	٩	•))		INS	SPECT			RM		Page	1 of 1	
Win	nipèg	SNC • LAVALIN	AUT	FOMATION	– COI	NTR	OL C	ONDUCTORS		ID:		
ect	Facility	:			Project Name:							
Project	Area :						nity:					
nit	Source	:				Des	t.:					
ondi ta												
Cable/Conduit Data	Installa	tion: ∐ Ca ☐ Str	ble Tray apped	Direct B	uried		_ EMT _ Rigio	l L d Steel [] Alum.] PVC			
Cat	No. of	Conductors:		Size:		А	WG -	Туре:		Rated Vo	oltage:	V
L												
_ 5	Cable I	dentification Tag I	nstalled:] Yes 🛛 No	1 🗆	N/A	Enclo	sure Entry Accepta	able:		□ Y	′es 🗌 No
Visual Inspection	Wire ta	gs installed:] Yes 🗌 No			Cond	uit / Cable Support	ed Appi	opriately:	□ Y	′es 🗌 No
v Insp	Comme	ents:										
	Test Voltage	. V	Ambient Ter	nperature:	c			tors not under test	grounde	ed for each	^າ 🗌 Yes	No 🗌 No
	#	J. ID	MΩ	. #		ID	ding:	MΩ	#		D	MΩ
	1			. "					37	•	0	11122
	2			20					38			
	3			21					39			
	4			22					40			
	5			23					41			
	6			24					42			
	7			25					43			
est	8			26					44			
Resistance Test	9			27					45			
tan	10			28					46			
esis	11			29					47			
_	12			30					48			
latic	13			31					49			
Insulatio	14			32					50			
-	15			33					51			
	16			34					52			
	17			35					53			
	18		C Toot Valta	36	tod oobl			for apples rated a	54			
	1. 2.	Utilize a single	form for each	ĥ cable / condu	uit.	85, 00		for cables rated <	= 300 v.			
	3. 4.					t und	er test	must be grounded	durina	each test		
	5.	Each reading r	nust not be le	ess than 22 M	Ω or sign	ificar	ntly less	s than comparable	conduc	tors.		
	Comme	ents:										
	Test S	ummary: 🗌 T	est Passed	🗌 Test Fai	led							
	1	Commonweak		Nema			1.	Ciamotree			Data ta	
1		Company		Name				Signature			Date (yyy	y/mm/dd)

	Company	Name	Signature	Date (yyyy/mm/dd)
Performed By				
Checked By				

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	<u> </u>	•))			SPECT					Page	1 of 2	
Win	nipèg	SNC · LAVALIN	AUT	– TWI	STE	D SHI	ELDED P	AIRS	Cable	ID:		
ect	Facility:					Project Name:						
Project	Area	ι:			Bid Opp	oortuni	ity:					
						1						
luit	Sou	rce:				Dest	t.:					
Cable/Conduit Data	Insta		le Cable Tray Strapped	Direct B	Suried		Conduit EMT Rigio		☐ Alum. ☐ PVC		Other:	
Са	No.	of Pairs:		Size:		A١	WG 1	Гуре:		Ratec	d Voltage:	V
	Cabl	e Identification Tag	g Installed:]Yes 🗌 No		N/A	Enclo	sure Entry Ac	ceptable:			es 🗌 No
Visual spectio	Wire	tags installed:	<u> </u>]Yes 🗌 No			Cond	uit / Cable Su	poorted App	opriate	ely: 🗆 Ye	es 🗌 No
Visual Inspection		iments:					00114			opnato		
	0011											
	Test Volta	V	Ambient Te	mperature:	C All conductors not under test grounde reading:				ed for each Yes No			
	Pr	ID	Cond. 1 (+) to Gnd (MΩ)	Cond. 2 (-) to Gnd (MΩ)	G	eld to nd IΩ)	Pr	ID	Cond. 1 to Gn (ΜΩ)	d	Cond. 2 (-) to Gnd (MΩ)	Shield to Gnd (MΩ)
	1						13					
	2						14					
	3						15					
est	4 5						16 17					
Insulation Resistance Test	6						18					
stan	7						19					
Resi	8						20					
ion	9						21					
ulat	10						22					
lns	11						23					
	12						24					
		 Utilize a sing Disconnect b Test each co 	le form for eac ooth ends of wi onductor to gro	nge for 600V ra ch cable / cond ring prior to tes und. All condu ess than 22 M	uit. sts. ictors ar	nd shie	elds no	t under test n	nust be grour	nded du	uring each test.	
	Com	iments:				_						
	Test	Summary:	Test Passed	🗌 Test Fai	led							

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INSPECTION FORM AUTOMATION – TWISTED SHIELDED PAIRS

Page 2 of 2

ID:

Pr	ID	Cond. 1 (+) to Cond. 2 (-) (mΩ)	Cond. 1 (+) to Shield (mΩ)	Pr	ID	Cond. 1 (+) to Cond. 2 (-) (mΩ)	Cond. 1 (+) to Shield (mΩ)
1				13			
2				14			
3				15			
4				16			
5				17			
6				18			
7				19			
8				20			
9				21			
10				22			
11				23			
12				24			
	1. Record resist	ance from one end for ea	ach connection sho	wn, whi	ch shall be mad	le at the other end of the	e cable.

Test Summary: Test Passed Test Failed

	Company	Name	Signature	Date (yyyy/mm/dd)
Performed By				
Checked By				

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INSTRUMENTATION SWITCH CHECKLIST

Project					
Facility:	Project Name:				
Area :	Bid Opportunity:				

Instrument							
Tag:	Description:						
Manufacturer:	Model:	Serial Number:					

	Inspection Chee	cklist	
No.	Item to be Inspected	Comments	Pass (P/F)
1.	Instrument type and class per P&ID and specification		
2.	Instrument tag(s) installed and correct		
3.	Installation of sensor complete and correct		
4.	Block and drain valves		
5.	Pneumatic / hydraulic tubing leak tested		
6.	Heat tracing / insulation / instrument housing		
7.	Wiring correct		
8.	Drawings marked up as-built		
9.	HMI Graphic symbol and tag correct		

State Checklist								
State State Desc	PLC Input	Local HMI	SCADA	Alarm		Pass (P/F)		
0				🗌 On 🔲 Off	□ N/A			
1				🗌 On 🔲 Off				

	Calibration								
Transition	Setpoint Trip Point (incl. units)	Actual Trip Point (incl. units)	Setpoint Time Delay	Actual Time Delay	Pass (P/F)				
0 → 1									
1 → 0									

	Company	Name	Signature	Date (yyyy/mm/dd)
Tested By				
Witnessed By				

INSTRUMENTATION TRANSMITTER LOOP CHECKLIST

Project			
Facility:	Project Name:		
Area :	Bid Opportunity:		

Instrument (Sensor / Element)			
Tag:	Description:		
Manufacturer:	Model:	Serial Number:	

	Transmitter					
Tag:			Description:			
Manufacturer:			Model:			Serial Number:
Units:			Design Range:		-	
Output	☐ 4-20 mA ☐ 0-10 V	☐ Modb ☐ Etheri		Other:		

	Inspection Checklist					
No.	Item to be Inspected	Comments	Pass (P/F)			
1.	Instrument type and class per P&ID and specification					
2.	Instrument tag(s) installed and correct					
3.	Installation of sensor complete and correct					
4.	Block and drain valves					
5.	Pneumatic / hydraulic tubing leak tested					
6.	Heat tracing / insulation / instrument housing					
7.	Impulse lines pressure tested					
8.	Wiring correct					
9.	Drawings marked up as-built					
10.	HMI Graphic symbol, tag and units correct					



	Signal Validation					
Input Signal	Location	Design Value	Actual Value	Error (%)	Pass (P/F)	
	Transmitter Display					
	Transmitter Output					
	Process Display					
	PLC					
	НМІ					
	Transmitter Display					
	Transmitter Output					
	Process Display					
	PLC					
	НМІ					
	Transmitter Display					
	Transmitter Output					
	Process Display					
	PLC					
	НМІ					

Notes:

Attach factory calbration forms for all instruments where provided and/or specified. Provide instrument parameters for each parameter changed from the factory default.

1. 2.

	Company	Name	Signature	Date (yyyy/mm/dd)
Tested By				
Witnessed By				

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MODULATING CONTROL DEVICE CHECKLIST

Project			
Facility:	Project Name:		
Area :	Bid Opportunity:		

Control Device				
Tag:	Description:			
Manufacturer:	Model:	Serial Number:		

	Inspection Checklist					
No.	Item to be Inspected	Comments	Pass (P/F)			
1.	Actuator type and class per P&ID and specification					
2.	Instrument tag(s) installed and correct					
3.	Installation of actuator complete and correct					
4.	Wiring correct					
5.	Drawings marked up as-built					
6.	HMI graphic symbol, tag and units correct					

	Control Validation						
Control Output	Location	Design Value	Actual Value	Error (%)	Pass (P/F)		
0%	PLC Output						
0%	Field Device						
50%	PLC Output						
50%	Field Device						
100%	PLC Output						
100%	Field Device						

Notes: 1.

Attach factory calbration forms for all instruments where provided and/or specified. Provide instrument parameters for each parameter changed from the factory default.

2.

Company		Name	Signature	Date (yyyy/mm/dd)
Tested By				
Witnessed By				

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PID CONTROLLER CHECKLIST

Project					
Facility:	Project Name:				
Area :	Bid Opportunity:				

Controller Loop

Tag:

Description:

	Test Checkli	st	
No.	Item to be Inspected	Comments	Pass (P/F)
1.	Startup Test		
2.	Input signal positive bump test		
3.	Input signal negative bump test		
4.	Bumpless auto-manual control transition		
4.	Manual output capability		
5.	Bumpless manual-auto control transition		
6.	HMI graphic symbols, tag and units correct		
7.	HMI equipment faceplate correct		

Final PID Tuning Values						
Ρ:	1:	D :				

Notes:

1. Attach printouts of trends for varous tests, with final PID tuning values.

	Company	Name	Signature	Date (yyyy/mm/dd)
Tested By				
Witnessed By				

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Project					
Facility:	Project Name:				
Area :	Bid Opportunity:				

	PLC						
PLC ID:	Description:						
Rack:	Slot:						

Pt	Tag	Description	State	State Desc.	PLC Input	Local HMI	SCADA	Alarm		Pass (P/F)
			0					🗌 On 🔲 Off	- 🗌 N/A	
			1					🗌 On 🔲 Off	- [] N/A	
			0					🗌 On 🔲 Off		
			1					🗌 On 🔲 Off	- □ N/A	
			0					🗌 On 🔲 Off		
			1					🗌 On 🔲 Off	- □ N/A	
			0					🗌 On 🔲 Off		
		1					🗌 On 🔲 Off	- □ N/A		
			0					🗌 On 🔲 Off	- □ N/A	
			1					🗌 On 🔲 Off	- [] N/A	
			0					🗌 On 🔲 Off	- 🗌 N/A	
		1					🗌 On 🔲 Off	- 🗌 N/A		
			0					🗌 On 🔲 Off		
			1					🗌 On 🔲 Off	· □ N/A	
			0					🗌 On 🔲 Off		
			1					🗌 On 🔲 Off	- □ N/A	
			0					🗌 On 🔲 Off	- 🗆 N/A	
			1					🗌 On 🔲 Off	- [] N/A	
			0					🗌 On 🔲 Off	- □ N/A	
			1					🗌 On 🔲 Off	. П N/А	
			0					🗌 On 🔲 Off		
			1					🗌 On 🔲 Off	- 🗌 N/A	
			0					🗌 On 🔲 Off	- □ N/A	
			1					🗌 On 🔲 Off	- <u></u> П/А	

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Image: WinnipegImage: SNC·LAVALINPLC DISCRETE INPUT CHECKLIST	Page	2 of 2
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			0			🗌 On 🔲 Off	- 🗌 N/A	
		1			🗌 On 🔲 Off			
			0			🗌 On 🔲 Off		
		1			🗌 On 🔲 Off	□ N/A		
			0			🗌 On 🔲 Off	- 🗆 N/A	
		1			🗌 On 🔲 Off			
			0			🗌 On 🔲 Off	- 🗌 N/A	
		1			🗌 On 🔲 Off			

	Company	Name	Signature	Date (yyyy/mm/dd)
Tested By				
Witnessed By				

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Winnipeg	

PLC DISCRETE OUTPUT CHECKLIST

Project				
Facility:	Project Name:			
Area :	Bid Opportunity:			

PLC					
PLC ID:	Description:				
Rack:	Slot:				

Pt	Тад	Description	State	State Desc.	PLC Output	Field Device	Pass (P/F)
			0				
			1				
			0				
			1				
			0				
			1				
			0				
			1				
			0				
			1				
			0				
			1				
			0				
			1				
			0				
			1				
			0				
			1				
			0				
			1				
			0				
			1				
			0				
			1				

Winnipeg SNC·LAVALIN)) LAVALIN	PLC DISCRETE OUTPUT CHECKLIST		Page 2 of	2	
			0				
			1				
			0				
			1				
			0				
			1				
			0				
			1				

	Company	Name	Signature	Date (yyyy/mm/dd)
Tested By				
Witnessed By				