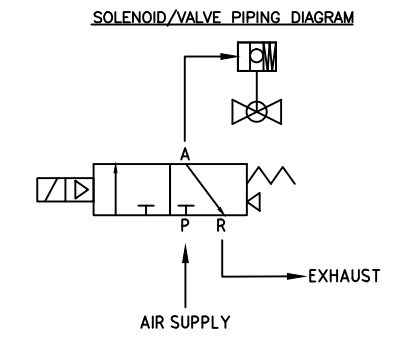
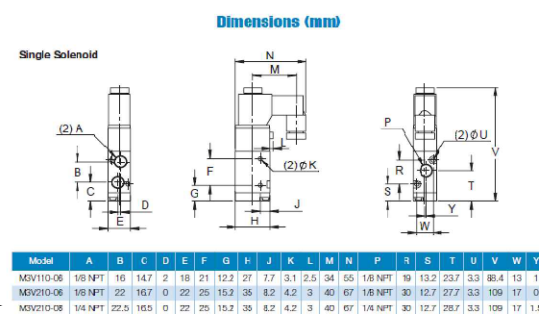


ITEM	QTY	DESCRIPTION	PART NO.
1	1	RITTAL, AE SINGLE DOOR, WALL MOUNT, ENCL., 500 mm H x 500 mm W x 210 mm.	1050.500
2	1	RITTAL, WALL BRACKET KIT, pkg of 4.	2508.010
3	2	RITTAL, SZ PLASTIC LEVER HANDLE.	2533.000
4			
5	8	MEAD, 1/4" NPT 3/2 N/C HAZ LOC VALVE C/W COIL.	M3V210-08-NC-24VDC-X
6	1	MEAD, 8-STATION MANIFOLD FOR ABOVE VALVES, (4) 1/4" NPT PORTS.	DWG 6670-0
7	8	MEAD, MANIFOLD GASKET AND SCREW KIT.	XXXXX
8	4	DOMINION FITTINGS, PIPE PLUG COUNTERSUNK HEX 1/4" - TO PLUG ONE END OF MANIFOLD.	D118-B
9	8	CAMOZZI, MALE SWIVEL ELBOW 1/4" TUBE - 1/4" NPT - FOR VALVES.	P6520-04-04
10	2	CAMOZZI, STRAIGHT - FOR OTHER END OF MANIFOLD, 1/4in TUBE, 1/4in NPTF	P6510-04-04
11	10	HAM-LET, LET-LOK, 1/4" OD TUBE X 1/4" OD TUBE 316SS BULKHEAD UNION.	774-LSS-04
12	10	HAM-LET, LET-LOK, 316SS TUBE INSERT FOR 1/4" OD TUBING.	774-LISS-040,17
13	4.3FT	FREELIN-WADE, 1/4 O.D. X .160 I.D. BLACK P/U 95A TUBE.	1A-151-0
14			
15	20	ENTRELEC, TERMINAL BLOCK, M 4/6, WITH TEST SOCKET.	115 217.14
16	1	ENTRELEC, END SECTION, M 4/6.	118 368.16
17	2	ENTRELEC, END STOP (ALL RAILS).	206 351.16
18	0.33M	ENTRELEC, ASSY. RAIL, PR30, (2m), DIN 3, 35mm.	173 220.05
19	2	ENTRELEC, RAIL OFFSET BRACKET, TS 0441-SM6, 40mm HIGH.	0101 655.06
20	1	ENTRELEC, SEPARATOR END SECTION, RAIL MOUNT, SCF6.	118 707.03
21	1	ENTRELEC, COMB-TYPE JUMPER BAR, PC6, 10 POLE, 35A, (M 4/6).	113 548.26
22	1	ENTRELEC, LABELS, 1 TO 10, 10 STRIPS PER CARD.	233 002.27
23	1	ENTRELEC, LABELS, 11 TO 20, 10 STRIPS PER CARD.	233 003.20
24	0.3M	PANDUIT OR EQUAL, WIRING DUCT, 1.5"W, 3"H ft, WITH COVER, GREY, 2M.	
25			

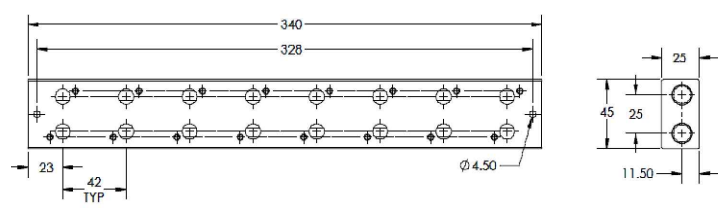
NOTE 1
NOTE 1



MEAD SOLENOID DIMENSIONS



MEAD MANIFOLD DIMENSIONS



NOTES:
 1. ALL ITEMS SUPPLIED BY NRCAN EXCEPT ITEM 18 AND 24.
 2. SHOP WILL BE REQUIRED TO ASSEMBLE THE SOLENOID VALVES AND GASKETS TO THE MANIFOLD.
 3. CABINET POWER IS 24VDC, NO ESA APPROVAL REQUIRED.
 4. ALL TERMINATION OF SOLENOID WIRED TO TERMINAL BLOCKS TO USE CRIMP FERRULES.
 5. INTERNAL WIRING TO BE IDENTIFIED WITH HEAT SHRINK LABELS AS NOTED.

Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	S	T	U	V	W
MNV110-08	18 NPT	16	14.7	2	18	21	12.2	27	1.7	3.1	2.5	34	35	1.8 NPT	19	13.2	23.7	3.3	88.4	13
MNV210-08	1/8 NPT	22	16.7	0	22	25	15.3	35	4.2	4.2	3	40	40	1/8 NPT	30	12.2	27.7	3.3	108	17
MNV210-08	1/4 NPT	22.5	16.5	0	22	25	15.2	35	4.2	4.2	3	40	40	1/4 NPT	30	12.7	28.7	3.3	109	17

REVISION	REVISION DESCRIPTION	DATE (Y/M/D)	DRAWN	CKD	APPD
1	ISSUE FOR TENDER	2017/03/24	RCM		
0	ISSUE FOR CLIENT REVIEW	2017/01/27	RCM		
No					

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DESIGNED
R. McNAIR
DRAWN
R. McNAIR
CHECKED
APPROVED
DATE
2016/11/11
SCALE
NONE

PROJECT
NRCAN CANMET DCSG/HIPROX
TITLE
ELECTRICAL
DCSG-HIPROX
SOLENOID VALVE CABINETS
ASSEMBLY

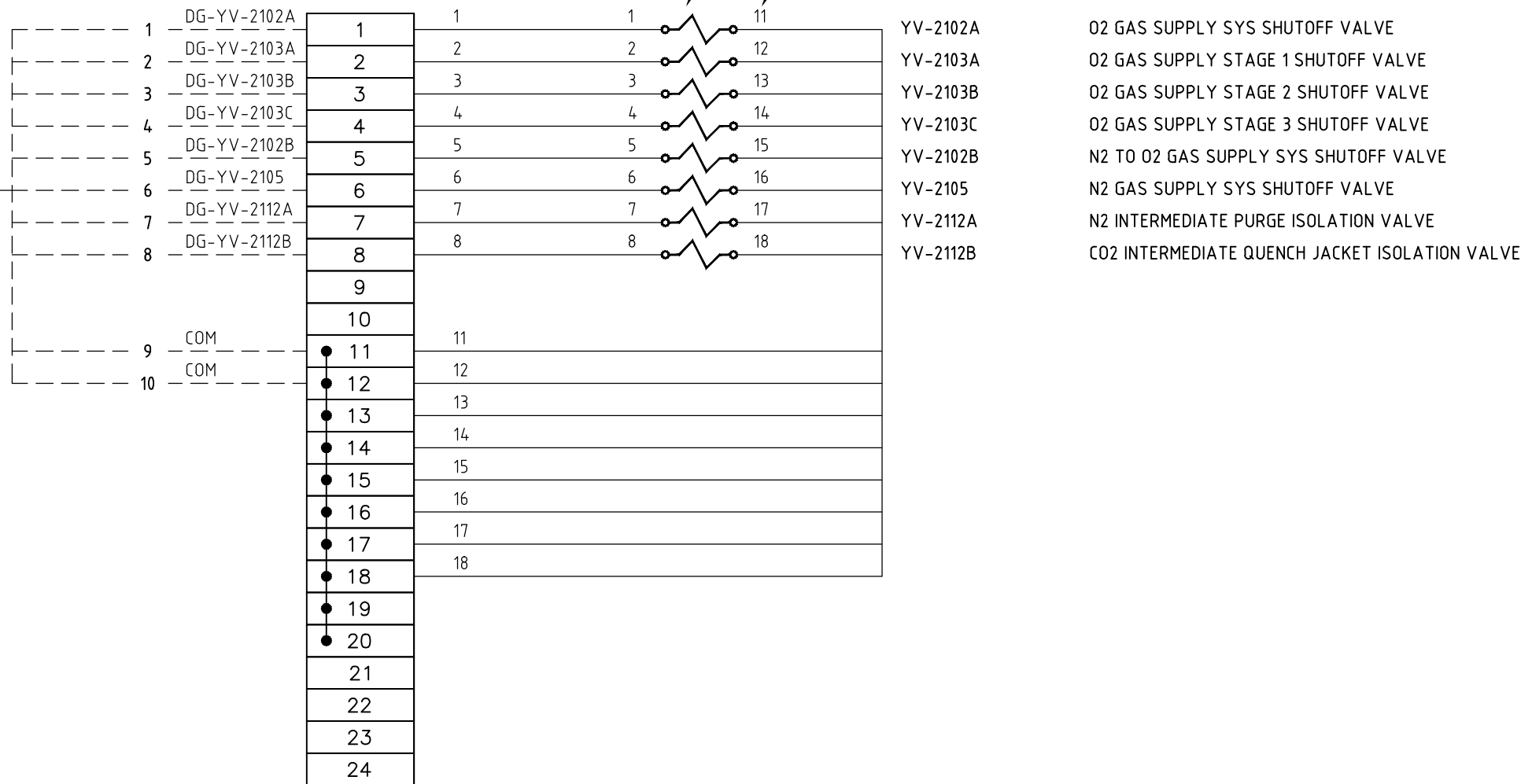
USER	PROJECT	BUILDING	DRAWING	REV.
E	DCSG	BCC4	600	1

SOLENOID CABINET SC-M9-1

DWG
E-DCSG-BCC4-206
DG-040
TO DIGITAL I/O CABINET

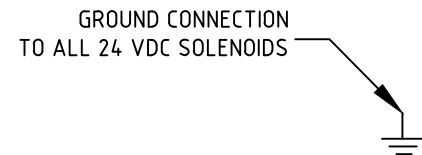
PNEUMATIC MANIFOLD
MOUNTED SOLENOID VALVES

WIRE LABELS



TERMINAL LEGEND

- XXX CABINET TERMINAL BLOCK
- RELAY/TIMER TERMINAL
- DEVICE TERMINAL
- EXTERNAL WIRING
- _____ INTERNAL WIRING
- CABLE



No	REVISION DESCRIPTION	DATE (Y/M/D)	DRAWN	CKD	APPD
1	ISSUE FOR TENDER	2017/03/24	RCM		
0	ISSUE FOR CLIENT REVIEW	2016/01/27	RCM		

REFERENCE DRAWINGS

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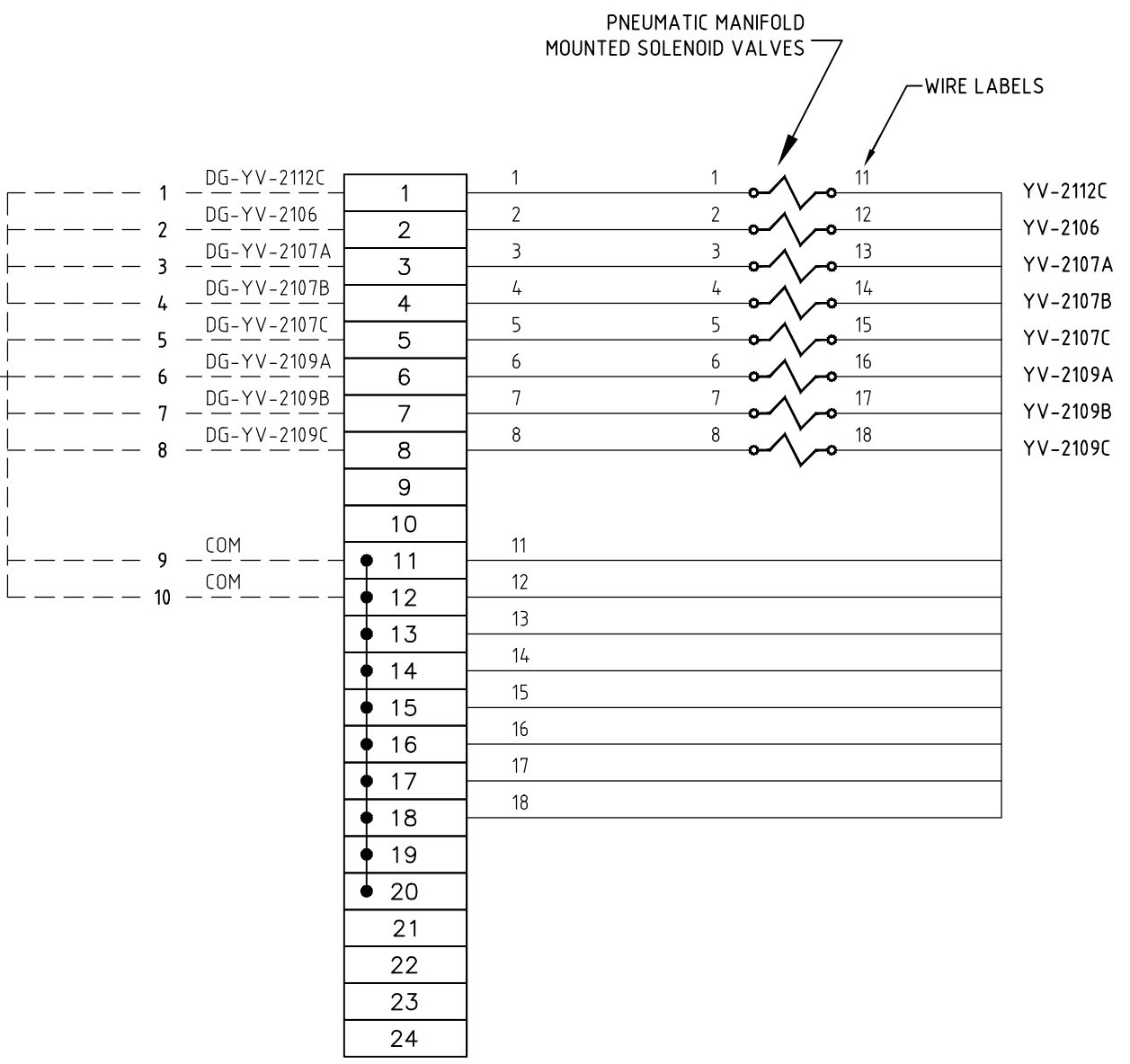
CLIENT
Canada
Natural Resources Canada
CANMET Energy Technology Center
Ressources naturelles Canada
Centre de la technologie de l'énergie de CANMET

DESIGNED	R. McNAIR
DRAWN	R. McNAIR
CHECKED	
APPROVED	
DATE	2016/11/11
SCALE	NONE

PROJECT	NRCAN CANMET DCSG/HIPROX				
TITLE	ELECTRICAL DCSG-HIPROX SOLENOID CABINET WIRING SC-M9-1				
USER	PROJECT	BUILDING	DRAWING	REV.	
E	DCSG	BCC4	601	1	

SOLENOID CABINET SC-M9-2

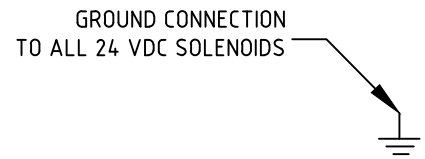
DWG
E-DCSG-BCC4-207
TO DIGITAL I/O CABINET
DG-041
10C, 16AWG



- YV-2112C N2 TO COD INTERMEDIATE ISOLATION VALVE
- YV-2106 N2 TO CO2 GAS SUPPLY SYS SHUTOFF VALVE
- YV-2107A N2 REACTOR SAMPLE PROBE OUTER COOLING SHUTOFF VALVE
- YV-2107B N2 REACTOR SAMPLE PROBE INNER COOLING SHUTOFF VALVE
- YV-2107C N2 QS SAMPLE PROBE COOLING SHUTOFF VALVE
- YV-2109A CO2 GAS SUPPLY STAGE 1 SHUTOFF VALVE
- YV-2109B CO2 GAS SUPPLY STAGE 2 SHUTOFF VALVE
- YV-2109C CO2 GAS SUPPLY STAGE 3 SHUTOFF VALVE

TERMINAL LEGEND

- XXX CABINET TERMINAL BLOCK
- ⊠ RELAY/TIMER TERMINAL
- XX DEVICE TERMINAL
- EXTERNAL WIRING
- _____ INTERNAL WIRING
- CABLE



NO	REVISION DESCRIPTION	DATE (Y/M/D)	DRAWN	CKD	APPD
1	ISSUE FOR TENDER	2017/03/24	RCM		
207	DIGITAL OUTPUT WIRING NODE 4 MODULE 7	2016/01/27	RCM		
600	SOLENOID CABINET ASSEMBLY	No			

REFERENCE DRAWINGS

REVISION REGISTER

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R. McNAIR

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DATE
2016/11/11

SCALE
NONE

PROJECT
NRCAN CANMET DCSG/HIPROX

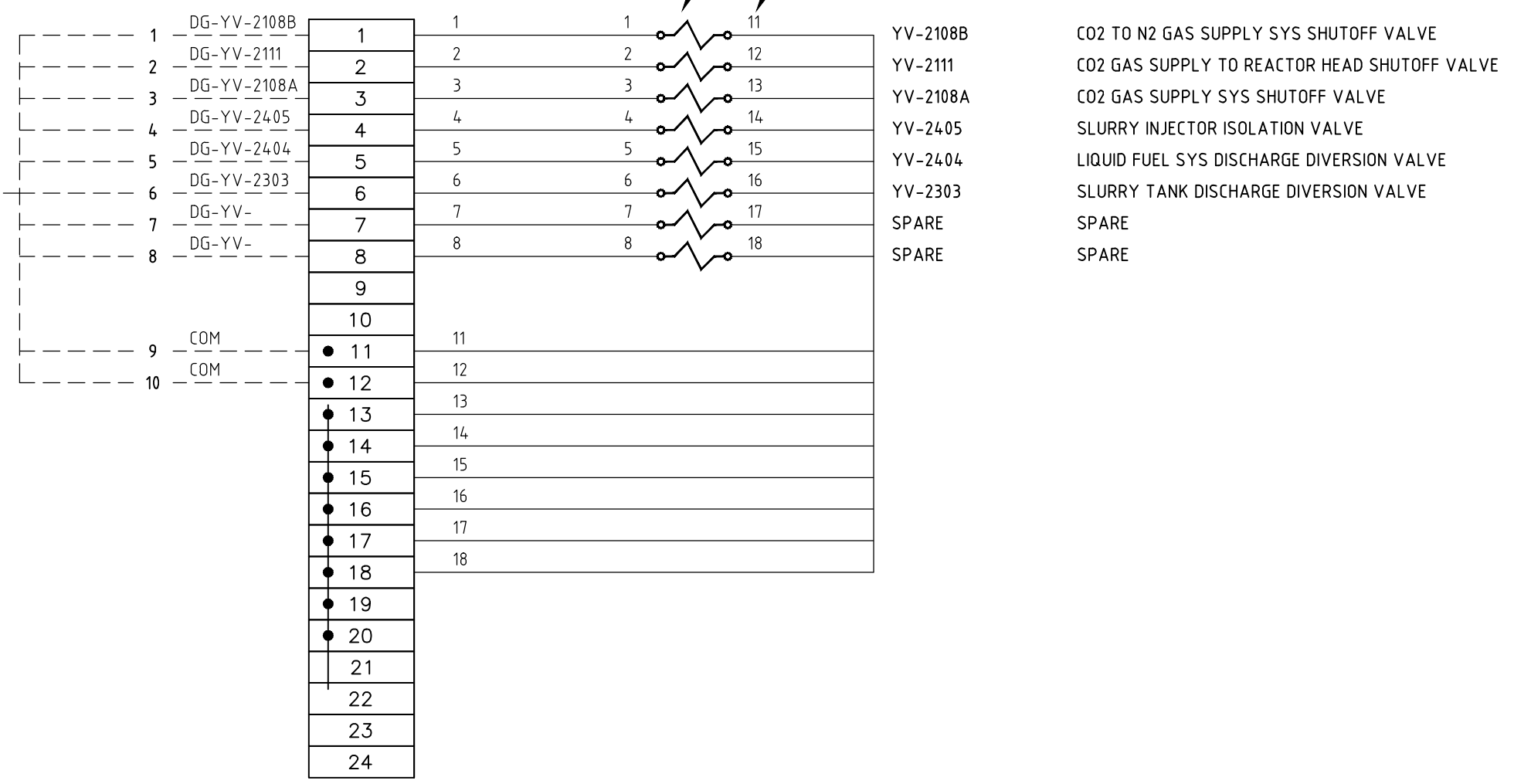
TITLE
ELECTRICAL
DCSG-HIPROX
SOLENOID CABINET WIRING
SC-M9-2

USER	PROJECT	BUILDING	DRAWING	REV.
E	DCSG	BCC4	602	1

SOLENOID CABINET SC-M9-3

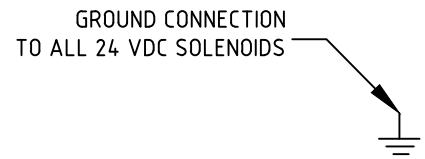
PNEUMATIC MANIFOLD MOUNTED SOLENOID VALVES
WIRE LABELS

DWG
E-DCSG-BCC4-207
TO DIGITAL I/O CABINET
DG-042



TERMINAL LEGEND

- XXX CABINET TERMINAL BLOCK
- ⊠ RELAY/TIMER TERMINAL
- XX DEVICE TERMINAL
- EXTERNAL WIRING
- _____ INTERNAL WIRING
- ▭ CABLE



REV	NO	DESCRIPTION	DATE (Y/M/D)	DRAWN	CKD	APPD
1		ISSUE FOR TENDER	2017/03/24	RCM		
0		ISSUE FOR CLIENT REVIEW	2017/01/27	RCM		
600		SOLENOID CABINET ASSEMBLY				

REFERENCE DRAWINGS

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DESIGNED: R. McNAIR
DRAWN: R. McNAIR
CHECKED:
APPROVED:
DATE: 2016/11/11
SCALE: NONE

PROJECT: NRCAN CANMET DCSG/HIPROX
TITLE: ELECTRICAL DCSG-HIPROX SOLENOID CABINET WIRING SC-M9-3

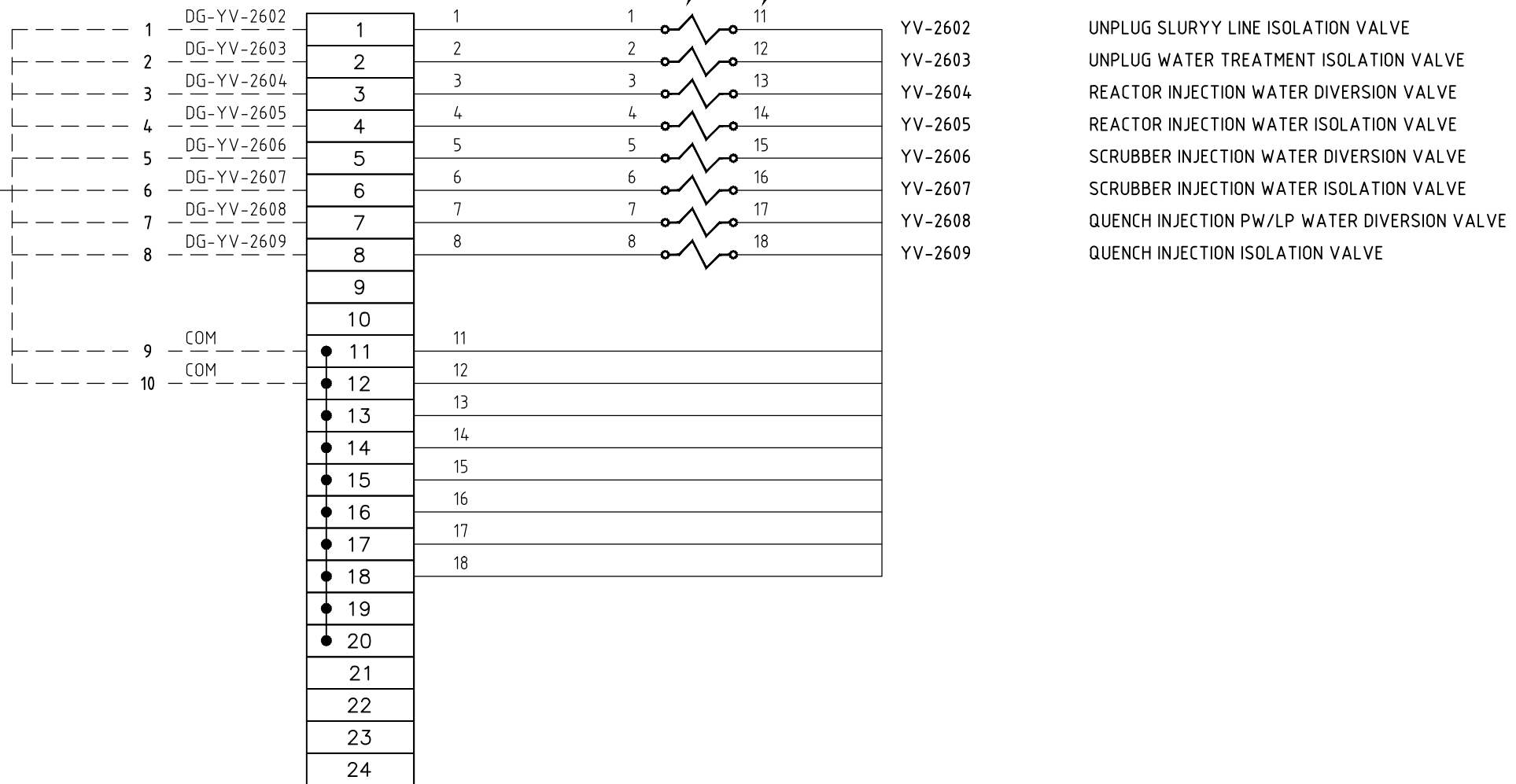
USER	PROJECT	BUILDING	DRAWING	REV.
E	DCSG	BCC4	603	1

SOLENOID CABINET SC-116-1

DWG
E-DCSG-BCC4-208
DG-043
TO DIGITAL I/O CABINET

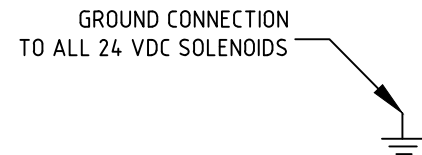
PNEUMATIC MANIFOLD
MOUNTED SOLENOID VALVES

WIRE LABELS



TERMINAL LEGEND

- XXX CABINET TERMINAL BLOCK
- RELAY/TIMER TERMINAL
- DEVICE TERMINAL
- EXTERNAL WIRING
- _____ INTERNAL WIRING
- CABLE



NO	REVISION DESCRIPTION	DATE (Y/M/D)	DRAWN	CKD	APPD
1	ISSUE FOR TENDER	2017/03/24	RCM		
208	DIGITAL OUTPUT WIRING NODE 4 MODULE 8	2017/01/27	RCM		
600	SOLENOID CABINET ASSEMBLY	No			

REFERENCE DRAWINGS

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2016/11/11

SCALE
NONE

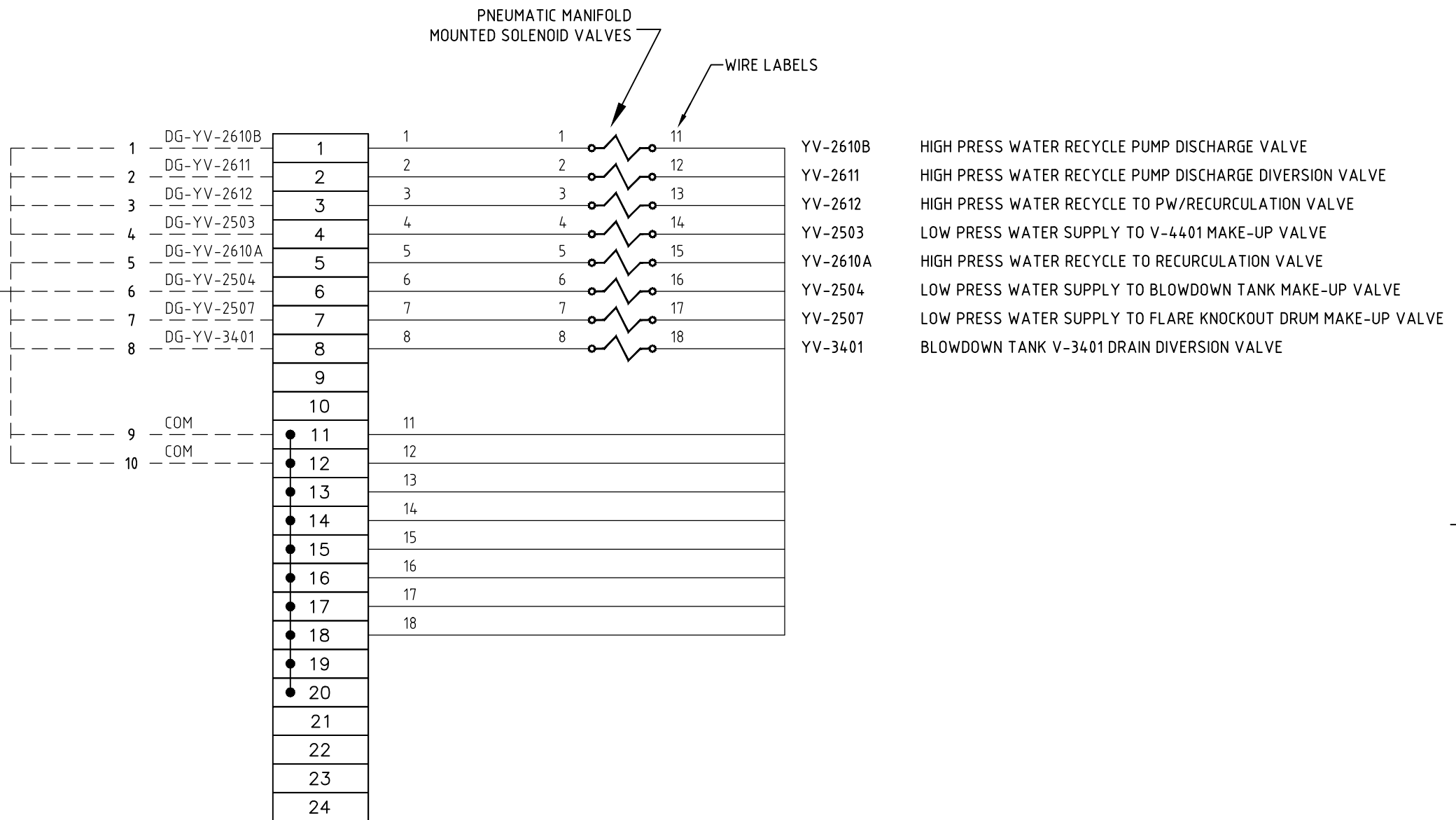
PROJECT
NRCAN CANMET DCSG/HIPROX

TITLE
ELECTRICAL
DCSG-HIPROX
SOLENOID CABINET WIRING
SC-116-1

USER	PROJECT	BUILDING	DRAWING	REV.
E	DCSG	BCC4	604	1

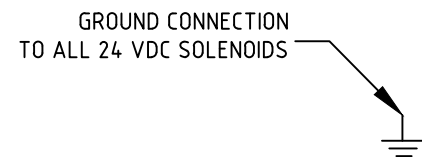
SOLENOID CABINET SC-116-2

DWG
E-DCSG-BCC4-208
DG-044
TO DIGITAL I/O CABINET



TERMINAL LEGEND

- XXX CABINET TERMINAL BLOCK
- X RELAY/TIMER TERMINAL
- XX DEVICE TERMINAL
- EXTERNAL WIRING
- _____ INTERNAL WIRING
- CABLE



NO	REVISION DESCRIPTION	DATE (Y/M/D)	DRAWN	CKD	APPD
1	ISSUE FOR TENDER	2017/03/24	RCM		
208	DIGITAL OUTPUT WIRING NODE 4 MODULE 8	0	ISSUE FOR CLIENT REVIEW	2017/01/27	RCM
600	SOLENOID CABINET ASSEMBLY	No			

REFERENCE DRAWINGS

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2016/11/11

SCALE
NONE

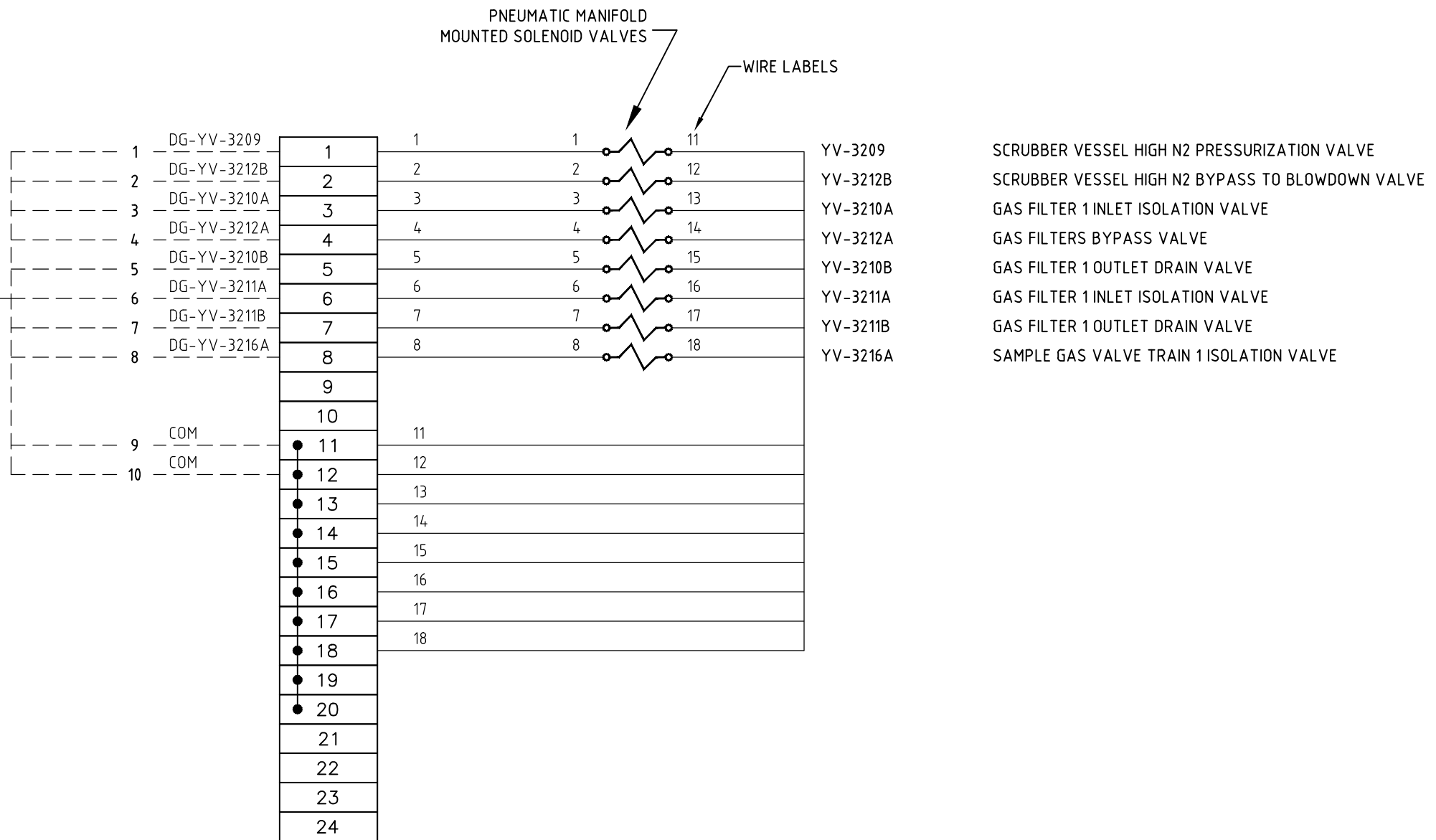
PROJECT
NRCAN CANMET DCSG/HIPROX

TITLE
ELECTRICAL
DCSG-HIPROX
SOLENOID CABINET WIRING
SC-116-2

USER	PROJECT	BUILDING	DRAWING	REV.
E	DCSG	BCC4	605	1

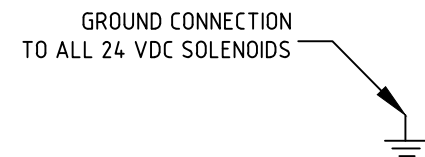
SOLENOID CABINET SC-M8-1

DWG
E-DCSG-BCC4-209
DG-045
TO DIGITAL I/O CABINET



TERMINAL LEGEND

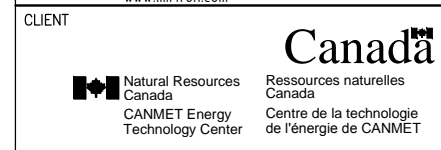
- XXX CABINET TERMINAL BLOCK
- X RELAY/TIMER TERMINAL
- XX DEVICE TERMINAL
- EXTERNAL WIRING
- _____ INTERNAL WIRING
- CABLE



NO	REVISION DESCRIPTION	DATE (Y/M/D)	DRAWN	CKD	APPD
1	ISSUE FOR TENDER	2017/03/24	RCM		
209	DIGITAL OUTPUT WIRING NODE 5 MODULE 1	2017/01/27	RCM		
600	SOLENOID CABINET ASSEMBLY	No			

REFERENCE DRAWINGS

REVISION REGISTER

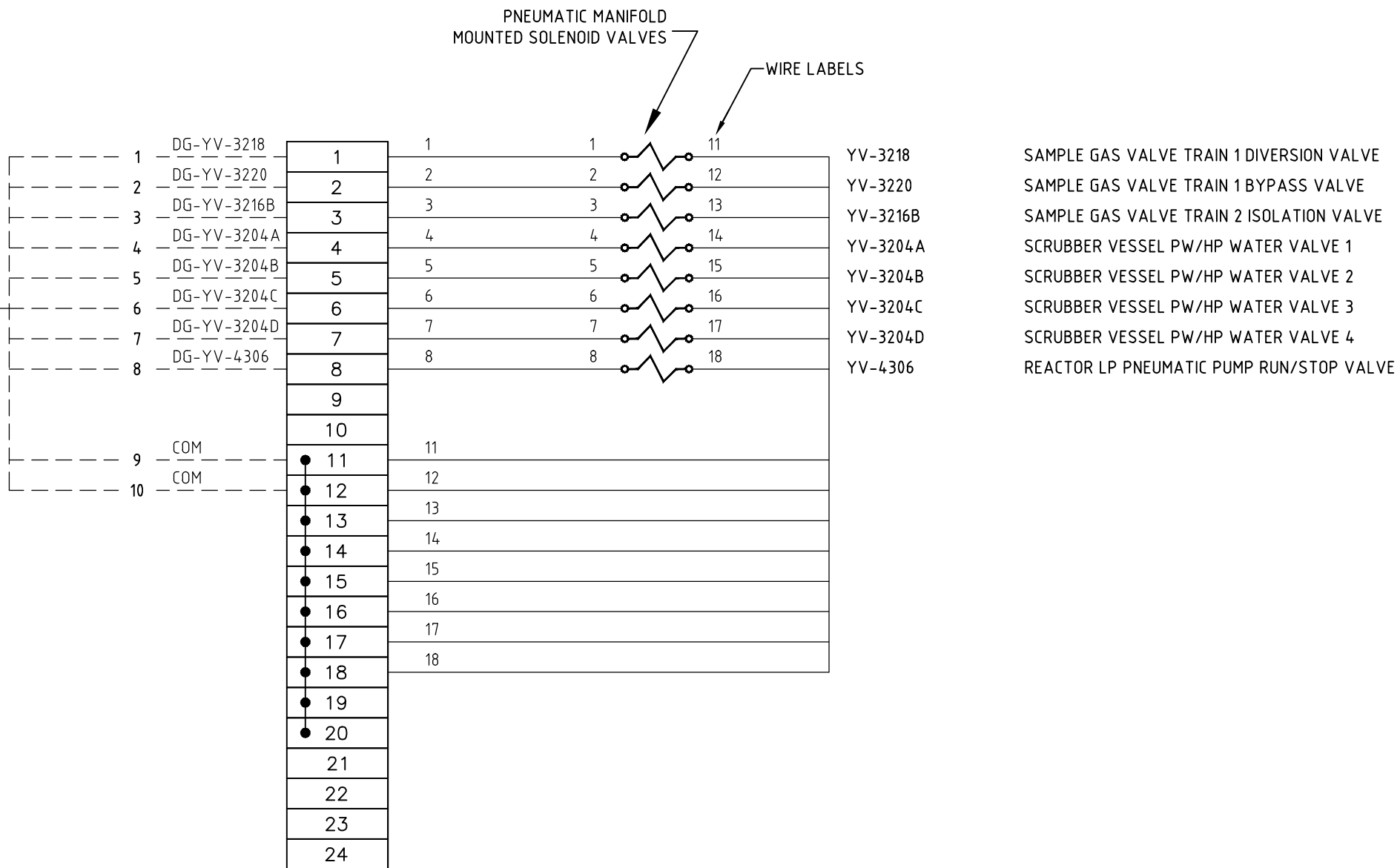


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DRAWN R. McNAIR
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APPROVED
DATE 2016/11/11
SCALE NONE

PROJECT NRCAN CANMET DCSG/HIPROX				
TITLE ELECTRICAL DCSG-HIPROX SOLENOID CABINET WIRING SC-M8-1				
USER E	PROJECT DCSG	BUILDING BCC4	DRAWING 606	REV. 1

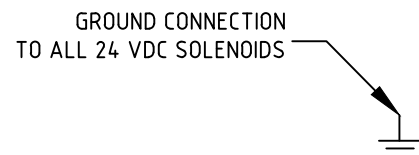
SOLENOID CABINET SC-M8-2

DWG
E-DCSG-BCC4-209
TO DIGITAL I/O CABINET
DG-046



TERMINAL LEGEND

- XXX CABINET TERMINAL BLOCK
- RELAY/TIMER TERMINAL
- DEVICE TERMINAL
- EXTERNAL WIRING
- _____ INTERNAL WIRING
- CABLE



NO	REVISION DESCRIPTION	DATE (Y/M/D)	DRAWN	CKD	APPD
1	ISSUE FOR TENDER	2017/03/24	RCM		
209	DIGITAL OUTPUT WIRING NODE 5 MODULE 1	2017/01/27	RCM		
600	SOLENOID CABINET ASSEMBLY	No			

REFERENCE DRAWINGS

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DATE
2016/11/11

SCALE
NONE

PROJECT
NRCAN CANMET DCSG/HIPROX

TITLE
ELECTRICAL
DCSG-HIPROX
SOLENOID CABINET WIRING
SC-M8-2

USER	PROJECT	BUILDING	DRAWING	REV.
E	DCSG	BCC4	607	1

CLIENT

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CANMET Energy Technology Center

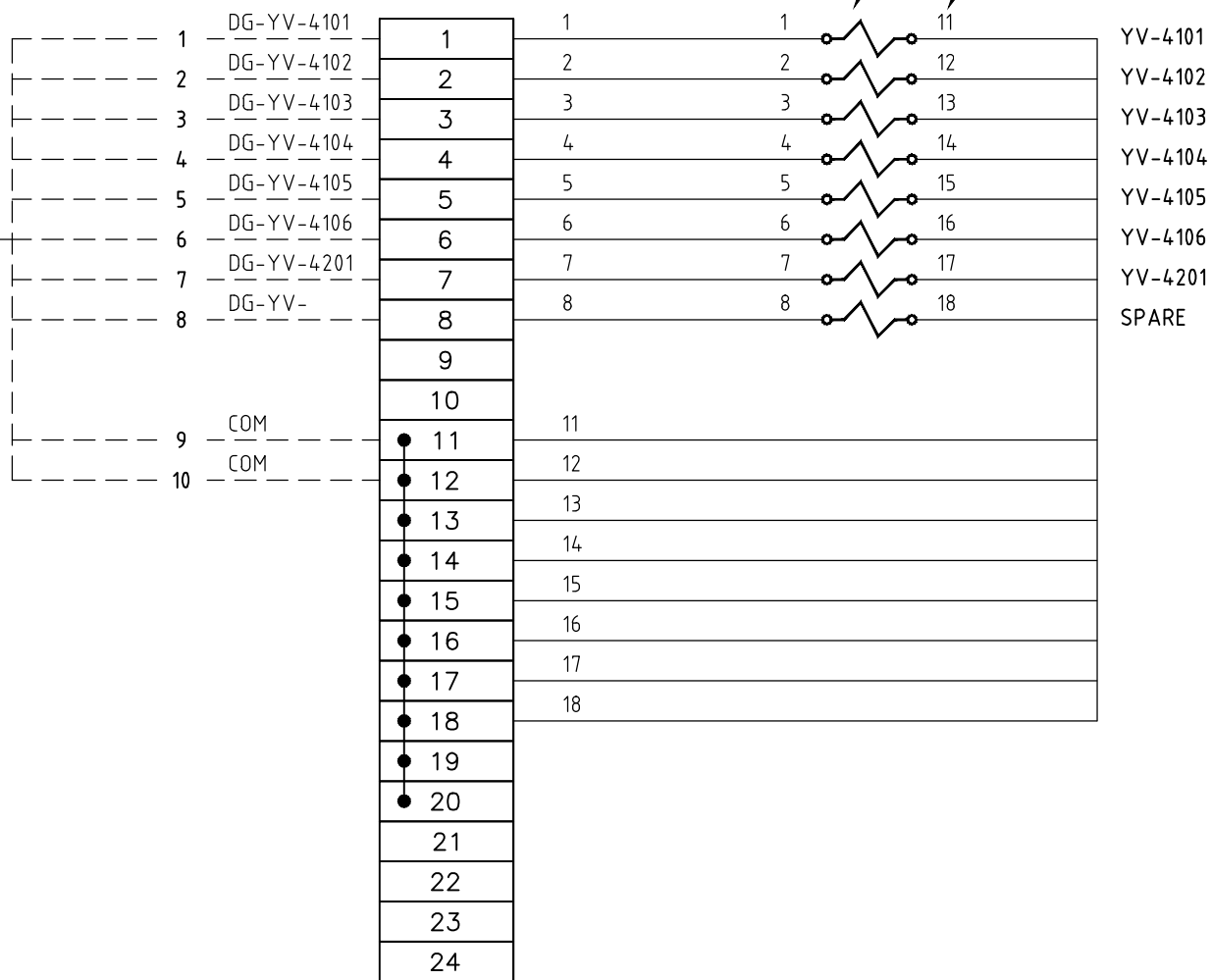
Ressources naturelles Canada
Centre de la technologie de l'énergie de CANMET

SOLENOID CABINET SC-M9-4

DWG
E-DCSG-BCC4-210
DG-047
TO DIGITAL I/O CABINET

PNEUMATIC MANIFOLD
MOUNTED SOLENOID VALVES

WIRE LABELS



TERMINAL LEGEND

- XXX CABINET TERMINAL BLOCK
- ⊠ RELAY/TIMER TERMINAL
- XX DEVICE TERMINAL
- EXTERNAL WIRING
- _____ INTERNAL WIRING
- ▭ CABLE

GROUND CONNECTION
TO ALL 24 VDC SOLENOIDS

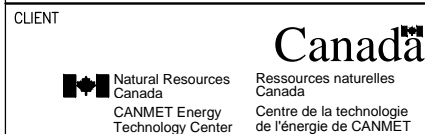
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1	ISSUE FOR TENDER	2017/03/24	RCM		
210	DIGITAL OUTPUT WIRING NODE 5 MODULE 2	2017/01/27	RCM		
600	SOLENOID CABINET ASSEMBLY	No			

REFERENCE DRAWINGS

REVISION REGISTER



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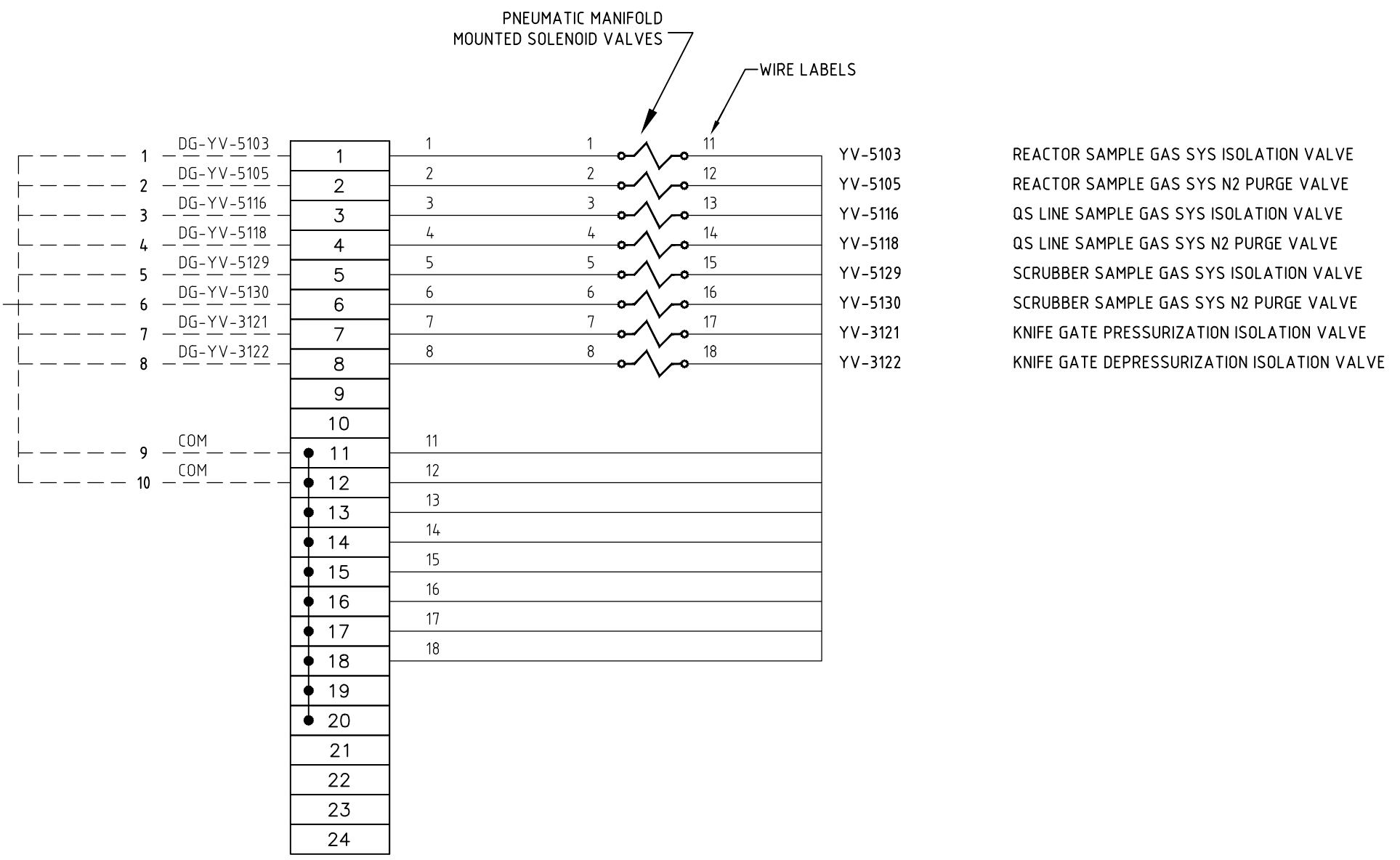


DESIGNED	R. McNAIR
DRAWN	R. McNAIR
CHECKED	
APPROVED	
DATE	2016/11/11
SCALE	NONE

PROJECT	NRCAN CANMET DCSG/HIPROX				
TITLE	ELECTRICAL DCSG-HIPROX SOLENOID CABINET WIRING SC-M9-4				
USER	PROJECT	BUILDING	DRAWING	REV.	
E	DCSG	BCC4	608	1	

SOLENOID CABINET SC-M8-4

DWG
E-DCSG-BCC4-210
DG-048
TO DIGITAL I/O CABINET



TERMINAL LEGEND

- XXX CABINET TERMINAL BLOCK
- RELAY/TIMER TERMINAL
- DEVICE TERMINAL
- EXTERNAL WIRING
- _____ INTERNAL WIRING
- CABLE

GROUND CONNECTION
TO ALL 24 VDC SOLENOIDS

NO	REVISION DESCRIPTION	DATE (Y/M/D)	DRAWN	CKD	APPD
1	ISSUE FOR TENDER	2017/03/24	RCM		
210	DIGITAL OUTPUT WIRING NODE 5 MODULE 2	2017/01/27	RCM		
600	SOLENOID CABINET ASSEMBLY	No			

REFERENCE DRAWINGS

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DESIGNED
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DRAWN
R. McNAIR

CHECKED

APPROVED

DATE
2016/11/11

SCALE
NONE

PROJECT
NRCAN CANMET DCSG/HIPROX

TITLE
ELECTRICAL
DCSG-HIPROX
SOLENOID CABINET WIRING
SC-M8-4

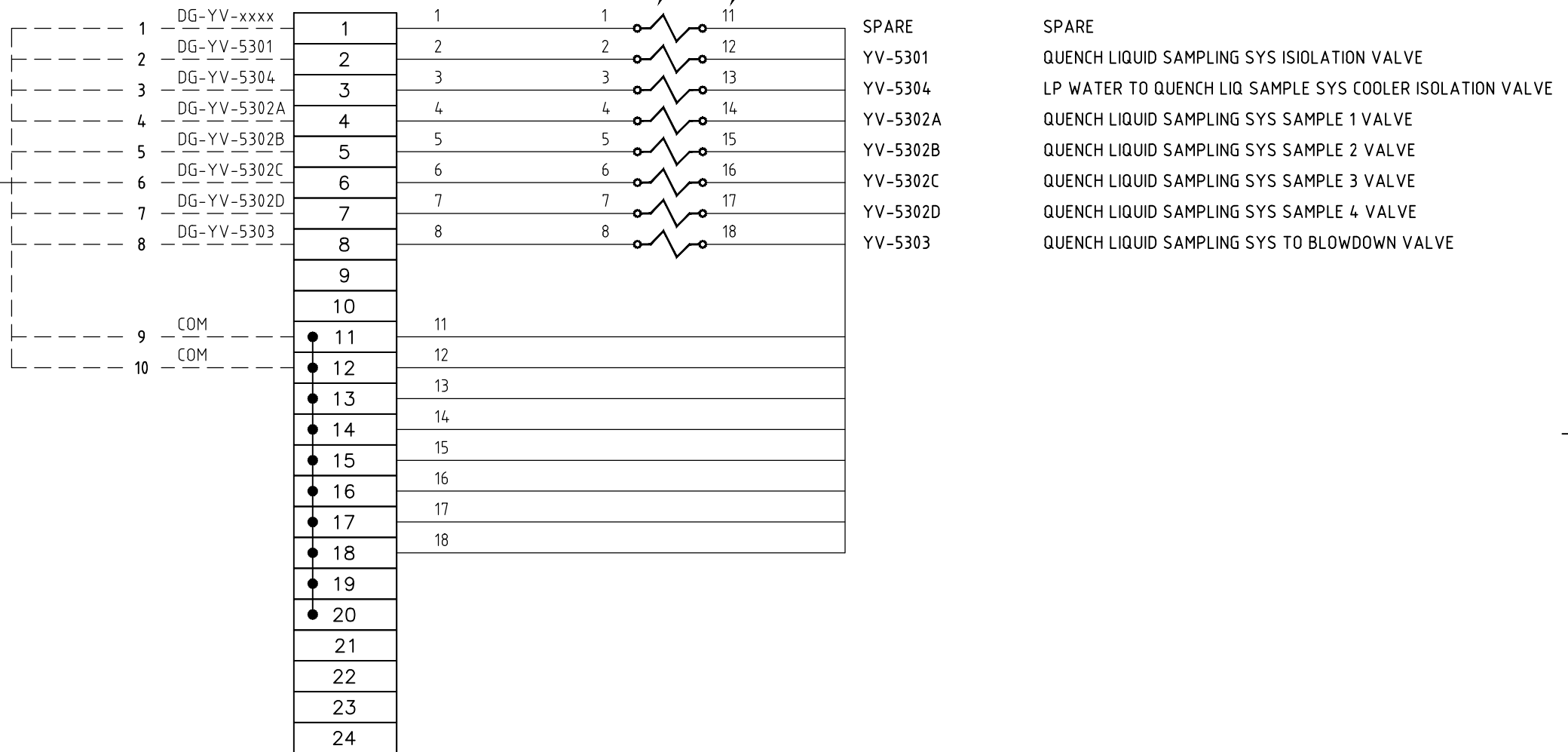
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E	DCSG	BCC4	609	1

SOLENOID CABINET SC-115-1

DWG
E-DCSG-BCC4-211
DG-049
TO DIGITAL I/O CABINET

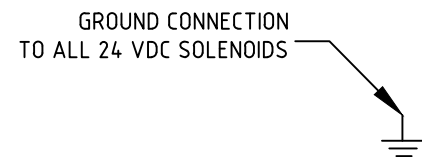
PNEUMATIC MANIFOLD
MOUNTED SOLENOID VALVES

WIRE LABELS



TERMINAL LEGEND

- XXX CABINET TERMINAL BLOCK
- X RELAY/TIMER TERMINAL
- XX DEVICE TERMINAL
- EXTERNAL WIRING
- _____ INTERNAL WIRING
- CABLE



NO	REVISION DESCRIPTION	DATE (Y/M/D)	DRAWN	CKD	APPD
1	ISSUE FOR TENDER	2017/03/24	RCM		
211	DIGITAL OUTPUT WIRING NODE 5 MODULE 3	2017/01/27	RCM		
600	SOLENOID CABINET ASSEMBLY	No			

REFERENCE DRAWINGS

REVISION REGISTER

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CANMET Energy Technology Center

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DRAWN
R. McNAIR

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DATE
2016/11/11

SCALE
NONE

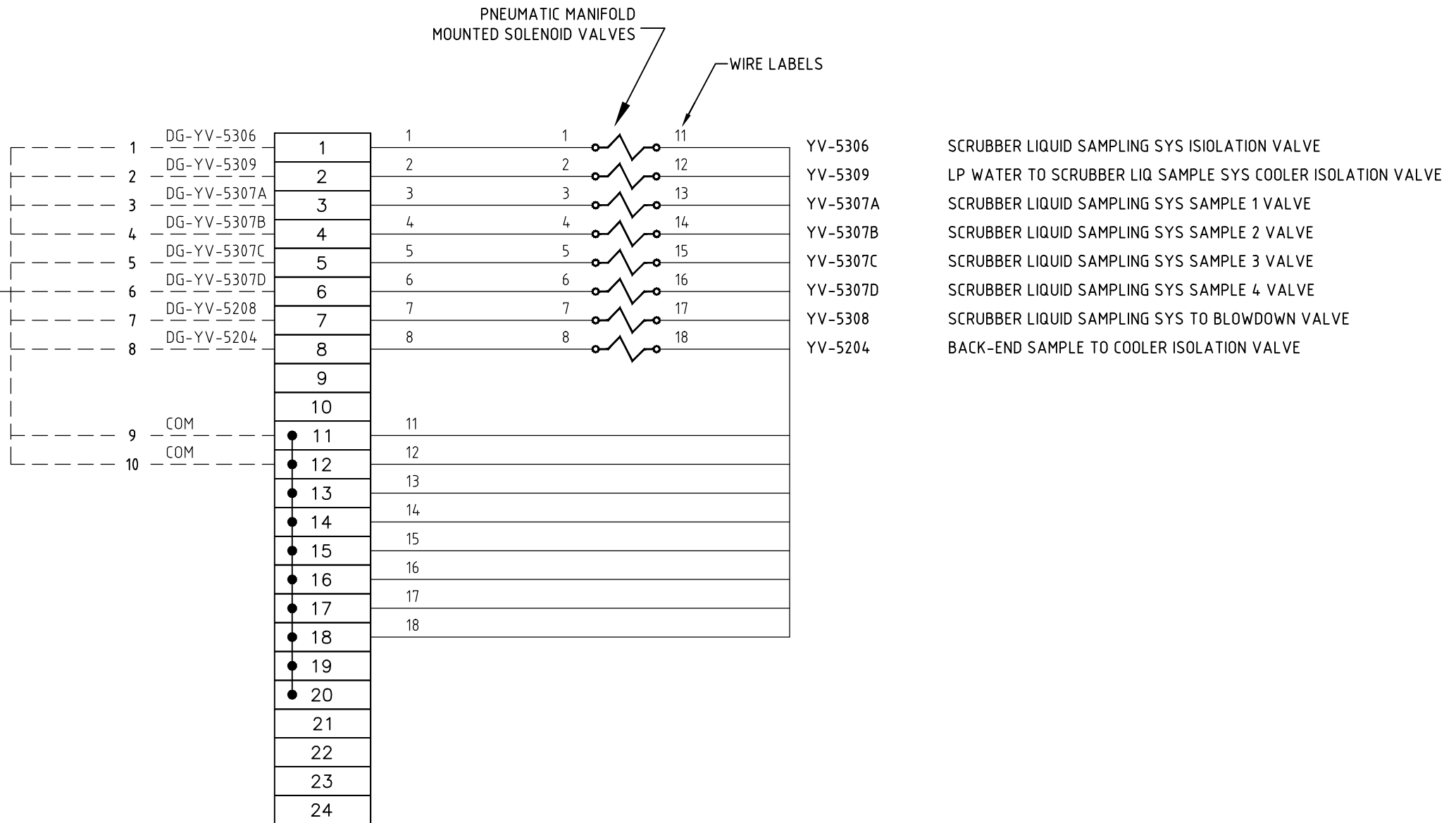
PROJECT
NRCAN CANMET DCSG/HIPROX

TITLE
ELECTRICAL
DCSG-HIPROX
SOLENOID CABINET WIRING
SC-115-1

USER	PROJECT	BUILDING	DRAWING	REV.
E	DCSG	BCC4	610	1

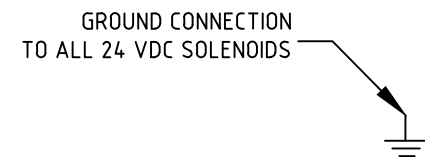
SOLENOID CABINET SC-115-2

DWG
E-DCSG-BCC4-211
DG-050
TO DIGITAL I/O CABINET



TERMINAL LEGEND

- XXX CABINET TERMINAL BLOCK
- RELAY/TIMER TERMINAL
- DEVICE TERMINAL
- EXTERNAL WIRING
- _____ INTERNAL WIRING
- CABLE



NO	REVISION DESCRIPTION	DATE (Y/M/D)	DRAWN	CKD	APPD
1	ISSUE FOR TENDER	2017/03/24	RCM		
211	DIGITAL OUTPUT WIRING NODE 5 MODULE 3	2017/01/27	RCM		
600	SOLENOID CABINET ASSEMBLY	No			

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CANMET Energy Technology Center
Ressources naturelles Canada
Centre de la technologie de l'énergie de CANMET

DESIGNED R. McNAIR
DRAWN R. McNAIR
CHECKED
APPROVED
DATE 2016/11/11
SCALE NONE

PROJECT NRCAN CANMET DCSG/HIPROX				
TITLE ELECTRICAL DCSG-HIPROX SOLENOID CABINET WIRING SC-115-2				
USER E	PROJECT DCSG	BUILDING BCC4	DRAWING 611	REV. 1

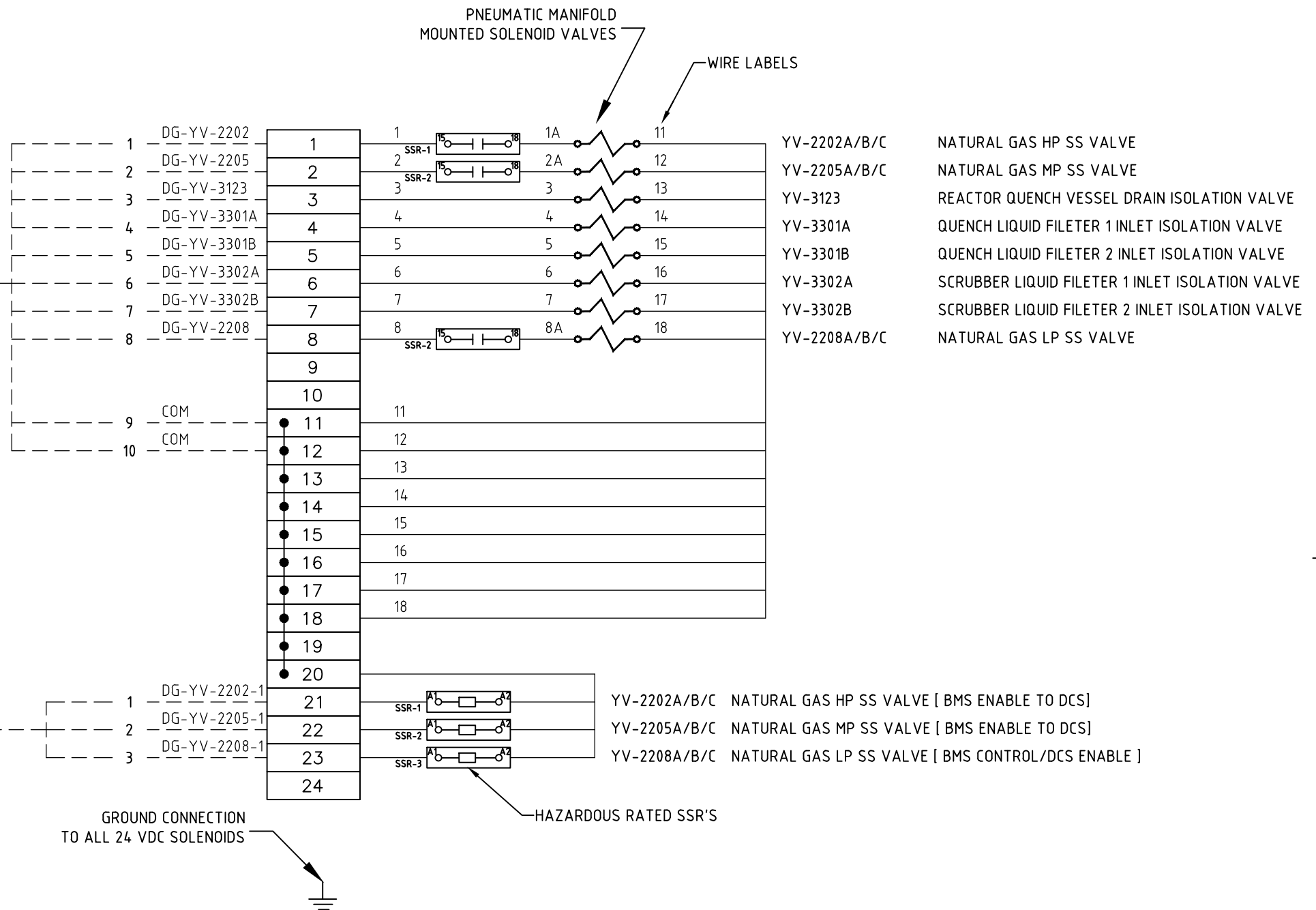
SOLENOID CABINET SC-M8-3

DWG
E-DCSG-BCC4-212
DG-051
TO DIGITAL I/O CABINET

TO BMS CABINET
E-DCSG-BCC4-901
DG-052

TERMINAL LEGEND

XXX	CABINET TERMINAL BLOCK
	RELAY/TIMER TERMINAL
XX	DEVICE TERMINAL
-----	EXTERNAL WIRING
—————	INTERNAL WIRING
	CABLE



NO	REVISION DESCRIPTION	DATE (Y/M/D)	DRAWN	CKD	APPD
901	BMS CABINET EXTERNAL WIRING	2017/03/24	RCM		
212	DIGITAL OUTPUT WIRING NODE 5 MODULE 4	2017/01/27	RCM		
600	SOLENOID CABINET ASSEMBLY	No			

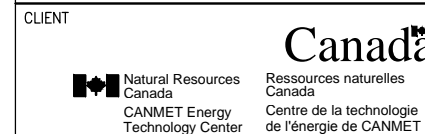
NO	REVISION DESCRIPTION	DATE (Y/M/D)	DRAWN	CKD	APPD
1	ISSUE FOR TENDER	2017/03/24	RCM		
0	ISSUE FOR CLIENT REVIEW	2017/01/27	RCM		

REFERENCE DRAWINGS

REVISION REGISTER



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PROJECT NRCAN CANMET DCSG/HIPROX				
TITLE ELECTRICAL DCSG-HIPROX SOLENOID CABINET WIRING SC-M8-3				
USER E	PROJECT DCSG	BUILDING BCC4	DRAWING 612	REV. 1