	1																
	<u> </u>				II	NSPE	CTI	ON FO)RI	l				Page	1 (of 2	
l W	Vinnipeg		T	RANSI	FORM	ER, D	RY	TYPE,	, LC	W VO	LTA	GE		ID:			
ect	Facility:					Р	roject	Name:									
Project	Area :					В	id Op	portunit	y:								
						1											,
	KVA:		Pha	ise:		Р	rimar	y Voltag	je:			V	Seconda Voltage:		٧		
ata	Manufacturer:					Т	Гуре:						Serial N	umber:			
Transformer Data			YG Othe	r:				Seco] ∆] Y		/G Other:				
ansfoi	Winding Mater	rial: 🔲	Copp	er 🗌 Al	uminum	l	Impe	edance:			%Z	Ten	np Rise:	ı	°C	K Factor:	
Ţ	No Load Tap	Тар		1	2	3	3	4		5						p Setting	
	Changer	Voltage													(As	s Found):	
	Transformer Id	dentificati	on Ta	ıg Installe	d:	☐ Yes	s] No	Vis	ıal Sign	s of C	Overh	eating:			☐ Yes I	□ No
ning	Bushings:				od 🗌 A	ccepta	ble [Poor	Sup	port Ins	ulato	rs:		☐ Good	d \square	Acceptable [□ Poor
/ Clea	Paint:			☐ God	od 🗆 A	ccepta	ble [Poor	No Chí	Load Ta	ар		□ N/	A 🗌 Good	ı 🗆	Acceptable [☐ Poor
ction	Fans:		□ N/.	A 🛮 Go	od 🗆 A	ccepta	ble [] Poor		Contro	ls:		□ N/.	A 🗌 Good	ı 🗆	Acceptable [□ Poor
Inspe	Temp. Gauge:	:	□ N/	A 🗌 Go	od 🗆 A	ccepta	ble [Poor	Cor	nection	s:			☐ Good	I 🗆	Acceptable [☐ Poor
Visual Inspection / Cleaning	Ground Connection:			☐ God	od 🗆 A	ccepta	ble [Poor	Ne	tral Bor	nded t	to Gr	ound:		N/A	A ☐ Yes [□No
	Cleanliness (A	s Found):	☐ God	od 🗆 A	ccepta	ble [] Poor	Uni	Cleane	ed:		es Ph	otograph T	aker	n: 🗌 Ye:	S
	Operational C	onditions	/ Not	es:													
uo	Primary Voltage	1	H1:H2		V	H2:H3	:		VH	3:H1:			V Meas	ured at:			
Inspection	Secondary Vo		X1:	<u>.</u>	V	X2::	:		V >	3::			V Meas	ured at:			
	Current:		Ph A:		Α	Ph B:			A F	h C:			A Meas	ured at:			
Operational	Tap Setting:		☐ Fi	ppears Sa irther Moi ecommen	nitoring	Recom		led.	1	Тар	Setti	ng (A	s Left):				
	Thermographi Performed:	ic Inspec	tion	☐ Yes		tach re eparatel		Results	s: [No Is:			d dentified.				
·	1							1									
ance		Windi	ng		Т	est Vol				R	esista	ance	(ΜΩ)			Dielectr Absorption 60s/30s	Ratio
ssist						(vuc	,		30	sec			60	sec.		003/30:	•
sulation Resistance	Primary to Gi	round, Se	cond	ary Guard	ded												
sulati	Secondary to	Ground,	Prim	ary Guard	ded												

Primary to Secondary, Ground Guarded



INSPECTION FORM TRANSFORMER, DRY TYPE, LOW VOLTAGE

Page	2 of 2	
ID:		

	Returned	I to Service:	☐ Yes	☐ No	Comments:		
	Final nalysis	Monitorir Required	ng / Further Inspection l:	☐ Yes	□No		
	⋖	Repair /	Replacement Required:	☐ Yes	□No		
			_	_			
			Company	Name		Signature	Date (yyyy/mm/dd)
ı	Dorforr	ned By					
	renon						

Note: The person(s) performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.

Winnip	neg			CUET		_				ON END		Pag	je 1 o	f 2
·· iiiii	.~s			CUSI	OWER	SEK	VICE I	EKIVIII	NAII	ON ENL	,	Equ	ipment Tag:	
Project	Facility:				Project Name: RPF No. Tender No. Tender No. Project Manager: Contract Administrator: Consulting Project Manager: Consulting Project Manager: Site Plan: Serial #: S									
Pro	Area:				RPF	No.					Tender	Equipment Tag: No. Cation: e Plan: rial #: cmote Enclosure: Yes Ph Short-Circuit Rating Pole I E Downstream d: E Ground le Size & Type: Yes Good Acceptable Good Acceptable Good Acceptable Good Acceptable Good Acceptable Test Passed Test Passed Test Inconclustre Inverse Required.		
	General Con	tractor:				Proi	ect Mana	ger:						
Project Contact	Consultant:	ili actor.							or:					
Pro	City of Winni	ipeg								er:				
	<u> </u>													
	CSTE Down	stream Lo	oad:			+ -	•	0.			Loc	cation:		
Jata	Drawings:	Single Li				+								
] & [Manufac	turer:			Mod	lel:			-		rial #:		
ation	CSTE:	Mounting	j Type: [Floor	☐ Wall	Mete	ering Typ	ρ. —			IRE	mote E	nclosure:	s □ No
CSTE Location & Data		Rated Cu	urrent:	Α	Rated \	/oltage	e:	VAC	Phas	ses: 🗌 1-F	Ph 🗌 3-F	Ph Shor	rt-Circuit Rating	kAIC
CST	Main	☐ Break		Datin			Inst.		۸	Manufact	urer:			
	Disconnect Type:	☐ N/A	n	Rating:	А		Setting:		А	Model:				
			Valt		\/AC									
ze & ling	Service Size):	k\/A	•	_	Rate	ed Service	e Currer	nt:	А			r: Pole 🔲	Padmount
Service Size & CSTE Cabling	CSTE Load Side Cabling Size and Typ		2 x 4C, 350	0 kcmil T	eck90)			☐ Bot	tom [☐ Side / R	eari		nstream	
SS	CSTE Load Cable Rating		Table		Diagr		EC C22.1		etail:					
	CSTE Lama		llad.		П V		□ Na	\/:I	C:	-f O wh -	-4:			
_														□ No
Cleaning	Power Cable	es Labelle												☐ No
	Cleanliness:			Good	☐ Accep	table	☐ Poor	Power	Cable	Connection	ons:	☐ Go	ood Acceptabl	e 🗌 Poor
tion	Main Discon	nect:		Good	☐ Accep	table	☐ Poor	Service	e Entra	ance Enclo	sure:	☐ Go	ood Acceptabl	e 🗌 Poor
sbec	Ground Con	nections:		Good	☐ Accep	table	☐ Poor	Bus Ba	ırs and	d Insulator	s:	☐ Go	od	e 🗌 Poor
Visual Inspection /	Door Mechai	nical:		☐ Good	☐ Accep	table	☐ Poor	Exercis	sed Ci	rcuit Break	er / Disc	onnect:	☐ Yes	☐ No
Visu	Cables Supp	orted App	oropriately	:	☐ Yes [] No		Equipn	nent C	leaned:	☐ Yes	Photog	graph Taken:	☐ Yes
	Comments:													
						Desic	tanco /uO	\		Test Summary				
its			Test				Phas					se C	-	
tance		Interior	Bus Bar	/ Cabling									I —	
Resistance Measurements			ker / Disc										Required.	Jugadon
Ae A													L Lest Falled	

Comments:

Winni	neo		CUSTON	COMMISSIO				Page	2 of 2
**HIIII			CUSTON	HER SERVICE	EIERIVIINAI	ION END		Equipm	nent Tag:
Project	Facility:			Project Name:					
Pro	Area:			RPF No.			Tender No		
	Test Preparation:		actor: Open	☐ Disconnect☐ Connected Isolated	with Load	prior to le	aving cable	s conne	resentative is required, cted during the test.
Test			NECT ALL POWER C DL POWER FUSES PR			ND CAPACIT			
ance		Te	est	Voltage	Phase A	Phase B	Phase		Ground all phases not under test!
Insulation Resistance Test	Interior Bus	s Bar /	Cabling to Ground	1000 VDC				Te	est Summary
ılation	Main Dis	connec	t Line to Ground	1000 VDC					Test Passed Test Inconclusive
Insu	Main Disc	connec	t Load to Ground	1000 VDC					Further Investigation Required.
	Main Di	sconne	ect Line to Load	1000 VDC					Test Failed
	Comments:								
	Adjust Settings	to Mate	ch Single Line Diagran	n	Comments:				
Breaker Settings	Settings Applied			□ No					
Bre Set	Single Line Dia	gram:							
	Returned to Ser	rvice:		☐ Yes ☐ No	Comments:				
Final Analysis	Monitoring / Fur	rther In	spection Required:	☐ Yes ☐ No	<u> </u>				
F	Repair / Replac	ement	Required:	☐ Yes ☐ No)				
			Company	Na	me		Signature		Date (yyyy/mm/dd)
	al Contractor sentative		σοπιραπί	Na		,	Jigilatul e		Date (yyyy/iiiii/uu)

<u> </u>							CON	MISSIONI	NG FOR	М				Page 1	of 2
Winni	peg						EME	RGENCY L	IGHTIN	G				Equipment Tag:	
ect	Facili	ty:					Proje	ct Name:							
Project	Area:						RPF	No.				Tende	r No.		
	Gono	ral Contr	actor:					Project Mana	gor:						
Project Contact		ultant:	acioi.					Contract Adm							
Pro		of Winnip	ea					Consulting Pr		ager					
	U.I.y U		-9						ojoot man	ago.	•				
D	Batte Locat	ry Bank			y Bank ment No.			Panel Feed:			ntrol nel No.			Applicable Drawings:	
Emergency Lighting Location & Data			Manufa	1 ' '	nent No.			Circuit No.		га	nei No.			Serial #:	
y Lig	Batte Bank		Input V		V	AC	Output	Catalog No. Voltage:	VDC	\/\/a	ttage:		W		
genc			Manufa			٦٥	Output	Catalog No.	VDO	vva	ilage.		• • •	Remote Fixtures C	
merg	Remo		Input V		V	DC	Input C	Current:	Α	Lan	np Wattag	ie.	W		
ū	Fixtu	res:	•	d Location			put c	, dirioriti	,,	Laii	np Wanag	,		1 Maro Lamp Gty.	
						_									
_	-	ification L			led:	<u> </u>		□ No			rly Aimed			☐ Yes	□ No
ıning		l Signs o				Ш,	Yes	☐ No			operly Ope			☐ Yes	☐ No
Clea		Vell Rem		res			Yes [No □ N/A	Moisture		er Remotor of Rated:	e Fixtur	es	☐ Yes ☐	No 🗆 N/A
Visual Inspection / Cleaning		Well Rem					Yes 🗆	No □ N/A			Chamber of Rated:		Fixt	ures 🗌 Yes 🗎	No □ N/A
edsi	Clear	nliness:			☐ Good		Accept	able 🗌 Poor	Cable Co	nne	ctions:			Good Acceptal	ble 🗌 Poor
la lu	Grou	nd Conne	ections:		☐ Good		Accept	able 🗌 Poor	Connecti	ons	Properly S	Sealed:		Good Acceptal	ble 🗌 Poor
Visu	Cable	es Suppo	rted App	ropriate	ly:		Yes	☐ No	Equipme	nt Cl	eaned:	☐ Yes	s F	Photograph Taken:	☐ Yes
	Comr	ments:													
	I _						1_								
		ry Bank 1 e Starting				°C		ttery Bank Ten er Testing Con			c			Summary	
ng	Batte	ry Voltag	e at Sta	rt of Tes	ting:		•		V					st Passed st Inconclusive	
esti	Batte	ry Backu	p Desigr	า Time (f	from Draw	ving)			minu	ites	minimum	I _		rther Investigation R	equired
ery I				• •	ts Turn O				minu	ites] Tes	st Failed	
Battery Testing					nt Draw D			ng:	A	ıtoo					
			Recnarg	e Battery	y After Te	sung	-		minu	ites					
	Comr	ments:													
		gency Lig						Yes 🗆 No	Emerge	ncy l	Lights Tur	n On in	Test	t Mode:	∕es □ No
ting		<u> </u>	escriptio						Er	nerg	ency Ligh	ts On		Time For Eme Lights to Tur	
Tes	Mode	Normal	Mode –	Normal	Station O	pera	tion				No			N/A	
Operational Testing	Operating Modes	-			Bank Pow			ailure	☐ Yes	3	□ No		\dashv	Se	ec
erati	pera							rcuits Fail	☐ Yes		No		\dashv	Se	 C
ဝိ	Ō	Test Mo					-		☐ Yes	3	□No	□ N	/A	se	ec
	Comr	nents:							1				ı		

<u> </u>	_			COMM	ISSION	ING FORM		Page		2 of 2
Winnip	peg			EMER	GENCY	LIGHTING		Equipmer	nt Tag:	
Project	Facility:			Project N	Name:					
Pro	Area:			RPF No.			Tender No	Equipment Tag:		
						_				
sis	Returned to Ser	vice:		☐ Yes	☐ No	Comments:				
Final Analysis	Monitoring / Fur	ther In	spection Required:	Project Name:						
Ā	Repair / Replac	ement	Required:	☐ Yes	□No					
				•			•	•		
			Company		Name	•	Signature		Date (yyyy/mm/dd)
Conors	neral Contractor		_							

Representative

City Representative

	_										Page	e 1	of 3	
Winni	peg			H\	/AC C	ONTR	ROLLI	ER		Dampers Loop: N/A				
ect	Facility:			Proje	ect Name	e:								
Project	Area:			RPF	No.					Tender N	0.			
+	General Contractor: Project Consultant: Contract City of Winnipeg Consult HVAC Controller Location:				Manag	ger:								
Project Contact	Consulta	nt:						tor:						
<u>r</u> 0	City of W	/innipeg			Consul	ting Pr	oject M	/lanag	er:					
										шуул	Cont	rol		
ta	HVAC Co	ntroller Locat	tion:		Equipm	nent No	ο.							N/A
& Da	Drawings	: HVAC P	ßID:		Control	l Panel:	:			Dam	oers Lo	юр:		
ation		1 1 7		□ N/A					□ N//				□ 1	N/A
er Loc		Heater N	0.	□ N/A	Heater	No.			□ N//	A Heat	er No.		□ 1	N/A
troll			turer:		Catalog	g No.				Seria	l #:			
Con	Controlle	Power R	ating:	Power S	Supply:		VAC	Сι	rrent Ratin	g: A	Cont	trol Voltage:	٧	/AC
	Control F	Power Trans	former: Size:	VA Se	condary	Voltage	e:	V	Primary F	use:	A Se	econdary Fuse):	Α
	HVAC C	ontroller Lam	acoid Installed:	□ Yes	П	No	Visual	l Sians	s of Overhe	ating:		□ Yes		No
_	Power C	ables Labelle	ed at Both Ends:	☐ Yes		No					nds:			
ction	Cleanline	ess:	Good	☐ Accep	table	Poor	Power	r Cabl	e Connection	ons:	☐ Goo	od	ble 🗆 F	Poor
Visual Inspection / Cleaning	Fully Fur	nctioning Con	troller: Good	☐ Accep	table 🗌	Poor	Contro	oller P	roperly Mo	unted:	☐ Goo	od	ble 🗌 F	Poor
lal lr Cle	Controlle	r Fully Progra	ammed: Good	☐ Accep	table 🗌	Poor	All Inp	outs &	Outputs W	ork:	☐ Goo	od 🗌 Accepta	ble 🗌 F	Poor
Visu	Cables S	Supported Ap	propriately:	☐ Yes [□ No □	N/A	Equipr	ment (Cleaned:	☐ Yes	Photogi	raph Taken:		Yes
	Commer	its:												ļ
	Station (Securied Ligh	ot Switch Activotos					Comm	onto:					
				☐ Y	es 🗌 N	0 🔲	N/A	JUIIIII	enis.					
D				☐ Y	es 🗌 N	ا	N/A							
Testin				□ Y	es 🗌 N	ا 0	N/A							
ional				, \square A	es 🗌 N	0 🗆 1	N/A							
berat	Controlle	r Defaults to	Low Ventilation Rat	e: 🗌 Y	es 🗌 N	1 o	N/A							
ŏ	ting es	Mode	e Description	Sup	ply Dam (0 – 10		en	Re	eturn Damp (0 – 100			Exhaust Dam (0 – 100		n
	Operating Modes	High V	entilation Rate		%	□ N/	/A		%	□ N/A		%	□ N/A	4
	0	Low V	entilation Rate		%	□ N/	/A		%	□ N/A		%	□ N/A	4
	Drogram	الا	collar Cattings to Ma	tah Catti-	a l o#o=		<u> </u>	Comm	ents:					
oller			oller Settings to Ma											
Controller Settings	_	Applied to Co		es	☐ No									
١٥٣	HVAC C File:	ontroller Setti	ing Letter											

W.	\						NING F				Page	:	2 of 3	}
Winnip	peg			<u> </u>	HVAC	CON.	TROLL	.ER			Equipment	t Tag:		
Project	Facili	ty:		Pro	oject Na	ıme:								
Pro	Area:			RF	PF No.					Tender No).		_	
		Too	Between Controll				Comme	nts:						
			pers for signals	☐ Yes										
		Signal Descript			Descrip	otion		nl Appea		Modulated (0 – 10			ated 2 – 100	2 Output
	Discrete 1 Input	☐ Not Used	Low (0) High (1)					□ No	□ N/A	%	□ N/A		%	□ N/A
		Signal Descript	ion Signal		ition Pic	кир	Signa	ıl Appea	ars on	Modulated	1 Output		ated 2	2 Output
	Sensor A Input		∏ RTD	Low	<i>Level</i> ≤	°C		roller So	creen ☐ N/A	(0 – 10 %	<i>00 %)</i> □ N/A	(0	– 100 %	0 %) □ N/A
Signals	Ser	☐ Not Used	☐ PT100 ☐ PT1000 ☐ 4-20 mA	☐ High	>	°C	☐ Yes	☐ No	□ N/A	%	□ N/A		%	□ N/A
	r B	Signal Descript	ion Signal Type		ition Pic Level	kup		nl Appea roller So		Modulated (0 – 1			ated 2 – 100	2 Output 0 %)
	Sensor I	☐ Not Used	☐ RTD ☐ PT100 ☐ PT1000	☐ Low		°C			□ N/A	%	□ N/A			□ N/A
	ont	Signal Descript	Output		ut Chan	ges		ıt State		State Des			І Арр	ears on Screen
ıt / Outp	y 1 Output		000070	☐ Disc	crete Inp			Low (0)				Yes	□ No	N/A
ller Inpu	Relay	☐ Not Used	ı		nsor A nsor B		ļ	High (1))			☐ Yes	□ No	□ N/A
Contro	rtput	Signal Descript	ion Output Goes To	Outpo Based o	ut Chan n Signa	ges I Input	Outpu	ıt State	Level	State Des	scription	_		ears on Screen
	Relay 2 Out				crete Inp nsor A	put 1		Low (0)				Yes	No	N/A
	Re	☐ Not Used		☐ Ser	nsor B			High (1))			☐ Yes	□ No	□ N/A
	1	Output Goes		Outpo Based o	ut Chan n Signa		Outpu	ıt State	Level	Signal Ap Controlle			ured V/m	Output A)
	Modulated Output	☐ Heater SCR☐ Supply Damp☐ Return Damp			crete Inp	put 1		Low		☐ Yes ☐ N	No □ N/A		V	/ mA
	Mo	☐ Exhaust Dam ☐ Not Used		_				High		☐ Yes ☐ N	No □ N/A		V	/ mA
	2	Output Goes Field Device		Outpo Based o	ut Chan n Signa		Outpu	ıt State	Level	Signal Ap Controlle			ured V/m	Output A)
	Modulated 2 Output	☐ Heater SCR☐ Supply Damp		☐ Dis	screte In	put 1		Low		☐ Yes ☐ I	No □ N/A		V	/ mA
	Mod	☐ Return Damp ☐ Exhaust Dam ☐ Not Used			ensor A ensor B			High		☐ Yes ☐ I	No □ N/A		V	/ mA

<u> </u>	_		COMMISSION	ING FORM			Page	3 of 3
Winnip	peg		HVAC CONT	ROLLER			Equipme	nt Tag:
Project	Facility:		Project Name:					
Pro	Area: RPF No. Tender N					Tender No).	
.s	Returned to Ser	rvice:	☐ Yes ☐ No	Comments:				
Final Analysis	Monitoring / Fur	rther Inspection Required:	☐ Yes ☐ No					
⁻ 4	Repair / Replac	ement Required:	☐ Yes ☐ No					
		Company	Name	9	!	Signature		Date (yyyy/mm/dd)
Canara	ol Contractor							-

Page

3 of 3

Representative City Representative

Note: The General Contractor Representative is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.

<u> </u>						CON	MISSI	ONII	NG FOF	RM		Page	1 of	3
Winnij	oèg					I	HVAC [DAM	PERS			Equipme	nt Tag:	
ţ	Facili	ty:				Proje	ect Name:							
Project	Area:					RPF	No.				Tender No).		
ಕಕ	Gene	ral Con	tractor:				Project I	Mana	ger:					
Project Contact	Cons	ultant:					Contract	t Adm	ninistrator	:				
т О	City o	of Winni	peg				Consulti	ng Pr	oject Mai	nager:				
	Statio	n Venti	lation				HVAC C	ontrol	ler		HVAC Cor	ntrol Panel		
		n(s) / Ar					Equipme							□ N/A
a	Draw	ings:	HVAC P				Control F						_	_
Damper Actuators Location & Data	Sunn	dse	Room In				Equipme).		· ·	pe: Mo	odulating _	On / Off
ي م	Supp Dam		Manufac				Catalog I	No.			-			
atio	Actu	ator:	Power S		VAC / V		Torque:			Nm				
Po			Control	•	VAC / V	DC	Control C			VAC / VDC				
tors	Retu	rn	Room In				Equipme).			Ц М	odulating L	On/Off
tua	Damı	per	Power S		VAC / V	'DC	Catalog I Torque:	NO.		Nm	+		500	
r Ac	Actu	ator:	Control		VAC / V		Control C	Jutnu	+-	VAC / VDC		witch Prov		s 🗆 No
mpe			Room In	-	VAC / V	DC	Equipme			VACTVDC	-			On/Off
Daı	Exha	ust	Manufac				Catalog I		<u>'-</u>				Dadiating L	101/011
	Damı Actu		Power S		VAC / V	DC	Torque:			Nm	Equipment Tag: Equipment Tag:			
	Actu	ator.	Control		VAC / V		Control C	Dutpu	t:	VAC / VDC		Equipment Tag: Equipment Tag:		s 🗆 No
	1						ı							
	HVAC	C Damp	er Lamad	coids Install	led: 🔲 `	Yes .			HVAC D	amper Actuat	or Lamacoid	s Installed		☐ No
sual Inspection / Cleaning	Powe	r Cable	s Labelle	ed at Both E					Control	Cables Labell				☐ No
ecti		nliness:			Good 🗆					Cable Connect			•	
al Inspect Cleaning			ning Actu							s Properly Ins				
	All Ac	tuator I	nputs Wo	ork:	Good 🗆 /					ator Outputs V		Good [Acceptable	Poor
Visi	Cable	es Supp	orted App	propriately:		Yes [□ No □	N/A	Equipme	ent Cleaned:	☐ Yes P	hotograph	s Taken:	☐ Yes
	Comr	ments:												
	Supp	ly Actua	ator Meas	sured Open	ing Time		sec	Supi	olv Actua	tor Measured	Closing Time	e·		sec
				sured Openi			sec	- '						sec
	Exha	ust Actu	uator Mea	asured Ope	ning Time:		sec	Exh	aust Actu	ator Measure	d Closing Tir	ne:		sec
				ges From		☐ Ye	s 🗆 No			er Changes F			П Уес	□ No
ting				h Ventilatio	on:		3 🔲 140			on to Low Ver				
Tesi				ges From h Ventilatio	n:	☐ Ye	s 🗌 No			er Changes F on to Low Ver			☐ Yes	☐ No
Operational Testing				nges From h Ventilatio		☐ Ye	s 🗌 No			per Changes on to Low Ver			☐ Yes	□No
pera		Mode	Description	on					Fail-Safe	Position	Low Ventila	ation Rate	High Ventila	ation Rate
0	ating les	Supply	/ Damper	Open Pos	ition				Opened	☐ Closed		%		%
	Operating Modes	Return	Damper	Open Posi	ition				Opened	☐ Closed		%		%
		Exhau	st Dampe	er Open Po	sition				Opened	Closed	Equip. No. Dampers Loop: Control Type: Modulating Good Yes Y	%		
	Comr	ments:												

<u> </u>				CC	MMISSION	NING FORM		Page	2 of 3
Winnip	peg				HVAC DA	MPERS		Equipme	ent Tag:
ect	Facili	ty:		Pro	ject Name:				
Project	Area:			RP	F No.		Tender No).	
	Adjus	t Damper Actuato	r Settings for	Damper Bala	ancing	Comments:			
Damper Actuator Settings	Damp Applie			_	Exhaust				
r Sel	Applie	ea to.	Damper	Damper Direction C	Damper	Angle of Rotation I	Positions	Auxil	iary Switch Position
uato	Su	pply Damper Actu	lator		□ ccw	ŭ	ding:		☐ Not Used
r Act	Po	turn Damper Actu	ator	Direction C	Control	Angle of Rotation I	Positions	Auxil	iary Switch Position
mpeı	Ne	din Damper Actu			□ ccw		ding:		☐ Not Used
Da	Exh	naust Damper Act	uator	Direction C	Control	Angle of Rotation I Starting: En		Auxil	iary Switch Position ☐ Not Used
] CCW		Starting.	ding:		☐ Not Osed
	Verify	Control Signals E	Between HVA	C Controller	and Dampers	Comments:			
	Test F		t physical sign pers for signa		an installing				
	Field '	Wires Labelled at	Both Ends:	☐ Yes	□No				
		Actuator	Signal Type	Measured Input Voltage	Measured Output Voltage	Output Received at PLC Card	Signal Ap on HMI So		SCADA Can See Signal
gnals	tion Rate	Supply Damper Not Used	☐ 0 −5V ☐ 0 −10V ☐ On / Off	VDC	VDC	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No	o □ N/A	☐ Yes ☐ No ☐ N/A
Control Si	Low Ventilation Rate	Return Damper Not Used	☐ 0 − 5V ☐ 0 − 10V ☐ On / Off	VDC	VDC	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No	o □ N/A	☐ Yes ☐ No ☐ N/A
put / Output Control Signals	7	Exhaust Damper Not Used	☐ 0 −5V ☐ 0 −10V ☐ On / Off	VDC	VDC	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No	o 🗌 N/A	☐ Yes ☐ No ☐ N/A
Actuator Inpu		Actuator	Signal Type	Measured Input Voltage	Measured Output Voltage	Output Received at PLC Card	Signal Ap on HMI So		SCADA Can See Signal
Act	tion Rate	Supply Damper Not Used	☐ 0 − 5V ☐ 0 − 10V ☐ On / Off	VDC	VDC	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No	o □ N/A	☐ Yes ☐ No ☐ N/A
	High Ventilation	Return Damper Not Used	☐ 0 − 5V ☐ 0 − 10V ☐ On / Off	VDC	VDC	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No	o □ N/A	☐ Yes ☐ No ☐ N/A
	±	Exhaust Damper Not Used	☐ 0 −5V ☐ 0 −10V ☐ On / Off	VDC	VDC	☐ Yes ☐ No ☐ N/A	☐ Yes ☐ No	o □ N/A	☐ Yes ☐ No ☐ N/A
	Retur	ned to Service:		П	Yes □ No	Comments:			
Final Analysis		oring / Further Ins	spection Regi		Yes No	-			
Fi Ana		ir / Replacement I	•		Yes No				

Winnipeg			COMMISSIONING FORM	Page 3 of 3		
			HVAC DAMPERS		Equipment Tag:	
oject	ម្តី Facility:		Project Name:			
Pro	Area:		RPF No.	Tender No).	

	Company	Name	Signature	Date (yyyy/mm/dd)
General Contractor Representative				
City Representative				



INSTRUMENTATION SWITCH CHECKLIST

Page	1 of 1
------	--------

Project										
Facility:			Project Name:							
Area :			Bid Opportunity:	:						
				trument						
Tag:		Descript	tion:			T				
Manufacturer:	:	Model:				Serial Numb	er:			
			Inspecti	ion Check	dist					
No. Item to	be Inspected						Comm	ents		Pass (P/F)
1. Instrum	ent type and class per P&ID a	and speci	ification							
2. Instrum	ent tag(s) installed and correc	t								
3. Installat	tion of sensor complete and c	orrect								
4. Block a	nd drain valves									
5. Pneuma	atic / hydraulic tubing leak tes	ted								
6. Heat tra	acing / insulation / instrument	housing								
7. Wiring o										
	gs marked up as-built									
9. HMI Gra	aphic symbol and tag correct									
			State	Checklis	t					
State State	Desc		PLC Input	Local HI		SCADA		Ala	arm	Pass (P/F)
0							☐ On ☐ Off		ff	(1717)
1							□ On □ Off		—— П N/A	
	Octobrist Take Baket			libration	Т	O-tracint			A 1	T D
Transition	Setpoint Trip Point (incl. units)		Actual Trip Po (incl. units)	int		Setpoint Time Delay		Ti	Actual ime Delay	Pass (P/F)
0 → 1										
1 → 0										
Comments:	Comments:									
	Soffifficatios.									
	Company	Name			Cianal				Date (yyyy/mm/c	14/
	Company	Name			Signat	ture			Date (yyyy/mm/c	ia)
Tested By										
Witnessed B	sv									



HMI Graphic symbol, tag and units correct

INSTRUMENTATION TRANSMITTER LOOP CHECKLIST

Page

1 of 2

			Project				
Facility:			Project Name:				
Area	1:		Bid Opportunity:				
		l	Instrument (Sensor /	Element)		
Tag:		Descrip	tion:				
Man	ufacturer:	Model:			Serial Number:		
			Transmitter				
Tag:		Descrip					
Manufacturer: Mo					Serial Number:		
		Design			Ocha Namber.		
Units	S:	Range:	-				
Outp	out 4-20 mA Modb		☐ Other:				
			Inspection Ched	klist			
No.	Item to be Inspected				Comments	Pas (P/	
1.	Instrument type and class per P&ID	and spec	cification				
2.	Instrument tag(s) installed and corre	ct					
3.	Installation of sensor complete and o	orrect					
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						



INSTRUMENTATION TRANSMITTER LOOP CHECKLIST

Page

2 of 2

	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									

N۱	otc	٠.

Comments:

Witnessed By

- 1.
- Attach factory calbration forms for all instruments where provided and/or specified. Provide instrument parameters for each parameter changed from the factory default.

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

	<u> </u>			INS	PECTION I				Page	e 1 of 6	
V	Vinnipeg				MCC, 600	V			ID:		
ect	Facility:				Project Name:						
Project	Area :				Bid Opportun	ity:					
·											
_	Location:							# of C	ells:		
MCC Data	Manufacturer:				Model:			Serial #:			
MCC	Rated Voltage:	: V	Main Bus F	Rating:		А	Main Bus	Neutral Rating	j :	А	
	Bus Conductor	r: Copper C	Aluminum	Cui	rrent Withstan	d Rating:	Α				
	Identification T	ag Installed:		☐ Yes	□No	Visual Signs	of Overhe	ating:		☐ Yes	□No
	Visual Signs of	f Moisture:		☐ Yes	□No	Visual Signs	of Corona	:		☐ Yes	☐ No
	Fuse/Breaker	Fuse/Breaker Sizes Match Drawings:			□No	PT and CT ra	atios matc	h drawings:	□ N/A	☐ Yes	□No
Бu	Elevation Draw	ration Drawings Correct:			□No	o Cables Supported Appropriately:			□No		
leani	Cleanliness (A	eanliness (As Found): Good Acce			otable Poor Insulators Condition: Good Acceptable					le 🗌 Poor	
Visual Inspection / Cleaning	Connections:	tions: Good Accep			ptable ☐ Poor					Acceptable	e 🗌 Poor
spect	Ground Conne	ection:	☐ Good ☐] Accepta	able 🗌 Poor	Vents/Filters	:	□ G	Good [Acceptable	e 🗌 Poor
al Ins	Doors Mechan	ical:	☐ Good ☐	Accepta	able 🗌 Poor	Exercise Act	ive Compo	onents:		☐ Yes	□No
Visu	Cell Fit and Ali	gnment:	☐ Good ☐	Accepta	able 🗌 Poor						
	Required Clea Met:	rances are	☐ Good ☐] Accepta	able 🗌 Poor						
	Indicating mec	hanisms:	☐ Good ☐] Accepta	able Poor	Unit Cleaned	d: Y	es Photograp	h Take	en: 🔲 `	Yes
	Comments:					1		1			
	Type:	Inspectio	n								
<u>.</u>	☐ Main Break	er Complete	appropriate	breaker i	nspection forr	n.					
Incoming Power	☐ Disconnect	Complete	appropriate	disconne	ect inspection	form.					
ning		Visual Ins	pection:	☐ Go	ood 🗆 Accep	table 🗌 Poor					
Incor	☐ Main Lugs	Connectio	ns Torqued:	☐ Ye	es						
	ы wain Lugs	Connectio			Α	В		С		N	l
		Resistanc As Left	e (ht)								



Page	2 of 6
ID:	

	Test Preparatio	Source: Disconnected Connected Isolated	cted d with Source	Cable Dest. / Lo Disconnected Connected w		Note: Apprequired, protection that the test.	oroval of City's Representative is orior to leaving cables connected during				
est	Temperature: °C										
ince T	Test Voltage	Insul	ation Resistand Phase To Phas		Test Summar	Test Summary					
sista vork	(dc)	A - B	B - C	C - A	☐ Test Passe						
n Resistal (Buswork)	1000 V					☐ ☐ Test Inconclusive Further Investigation Required.					
Insulation Resistance Test (Buswork)	Test	Insul	ation Resistand Phase To GND		Test Failed	Test Failed					
lus	Voltage	A - GND	B - GND	C - GND							
	1000 V										
	Comments	S:									
	1		ī	T							
nce 'est)		Point A	Poir	nt B	Resistan (μΩ)	ce	Test Summary ☐ Test Passed				
sista tor 1	MCC GND Bus		Facility Ground Electrode				☐ Test Inconclusive Further Investigation Required.				
Ground Resistance Checks (Ductor Test)	MCC GND Bus		MCC Enclosure				Test Failed				
ounc		C GND Bus	System								
ا يَ جَ			System	ineuliai							
	Comments	5:									
	Visual Insp	pect Requirements:	G=Good,	A=Acceptable,	P=Poor Comments	are required	d for all items identified in Poor condition.				
					/ lamacoid is installe						
		2		risual signs of o							
		3	3. Inspect a	nd torque conne	ections.						
S		4	1. Inspect a	nd test any elec	tro/mechanical inter	locks.					
eake		Ę	5. Confirm o	disconnect opera	ation.						
der Breakers		6	6. Check do	or mechanical o	condition.						
Feede		7	7. Exercise	circuit breaker.							
"		8	3. Confirm o	ables are suppo	orted and routed app	oropriately.					
		9	9. Visually a	ssess the gene	ral condition of the i	nstallation.					
	Note:				r Inspection Form fo ettings, or > 250A fra		s with separate adjustable Long and				
				Contin	ued on next page						



Page	3 of 6	
ID:		

			1	•		Continued	from previous	page	1		
	ID	Loc./ Cell	Frame Rating (A)	Trip Rating (A)	Manuf.	Model	Trip Unit Type	Inst Setting	Visual Inspection	Cleaned	Comments
ers											
Feeder Breakers											
er B											
-eed											
_											
	General Comments:										



Page	4 of 6	
ID:		

	Overcurrent Protection Type:	B=Breaker (Thermal Magnetic), M=Motor Circuit Protector, F=Fuse
	Overload Protection Type:	T=Thermal, SS=Solid State, I=Intelligent
	Visual Inspect Requirements:	G=Good, A=Acceptable, P=Poor Comments are required for all items identified in Poor condition.
rs	1.	Confirm identification tag / lamacoid is installed.
acto	2.	Look for visual signs of overheating.
Contactors	3.	Inspect and torque connections.
rs/	4.	Inspect and test any electro/mechanical interlocks.
Starters /	5.	Confirm disconnect operation.
or S	6.	Check door mechanical condition.
Motor	7.	Exercise circuit breaker.
	8.	Confirm cables are supported and routed appropriately.
	9.	Visually assess the general condition of the installation.
	Note: Comp Starte	elete a Motor Starter Inspection Form for all Motor Starters Size 4 or larger, with VFDs, or with Softers.

				Overcu	irrent Prot	tection	Contactor		Overload			
	ID	Loc./ Cell	Type	Rating (A)	Manuf.	Model	Size / Rating	Type	Model	Visual Insp.	Cleaned	Comments
Motor Starters / Contactors												
ntac												
°S												
rters												
Sta												
loto												
_												
	General Comments:											



Page	5 of 6	
Ę		

				Overcu	ırrent Pro	tection	Contactor		Overload			
	ID	Loc./ Cell	Type	Rating (A)	Manuf.	Model	Size / Rating	Type	Model	Visual Insp.	Cleaned	Comments
S												
tarte												
Motor Starters												
Š												
	General Comments:											

,	Winnipeg		IN	SPECTION MCC,		RM	Page 6 of 6		
Final Analysis	Monitoring	to Service: g / Inspection Required: eplacement Required:	☐ Yes☐ Yes☐ Yes☐ Yes	□ No □ No □ No	Commer	nts:			
		Company	Name			Signature	Date	e (yyyy/mm/dd)	
Perfo	ormed By								
Checked By									

Note: The person(s) performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.

	<u> </u>						CTION FO				Pa	ige	1 of 2		
· ·	Winnipèg		N	IOLDE	D CASE	CIR	CUIT BRE	EAKER, <	1000	V	ID:	:			
Project	Facility:				P	roject	Name:								
Pro	Area:				Ві	id Opp	portunity:	unity:							
	Location:					Pane	elboard/MCC:				С	ell #	<u> </u>		
Data	Manufactu	rer:				Type: Serial #:									
Breaker Data	Rated Volt		V	Fran	ne Size:	: A Trip Unit:									
Bre	Interrupting			kA	(Comments:									
	Breaker Id	entification	Tag In:		☐ Ye		☐ No	Visual Signs						Yes	No
tion /	Cleanlines	s (As Foun	d):	☐ Go	ood 🗌 Ad	ccepta	able Poor				ately:			Yes 🗆 N	No
Visual Inspection / Cleaning	Connection	ns:		☐ Go	ood 🗌 Ad	ccepta	able 🗌 Poor	Electro/Mec Interlock:	hanica	al 🗆 I	N/A 🗌	God	od 🗌 Acce	ptable 🗌 F	Poor
ual In Clea	Ground Co	nnection:		☐ G	ood 🗌 Ad	ccepta	able 🗌 Poor	Exercise Cir	cuit Br	reaker:				Yes	
Visi	Door Mech	nanical:		☐ Go	ood 🗌 Ad	ccepta	able 🗌 Poor	Other:							
	Comments	::													
	Trip Unit Rating: A Trip Unit Type: None Thermal Magnetic Electronic LI LSI LSIG														
"	Breaker Setting (As Left)					ype.	Range		Setp		CHOILE		Delay	LSIG I ² T	
tting	Long Time			☐ Fixed ☐ Adj.			Kange	X	Seth	A =	Α		sec	□ On □	1 Off
er Se		nort Time		☐ Fixed ☐ Adj.				X		A =	A			□ On □	
Breaker Settings		antaneous		☐ Fixed ☐ Adj.					X A =			A N/A			J OII
		ound Fault			d \square Adj.			A A =			sec			□ On □	l Off
	Perform in	sulation res						A, or as specif		اد ماما					
Test	Temperatu	ıre:	°C —	ource:		onnec		nnected (Sou					required, pr nected durin		ng
tance	Test							on Resistan							
esist	Voltage (VDC)	Phase	To GN	ID (Brea	ker Close	d)	Phase To	Phase (Brea	ker Cl	osed)	Lin	e to	Load (Brea	ker Open))
on R	(VDC)	Α		В	С		A – B	B – C	Α	C	Α		В	С	
Insulation Resistance	T			-1.5		T		To continue of					1 = =		
lus	Test Sumi		<u> </u>	st Passe	d L	l est Ir	nconclusive. I	Further Invest	igation	Required	d.	L	Test Failed	<u> </u>	
	Comments	·-													
Φ	Perform co	ontact meas	sureme	nts for br	eakers >=	= 250A	l, or as speci								
Contact Resistance	Res	sistance (µ	ιΩ)		Α	+	В	С			Test Summary ☐ Test Passed				
Cor Resis		(1	Resistance (μΩ)							☐ Test Inconclusive ☐ Further Investigation Required.					
	Comments													red.	

@	
Winnipeg	

Checked By

INSPECTION FORM MOLDED CASE CIRCUIT BREAKER, < 1000V

Page	2 of 2	
ID:		

Performed By							
		Company	Name			Signature	Date (yyyy/mm/dd)
◀	Repair / R	eplacement Required:	☐ Yes	□ No			
Final nalys	Monitoring	g / Further Inspection Requir	ed: Yes	□No			
al rsis	Returned	to Service:	☐ Yes	□No	Comme	nts:	

Note: The person(s) performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.



MODULATING CONTROL DEVICE CHECKLIST

Page

1 of 1

			Project						
Facility:		Pro	oject Name:						
Area:			Bid Opportunity:						
		T	Control Devic	е					
Tag:		Description	n:						
Manufacturer:		Model:			Serial Number:				
			Inspection Chec	klist					
No. Item to be	Inspected				Comments	3	Pass (P/F)		
Actuator ty	pe and class per P&ID an	d specification	on				(171)		
2. Instrument	tag(s) installed and corre	ct							
3. Installation	of actuator complete and	correct							
4. Wiring corr	ect								
5. Drawings r	narked up as-built								
6. HMI graphi	c symbol, tag and units co	orrect							
			Control Validati	ion					
Control Output	Location		Design Value	•	Actual Value	Error (%)	Pass (P/F)		
	PLC Output	<u> </u>	_				(F/F)		
0%	Field Device								
	PLC Output	1							
50%	Field Device)							
	PLC Output	:							
100%	Field Device)							
Notes: 1. At 2. Pr	tach factory calbration for ovide instrument paramet	ms for all ins ers for each	struments where provid parameter changed fro	ed and/o	or specified. actory default.				
	Company	Name		Signat	ture	Date (yyyy/mn	n/dd)		
Tested By									
Witnessed By									

		,														
,	Vinning						SPECT			2201/				Page 1 of	2	
·	Vinnipeg				MO	ГОК	START	ΓER, Ι	FVNK,	600 v				ID:		
Project	Facility:						Proj	ect Nar	me:							
Pro	Area :						Bid (Opport	unity:							
	Load:						Starter I	tarter Location:							Cell #:	
	Manufacture	••		Тур	oe.			Sanor Essanon.					Serial #:			
	Size:	•	Rate		oltage:	\	/	Curre	ent Ratir	na:	A			trol Voltage:		V
					1			A Fuse Siz			1	e Mfg.				
	Circuit			iC.	Rating: A		A	ruse 512		Model		el:				
r Data	Protection:	ction: Breaker			Rating: A		Α	Inst. A Man		nufacturer:						
Starter Data	☐ Thermal					<u> </u>						ufacturer:				
"	Overload Protection:	☐ Ele	ectronic elligent		Class:	☐ 20 ☐ 30)	Setti Ratir		Α						
	Control Pow		I			U	nknown				Mod	eı:				
	Transformer		Size:			VA	Sec. Vo	ltage:	,	V Prima	ry Fus	se:	Α	Secondary	Fuse:	Α
	Current Phases: A B C C				□ None Ratio:				round ault CT:		Present Not Present	Ratio:				
	ID:				Size:		kW /		Н	P	V	oltage:		V		
Motor Data	Full Load Am	ine.		A S	Service Fac			Othe				•				
	T un Load An	ipo.		A 0	octvice i ac			Otric	,ı.							
	Starter Identi	fication	n Tag In	stalle	ed:	☐ Y	es 🗆	No	Visu	al Signs o	of Ove	erheating:			☐ Yes	□No
bu	Cleanliness (As Fou	und):		☐ Good [Acc	eptable	☐ Poo	or Supp	ort Insul	ators:			☐ Good ☐ A	Acceptable	e 🗌 Poor
on / Cleaning	Connections				☐ Good [☐ Acc	eptable	☐ Poo	or Elect	ro/Mecha lock:	anical	□ 1	V/A [☐ Good ☐ /	Acceptable	e 🗌 Poor
) / uo	Ground Conr	nection	:	[☐ Good [☐ Acc	eptable	☐ Poo	or Cont	actor Co	nditio	า:		☐ Good ☐ A	Acceptable	Poor
pecti	Door Mechar	nical			☐ Good [☐ Acc	eptable	☐ Poo	or Cont	act Align	ment:			☐ Good ☐ A	Acceptable	Poor
Visual Inspecti	Verify O/L ele	ement i	is corre	ctly s	sized for		☐ Ye	s 🗆 N	lo Exer	cise Circ	uit Bre	eaker/MCF	P/Disc	connect		☐ Yes
Visi	Cables Supp	orted A	Appropri	ately	<i>/</i> :		☐ Ye	s 🗌 N	lo Unit	Cleaned:		Yes F	Photog	graph Taken:		Yes
	Comments:															
s		Test			A			В		С		Test Sun	nmar	у		
/Pole ment	Contact R				1							☐ Test F	nconc	clusive		
Contact/Pole Measurements	Disconnect Resis	/ Breal tance (P								Furth Test F		estigation Re	equired.	
Co	Fuse Re	sistand	e (μΩ)													
	Commo	ents:														



INSPECTION FORM MOTOR STARTER, FVNR, 600V

Page	2 of 2	
ID:	•	

est	Test Prepa		ce: Isola actor: C	ated Dis	Dest. / Load sconnected nnected with		nriar ta li		Representative is required, nected during the test.
Insulation Resistance Test	,	Test	Voltage			Insu	lation Resistan	ce (MΩ)	Ground all phases not
sistaı		rest		oitage		A	В	С	under test!
n Re	Contactor	actor Line To GND 10		00 VDC					Test Summary ☐ Test Passed
ulatic	Contactor	Load To GND	100	00 VDC					Test Inconclusive Further Investigation
lns	Contacto	r Line to Load	100	00 VDC					Required. Test Failed
	Comments	:							
		to Service:		☐ Yes	☐ No	Comme	nts:		
Final Analysis	Monitorin Required	g / Further Inspe	ection	☐ Yes	□ No				
∢		Replacement Re	quired:	☐ Yes	□No				
		Company		Name			Signatura		Date (vana/mm/dd)
		Company		ivallie			Signature		Date (yyyy/mm/dd)
Perfor	med By								
Check	red By								

Note: The person performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.



INSPECTION FORM AC MOTOR, LOW VOLTAGE

Page:	1 of 2		
ID:			

Project	Facility:			Р	Project N	Name:							
Pro	Area:			В	Bid Opp	ortunit	y :						
m.	Size:	kW /	HP	Volta	age:		V		R.P.M:				
Data	Manufacturer:			Mod	del:				Serial Number:				
Motor Data	Frame Type:		FLA:		A S	ervice	Factor:		Other:				
	Cooling:	☐ Air ☐ Fan	# Cooling Fans:		Winding Material:								
	Motor Identification	Tag Installe	ed:	Yes	☐ No Visual Signs of Overheating:					Yes 🗌 No			
вu	Connections:		☐ Good ☐ A	ccepta	able 🗌	Poor	Air Baffles:			☐ Good ☐ Acc	ceptable Poor		
leani	Paint:		☐ Good ☐ A	ccepta	able 🗌	Poor	Filter Media:		□ N/A	☐ Good ☐ Acc	ceptable Poor		
Visual Inspection / Cleaning	Cooling Fans:	□ N/	A 🗌 Good 🗎 A	Accepta	able 🗌	Poor	Fan Controls:		□ N/A	☐ Good ☐ Acc	ceptable Poor		
pecti	Anchorage/Alignm	ent:	☐ Good ☐ A	ccepta	able 🗆 Poor								
al Ins	Ground Connectio	n:	☐ Good ☐ A	ccepta	ptable Poor								
Visua	Mechanical/Electri Operation:	cal Noise Du	uring	Yes	☐ No Lubrication Required:			ed:	☐ Yes ☐ No				
	Cleanliness (As Fo	ound):	☐ Good ☐ A	Accepta	able 🗌	Poor	Unit Cleaned:	☐ Yes	Photo	graph Taken:	☐ Yes		
		Test			Resistance (MΩ)				Dielectric				
	Stator Winding	Voltage (Vdc)	Winding Temperature (°	°C)	30 S		1 min.	10 r	nin. (a)	Absorption Ratio	Polarization Index (a)		
eo										-	-		
ig Insulation Resistance		500	40										
n Res										-	-		
ılatio		500	40										
g Insu										-	-		
Winding		500	40										
Wi	Notes:			<u> </u>									
	(a) Testing to	10 minutes	and calculation of	of Polar	rization	Index	is only required for	motor	s > 150 k	W (200 HP)			
	Test Summary		Test Passed [☐ Test	t Incond	clusive	. Further Investiga	tion Re	equired.	☐ Test Fai	led		
		Poo	istance (μΩ)				Test Summary	,					
. e	A B	Res	,		A C		☐ Test Passed						
Winding Resistance	A - B		B-C		A - C		Test Inconc Further Inv	lusive	tion Requ	ired.			
^ Re							I rest Falled						



INSPECTION FORM AC MOTOR, LOW VOLTAGE

Page:	2 of 2		
ID:			

	☐ Not App	olicable					
tion) i	Test Voltag	e Bearing	Resi	stance (MΩ)	
sula	E	Bearing	(Vdc)	Temperature (°C)	1 min.	Correcte	ed to 40°C
Bearing Insulation Resistance			500				
Beari R			500				
	Test Sum	mary	☐ Test Passed	☐ Test Inconclusiv	e. Further Investigation Requi	red.	t Failed
	□ Nat And	- Cb-L-					
	□ Not App	inding Temperat	uro:	°C	Actual Bearing Temperature		°C
	RT		Resistance	Calculated Temperature	RTD	Resistance	Calculated Temperature
	Ki		(Ω)	(°C)	KID	(Ω)	(°C)
ce							
RTD Resistance							
Resi							
70.							
Α.							
	Test Sum	mary	☐ Test Passed	☐ Test Inconclusiv	e. Further Investigation Requi	red. 🔲 Tes	t Failed
Note:	Test co	nnection resistar	ce of bolted co	nnections. Report on ca	able inspection sheet.		
					0		
<u>.s</u>	Returned	to Service:		☐ Yes ☐ No	Comments:		
Final Analysis	Monitorin Required	g / Further Inspe :	ction	☐ Yes ☐ No			
٩	Repair / F	Replacement Red	quired:	☐ Yes ☐ No			
		Company	Nai	me	Signature	Date	(yyyy/mm/dd)
Perfo	rmed By		1101		9		()))),,,,,,,,,,,
Check	ced By						
Noto:	The perce	n(c) porforming t	ho chock is ros	concible for encuring the	at the data is transcribed from t	the handwritten for	m correctly and

Note: The person(s) performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.



INSPECTION FORM NON-FUSIBLE DISCONNECT SWITCH, 600V

Page	1 of 2	
ID:		

ect	Facility:				Project Name:						
Project	Area :				Bid Opportun	ity:					
-					T						
Disconnect Data	Manufacturer:				Model:						
Disco	Rated Voltage:	V	Current Ra	iting:	А		Interrupt	ing Rating:		А	
					☐ No Visual Signs of Overheating: ☐ Ye						
ng	Identification Tag Insta			☐ Yes	□ No	_				☐ Yes	□ No
leani	Cleanliness (As Found	l):			able 🗌 Poor	Support Insu	lators:			d Acceptable	
n/C	Connections:		☐ Good ☐	Accepta	able Poor	Blade Condit			Good	d Acceptable	☐ Poor
Visual Inspection / Cleaning	Ground Connection:		☐ Good ☐] Accepta	ble 🗌 Poor	Verify Blade Operation:	Mechanic	al [☐ Good	d	☐ Poor
lnsp	Door Mechanical:		☐ Good ☐] Accepta	ble 🗌 Poor	ele Poor Unit Cleaned: Yes					
/isual	Fit Plumb & Square:] Yes □ No	Unit Lubricate	ed:		☐ Yes		
	Cables Supported App	ropriate	ly:] Yes ☐ No	Other:					
0 -			stance (μΩ) As Left)			Test Sumn	nary				
nblade tance	A	(<i>P</i>			С	 ☐ Test Pa	ssed				
witchblade Resistance	A	(<i>P</i>	As Left)		С	☐ Test Par ☐ Test Inc ☐ Test Inc	ssed onclusive Investiga	tion Require	ed.		
Switchblade Resistance	A Comments:	(<i>P</i>	As Left)		С	☐ Test Pa	ssed onclusive Investiga	tion Require	ed.		
Switchblade Resistance		(<i>P</i>	As Left)		С	☐ Test Par ☐ Test Inc ☐ Test Inc	ssed onclusive Investiga	tion Require	ed.		
	Comments:	urce:	As Left)	Disco	cest. / Load: nnected ected with Load	☐ Test Pace ☐ Test Income Further ☐ Test Fair	ssed conclusive Investiga iled	roval of City	r's Repr	esentative is req ted during the te	
ce Test	Comments: Test Preparation: So Dis	urce:	B Isolated t: Open	☐ Disco	est. / Load: nnected ected with Lo:	☐ Test Pace ☐ Test Income Further ☐ Test Fair	ssed onclusive Investiga iled Note: App	roval of City ving cables	r's Repr	ted during the te	st.
ince Test	Comments:	urce:	B Isolated	☐ Disco	est. / Load: nnected ected with Lo:	Test Pac Test Inc Further Test Fai	ssed onclusive Investiga iled Note: App	roval of City ving cables	r's Repr		st. ses not
ince Test	Comments: Test Preparation: So Dis	urce: Econnect	B Isolated t: Open	☐ Disco	est. / Load: nnected ected with Loa	Test Pac Test Inc Further Test Fai	ssed conclusive Investigated Note: Apporior to lea	roval of City ving cables (ΜΩ)	r's Repr connec	Ground all pha- under tes	st. ses not
ince Test	Test Preparation: So Dis	urce: Cconnect	As Left) B Isolated Company Voltage	Disco Conne	est. / Load: nnected ected with Loa	Test Pac Test Inc Further Test Fai	ssed conclusive Investigated Note: Apporior to lea	roval of City ving cables (ΜΩ)	r's Repr connec	ted during the te Ground all pha under tes	st. ses not t!
ce Test	Comments: Test Preparation: So Disconnect Line To GN	urce: Cconnect	As Left) B Isolated Company of the company of th	Disco Conne	est. / Load: nnected ected with Loa	Test Pac Test Inc Further Test Fai	ssed conclusive Investigated Note: Apporior to lea	roval of City ving cables (ΜΩ)	r's Repr connec	Ground all phaunder tes Fest Summary Test Passed Test Inconclus	st. ses not t!



INSPECTION FORM NON-FUSIBLE DISCONNECT SWITCH, 600V

Page	2 of 2
ID	

sis	Returned	to Service:	☐ Yes		No	Comments:	
Final	Monitoring	/ Further Inspection Require	ed: Yes	☐ Yes ☐ No			
Ā	Repair / R	eplacement Required:	☐ Yes		No		
		Company	Name		Signature		Date (yyyy/mm/dd)
Perfo	med By	Company	Name		Signature		Date (yyyy/mm/dd)

Note: The person(s) performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.

<u> </u>						CO	MMISSIONII	NG FOR	кM		Page	1 0	of 2
Winni _]	Facility:					01	JTDOOR LI	GHTING	}		Equipr	ment Tag:	
ect	Facilit	ty:				Proj	ect Name:				-		
Project	Area:					RPF	No.		lo.).			
	Gene	ral Contr	actor:				Project Mana	aer:					
Project Contact	Consu						Contract Adm						
F. S	City o	f Winnip	eg				Consulting Pr	oject Man	ager:				
	1						·				1		
	Batter Locati	ry Bank ion:		Battery B Equipmen			Panel Feed: Circuit No.		Control Panel No.		Applio Draw		
ing	Outdo	oor	Manufa	cturer:			Catalog No.				Contr	ol Type	
ighti & Da	Light	ing	Rated \	Voltage:	VAC	Input	Current:	Α	Lamp Watta	ge:	W Outdo	oor Fixtures Q	ty:
or L	Fixtu	res:	Installe	d on Outdo	or Walls:		☐ North		East		South		West
Outdoor Lighting Location & Data			Manufa	acturer:			Catalog No.		Adjustable T	urn-On Le	vel:	☐ Yes	☐ No
0	Photo	cell:				ı	Catalog 1101		Adjustable T	urn-Off Le	vel:	☐ Yes	☐ No
			Rated \	Voltage:	VAC	Rated	Current:	Α	Installed Location:		Turn- Ratio	On / Turn-Off :	□ N/A
	Identi	fication L	_amacoi	ds Installed	:	Yes	□ No	Lamps P	roperly Aimed	<u></u> d:		☐ Yes	☐ No
ning	Visua	l Signs c	of Moistu	re:		Yes	□ No		s Properly Op			☐ Yes	□ No
Clea	Outdo	or Light	s Moistu	re Proof Ra	ated:	Yes [□ No □ N/A	Outdoor	Light Levels A	Adjustable:		☐ Yes ☐ N	lo 🗌 N/A
Visual Inspection / Cleaning	Clean	liness:			Good 🗆	Accep	otable Poor	Cable Co	onnections:		☐ Good	I ☐ Acceptab	le 🗌 Poor
ecti	Grour	nd Conne	ections:		Good 🗆	Accep	otable	Connecti	ons Properly	Sealed:	☐ Good	□ Acceptab	le 🗌 Poor
lnsp	Photo	cell Inst	allation:		Good 🗆	Accep	otable Poor	Dimming	Controller In:	stallation:	☐ Good	I ☐ Acceptab	le 🗌 Poor
sual	Cable	s Suppo	rted App	oropriately:		Yes	☐ No	Equipme	nt Cleaned:	☐ Yes	Photogra	ph Taken:	☐ Yes
Š	Comn	nents:											
) gr		ry Bank ⁻ e Startin			°C	;	Battery Bank T After Testing C			_	t Summa		
Photocell & Controller Testin	Photo	cell Turr	n-On Lev	/el:	foot-ca	ndles	Photocell Turn				Test Pass Test Incor		
toce ller T	Photo	cell Turr	n-Off Lev	/el:	foot-ca	ndles	Photocell Turn	-Off Time:	:	sec	urther In	vestigation Re	equired
Pho	Meas	ured Ligl	ht Outpu	ıt:	foot-ca	ndles	Dimming Conti	roller Outp	out:	v 🗆	est Faile	ed	
ပိ	Comn	nents:								·			
				n and Off		Г] Yes □ No	Outdoor	· Lights Turn (On in Manı	ıal Mode		es 🗆 No
5				atic Mode:	ina Contro				ell Turn-On Le		T		
stin	Light				ing Contro	iler: L	Yes No					foot-ca	
al Te	ور	Mode D	escriptic	on				(Outdoor Light	s On		Lights to Turr	
ation	Operating Modes			e – Normal	•				No			N/A	
Operational Testing	o∑			e – Photoce] No	sec		
"		Manual	Mode –	Individual I	Normal Lig	hting C	Circuits Fail		☐ Yes ☐] No		se	C
	Comn	nents:											

<u> </u>	_		СОММ	ISSION	IING FORM		Page		2 of 2		
Winni	peg			OUTI	DOOR L	LIGHTING			Equipme	nt Tag:	
Project	Facility:			Project I	Name:						
Pro	Area:		RPF No				Tender No.				
. <u>s</u>	Returned to Se	rvice:		☐ Yes	☐ No	Comments:					
Final Analysis	Monitoring / Fu	rther In	spection Required:	☐ Yes	☐ No						
_ A	Repair / Replacement Required:				☐ No						
	Company				Nam	е		Signature		Date	(yyyy/mm/dd)
	al Contractor sentative										

City Representative

<u>@</u>	_	COMMISSIONING FORM Page 1 of 2 PLC ANALOG INPUT CARD Equipment Tag:												
Winnip	peg			COMINISSIONING FORM										
ect	Facility:			Pr	roject	Name:								
Project	Area:			RF	PF No).			Tende	er No.				
ect act	General Contr	actor:				roject Mana								
Project Contact	Consultant:					Contract Adm								
	City of Winnipe	eg			C	Consulting Pr	oject Manager:							
	PLC Enclosure	Name:				PLC Manufa	acturer:		F	PLC N	lodel:			
PLC Data	Card Catalog I	No.				Rated Input	Voltage:	VDC	Ir	nputs	0-7 Fus	e No.		
l C	Documents:	I/O Wiri	ng Dwg:			DNP3 I/O F	ile:		C	Contro	l Narrati	ive:		
<u> </u>	PLC:	Equipm	ent Tag:			Rack:			N	/lodul	e:			
	Pro Manufacti	ufactured Cable Labelled: Yes No Pre-Manufac					Pro Manufactu	lanufactured Cable Tag:						
	All Inputs Wire									mina	I Blocks:	☐ Yes	☐ No	
Visual Inspection	All Inputs Sep			☐ Yes ☐ No All Input Wires Labelled ☐ Yes ☐ No All Inputs Wired at Ana										
sbec	Cleanliness:	aratery i		☐ Yes ☐ No All Inputs Wired at Ana Good ☐ Acceptable ☐ Poor Wire Connections Both										
al In	Fully Function	ing Card				ble 🗌 Poor						☐ Acceptable		
Visu	Card Fully Pro						All Card Input I	_ights W	ork:			Acceptable		
	Comments:											<u> </u>		
		1		T				_				ı	1	
Point	Physical Tag	j l	Description	Signal 1	Туре	Sign	al Mapping	PLC Input	Loc		SCADA	Condition Pickup Level	Pass (P/F)	
	Physical Tag	j I	Description	0 - 20	0mA	Signa Low:	al Mapping mA/V =	Input	HM	11 8		Pickup Level		
Point	Physical Tag	j I	Description	□ 0 − 20 □ 4 − 20	0mA 0mA					11 8	SCADA	Pickup Level Low High		
	Physical Tag	j I	Description	0 - 20 4 - 20 0 - 10	0mA 0mA 0V	Low: High:	mA/V = mA/V =	Input	HM	11 8		Pickup Level ☐ Low ☐ High ☐ N/A		
	Physical Tag	j I	Description	0 - 20 4 - 20 0 - 10 0 - 20 4 - 20	0mA 0mA 0V 0mA 0mA	Low: High: Low:	mA/V =	Input	HM]		Low High Low Low High High		
0	Physical Tag	j [Description	0 - 20 0 - 10 0 - 20 0 - 20 0 - 10	0mA 0mA 0V 0mA 0mA 0V	Low: High:	mA/V = mA/V =	Input	HM]		Pickup Level ☐ Low ☐ High ☐ N/A ☐ Low ☐ High ☐ N/A		
0	Physical Tag	j I	Description	0 - 20 0 - 10 0 - 10 0 - 10 0 - 20 0 - 10	OmA OWA OMA OMA OWA	Low: High: Low:	mA/V = $mA/V =$ $mA/V =$ $mA/V =$ $mA/V =$	Input	HM]		Pickup Level Low High N/A Low High N/A Low Hoyh Low Low Low Low		
0	Physical Tag	, !	Description	0 - 20 0 - 10 0 - 20 0 - 20 0 - 10	OmA OW OMA OMA OW OMA OMA	Low: High: Low: High:	mA/V = $mA/V =$ $mA/V =$ $mA/V =$	Input	HM]		Pickup Level ☐ Low ☐ High ☐ N/A ☐ Low ☐ High ☐ N/A		
0 1 2	Physical Tag	, !	Description	0 - 20 0 - 10 0 - 10 0 - 10 0 - 10 0 - 10 0 - 20 0 - 10 0 - 20 0 - 10 0 - 20 0 - 20	OmA OWA OWA OMA OWA OMA OMA OWA OMA OV	Low: High: Low: High:	mA/V = $mA/V =$ $mA/V =$ $mA/V =$ $mA/V =$	Input	HM]		Pickup Level Low High N/A Low High N/A Low High N/A Low High Low High Low How Low Low Low Low Low		
0	Physical Tag	, ,	Description	0 - 20 0 - 10 0 - 10 0 - 10 0 - 10 0 - 20 0 - 10 0 - 20 0 - 10 0 - 20 0 - 10 0 - 20 0 - 4 - 20 0 - 4 - 20	OmA OWA OMA OWA OMA OWA OMA OWA OMA	Low: High: Low: High: Low: High:	mA/V =	Input	HM]		Pickup Level Low High N/A Low High N/A Low High N/A Low High Low High		
0 1 2	Physical Tag	, !	Description	0 - 20 0 - 10 0 - 10 0 - 10 0 - 10 0 - 10 0 - 20 0 - 10 0 - 20 0 - 10 0 - 20 0 - 20	OmA OW OmA OW OmA OW OmA OW OmA OW	Low: High: Low: High: Low: High: Low: High:	mA/V =	Input	HM]		Pickup Level Low High N/A Low High N/A Low High N/A Low High Low High Low How Low Low Low Low Low		
0 1 2	Physical Tag	j !	Description	0 - 20	0mA 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA	Low: High: Low: High: Low: High: Low: High: Low: Low:	mA/V =	Input	HM]		Pickup Level Low High N/A High N/A High N/A		
0 1 2 3	Physical Tag	, ,	Description	0 - 20	0mA 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V	Low: High: Low: High: Low: High: Low: High:	mA/V =	Input	HM]		Pickup Level Low High N/A N/A N/A N/A		
0 1 2 3	Physical Tag	, !	Description	0 - 20	0mA 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA	Low: High: Low: High: Low: High: Low: High: Low: High: Low: Low: Low:	mA/V =		HM]		Pickup Level Low High N/A Low High Low High Low High Low High Low		
0 1 2 3 4	Physical Tag		Description	0 - 20	0mA 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA	Low: High: Low: High: Low: High: Low: High: Low: High:	mA/V =	Input	HM]		Pickup Level Low High N/A N/A N/A N/A		
0 1 2 3 4 5	Physical Tag	, ,	Description	0 - 20	0mA 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA	Low: High: Low: High: Low: High: Low: High: Low: High: Low: Low: Low:	mA/V =			1		Pickup Level Low High N/A Low Low High N/A		
0 1 2 3 4	Physical Tag	, !	Description	0 - 20	0mA 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA	Low: High:	mA/V =		HM	1		Pickup Level Low High N/A		
0 1 2 3 4 5	Physical Tag		Description	0 - 20	0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA	Low: High:	mA/V =			1		Pickup Level Low High N/A Low Low High N/A		
0 1 2 3 4 5	Physical Tag		Description	0 - 20	0mA 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V 0mA 0V	Low: High:	mA/V =					Pickup Level Low High N/A N/A		

Winnipeg						ING FORM		Page		2 of 2	
Winnip	peg		1	PLC AN	ALOG I	NPUT CAR	D		Equipme	ent Tag:	
ect	Facility:			Project N	Name:						
Project	Area:			RPF No.				Tender No).		
<u>.s</u>	Returned to Ser	rvice:		☐ Yes	☐ No	Comments:					
Final Analysis	Monitoring / Fur	rther Ins	spection Required:	☐ Yes	☐ No						
Ar	Repair / Replac	ement	Required:	☐ Yes	□No						
Commo	Repair / Replacement Required:										
			Company	Name Signa						Date	(yyyy/mm/dd)
Conor	al Contractor										

Representative

City Representative

W					MISSIO				Page	1 of 2	!		
Winnipeg PLC ANALOG OUTPUT CARD Equipment Tag: By Facility: Project Name:													
Project	Facility:			Proje	ct Name:								
Proj	Area:			RPF	No.			Tender No	١.				
	General Contra	actor:			Project Ma	anager:							
Project Contact	Consultant:				Contract A	Administra	ator:						
<u>r</u> S	City of Winnipe	eg			Consulting	g Project I	Manager:						
	PLC Enclosure	Name		r·	PI C I	Model:							
ata									its 0-3 Fuse	No.			
PLC Data	_		ina Dwa:	290		ol Narrative:							
颪	Documents: I/O Wiring Dwg: DNP3 I/O File: PLC: Equipment Tag: Rack:							Module:					
<u> </u>	Pre-Manufactured Cable Labelled:												
	Pre-Manufactu	e Tag:	ag:										
u	All Outputs Wi	red to T	erminal Blocks:	☐ Yes	☐ No	All O	utput Wires Labelle	ed at Termi	nal Blocks:	☐ Yes	☐ No		
oecti	All Outputs Se	paratel		☐ Yes	□ No		utputs Wired at An			☐ Yes	□ No		
lnsk	Cleanliness:				table 🗌 Po	_	Connections Both		☐ Good ☐ A				
Visual Inspection	Fully Functioni	_			table 🗌 Po		Secured on PLC F		Good D				
i>	Card Fully Pro	gramm	ed: Good	☐ Accep	table 🗌 Po	oor All Ca	ard Input Lights We	ork:	Good D	cceptable	☐ Poor		
	Comments:												
Point	Physical Ta	ag	Description	Sigi	nal Type	;	State Mapping	PL	- 90'011/	Field	Pass (P/F)		
Point	Physical Ta	ag	Description		nal Type			PL Inp	- 90'011/	Field Device	Pass (P/F)		
Point	Physical Ta	ag	Description			Low	mA/V =		ut SCADA				
	Physical Ta	ag	Description) – 20mA 1 – 20mA) – 10V			Inp	ut SCADA	Device			
0	Physical Ta	ag	Description		0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA	Low	mA/V =		SCADA	Device			
	Physical Ta	ag	Description) – 20mA 1 – 20mA) – 10V	Low High	mA/V = mA/V =	Inp	SCADA	Device			
0	Physical Ta	ag	Description		0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 4 – 20mA	Low High Low High	mA/V = mA/V = mA/V = mA/V =		SCADA	Device			
0	Physical Ta	ag	Description		0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 4 – 20mA	Low High Low High	mA/V =		SCADA	Device			
0	Physical Ta	ag	Description		0 – 20mA 4 – 20mA 1 – 10V 0 – 20mA 4 – 20mA 1 – 10V 0 – 20mA 4 – 20mA 1 – 20mA 1 – 20mA	Low High Low High	mA/V = mA/V = mA/V = mA/V = mA/V = mA/V =		SCADA	Device			
0 1	Physical Ta	ag	Description		0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 4 – 20mA	Low High Low High Low How High	mA/V =		SCADA	Device			
0 1 2	Physical Ta	ag	Description		0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 4 – 20mA 1 – 20mA 0 – 10V 0 – 20mA	Low High Low High Low High	mA/V = mA/V = mA/V = mA/V = mA/V = mA/V =		SCADA	Device			
0 1 2 3	Physical Ta		Description		0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 4 – 20mA 0 – 10V	Low High Low High Low High Low High	mA/V =		SCADA	Device			
0 1 2 3	Returned to Se	ervice:	Description		0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 1 – 20mA 1 – 20mA	Low High Low High Low High Comm	mA/V =		SCADA	Device			
0 1 2	Returned to Se	ervice:	nspection Required		0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 1 – 20mA 0 – 10V	Low High Low High Low High Comm	mA/V =		SCADA	Device			
0 1 2 3	Returned to Se	ervice:	nspection Required		0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 1 – 20mA 0 – 10V	Low High Low High Low High Comm	mA/V =		SCADA	Device			
0 1 2 3	Returned to Se Monitoring / Fu Repair / Repla	ervice:	nspection Required		0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 1 – 20mA 0 – 10V	Low High Low High Low High Comm	mA/V =		SCADA	Device			
Final 3 Analysis	Returned to Se Monitoring / Fu Repair / Repla	ervice:	nspection Required		0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 1 – 20mA 0 – 10V	Low High Low High Low High Comm	mA/V =		SCADA	Device			
Final 2 3 Analysis	Returned to Se Monitoring / Fu Repair / Repla	ervice:	nspection Required		0 – 20mA 4 – 20mA 0 – 10V 0 – 20mA 1 – 20mA 0 – 10V	Low High Low High Low High Comm	mA/V =		SCADA	Device			

<u> </u>				2 of 2		
Winnip	peg	PL	C ANALOG OUTPUT CARD		Equipment Tag:	
oject	Facility:		Project Name:			
Pro	Area:		RPF No.	Tender No).	

	Company	Name	Signature	Date (yyyy/mm/dd)
General Contractor Representative				
City Representative				

Winnipeg					MISSIONIN	_	_				Page	1 of 3	
Winnij	peg			PLC D	ISCRETE IN	NPUT	T CAF	RD			Equipment '	Tag:	
ect	Facility:			Proje	ct Name:								
Project	Area:			RPF	No.				Tend	er No).		
	General Contra	actor:			Project Manad	ger:							
Project Contact	Consultant:				Contract Adm		ator:						
F S	City of Winnipe	eg			Consulting Pr	oject	Manage	er:					
	PLC Enclosure	Nomo:			PLC Manufa	acturo	\r·				Model:		
a	PLC Effciosure	inaille.			PLC Manuia	acture	žI.				o-15 Fuse N	No.	
PLC Data	Card Catalog N	10.			Rated Inputs	Volta	age:	VAC /	/ VDC L	•	s 16-31 Fuse		
P.C	Documents:	I/O Wiri	ng Dwg:		DNP3 I/O Fi	ile:			(Contr	ol Narrative:		
	PLC:	Equipm	ent Tag:		Rack:				ı	Module:			
	Pre-Manufactu	red Ca	ole Labelled: [☐ Yes	□No	Pre-N	Manufa	ctured Cal	ole Tag:				
_	All Inputs Wire	d to Te	rminal Blocks:	☐ Yes	□ No			es Labelle			al Blocks:	☐ Yes	☐ No
Visual Inspection	All Inputs Sepa			Yes	□ No		•	ired at Dis				☐ Yes	□ No
spe	Cleanliness:						·	ctions Botl			Good D		
al In	Fully Functioni	ng Card						ed on PLC			Good D		
Visu	Card Fully Pro	_		-				ut Lights V			Good D	•	
	Comments:	gramm			idole 🗀 i eei	7111 0	ara mp	ut Ligitio v	VOIK.			tocoptable	
Point	Physical Tag		BLC Local						OA Alarm			_	
			Description State State Description PLC Local Input HMI SCADA						A	Alar	m	Pass (P/F)	
_			Description	State 0	State Descript	tion			SCAD		Alar	f	
0			Description		State Descript	tion	Input	НМІ				f	
			Description	0	State Descript	tion	Input	НМІ			□ On □ Of	f □ N/A f	
1			Description	0	State Descript	tion	Input	HMI			□ On □ Of	f □ N/A f □ N/A	
1			Description	0 1 0	State Descript	tion	Input	HMI			On Of	f □ N/A f □ N/A f □ N/A	
			Description	0 1 0 1	State Descript	tion	Input	HMI			On Of Of Of On Of On Of	f	
1 2			Description	0 1 0 1 0	State Descript	tion	Input	HMI			On Of Of Of Of On Of On Of On Of	f	(P/F)
1			Description	0 1 0 1 0	State Descript	tion	Input	HMI			On Of Of Of Of On Of On Of On Of	f	(P/F)
1 2 3			Description	0 1 0 1 0 1 0	State Descript	tion	Input	HMI			On Of Of Of On Of	f	(P/F)
1 2			Description	0 1 0 1 0 1 0	State Descript	tion	Input	HMI			On Of Of Of Of On Of Of On Of	f	(P/F)
1 2 3			Description	0 1 0 1 0 1 0 1 0	State Descript	tion	Input	HMI			On Of Of Of On Of On Of On Of On Of Of On Of	f	(P/F)
1 2 3			Description	0 1 0 1 0 1 0 1 0	State Descript	tion	Input	HMI			On Of Of Of On Of On Of On Of On Of On Of	f	(P/F)
1 2 3 4 5			Description	0 1 0 1 0 1 0 1 0 1	State Descript	tion	Input				On Of Of Of On Of On Of On Of On Of Of On Of	f	(P/F)
1 2 3			Description	0 1 0 1 0 1 0 1 0 1 0	State Descript	tion	Input	HMI			On Of Of Of On Of On Of On Of On Of On Of Of Of On Of Of Of On Of	f	(P/F)
1 2 3 4 5 6			Description	0 1 0 1 0 1 0 1 0 0 1 0 0 1 0 0 1 0 0 0 1 0 0 0 0 1 0	State Descript	tion	Input				On Of	f	(P/F)
1 2 3 4 5			Description	0 1 0 1 0 1 0 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 0 1 1 1 0 1	State Descript	tion	Input				On Of Of Of On Of On Of On Of On Of On Of Of Of On Of	f	(P/F)
1 2 3 4 5 6			Description	0 1 0 1 0 1 0 1 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 1 0 0 0 1 0 0 0 1 0	State Descript	tion	Input				On Of	f	(P/F)

1

☐ On ☐ Off

<u></u>								Page	2 of 3	
Winnip	peg			MMISSIONING I DISCRETE INPU		RD		Equipment Tag:		
	Facility		Des	in at Nia ann.				Equipment rag.		
Project	Facility:		Proj	ject Name:						
Ā	Area:		RPF	No.			Tender I	No.		
Point	Physical Tag	Description	State	State Description	PLC	Local	SCADA	Alarm		Pass
Folin	Filysical rag	Description	_	State Description	Input	НМІ				(P/F)
9			0					On Off	□ N/A	
			1					On Off		
10			0					On Off	□ N/A	
			1					□ On □ Off		
11			0						□ N/A	
			1							
12			1					On Off On Off	□ N/A	
13			0					□ On □ Off □ On □ Off	□ N/A	
			1							
14			1						□ N/A	
15			1					□ On □ Off □ On □ Off	□ N/A	
			'		Ш		Ш			
					PLC	Leesl				Pass
Point	Physical Tag	Description	State	State Description	Input	Local HMI	SCADA	Alarm		(P/F)
16			0					On Off	□ N/A	
10			1					☐ On ☐ Off		
17			0					On Off	□ N/A	
.,			1					☐ On ☐ Off		
18			0					On Off	□ N/A	
			1					☐ On ☐ Off		
19			0					☐ On ☐ Off	□ N/A	
13			1					On Off		
20			0					On Off	□ N/A	
20			1					☐ On ☐ Off		
21			0					On Off	□ N/A	
21			1					☐ On ☐ Off		
22			0					☐ On ☐ Off	□ N/A	
<i></i>			1					☐ On ☐ Off		
23			0					On Off	□ N/A	
20			1					☐ On ☐ Off	IV/A	
			0		П			☐ On ☐ Off		

24

1

☐ On ☐ Off

☐ On ☐ Off

□ N/A

<u>@</u>				СО	MMISSION	ING I	FORM			Page	3 of 3	
Winni	pèg				DISCRETE			RD		Equipme	nt Tag:	
ect	Facility:			Pro	ject Name:					•		
Project	Area:			RPI	F No.				Tender	No.		
Point	Physical Tag		Description	State	State Descri	iption	PLC Input	Local HMI	SCADA	A	larm	Pass (P/F)
25				0						□ On □	Off N/A	
20				1						□ On □	Off	
26				0						□ On □	Off	
20				1						□ On □	Off	
27				0						□ On □	Off N/A	
				1						□ On □	Off	
28				0						☐ On ☐	Off N/A	
				1						□ On □	Off	
29				0						□ On □	Off N/A	
				1						□ On □	Off	
30				0						□ On □	Off N/A	
				1						□ On □	Off	
31				0						□ On □	Off N/A	
01				1						☐ On ☐	Off	
v	Returned to Ser	vice:			Yes □ No	Comi	ments:					
Final Analysis	Monitoring / Fur	ther In	spection Required:		Yes □ No							
An	Repair / Replace	ement	Required:		Yes No							
						I						
Comme	ents:											
0.	-1.0		Company		Name	e			Signatur	e	Date (yyyy/m	nm/dd)
	al Contractor sentative											

City Representative

Winnin	nog.	_		MISSIONII			Page	1 of 2		
Winnip		P	LC DIS	CRETE OU	JTPUT CARD		Equipment	Tag:		
ect	Facility:		Projec	ct Name:						
Project	Area:		RPF N	No.		Tende	er No.			
ect act	General Contract	or:		Project Mana						
Project Contact	Consultant:			Contract Adm						
	City of Winnipeg			Consulting Pi	roject Manager:					
_	PLC Enclosure N	ame:	Р	LC Model:						
PLC Data	Card Catalog No.		outputs 0-7 Fuse	No.						
ر کار	Documents: I/C) Wiring Dwg:		DNP3 I/O F	ile:	С	Control Narrative			
	PLC: Eq	uipment Tag:		Rack:		N	Module:			
	Pre-Manufacture	d Cable Labelled:	☐ Yes	□ No	Pre-Manufactured Ca					
_			⊒ Yes	□ No	All Output Wires Lab		erminal Blocks:	☐ Yes	□No	
ctior	All Outputs Sepa		⊒ Yes	□ No	All Outputs Wired at				□ No	
eds	Cleanliness:			able Poor	-		Good G			
Visual Inspection	Fully Functioning			able Poor		C Rack:	☐ Good ☐	-		
Visu	Card Fully Progra			able Poor		Work:	☐ Good ☐			
	Comments:				l					
Point	Physical Tag	Description	State	State I	Description	PLC Output	SCADA	Field Device	Pass (P/F)	
0			0							
			1							
1			0							
			1							
2			0							
			1							
3			0							
			1							
4			0							
			1	1					1	
5			0					4		
			1						1	
6			0						4	
			1						1	

1

<u> </u>	_				ING FORM		Page	2 of 2	
Winnip	peg	P	LC DISC	RETE C	OUTPUT CA	RD	_	Equipmen	nt Tag:
Project	Facility:		Project I	Name:					
Pro	Area:		RPF No	-			Tender No		
	I				1_				
- sis	Returned to Servi	ce:	☐ Yes	☐ No	Comments:				
Final Analysis	Monitoring / Furth	er Inspection Required:	☐ Yes	☐ No					
- A	Repair / Replacer	nent Required:	☐ Yes	□No					
	•								
Comme	ents:								
		Company	Name Signa				Signature		Date (yyyy/mm/dd)
	al Contractor sentative								

City Representative

	Winnipeg PANEL						SPEC	CTIC	ON FOR	RM					Pag	e 1 of	f 2	
	Winn	ipèg			P	ANELBO	OAR	D,	LOW V	OLT	AGI	E			ID:			
ect	Fac	ility:	•				F	Proje	ect Name	:								
Project	Are	a :					Е	Bid (Opportuni	ty:								
																l		
	Loc	ation:						Fed	d From:							No. of	Circuits:	
ta	Mai	nufact	urer:					Мс	odel:					Serial	No:			
d Da	Rat	ed Vo	ltage:	V	Curre	nt Rating:				Α		٧	Vithstar	nd Rating:	: A			
Panelboard Data		Single	Phase	☐ 3 Ph	nase, 3 V	Vire	□ 3 I	Phas	se, 4 Wire	9	Neu	utral E	Bonded	I to Groun	d	☐ Ye	s 🗌 No	
Pane		Main L	ugs															
		☐ Main Breaker: Rating: A Ma Complete separate inspection form (F-BKR-						er:				Mode	el:			Inst	t. Setting:	
	Coi	Complete separate inspection form (F-BKR-M						for n	nain brea	ker if	>= 25	50A, d	or has i	long, shor	t, or g	round t	fault settings.	
	Ide	Identification Tag Installed:						Yes No Visual Signs of Overheating:				eating:			☐ Yes	☐ No		
١ ج			ns of Mois			Yes	_						☐ Yes	□ No				
ction	6 513			s Match Di		Yes		□ No					propriately	,		☐ Yes	□ No	
Visual Inspection /	eanir										nectio	<u>''</u>	teu App	propriately		Cood [·	
isual	5 Cie		ss (As Fo	una):		od 🗆 Ac							-4:				Acceptable	
5			chanical:						Poor				ction:			ا 000ق	Acceptable	e Ll Poor
	EXE	ercise	All Circuit	Breakers:		L] Yes	5	□ No	Com	ments	is:						
			So	urce:		Note: A	Appro	val d	of Citv's R	Repre	senta	ative i	s	Equipme	nent Temperature: °C			°C
st	Test Prepa	aration	ı: 📙	Disconne	d with	required, prior to leaving cables connected during the test.					ature Correction							
stance Test				Source I		ulation R			(MO)					Factor to				
stanc	Te Volt								inder tes	t!				Test Sur		•		
Resi	VOIL	age	A-G	SND	B-0	SND		C-C	GND		N-	GND		☐ Test I	ncon	clusive	tion Required	1
ıtion			RDG	20°C	RDG	20°C	RD	OG	20°C	R	DG	2	0°C	Test F			lion Required	l.
Insulation																		
-	Test '	Voltag	es: 12	0-300V →	500 VD	C Test Vo	ltage			301-	600V	′ → 10	000 VD	C Test Vo	ltage			
	Comments:																	
						Bre	akers	s < 1	00A and	With	out Ir	nst. S	Setting					
	List b	у тос	lel of brea	ker. Multi	ple breal	ers of va	rying a	атр	acity may	/ be I	isted _l	per lii	ne.					
kers	Туре		Manufact	turer	Мо	del Series	S		nterruptir Rating (k/		Р	Positi	ons/Ci	rcuits	Note	es		
Brea	Α									,								
oad/Feeder Breakers	В																	
d/Fe	С																	
oa	D	1																

E F



INSPECTION FORM PANELBOARD, LOW VOLTAGE

Page	2 of 2	
ID:		

				Breaker	s >= 100A	or with In	st. Setting	I		
	List each b		ividually. Comple	te separate inspe	ection form	(F-BKR-M	C-LV) for b	oreaker if >= .	250A, or I	has long, short, or ground
Load/Feeder Breakers	ID	Pos.	Manufacturer	Model	Trip Rating (A)	Int. Rating (kA)	Inst. Setting	Separate Form	Notes	
. Bre										
eedeı										
ad/F										
Ľ										
	Returned	to Service:		☐ Yes ☐	No Co	mments:				1
- sis	Returned				110					
Final Analysis	Monitoring	g / Inspection	on Required:	☐ Yes ☐	No					
Ā	Repair / R	eplacemer	nt Required:	☐ Yes ☐	No					
		Company	/	Name		Sigr	nature			Date (yyyy/mm/dd)
Perfo	rmed By									
Chec	ked By									

Note: The person performing the check is responsible for ensuring that the data is transcribed from the handwritten form correctly, and that the analysis results are correct.

<u> </u>								SIONI						Page	1	of 4	
Winnip					ARIAB	LEI	FREQU	ENCY	DRI	VE			Equipn	nent Tag:			
ect	Facility:					Proje	ct Na	me:									
Project	Area:					RPF	No.					Tende	er No.	lo.			
# #	General Cor	ntractor:					Proj	ect Mana	ger:								
Project Contact	Consultant:						Contract Administrator:										
<u>-</u> 2	City of Winn	ipeg					Con	sulting Pr	oject Mai	nage	r:						
	VFD Downsti	ream Load	d:				VFD	Location	:			S	Section	n No.		□ N/A	٦
	Drawings:	Single Lir	ne:				Sche	ematic:				C	Conne	ction:			
		Manufact	urer:				Mode	el:				S	Serial 7	# :			
	VFD:	Power Ra	ating:			Rated V	oltage	э:	VAC	Cui	rrent Rating	g:	Α	Contro	ol Voltage:	VA	С
	Circuit Protection:	☐ Break	er		Rating:	А		Inst. Setting:		Α	Manufactu Model:	ırer:					
)ata	Line Reactor:	☐ Install	ed		Rating:						Manufacturer: Model:						
ation & [Harmonic Filter:	Harmonic Installed					oa:					Manufacturer: Model:					
VFD Location & Data	Load Installed Rating:					atina:					Manufacturer: Model:						
	D] NEM	A	Manufac	turer:	urer: Model:										
	Bypass Contactor:	Type: [☐ IEC ☐ N/A	-	NEMA S	ize:	ze: N/A IE				IEC Rating: A ☐ AC-3 ☐ AC-4					1	
	Bypass Overload	☐ Therm	nal		Class:	☐ 10 ☐ 20		Setting /		A	Manufactu	urer:					
	Protection:		oplicable		Olass.	☐ 30 ☐ Unkn	own	Rating:		٨	Model:						
	Current Tran	nsformer:		Rati	0:						Туре:						
	Control Pow	er Transf	ormer:	Size):	VA Sec	conda	ary Voltag	je:	V	Primary F	use:		A Sec	ondary Fuse	: <i>F</i>	4
- -	Equipment T	ag:				Powe	er:		kW /		HP			Voltage		VAC	;
Motor Data	Full Load An		A S	ervic	e Factor	<u> </u>	Ir	verter Du	ıty Rated	:	☐ Yes	□ N			on Class:		_
	VFD Lamaco	nid Installe	7q.] Yes		□ No	Visual S	ians	of Overhea	ating.			□ Yes	П №	_
	Power Cable			h En		l Yes		□ No		_	es Labelle	_	th En	qe.	☐ Yes		_
aning	Cleanliness:		a at Bot			Accept					Connection				☐ Acceptab		or
Cle	Control Cabl	e Connec	tions:			Accept					Interlocks				☐ Acceptab		
on /	Ground Con	nections:				Accept			Contacto	or Co	ndition:				☐ Acceptat		
pecti	Door Mecha					Accept			Contact						☐ Acceptat		
Visual Inspection / Cleaning	Verify Bypas sized for the		ment is		oth.	Yes [rcuit Break	er / Di			Yes	□No	
Visı	Cables Supp	orted App	ropriate	ely:] Yes [] No		Equipme	ent C	leaned:	☐ Yes	Ph	otogra	ph Taken:	☐ Yes	3
	Comments:																

Pacility:	<u> </u>	_			COMMIS	SIOI	NING	FOF	RM		Page 2 d		of 4		
Test	Winnip	pèg			VAF	RIABLE F	REC	UEN	ICY I	DRIVE		Equ	ipmen	t Tag:	
Test	ect	Faci	ility:	<u> </u>		Project Nar	ne:					1			
Test	Proj	Area	a:			RPF No.						der No.			
Test					ı	'									
Harmonic Filter Contactor Contact	a: 10			Test		-									-
Test	Pole								.	Phase B	Phase	C			
Test	act / urem														estigation/
Test	onta												4		
Test	OΣ			KCI / DIGOOI											
Test															
Test Voltage			paration: 500	rce: 🗀 I		☐ Discon☐ Conne	necte cted v	d		Note: /					
Test		WAI						D MO	DULE	AND CAPA	CITORS, AN	D DIS	CONN	NECT ALL	-
Test Voltage			_	4		Walka a			Insul	ation Resis	tance (MΩ)		Gr	ound all p	hases not
Harmonic Filter Contactor Line to Load	Tes		10	est		Voltage	е	Pha	se A Phase B		B Phas	Phase C			
Harmonic Filter Contactor Line to Load	ance		VFD Line	to Ground		1000 VE	С								
Harmonic Filter Contactor Line to Load	sista		VFD Load	to Ground		1000 VE	С								
Harmonic Filter Contactor Line to Load	n Re		VFD Lin	e to Load		1000 VE	С							•	
Harmonic Filter Contactor Line to Load	atio	На	armonic Filter Con	tactor Line	to Ground	1000 VE	С								
Harmonic Filter Contactor Line to Load	nsu	На	armonic Filter Cont	tactor Load	to Ground	1000 VE	С								
Bypass Contactor Line to Ground 1000 VDC	_	H	Harmonic Filter Co	ntactor Line	to Load	1000 VD	C								
Bypass Contactor Line to Load 1000 VDC			Bypass Contact	or Line to G	round	1000 VE	С						ПТ	est Failed	
Ramp Up Time Specified: sec Actual: sec Sec Actual: sec Sec Sec Actual: sec Sec Actual: sec Sec Sec Actual: sec			Bypass Contacto	or Load to G	Ground	1000 VE	С								
Ramp Up Time Specified: Sec Actual: Sec Sec Actual: Sec Sec Actual: Sec Sec Sec Actual: Sec Sec			Bypass Contac	tor Line to	Load	1000 VE	С								
Ramp Down Time Specified: Sec Actual: Sec Actual		Con	nments:												
Ramp Down Time Specified: Sec Actual: Sec Actual					0 :: 1						1				
Motor Measured Current			<u> </u>								-				
VFD Displayed Current			<u> </u>	ont.		<u> </u>	٨			aco P			Phasa	C	
PLC HMI Screen Displayed Motor Current:	5														
Bypass Manual Mode	stin							Amme							
Bypass Manual Mode	nal Te	Pote	entiometer Adjusts							•					
Bypass Manual Mode	atio	Mod							, ,	1					
Bypass Manual Mode	Oper	Se	,							_ ` +					
Bypass Manual Mode	oad (Mode		Mode											
Bypass Manual Mode	 	ting l													
Bypass Automatic Mode – Local Mode	<u>r</u>	pera			AI IVIOUE										
		O			ocal Mode										
		Con	1	S WIOGC E	- Indian			<u> </u>	. 00				. 00		L 19/7

Winnip						COMMISSIONING FORM RIABLE FREQUENCY DRIVE							Page 3 of 4			
							QUEITO	JI DIKI			Equip	oment Ta	g:			
Project	Faci	lity:			Project	Name:	ie.									
Pr	Area: RPF No									Tender I	No.					
sb	Prog	gram VFD Settings	to Match Se	tting Lett	ter.		Commer	nts:								
VFD Settings	Sett	ings Applied to VFI	D:	:S	□ No)										
0,	VFD	Setting Letter File	:													
	Veri	fy Control Signals I	Between VFI	D and PL	_C		Commer	nts:								
	Test		t physical sig													
	Field	d Wires Labelled at				□ No										
	Signal Description Pilot Light Illumi						nal Rece t PLC Ca		Signal Appears on HMI Screen			SCADA Can See Signal				
		Ready	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□ No	□ N/A		
		VFD Mode	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A		
als	<u>s</u>	Bypass Mode	☐ Yes	☐ No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	☐ No	□ N/A		
Sign	Signal	Manual Mode	☐ Yes	☐ No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	☐ No	□ N/A		
ntrol	Discrete S	Auto Mode	☐ Yes	☐ No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	☐ No	□ N/A		
VFD & PLC Control Signals	Disc	Forward Run	☐ Yes	☐ No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A		
& PL		Reverse Run	☐ Yes	☐ No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□ No	□ N/A		
VFD		VFD Fault	☐ Yes	☐ No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□ No	□ N/A		
		Bypass Fault	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	☐ No	□ N/A		
		Vibration Lockout	☐ Yes	□ No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□ No	□ N/A		
	sls	Signal Description	n Mea	asured Si	ignal		gnal recei FD / PLC		Sig on	nal Appea HMI Scre	ars en	SCADA	Can Se	e Signal		
	Signals	Speed Input		m	A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□ No	□ N/A		
	Analog	Speed Reference		m	A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A		
	Ā	Motor Current		m	A	☐ Yes	□No	□ N/A	☐ Yes	□No	□ N/A	☐ Yes	□ No	□ N/A		
	Dot:	urned to Coming	•		□ V ₂ -	□ No	Comn	nente:	•			•		$\overline{}$		
Final Analysis		urned to Service: itoring / Further Ins	spection Rec	mired.	☐ Yes			icilio.								
Fi		air / Replacement I	<u> </u>		☐ Yes											

			COMMISSIONING FORM		Page	4 of 4
Winni	peg	VAI	RIABLE FREQUENCY DRIVE		Equipment Tag:	
oject	Facility:		Project Name:			
Pro	Area:		RPF No.	Tender No).	

	Company	Name	Signature	Date (yyyy/mm/dd)
General Contractor Representative				
City Representative				