

 SNC-LAVALIN	Instrument Datasheets	Document Code	112577-0116-48ED-0001
		Revision	00
Client City of Winnipeg			
Project SEWPCC Venitlation and Misc. Upgrades			
Package / Area			
Prepared By	Name	Signature	Date
	T. Church		2012-10-15
Checked By	Name	Signature	Date
	C. Reimer		2012-10-15
Approved By	Name	Signature	Date
	C. Reimer		2012-10-15
Notes / Comments		Seal	
		Original Document Sealed By: T. M. Church SNC Lavalin Inc. Member #32682 2012-10-15 Rev. 00	

Revisions					
Rev	Description	Date	By	Checked	Approved
00	Issued for Tender	2012-10-15	T. Church	C. Reimer	C. Reimer



Client Doc. No.	N/A	Instrument Datasheet - Thermal Dispersion Flowmeter					
SLI Doc. No.	112577-0000-48ED-0001-01	Rev.	Date	Description	By	Chk	App
Location	SEWPCC	00	2012-10-15	Issued for Tender	TMC	CJR	CJR
Project	Ventilation and Misc. Upgrades						
Specification No:	40 91 00						
Req. Pkg. No.:							

Revision No.

1	GEN.	Tag No. :	G601-FT	Service :	Wet Well Upper Level Airflow	P&ID :	1-0102G-A0094	
2		Fluid Phase :	Gas	Fluid :	Air	Line No :		
3		Electrical Area Classification :	Unclassified					
4	PROCESS CONDITIONS	Process variables		Units	Min	Norm.	Max	Remarks
5		Flow Rate		l/s	1	600 - 1201	1500	
6		Temperature		°C		10	40	
7		Pressure						
8		Density						
9		Viscosity						
10		Velocity						
11		Vapor Pressure						
12		Cp/Cv						
13		Compressibility (z)						
14		Molecular Weight						
15		Suspended Solids						
16		Corrosive / Abrasive Property						
17	LINE	Line Size	Line Schedule	508 x 508mm Duct				
18		Line Material	Internal Diameter	Stainless Steel				
19		ANSI Rating	Insulation Thickness	N/A		50.8mm (2")		
20	METER / SENSOR	Tag No.	N/A					
21		Tube Size or Insertion Length	To middle of duct					
22		Tube Material	Sensor Material	316 SS				
23		End Connection	ANSI Rating	3/4" NPT		N/A		
24		End Connection Material						
25		Enclosure Material	Enclosure Class.					
26		Heating Element	Not Required					
27		Power Supply (Volts / Hz / Amp)						
28		Mounting Installatin (Horizontal / Vertical)	Vertical					
29	TRANSMITTER	Tag No.	G601-FT					
30		Range	Calibration	0-1500 l/s				
31		Indicator	Totalizer	Yes		Not Required		
32		Mounting (Local/Remote)	Cable Spec. Requirement	Local				
33		Case Material	Enclosure Class.	Painted Low-Copper Aluminum		CSA Type 4		
34		Electrical Enclosure Class.	CSA Approval	Unclassified		Required		
35		Power Supply	Cable Entries	24 VDC		16mm (1/2") NPT		
36		Transmitter Output	Accuracy	4-20 mA / HART		1% of reading / 0.5% of full scale		
37		Fail Mode	RFI Protection	Low		-		
38	ACCESSORIES	Retraction Unit c/w Ball Valve	Not Required					
39		Flow Linear Plate: Size	Not Required					
40		Thickness						
41		Material						
42								
43								
44	MISC.	* Manufacturer	Magnetrol					
45		* Meter Model Number						
46		* Transmitter Model Number	TA2 Series					

NOTES:

1. Each component shall be indentified with it's respective tag number. The nameplates shall be attached with S.S. wire.

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Client Doc. No.	N/A	Instrument Datasheet - Thermal Dispersion Flowmeter					
SLI Doc. No.	112577-0000-48ED-0001-02	Rev.	Date	Description	By	Chk	App
Location	SEWPCC	00	2012-10-15	Issued for Tender	TMC	CJR	CJR
Project	Ventilation and Misc. Upgrades						
Specification No:	40 91 00						
Req. Pkg. No.:							

Revision No.

1	GEN.	Tag No. :	G602-FT	Service :	Wet Well Lower Level Airflow	P&ID :	1-0102G-A0095	
2		Fluid Phase :	Gas	Fluid :	Air	Line No :		
3		Electrical Area Classification :	Unclassified					
4	PROCESS CONDITIONS	Process variables		Units	Min	Norm.	Max	Remarks
5		Flow Rate		l/s	1	3013	4000	
6		Temperature		°C	-40	-30 - 30	40	
7		Pressure						
8		Density						
9		Viscosity						
10		Velocity						
11		Vapor Pressure						
12		Cp/Cv						
13		Compressibility (z)						
14		Molecular Weight						
15		Suspended Solids						
16		Corrosive / Abrasive Property						
17	LINE	Line Size	Line Schedule	762 x 762mm Duct				
18		Line Material	Internal Diameter	Stainless Steel				
19		ANSI Rating	Insulation Thickness	N/A		50.8mm (2")		
20	METER / SENSOR	Tag No.	N/A					
21		Tube Size or Insertion Length	To middle of duct					
22		Tube Material	Sensor Material	316 SS				
23		End Connection	ANSI Rating	3/4" NPT		N/A		
24		End Connection Material						
25		Enclosure Material	Enclosure Class.					
26		Heating Element	Not Required					
27		Power Supply (Volts / Hz / Amp)						
28		Mounting Installatin (Horizontal / Vertical)	Vertical					
29	TRANSMITTER	Tag No.	G602-FT					
30		Range	Calibration	0-4000 l/s				
31		Indicator	Totalizer	Yes		Not Required		
32		Mounting (Local/Remote)	Cable Spec. Requirement	Local				
33		Case Material	Enclosure Class.	Painted Low-Copper Aluminum		CSA Type 4		
34		Electrical Enclosure Class.	CSA Approval	Unclassified		Required		
35		Power Supply	Cable Entries	24 VDC		16mm (1/2") NPT		
36		Transmitter Output	Accuracy	4-20 mA / HART		1% of reading / 0.5% of full scale		
37		Fail Mode	RFI Protection	Low				
38	ACCESSORIES	Retraction Unit c/w Ball Valve	Not Required					
39		Flow Linear Plate: Size	Not Required					
40		Thickness						
41		Material						
42								
43								
44	MISC.	* Manufacturer	Magnetrol					
45		* Meter Model Number						
46		* Transmitter Model Number	TA2 Series					

NOTES:

1. Each component shall be indentified with it's respective tag number. The nameplates shall be attached with S.S. wire.

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Client Doc. No.	N/A	Instrument Datasheet - Temperature (Transmitter, Element & Thermowell)					
SLI Doc. No.	112577-0116-48ED-0001-03	Rev.	Date	Description	By	Chk	App
Location	SEWPCC	00	2012-10-15	Issued for Tender	TMC	CJR	CJR
Project	Ventilation and Misc. Upgrades						
Specification No:	40 91 00						
Req. Pkg. No.:							

Revision No.

1	GEN.	Tag No : G601-TT-1	Electrical Area Classification : Unclassified	P&ID : 1-0102G-A0094
2		Process Fluid : Air	Fluid Phase : Gas	
3		Line No : N/A	Equipment No : G601-SF	
4		Service : Outdoor Air Temperature		

5	PROCESS CONDITIONS	Process Variables	Units	Min	Normal	Max	Remarks
6		Flow Rate	L/s	0	600 - 1200	1500	
7		Inlet Pressure					
8		Inlet Temperature	°C	-40	-30 - 30	40	
9		Specific Gravity	-				
10		Compressibility Factor	-				
11		Fluid Viscosity	cP				
12		Corrosive Components					
13		Erosive Solids					

15	LINE	Pipe Line Size (inches)	NA (Duct Mount)	48	Tag number	N/A
16		Pipe Sch./Wall Thickness	Material	49	Type	Threaded Hub (No Thermowell)
17		Pipe Inside Diameter	Stainless Steel	50	Process Connection	Threaded Hub welded to Duct

18	ELEMENT	Tag number	G601-TE-1	51	Element Connection	15mm (1/2") NPT
19		Type	RTD PT-100 Class B	52	Vibration Calc. Reqd.	
20		Single / Duplex	Single	53	Material	
21		No. of Wires	3	54	Head Length	
22	*	Wire Gauge		55	Immersion Length	
23		Sheath O.D.	6.35 mm (1/4")	56	Insertion Length	
24		Sheath Material	SS	57	Root Diameter	
25		Grounded / Ungrounded Junction	N/A	58	Bore Diameter	
26		Spring Loaded	No	59	Tip Diameter	
27		Manufacturing Standard		60	Tip Thickness	
28		Length	228.6mm (9")	61	Plug & Chain	
29	*	Manufacturer		62	NACE	
30	*	Model		63		

31	TRANSMITTER	Output Signal	4-20 mA	64	* Canadian Reg. # (CRN)	
32		Calibration Range	-40 to 40 °C	65	* Manufacturer	
33	*	Transmitter Range		66	* Model Number	
34		Power Supply	loop powered	67		
35	*	Accuracy		68	Connection Head	N/A (Integral)

36		Local Indicator	Not required	69	Screw-Cap & Chain	
37		Housing Material	Cast Aluminum	70	Material	
38		Electrical Connection	NPT	71	Electrical Connection	
39		Electrical Classification	Unclassified	72	* Electrical Classification	
40		Ingress Protection		73	Ingress Protection	
41		Output on Sensor Burnout	0 - 3.8 mA	74	Sensor connection	
42		Ambient Temperature Limits	40 °C max	75		
43		Mounting (Integral / Remote)	Integral	76		

44		Protection Method		77		
45				78		
46	*	Manufacturer		79	Nipple-Union-Nipple Length	Not Required
47	*	Model		80	Mounting Hardware	As required

NOTES:
 Element length includes 76.2mm to clear insulation.

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Client Doc. No.	N/A	Instrument Datasheet - Temperature (Transmitter, Element & Thermowell)					
SLI Doc. No.	112577-0116-48ED-0001-04	Rev.	Date	Description	By	Chk	App
Location	SEWPCC	00	2012-10-15	Issued for Tender	TMC	CJR	CJR
Project	Ventilation and Misc. Upgrades						
Specification No:	40 91 00						
Req. Pkg. No.:							

Revision No.

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1	GEN.	Tag No :	G603-TT-1	Electrical Area Classification :	Unclassified	P&ID :	1-0102G-A0094
2		Process Fluid :	Air	Fluid Phase :	Gas		
3		Line No :	N/A	Equipment No :	G601-SF		
4		Service :	G601-SF Intermediate Air				
5	PROCESS CONDITIONS	Process Variables	Units	Min	Normal	Max	Remarks
6		Flow Rate	L/s	0	600 - 1200	1500	
7		Inlet Pressure					
8		Inlet Temperature	°C	-40	-30 - 30	40	
9		Specific Gravity	-				
10		Compressibility Factor	-				
11		Fluid Viscosity	cP				
12		Corrosive Components					
13		Erosive Solids					
14							
15	LINE	Pipe Line Size (inches)	NA (Duct Mount)	48	Tag number	N/A	
16		Pipe Sch./Wall Thickness	Material	49	Type	Threaded Hub (No Thermowell)	
17		Pipe Inside Diameter	Stainless Steel	50	Process Connection	Threaded Hub welded to duct	
18	ELEMENT	Tag number	G603-TE-1	51	Element Connection	15mm (1/2") NPT	
19		Type	RTD PT-100 Class B	52	Vibration Calc. Req'd.		
20		Single / Duplex	Single	53	Material		
21		No. of Wires	3	54	Head Length		
22		* Wire Gauge		55	Immersion Length		
23		Sheath O.D.	6.35 mm (1/4")	56	Insertion Length		
24		Sheath Material	SS	57	Root Diameter		
25		Grounded / Ungrounded Junction	N/A	58	Bore Diameter		
26		Spring Loaded	No	59	Tip Diameter		
27		Manufacturing Standard		60	Tip Thickness		
28		Length	228.6mm (9")	61	Plug & Chain		
29		* Manufacturer		62	NACE		
30		* Model		63			
31	TRANSMITTER	Output Signal	4-20 mA	64	* Canadian Reg. # (CRN)		
32		Calibration Range	-40 to 40 °C	65	* Manufacturer		
33		* Transmitter Range		66	* Model Number		
34		Power Supply	loop powered	67	Connection Head	N/A (Integral)	
35		* Accuracy		68	Screw-Cap & Chain		
36		Local Indicator	Not required	69	Material		
37		Housing Material	Cast Aluminum	70	Electrical Connection		
38		Electrical Connection	NPT	71	* Electrical Classification		
39		Electrical Classification	Unclassified	72	Ingress Protection		
40		Ingress Protection		73	Sensor connection		
41		Output on Sensor Burnout	0 - 3.8 mA	74			
42		Ambient Temperature Limits	40 °C max	75			
43		Mounting (Integral / Remote)	Integral	76			
44		Protection Method		77			
45				78			
46		* Manufacturer		79	Nipple-Union-Nipple Length	Not Required	
47		* Model		80	Mounting Hardware	As required	

NOTES:

Element length includes 76.2mm to clear insulation.



Client Doc. No.	N/A	Instrument Datasheet - Temperature (Transmitter, Element & Thermowell)					
SLI Doc. No.	112577-0116-48ED-0001-05	Rev.	Date	Description	By	Chk	App
Location	SEWPCC	00	2012-10-15	Issued for Tender	TMC	CJR	CJR
Project	Ventilation and Misc. Upgrades						
Specification No:	40 91 00						
Req. Pkg. No.:							

Revision No.

1	GEN.	Tag No :	G603-TT-2	Electrical Area Classification :	Unclassified	P&ID :	1-0102G-A0094	
2		Process Fluid :	Flushing Water	Fluid Phase :	Liquid			
3		Line No :	N/A	Equipment No :	G603-HE			
4		Service :	G603-HE Inlet Temperature					
5	PROCESS CONDITIONS	Process Variables		Units	Min	Normal	Max	Remarks
6		Flow Rate	L/s	0	1.9	3.0		
7		Inlet Pressure	kPA	0		750		
8		Inlet Temperature	°C	-10	10	30		
9		Specific Gravity	-		1.0			
10		Compressibility Factor	-					
11		Fluid Viscosity	cP					
12		Corrosive Components	Some - Effluent from Secondary Clarifiers					
13	Erosive Solids	Minimal - Filtered						
14								
15	LINE	Pipe Line Size	65ø (2.5")		48	Tag number	G601-TW-2	
16		Pipe Sch./Wall Thickness	40	Material	Carbon Steel	49	Type	Tapered or Stepped
17		Pipe Inside Diameter	62.7 mm			50	Process Connection	NPT
18	ELEMENT	Tag number	G603-TE-2		51	Element Connection	15mm (1/2") NPT	
19		Type	RTD PT-100 Class B		52	Vibration Calc. Req'd.	Yes	
20		Single / Duplex	Single		53	Material	Stainless Steel	
21		No. of Wires	3		54	* Head Length		
22		* Wire Gauge			55	Immersion Length	101.6mm (4") (at elbow)	
23		Sheath O.D.	6.35 mm (0.25")		56	Insertion Length		
24		Sheath Material	SS		57	Root Diameter		
25		Grounded / Ungrounded Junction	N/A		58	Bore Diameter	6.6mm (0.26")	
26		Spring Loaded	Yes		59	Tip Diameter	12.7mm (0.5")	
27		Manufacturing Standard			60	* Tip Thickness		
28				61	Plug & Chain	Not required		
29	* Manufacturer			62	NACE			
30	* Model			63				
31	TRANSMITTER	Output Signal	4-20 mA		64	* Canadian Reg. # (CRN)		
32		Calibration Range	-40 to 40 °C		65	* Manufacturer		
33		* Transmitter Range			66	* Model Number		
34		Power Supply	loop powered		67	Connection Head	N/A (Integral)	
35		* Accuracy			68	Screw-Cap & Chain		
36		Local Indicator	Not required		69	Material		
37		Housing Material	Cast Aluminum		70	Electrical Connection		
38		Electrical Connection	NPT		71	Electrical Classification		
39		Electrical Classification	Unclassified		72	Ingress Protection		
40		Ingress Protection	NEMA 4		73	Sensor connection		
41	Output on Sensor Burnout	0 - 3.8 mA		74				
42	Ambient Temperature Limits	40 °C max		75				
43	Mounting (Integral / Remote)	Integral		76				
44	Protection Method			77				
45				78				
46	* Manufacturer			79	Nipple-Union-Nipple Length	Not required		
47	* Model			80	Mounting Hardware	As required		

THE THERMOWELL

THE HEAD

MISC.

NOTES: Install utilizing tee as elbow.

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Client Doc. No.	N/A	Instrument Datasheet - Temperature (Transmitter, Element & Thermowell)					
SLI Doc. No.	112577-0116-48ED-0001-06	Rev.	Date	Description	By	Chk	App
Location	SEWPCC	00	2012-10-15	Issued for Tender	TMC	CJR	CJR
Project	Ventilation and Misc. Upgrades						
Specification No:	40 91 00						
Req. Pkg. No.:							

Revision No.

1	GEN.	Tag No :	G603-TT-3	Electrical Area Classification :	Unclassified	P&ID :	1-0102G-A0094	
2		Process Fluid :	Flushing Water	Fluid Phase :	Liquid			
3		Line No :	N/A	Equipment No :	G603-HE			
4		Service :	G603-HE Outlet Temperature					
5	PROCESS CONDITIONS	Process Variables		Units	Min	Normal	Max	Remarks
6		Flow Rate	L/s	0	1.9	3.0		
7		Inlet Pressure	kPA	0		750		
8		Inlet Temperature	°C	-10	10	30		
9		Specific Gravity	-		1.0			
10		Compressibility Factor	-					
11		Fluid Viscosity	cP					
12		Corrosive Components	Some - Effluent form Secondary Clarifiers					
13		Erosive Solids	Minimal - Filtered					
14								
15	LINE	Pipe Line Size	65ø (2.5")		48	Tag number	G601-TW-2	
16		Pipe Sch./Wall Thickness	40	Material	Carbon Steel	49	Type	Tapered or Stepped
17		Pipe Inside Diameter	62.7 mm		50	Process Connection	NPT	
18	ELEMENT	Tag number	G603-TE-3		51	Element Connection	15mm (1/2") NPT	
19		Type	RTD PT-100 Class B		52	Vibration Calc. Req'd.	Yes	
20		Single / Duplex	Single		53	Material	Stainless Steel	
21		No. of Wires	3		54	* Head Length		
22		* Wire Gauge			55	Immersion Length	101.6mm (4") (at elbow)	
23		Sheath O.D.	6.35 mm (0.25")		56	Insertion Length		
24		Sheath Material	SS		57	Root Diameter		
25		Grounded / Ungrounded Junction	N/A		58	Bore Diameter	6.6mm (0.26")	
26		Spring Loaded	Yes		59	Tip Diameter	12.7mm (0.5")	
27		Manufacturing Standard			60	* Tip Thickness		
28				61	Plug & Chain	Not required		
29	* Manufacturer			62	NACE			
30	* Model			63				
31	TRANSMITTER	Output Signal	4-20 mA		64	* Canadian Reg. # (CRN)		
32		Calibration Range	-40 to 40 °C		65	* Manufacturer		
33		* Transmitter Range			66	* Model Number		
34		Power Supply	loop powered		67			
35		* Accuracy			68	Connection Head	N/A (Integral)	
36		Local Indicator	Not required		69	Screw-Cap & Chain		
37		Housing Material	Cast Aluminum		70	Material		
38		Electrical Connection	NPT		71	Electrical Connection		
39		Electrical Classification	Unclassified		72	Electrical Classification		
40		Ingress Protection	NEMA 4		73	Ingress Protection		
41	Output on Sensor Burnout	0 - 3.8 mA		74	Sensor connection			
42	Ambient Temperature Limits	40 °C max		75				
43	Mounting (Integral / Remote)	Integral		76				
44	Protection Method			77				
45				78				
46	* Manufacturer			79	Nipple-Union-Nipple Length	Not required		
47	* Model			80	Mounting Hardware	As required		

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NOTES: Install utilizing tee as elbow.



Client Doc. No.	N/A	Instrument Datasheet - Temperature (Transmitter, Element & Thermowell)					
SLI Doc. No.	112577-0116-48ED-0001-07	Rev.	Date	Description	By	Chk	App
Location	SEWPCC	00	2012-10-15	Issued for Tender	TMC	CJR	CJR
Project	Ventilation and Misc. Upgrades						
Specification No:	40 91 00						
Req. Pkg. No.:							

Revision No.

1	GEN.	Tag No :	G605-TT-1	Electrical Area Classification :	Unclassified	P&ID :	1-0102G-A0094	
2		Process Fluid :	Air	Fluid Phase :	Gas			
3		Line No :	N/A	Equipment No :	G601-SF			
4		Service :	G601-SF Discharge Air					
5	PROCESS CONDITIONS	Process Variables		Units	Min	Normal	Max	Remarks
6		Flow Rate		L/s	0	600 - 1200	1500	
7		Inlet Pressure						
8		Inlet Temperature		°C	-40	-30 - 30	40	
9		Specific Gravity		-				
10		Compressibility Factor		-				
11		Fluid Viscosity		cP				
12		Corrosive Components						
13		Erosive Solids						
14								
15	LINE	Pipe Line Size (inches)	NA (Duct Mount)		48	Tag number	N/A	
16		Pipe Sch./Wall Thickness		Material	Stainless Steel	49	Type	Threaded Hub (No Thermowell)
17		Pipe Inside Diameter				50	Process Connection	Threaded Hub Welded to Duct
18	ELEMENT	Tag number	G605-TE-1		51	Element Connection	15mm (1/2") NPT	
19		Type	RTD PT-100 Class B		52	Vibration Calc. Req'd.		
20		Single / Duplex	Single		53	Material		
21		No. of Wires	3		54	Head Length		
22		* Wire Gauge			55	Immersion Length		
23		Sheath O.D.	6.35 mm (1/4")		56	Insertion Length		
24		Sheath Material	SS		57	Root Diameter		
25		Grounded / Ungrounded Junction	N/A		58	Bore Diameter		
26		Spring Loaded	No		59	Tip Diameter		
27		Manufacturing Standard			60	Tip Thickness		
28	Length	228.6mm (9")		61	Plug & Chain			
29	* Manufacturer			62	NACE			
30	* Model			63				
31	TRANSMITTER	Output Signal	4-20 mA		64			
32		Calibration Range	-40 to 40 °C		65	* Canadian Reg. # (CRN)		
33		* Transmitter Range			66	* Manufacturer		
34		Power Supply	loop powered		67	* Model Number		
35		* Accuracy			68	Connection Head	N/A (Integral)	
36		Local Indicator	Not required		69	Screw-Cap & Chain		
37		Housing Material	Cast Aluminum		70	Material		
38		Electrical Connection	NPT		71	Electrical Connection		
39		Electrical Classification	Unclassified		72	* Electrical Classification		
40		Ingress Protection			73	Ingress Protection		
41	Output on Sensor Burnout	0 - 3.8 mA		74	Sensor connection			
42	Ambient Temperature Limits	40 °C max		75				
43	Mounting (Integral / Remote)	Integral		76				
44	Protection Method			77				
45				78				
46	* Manufacturer			79	Nipple-Union-Nipple Length	Not Required		
47	* Model			80	Mounting Hardware	As required		

THERMOWELL

HEAD

MISC.

NOTES:

Element length includes 76.2mm to clear insulation.

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Client Doc. No.	N/A	Instrument Datasheet - Temperature (Transmitter, Element & Thermowell)					
SLI Doc. No.	112577-0116-48ED-0001-08	Rev.	Date	Description	By	Chk	App
Location	SEWPCC	00	2012-10-15	Issued for Tender	TMC	CJR	CJR
Project	Ventilation and Misc. Upgrades						
Specification No:	40 91 00						
Req. Pkg. No.:							

Revision No.

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1	GEN.	Tag No :	G682-TT-1	Electrical Area Classification :	Unclassified	P&ID :	1-0102G-A0026
2		Process Fluid :	Air	Fluid Phase :	Gas		
3		Line No :	N/A	Equipment No :	G682-AHU		
4		Service :	G682-AHU Outside Air				
5	PROCESS CONDITIONS	Process Variables	Units	Min	Normal	Max	Remarks
6		Flow Rate	L/s	0		2260	
7		Inlet Pressure					
8		Inlet Temperature	°C	-40	-30 - 30	40	
9		Specific Gravity	-				
10		Compressibility Factor	-				
11		Fluid Viscosity	cP				
12		Corrosive Components					
13		Erosive Solids					
14							
15	LINE	Pipe Line Size (inches)	NA (Duct Mount)	48	Tag number	N/A	
16		Pipe Sch./Wall Thickness	Material Galvanized Steel	49	Type	Threaded Hub (No Thermowell)	
17		Pipe Inside Diameter		50	Process Connection	Threaded Hub Mounted to Duct	
18	ELEMENT	Tag number	G682-TE-1	51	Element Connection	15mm (1/2") NPT	
19		Type	RTD PT-100 Class B	52	Vibration Calc. Req'd.		
20		Single / Duplex	Single	53	Material		
21		No. of Wires	3	54	Head Length		
22	*	Wire Gauge		55	Immersion Length		
23		Sheath O.D.	6.35 mm (1/4")	56	Insertion Length		
24		Sheath Material	SS	57	Root Diameter		
25		Grounded / Ungrounded Junction	N/A	58	Bore Diameter		
26		Spring Loaded	No	59	Tip Diameter		
27		Manufacturing Standard		60	Tip Thickness		
28		Length	228.6mm (9")	61	Plug & Chain		
29	*	Manufacturer		62	NACE		
30	*	Model		63			
31	TRANSMITTER	Output Signal	4-20 mA	64			
32		Calibration Range	-40 to 40 °C	65	* Canadian Reg. # (CRN)		
33	*	Transmitter Range		66	* Manufacturer		
34		Power Supply	loop powered	67	* Model Number		
35	*	Accuracy		68	Connection Head	N/A (Integral)	
36		Local Indicator	Not required	69	Screw-Cap & Chain		
37		Housing Material	Cast Aluminum	70	Material		
38		Electrical Connection	NPT	71	Electrical Connection		
39		Electrical Classification	Unclassified	72	* Electrical Classification		
40		Ingress Protection		73	Ingress Protection		
41		Output on Sensor Burnout	0 - 3.8 mA	74	Sensor connection		
42		Ambient Temperature Limits	40 °C max	75			
43		Mounting (Integral / Remote)	Integral	76			
44		Protection Method		77			
45				78			
46	*	Manufacturer		79	Nipple-Union-Nipple Length	Not Required	
47	*	Model		80	Mounting Hardware	As required	

NOTES:

Element length includes 76.2mm to clear insulation.



Client Doc. No.	N/A	Instrument Datasheet - Temperature (Transmitter, Element & Thermowell)					
SLI Doc. No.	112577-0116-48ED-0001-09	Rev.	Date	Description	By	Chk	App
Location	SEWPCC	00	2012-10-15	Issued for Tender	TMC	CJR	CJR
Project	Ventilation and Misc. Upgrades						
Specification No:	40 91 00						
Req. Pkg. No.:							

Revision No.

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1	GEN.	Tag No :	G682-TT-2	Electrical Area Classification :	Unclassified	P&ID :	1-0102G-A0026
2		Process Fluid :	Air	Fluid Phase :	Gas		
3		Line No :	N/A	Equipment No :	G682-AHU		
4		Service :	G682-AHU Discharge Air				
5	PROCESS CONDITIONS	Process Variables	Units	Min	Normal	Max	Remarks
6		Flow Rate	L/s	0		2260	
7		Inlet Pressure					
8		Inlet Temperature	°C	-40	-30 - 30	40	
9		Specific Gravity	-				
10		Compressibility Factor	-				
11		Fluid Viscosity	cP				
12		Corrosive Components					
13		Erosive Solids					
14							
15	LINE	Pipe Line Size (inches)	NA (Duct Mount)	48	Tag number	N/A	
16		Pipe Sch./Wall Thickness	Material Galvanized Steel	49	Type	Threaded Hub (No Thermowell)	
17		Pipe Inside Diameter		50	Process Connection	Threaded Hub Mounted to Duct	
18	ELEMENT	Tag number	G682-TE-2	51	Element Connection	15mm (1/2") NPT	
19		Type	RTD PT-100 Class B	52	Vibration Calc. Reqd.		
20		Single / Duplex	Single	53	Material		
21		No. of Wires	3	54	Head Length		
22	*	Wire Gauge		55	Immersion Length		
23		Sheath O.D.	6.35 mm (1/4")	56	Insertion Length		
24		Sheath Material	SS	57	Root Diameter		
25		Grounded / Ungrounded Junction	N/A	58	Bore Diameter		
26		Spring Loaded	No	59	Tip Diameter		
27		Manufacturing Standard		60	Tip Thickness		
28		Length	228.6mm (9")	61	Plug & Chain		
29	*	Manufacturer		62	NACE		
30	*	Model		63			
31	TRANSMITTER	Output Signal	4-20 mA	64			
32		Calibration Range	-40 to 40 °C	65	* Canadian Reg. # (CRN)		
33	*	Transmitter Range		66	* Manufacturer		
34		Power Supply	loop powered	67	* Model Number		
35	*	Accuracy		68	Connection Head	N/A (Integral)	
36		Local Indicator	Not required	69	Screw-Cap & Chain		
37		Housing Material	Cast Aluminum	70	Material		
38		Electrical Connection	NPT	71	Electrical Connection		
39		Electrical Classification	Unclassified	72	* Electrical Classification		
40		Ingress Protection		73	Ingress Protection		
41		Output on Sensor Burnout	0 - 3.8 mA	74	Sensor connection		
42		Ambient Temperature Limits	40 °C max	75			
43		Mounting (Integral / Remote)	Integral	76			
44		Protection Method		77			
45				78			
46	*	Manufacturer		79	Nipple-Union-Nipple Length	Not Required	
47	*	Model		80	Mounting Hardware	As required	

NOTES:
 Element length includes 76.2mm to clear insulation.



Client Doc. No.	N/A	Instrument Datasheet - Temperature (Transmitter, Element & Thermowell)					
SLI Doc. No.	112577-0116-48ED-0001-10	Rev.	Date	Description	By	Chk	App
Location	SEWPCC	00	2012-10-15	Issued for Tender	TMC	CJR	CJR
Project	Ventilation and Misc. Upgrades						
Specification No:	40 91 00						
Req. Pkg. No.:							

Revision No.

1	GEN.	Tag No : G682-TT-3	Electrical Area Classification : Unclassified	P&ID : 1-0102G-A0026
2		Process Fluid : Air	Fluid Phase : Gas	
3		Line No : N/A	Equipment No : G682-AHU	
4		Service : G682-AHU Return Air		

5	PROCESS CONDITIONS	Process Variables	Units	Min	Normal	Max	Remarks
6		Flow Rate	L/s	0		2260	
7		Inlet Pressure					
8		Inlet Temperature	°C	-40	20 - 30	40	
9		Specific Gravity	-				
10		Compressibility Factor	-				
11		Fluid Viscosity	cP				
12		Corrosive Components					
13		Erosive Solids					

15	LINE	Pipe Line Size (inches)	NA (Duct Mount)	48	Tag number	N/A
16		Pipe Sch./Wall Thickness	Material Galvanized Steel	49	Type	Threaded Hub (No Thermowell)
17		Pipe Inside Diameter		50	Process Connection	Threaded Hub mounted to duct

18	ELEMENT	Tag number	G682-TE-3	51	Element Connection	15mm (1/2") NPT
19		Type	RTD PT-100 Class B	52	Vibration Calc. Reqd.	
20		Single / Duplex	Single	53	Material	
21		No. of Wires	3	54	Head Length	
22	*	Wire Gauge		55	Immersion Length	
23		Sheath O.D.	6.35 mm (1/4")	56	Insertion Length	
24		Sheath Material	SS	57	Root Diameter	
25		Grounded / Ungrounded Junction	N/A	58	Bore Diameter	
26		Spring Loaded	No	59	Tip Diameter	
27		Manufacturing Standard		60	Tip Thickness	
28		Length	152.4mm (6")	61	Plug & Chain	
29	*	Manufacturer		62	NACE	
30	*	Model		63		

31	TRANSMITTER	Output Signal	4-20 mA	64	* Canadian Reg. # (CRN)	
32		Calibration Range	-40 to 40 °C	65	* Manufacturer	
33	*	Transmitter Range		66	* Model Number	
34		Power Supply	loop powered	67		
35	*	Accuracy		68	Connection Head	N/A (Integral)

36		Local Indicator	Not required	69	Screw-Cap & Chain	
37		Housing Material	Cast Aluminum	70	Material	
38		Electrical Connection	NPT	71	Electrical Connection	
39		Electrical Classification	Unclassified	72	* Electrical Classification	
40		Ingress Protection		73	Ingress Protection	
41		Output on Sensor Burnout	0 - 3.8 mA	74	Sensor connection	
42		Ambient Temperature Limits	40 °C max	75		
43		Mounting (Integral / Remote)	Integral	76		

44		Protection Method		77		
45				78		
46	*	Manufacturer		79	Nipple-Union-Nipple Length	Not Required
47	*	Model		80	Mounting Hardware	As required

NOTES:

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