upstream of Weir	-	226.37 m	229.37m	AI (Isolated, 4..20mA)	2-Wire	4-20mA - 2 Wire Isol		
	F208	TB04	3	AI3	0	4	3	AI	3	ZT_S851		ZT-S851	Flap Gate Inclination	-	-30° (degree)	30° (degree)	AI (Isolated, 4..20mA)	2-Wire	4-20mA - 2 Wire Isol		
	F208	TB04	4	AI4	0	4	4	AI	4	TAL_G681	TAL_G681	TT-G681	PLC Control Panel Temperature	-	5°C	40°C	AI (Isolated, 4..20mA)	2-Wire	4-20mA - 2 Wire Isol		
	F208	TB04	5	AI5	0	4	5	AI	5				-	Spare	-	-	-	-	-		
	F208	TB04	6	AI6	0	4	6	AI	6				-	Spare	-	-	-	-	-		
F208	TB04	7	AI7	0	4	7	AI	7				-	Spare	-	-	-	-	-			

Notes:

1. Zero (0) States and One (1) States are represented as positive logic not contact logic.

INTERNAL VARIABLE TAGS

PLC Card	Fuse Number	Terminal Block	Terminal Number	Wire Tag	Rack	IO Module	Point	DNP3 Type	DNP3 Address	Software Tag	Alarm Tag	Equipment Tag	Description	Fail Safe (F/S)	0 State/ EU Minimum (Note 1)	1 State/ EU Maximum (Note 1)	I/O Type	Interface	Field Type	Notes	Wiring Drawing
	-	-	-	-	-	-	-	AI	8	PLC_G81_HB		PLC_G81_HB	Outfall Chamber PLC Heartbeat to SCADA	-	0	32767	-	-	-		
			-	-	-	-	-	BI	16	LAH_S751	LAH_S751	LT-S751	High Water Level Alarm Between Weir and Immediately Upstream of Flap Gate	-	Normal	Alarm	-	-	-		
			-	-	-	-	-	BI	17	LAH_S951	LAH_S951	LT-S951	High Water Level Alarm Downstream of Sluice Gate	-	Normal	Alarm	-	-	-		
			-	-	-	-	-	BI	18	LAH_S651	LAH_S651	LT-S651	High Water Level Alarm In Pipe Upstream of Weir	-	Normal	Alarm	-	-	-		
			-	-	-	-	-	BI	19	TAL_G681	TAL_G681	TT-G681	PLC Control Panel Temperature Low Temperature Alarm	-	Normal	Alarm	-	-	-		
			-	-	-	-	-	BI	20	TAH_G681	TAH_G681	TT-G681	PLC Control Panel Temperature High Temperature Alarm	-	Normal	Alarm	-	-	-		