

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
F	ECN000247128 Corrected multiple typos	10/21/22	MASMAS

TruCONTROL SERIES AUTOMATIC

TRANSFER SWITCHES:

1600 — 3000 AMP (R5)

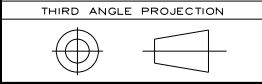
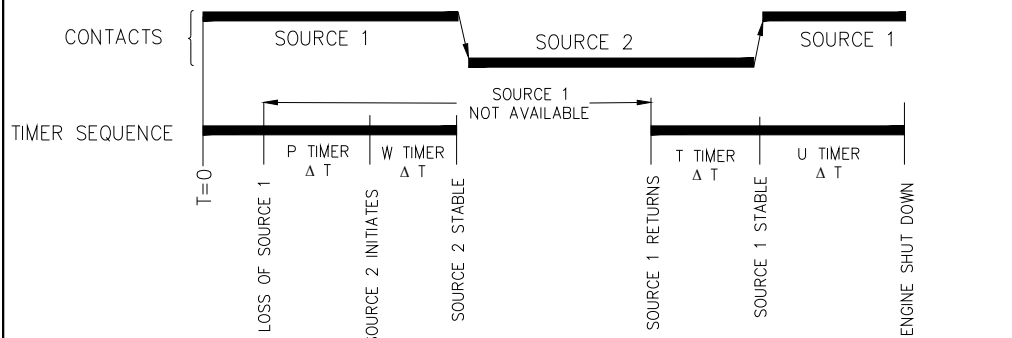
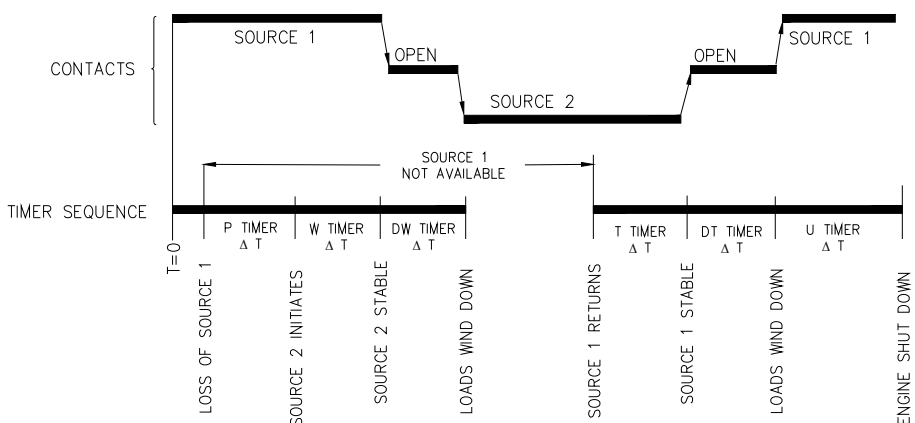
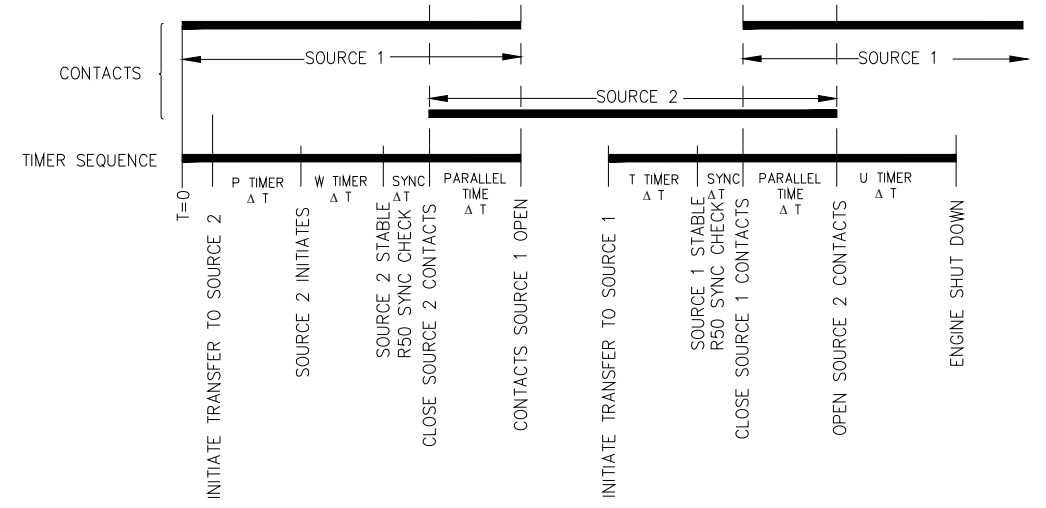
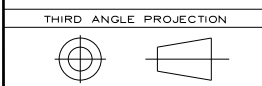
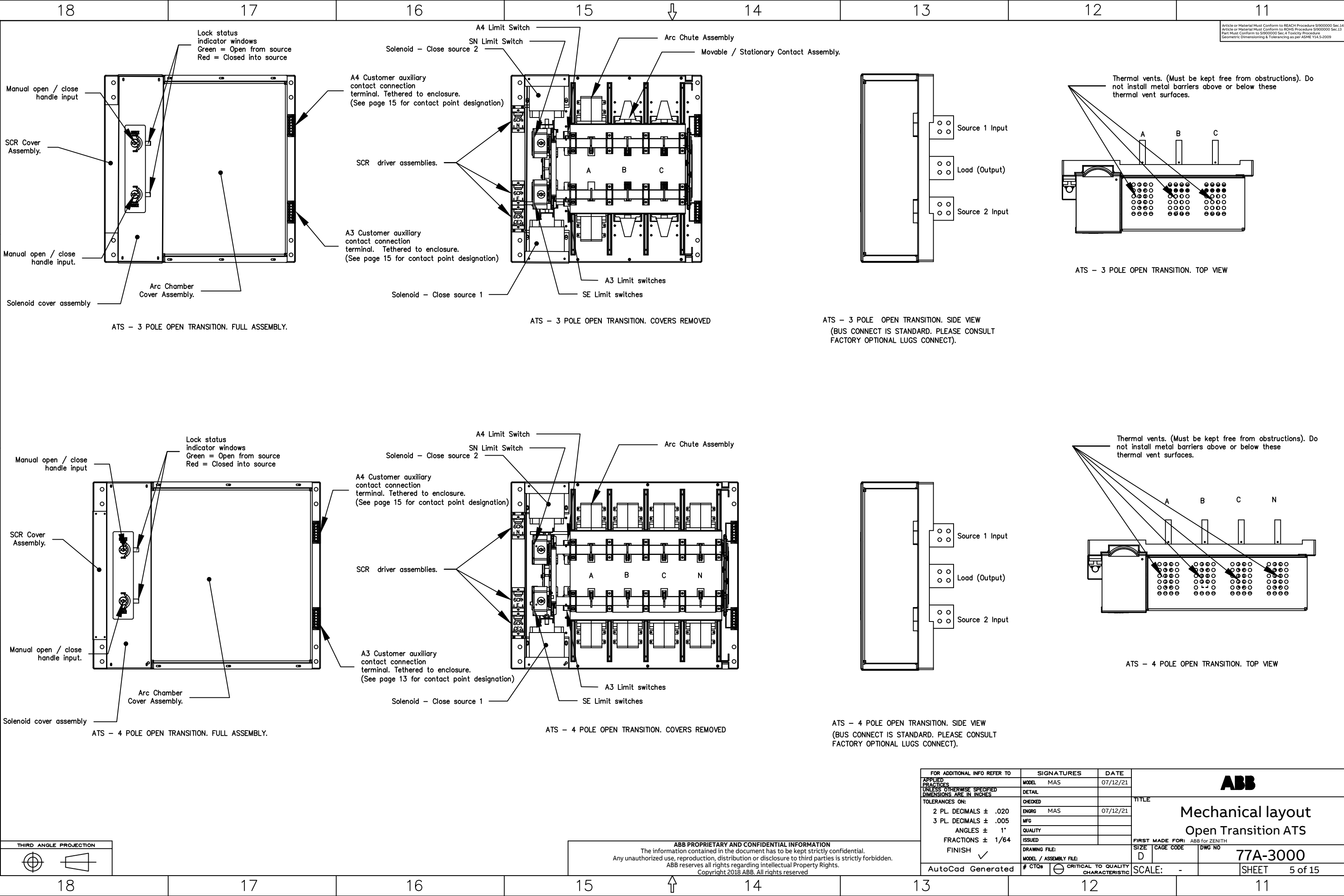
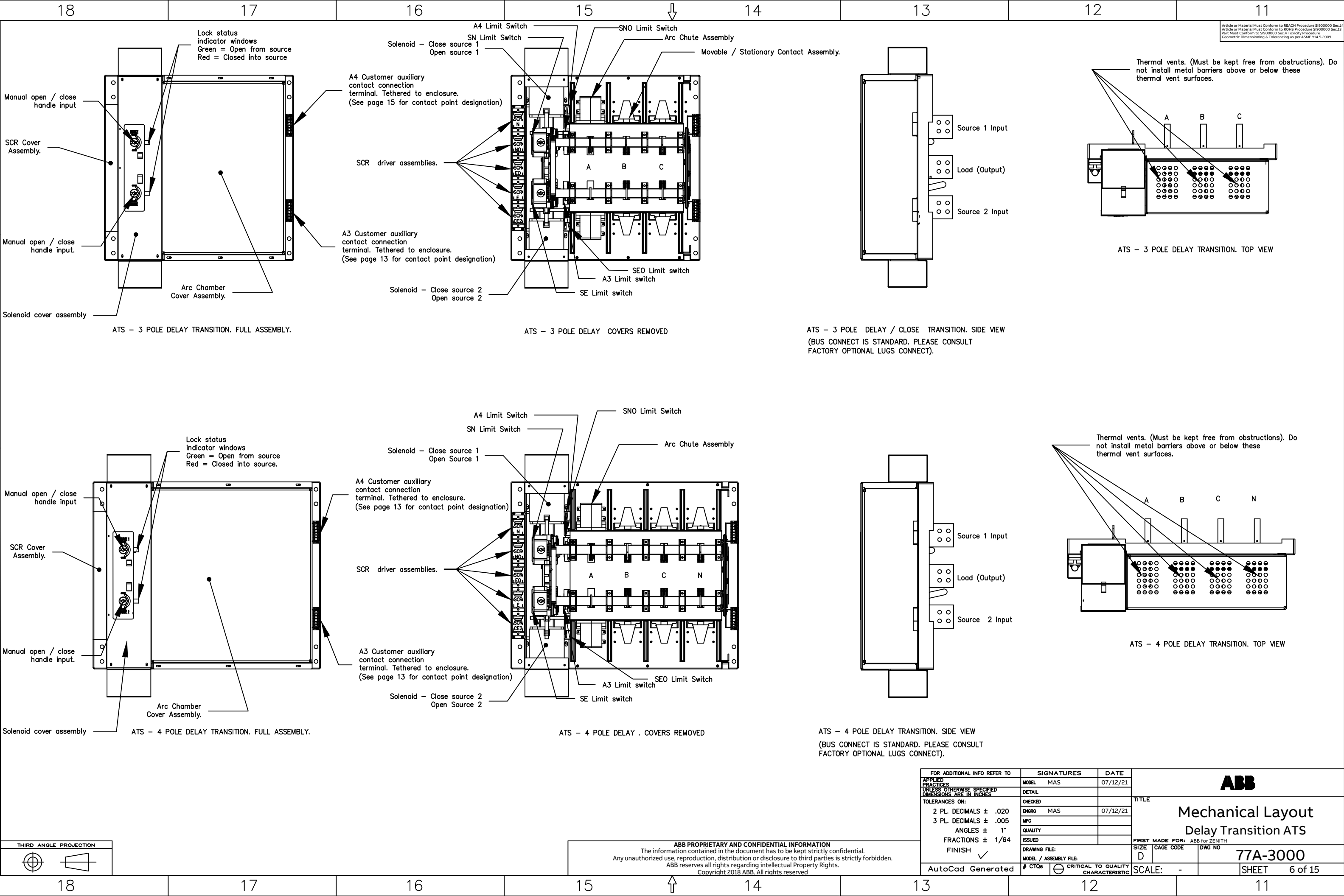


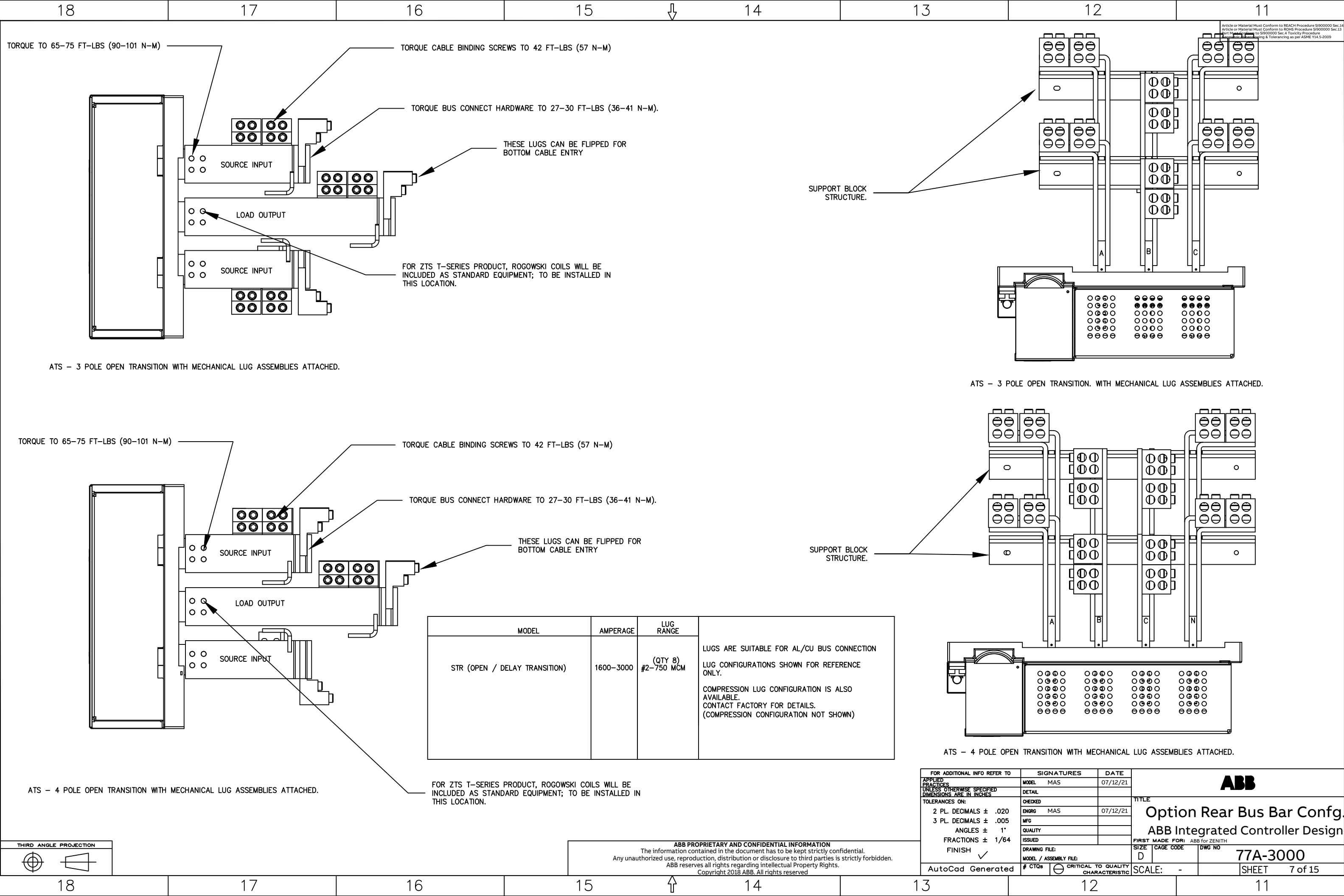
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FOR ADDITIONAL INFO REFER TO		SIGNATURES	DATE	TITLE		
APPLIED PRACTICES UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	MODEL	MAS	07/12/21	ABB Electrical diagram ABB Integrated Controller design		
	DETAIL					
	CHECKED					
	ENGRG	MAS	07/12/21			
TOLERANCES ON: 2 PL. DECIMALS ± .020 3 PL. DECIMALS ± .005 ANGLES ± 1° FRACTIONS ± 1/64 FINISH ✓	MFG			FIRST MADE FOR: ABB for Zenith		
	QUALITY			SIZE	CAGE CODE	DWG NO
	ISSUED			D		77A-3000
	DRAWING FILE:	77a-3000.dwg		SCALE:	-	SHEET 1 of 15
AutoCad Generated		# CTOs	CRITICAL TO QUALITY CHARACTERISTIC			

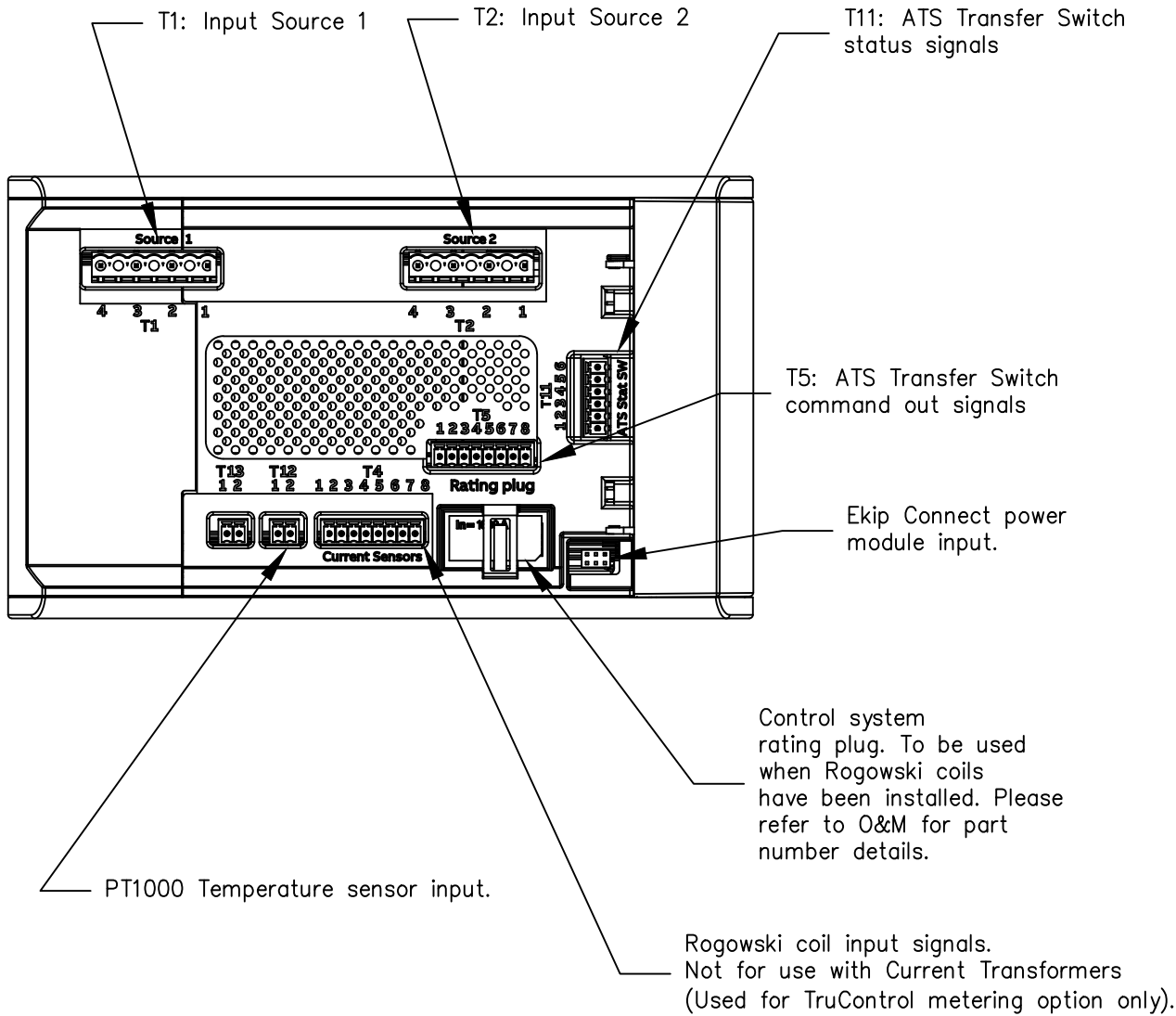
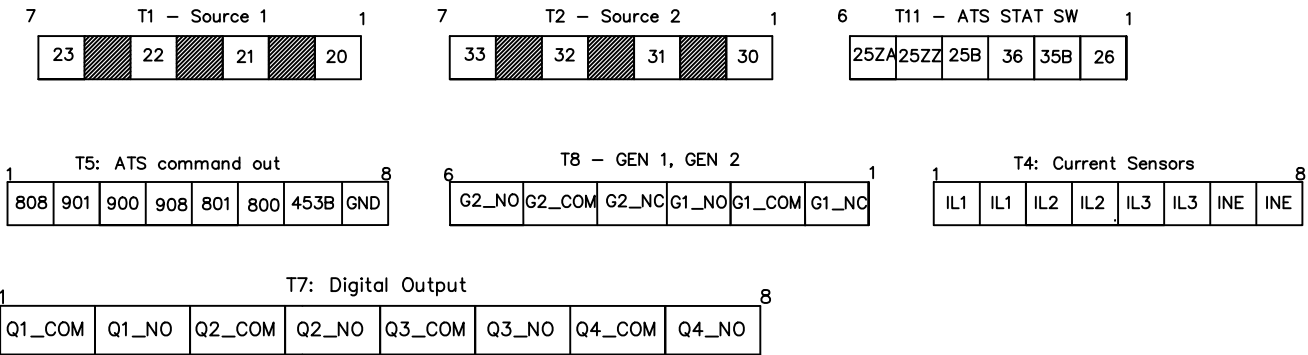
18	17	16	15	↓	14	13	12	11																																																														
SEQUENCE OF OPERATION – OPEN TRANSITION				(ESTABLISHED DURING THE T TIMER ELAPSE CYCLE), THE TruCONTROL INITIATES A TRANSFER SIGNAL THROUGH THE SCR-EO MODULE TO OPERATE THE CEO TRANSFER OPERATOR.					6) AFTER THE LOAD HAS BEEN PARALLELED TO SOURCE 1, THE TRANSFER SWITCH IS MECHANICALLY LOCKED AND ACKNOWLEDGED THRU THE SN LIMIT SWITCH. THE CONTROLLER THEN INITIATES A TRANSFER SIGNAL THRU THE SCR-EO MODULE WHICH OPENS THE ATS OUT OF SOURCE 2.																																																													
1) WHEN SOURCE 1 LINE VOLTAGE OR FREQUENCY DROPS BELOW THE PRESET "FAIL" VALUES, THE SOURCE 1 VOLTAGE SENSING CIRCUIT INITIATES THE ENGINE START CIRCUIT THRU THE ENGINE START TIMER "P".				6) THE LOAD WILL BE TRANSFERRED TO THE OPEN POSITION. ONCE THE SNO / SEO LIMIT SWITCHES HAVE BEEN ACTIVATED, THE TruCONTROL WILL INITIATE THE DT TIME DELAY. AFTER A SET TIME DELAY (ESTABLISHED THRU THE DT TIMER), THE TruCONTROL INITIATES A TRANSFER SIGNAL THROUGH THE SCR-N MODULE TO OPERATE THE CN TRANSFER OPERATOR. NOTE: IF CENTER OFF OPTION HAS BEEN DISABLED, UPON COMPLETE LOSS OF SOURCE, TRANSFER TO SOURCE 1 WILL BE IMMEDIATE. DT TIME DELAY WILL NOT SEQUENCE DOWN.					7) WHEN THE ATS HAS OPENED OUT OF SOURCE 2, THE SEO LIMIT SWITCH ACTIVATED. THE ATS HAS NOW CLOSED BACK INTO THE SOURCE 1 POSITION WITHOUT INTERRUPTING THE LOAD.																																																													
2) WHEN SOURCE 2 LINE VOLTAGE AND FREQUENCY REACH THE PRESET "RESTORE" VALUES (ESTABLISHED DURING THE W TIMER ELAPSE CYCLE), THE TruCONTROL INITIATES A TRANSFER SIGNAL THROUGH THE SCR-E DEVICE TO OPERATE THE CE TRANSFER OPERATOR.				7) THE LOAD WILL BE TRANSFERRED TO THE SOURCE 1 POSITION. THE TRANSFER SWITCH IS MECHANICALLY LOCKED AND ACKNOWLEDGED THRU THE SN LIMIT SWITCH.					8) IN ADDITION, ONCE THE SOURCE 1 STATUS HAS BEEN ACKNOWLEDGED, THE TruCONTROL WILL INITIATE AN ENGINE COOL-DOWN SEQUENCE. THE ENGINE COOL DOWN SEQUENCE WILL ALLOW THE GENERATOR TO OPERATE UNLOADED UNTIL THE U TIMER SETTING HAS ELAPSED ONCE COMPLETE. THE CONTROLLER WILL AUTOMATICALLY SHUT DOWN THE ENGINE.																																																													
3) THE LOAD WILL BE TRANSFERRED TO THE SOURCE 2 POSITION. THE TRANSFER SWITCH IS MECHANICALLY LOCKED AND ACKNOWLEDGED THRU THE SE LIMIT SWITCH.				8) THE TruCONTROL WILL INITIATE AN ENGINE COOL-DOWN SEQUENCE. THE ENGINE COOL DOWN SEQUENCE WILL ALLOW THE GENERATOR TO OPERATE UNLOADED UNTIL THE U TIMER SETTING HAS ELAPSED. ONCE COMPLETE, THE CONTROLLER WILL AUTOMATICALLY SHUT DOWN THE ENGINE.																																																																		
4) WHEN THE SOURCE 1 LINE VOLTAGE AND FREQUENCY REACH THE PRESET "RESTORE" VALUES (ESTABLISHED BEFORE THE T TIMER ELAPSE CYCLE), THE TruCONTROL INITIATES A TRANSFER SIGNAL THROUGH THE SCR-N MODULE TO OPERATE THE CN TRANSFER OPERATOR.																																																																						
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OPEN TRANSITION TRANSFER DIAGRAM				DELAY TRANSITION TRANSFER DIAGRAM					CLOSED TRANSITION TRANSFER DIAGRAM																																																													
NOTE: A MANUAL "BYPASS" PUSHBUTTON IS AVAILABLE ON THE TruCONTROL. THIS FEATURE ALLOWS CERTAIN TIMERS TO BE BYPASSED IF THE PRE-SET CONDITIONS HAVE NOT BEEN SET CORRECTLY.				NOTE: A MANUAL "BYPASS" PUSHBUTTON IS AVAILABLE ON THE TruCONTROL. THIS FEATURE ALLOWS CERTAIN TIMERS TO BE BYPASSED IF THE PRE-SET CONDITIONS HAVE NOT BEEN SET CORRECTLY.					9) THE ATS DEFAULTS TO A DELAYED TRANSITION TRANSFER WHEN SOURCE 1 FAILS. THIS SIGNALS THE GENERATOR TO START. AFTER THE GENERATOR VOLTAGE AND FREQUENCY REACH THE PRESET "RESTORE" VALUES, THE ATS TRANSFERS TO THE SOURCE 2. CLOSED TRANSITION TRANSFER IS NOT POSSIBLE WITH ONLY ONE SOURCE AVAILABLE.																																																													
OPTIONAL DISCONNECT CONTROL SWITCH (DS): WHEN THE DISCONNECT CONTROL SWITCH IS PLACED IN THE INHIBIT POSITION, THE CIRCUITS TO THE TRANSFER OPERATORS ARE OPENED AND TRANSFER CANNOT TAKE PLACE				OPTIONAL DISCONNECT CONTROL SWITCH (DS): WHEN THE DISCONNECT CONTROL SWITCH IS PLACED IN THE INHIBIT POSITION, THE CIRCUITS TO THE TRANSFER OPERATORS ARE OPENED AND TRANSFER CANNOT TAKE PLACE					10) IF, WHILE IN CLOSED TRANSITION MODE, THE ATS FAILS TO OPEN THE SOURCE IT IS ATTEMPTING TO "TRANSFER OUT OF", THE SOURCE THAT THE ATS JUST CLOSED INTO WILL BE OPENED LEAVING THE ATS IN ITS INITIAL SOURCE WHILE DISABLING ALL OTHER TRANSFER OPERATIONS.																																																													
TEST SWITCH WITH LOAD: THE TEST SWITCH SIMULATES A SOURCE 1 LINE FAILURE WHEN ACTIVATED. TO TEST THE ATS, ACTIVATE THE TEST SWITCH ALLOWING THE TRANSFER SWITCH TO TRANSFER TO THE SOURCE 2 POSITION FOLLOWING THE ABOVE DESCRIBED OPERATION. RELEASING THE TEST SWITCH WILL ALLOW THE ATS TO TRANSFER BACK TO THE SOURCE 1 POSITION. TESTING AT LEAST ONCE PER MONTH IS RECOMMENDED. FOR HOSPITAL EMERGENCY SYSTEMS IT IS RECOMMENDED TO TEST ONCE PER WEEK.				TEST SWITCH WITH LOAD: THE TEST SWITCH SIMULATES A SOURCE 1 LINE FAILURE WHEN ACTIVATED. TO TEST THE ATS, ACTIVATE THE TEST SWITCH ALLOWING THE TRANSFER SWITCH TO TRANSFER TO THE SOURCE 2 POSITION FOLLOWING THE ABOVE DESCRIBED OPERATION. RELEASING THE TEST SWITCH WILL ALLOW THE ATS TO TRANSFER BACK TO THE SOURCE 1 POSITION. TESTING AT LEAST ONCE PER MONTH IS RECOMMENDED. FOR HOSPITAL EMERGENCY SYSTEMS IT IS RECOMMENDED TO TEST ONCE PER WEEK.					11) IF, WHILE IN CLOSED TRANSITION MODE, SHOULD THE ATS CONTACTS BECOME LOCKED IN PARALLEL MODE, BOTH THE STR AND THE ALARM CONTACTS WILL ACTIVATE. THESE CONTACTS WILL REMAIN ACTIVE UNTIL THE PARALLEL CONTACT CONDITION HAS BEEN CLEARED. ACTIVATING THE STR CONTACT WILL REMOVE THE GENERATOR FROM THE BUS IF NEITHER OPERATOR OPENED. INTERNAL DEFAULT SETTING FOR BOTH CONTACTS SETS IS 500ms.																																																													
SEQUENCE OF OPERATION – DELAY TRANSITION				SEQUENCE OF OPERATION – CLOSED TRANSITION.					PARALLELING REQUIREMENTS:																																																													
1) WHEN SOURCE 1 LINE VOLTAGE OR FREQUENCY DROPS BELOW THE PRESET "FAIL" VALUES, THE SOURCE 1 VOLTAGE SENSING CIRCUIT INITIATES THE ENGINE START CIRCUIT THRU THE ENGINE START TIMER "P".				1) TO TEST THE ATS, ACTIVATE THE TEST SWITCH TO DROP OUT THE ENGINE START RELAY (P). WHEN THE SOURCE 2 LINE VOLTAGE AND FREQUENCY REACH THE PRESET "RESTORE" VALUES (ESTABLISHED DURING THE W TIMER ELAPSE CYCLE), THE ATS CLOSSES INTO SOURCE 2 BY ACTIVATING THE SCR-E MODULE. THIS WILL OPERATE THE CE TRANSFER OPERATOR. THIS TRANSFER WILL OCCUR ONLY AFTER THE SYNC CHECK ENSURES THAT PROPER PHASE RELATIONSHIP BETWEEN BOTH SOURCES.					1. THE UNIT IS FACTORY SET TO ACCOMPLISH TRANSFER WITHIN 10 ELECTRICAL DEGREES.																																																													
2) WHEN SOURCE 2 LINE VOLTAGE AND FREQUENCY REACH THE PRESET "RESTORE" VALUES (ESTABLISHED DURING THE W TIMER ELAPSE CYCLE), THE TruCONTROL INITIATES A TRANSFER SIGNAL THROUGH THE SCR-NO MODULE TO OPERATE THE CNO TRANSFER OPERATOR.				2) AFTER THE LOAD IS PARALLELED TO SOURCE 2, THE TRANSFER SWITCH IS MECHANICALLY LOCKED AND ACKNOWLEDGED THRU THE SE LIMIT SWITCH. THE CONTROLLER THEN INITIATES A TRANSFER SIGNAL THRU THE SCR-NO MODULE WHICH OPENS THE ATS OUT OF SOURCE 1. WHEN THE ATS HAS OPENED OUT OF SOURCE 1, THE SNO LIMIT SWITCH WILL ACTIVATE.					2. REQUIRES AN ISOCHRONUS GOVERNOR WITH AN OPERATING FREQUENCY OF 60 ± 0.2 HZ.																																																													
3) THE LOAD WILL BE TRANSFERRED TO THE OPEN POSITION. ONCE THE SNO / SEO LIMIT SWITCHES HAVE BEEN ACTIVATED, THE TruCONTROL WILL INITIATE THE DW TIME DELAY. AFTER A SET TIME DELAY (ESTABLISHED THRU THE DW TIMER), THE TruCONTROL INITIATES A TRANSFER SIGNAL THROUGH THE SCR-E MODULE TO OPERATE THE CE TRANSFER OPERATOR. NOTE: IF CENTER OFF OPTION HAS BEEN DISABLED, UPON COMPLETE LOSS OF SOURCE, TRANSFER TO SOURCE 2 WILL BE IMMEDIATE. DW TIME DELAY WILL NOT SEQUENCE DOWN.				3) THE ATS HAS NOW CLOSED INTO THE SOURCE 2 POSITION WITHOUT INTERRUPTING THE LOAD.					3. REQUIRES A SHUNT TRIP BREAKER ON THE GENERATOR SET WITH A RESPONSE TIME NOT EXCEEDING 50MS.																																																													
4) THE LOAD WILL BE TRANSFERRED TO THE SOURCE 2 POSITION. THE TRANSFER SWITCH IS MECHANICALLY LOCKED AND ACKNOWLEDGED THRU THE SE LIMIT SWITCH.				4) RELEASING THE TEST SWITCH WILL ALLOW A RETRANSFER BACK TO SOURCE 1.																																																																		
5) WHEN SOURCE 1 LINE VOLTAGE AND FREQUENCY REACH THE PRESET "RESTORE" VALUES				5) WHEN SOURCE 1 LINE VOLTAGE REACH THE PRESET "RESTORE" VALUES (ESTABLISHED BEFORE THE T TIMER ELAPSE), THE ATS CLOSSES INTO SOURCE 1 BY ACTIVATING THE SCR-N MODULE. THIS WILL OPERATE THE CN TRANSFER OPERATOR. THIS TRANSFER WILL ONLY OCCUR AFTER THE SYNC CHECK ENSURES PROPER PHASE RELATIONSHIP BETWEEN BOTH SOURCES.																																																																		
				ABB PROPRIETARY AND CONFIDENTIAL INFORMATION The information contained in the document has to be kept strictly confidential. Any unauthorized use, reproduction, distribution or disclosure to third parties is strictly forbidden. ABB reserves all rights regarding intellectual Property Rights. Copyright 2018 ABB. All rights reserved					<table><tr><td>FOR ADDITIONAL INFO REFER TO</td><td>SIGNATURES</td><td>DATE</td><td colspan="2" rowspan="2"></td></tr><tr><td>APPLIED PRACTICES UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES</td><td>MODEL MAS</td><td>07/12/21</td></tr><tr><td>TOLERANCES ON:</td><td>CHECKED</td><td></td><td colspan="2" rowspan="2">TITLE</td></tr><tr><td>2 PL. DECIMALS ± .020</td><td>ENGRG MAS</td><td>07/12/21</td></tr><tr><td>3 PL. DECIMALS ± .005</td><td>MFG</td><td></td><td colspan="2" rowspan="2">Sequence of Operations ABB Integrated Controller Design</td></tr><tr><td>ANGLES ± 1°</td><td>QUALITY</td><td></td></tr><tr><td>FRACTIONS ± 1/64</td><td>ISSUED</td><td></td><td colspan="2" rowspan="2">FIRST MADE FOR: ABB for ZENITH</td></tr><tr><td>FINISH ✓</td><td>DRAWING FILE:</td><td></td></tr><tr><td></td><td>MODEL / ASSEMBLY FILE:</td><td></td><td>SIZE D</td><td>CAGE CODE</td></tr><tr><td></td><td># CTQs</td><td></td><td></td><td>DWG NO</td></tr><tr><td></td><td></td><td></td><td></td><td>77A-3000</td></tr><tr><td>AutoCad Generated</td><td></td><td></td><td>SCALE: -</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td>SHEET 4 of 15</td></tr></table>					FOR ADDITIONAL INFO REFER TO	SIGNATURES	DATE			APPLIED PRACTICES UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	MODEL MAS	07/12/21	TOLERANCES ON:	CHECKED		TITLE		2 PL. DECIMALS ± .020	ENGRG MAS	07/12/21	3 PL. DECIMALS ± .005	MFG		Sequence of Operations ABB Integrated Controller Design		ANGLES ± 1°	QUALITY		FRACTIONS ± 1/64	ISSUED		FIRST MADE FOR: ABB for ZENITH		FINISH ✓	DRAWING FILE:			MODEL / ASSEMBLY FILE:		SIZE D	CAGE CODE		# CTQs			DWG NO					77A-3000	AutoCad Generated			SCALE: -						SHEET 4 of 15
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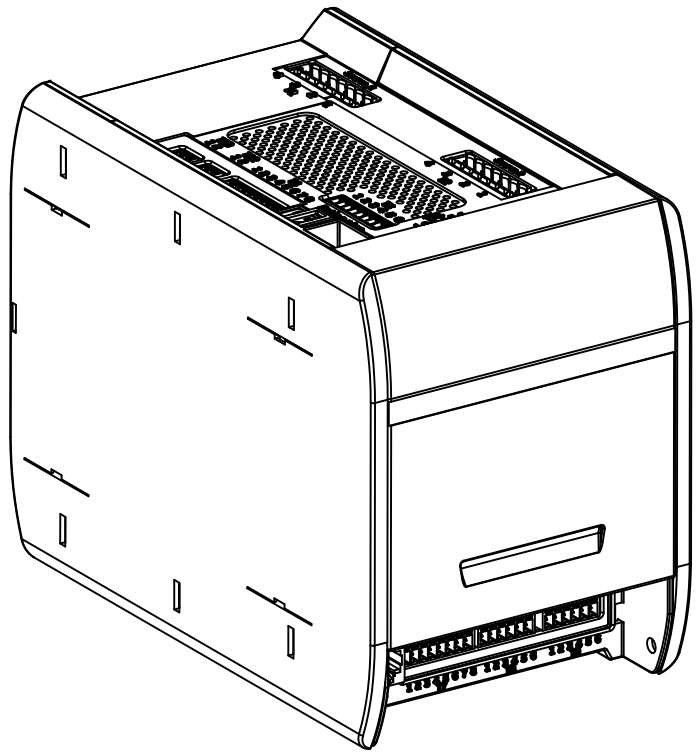
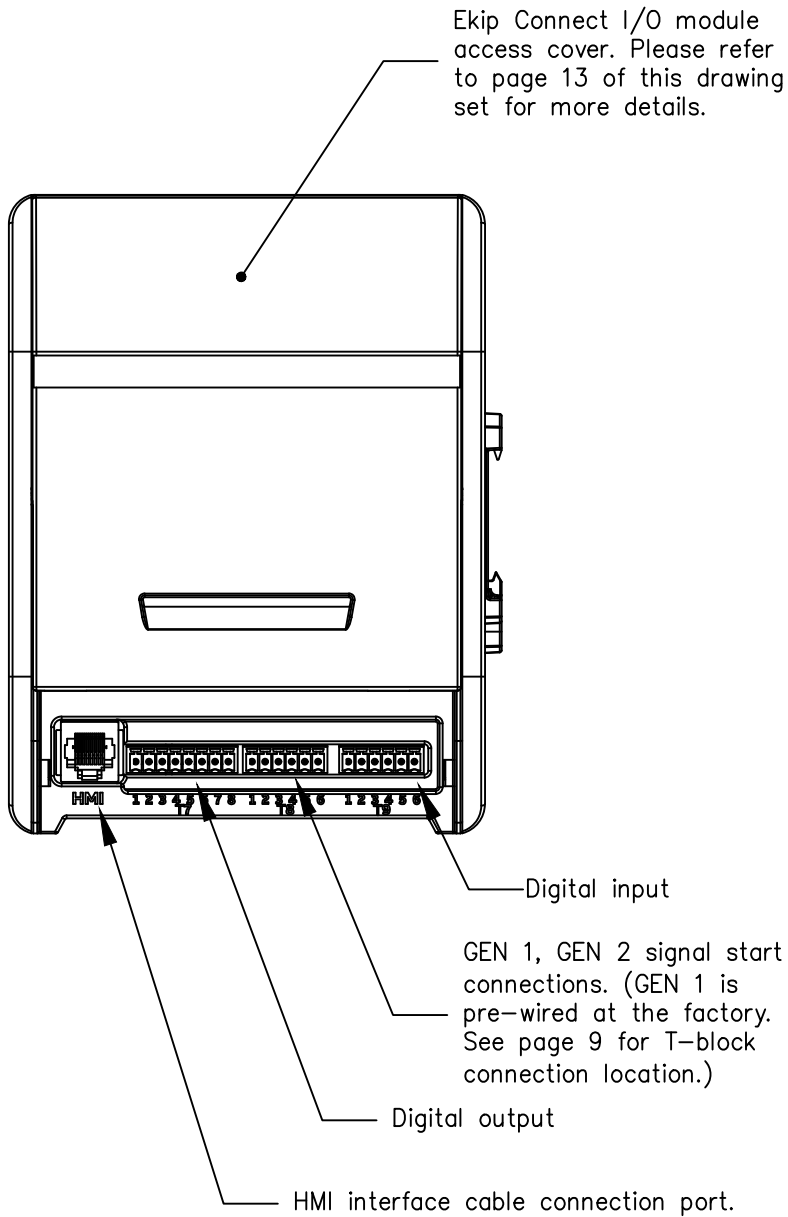
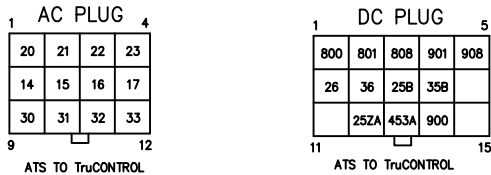
STANDARD PLUG CONNECTION SCHEME – LOCATED ON TRU CONTROLLER



Notes:

- 1) ABB Zenith TruControl is a fully integrated electrical module that has no field replaceable components. Units that are not operating as intended will require complete replacement. Any attempts to perform hardware repair or maintenance of internal components is not recommended.

STANDARD PLUG CONNECTION SCHEME – LOCATED ON R5 ATS TO T1 INTERFACE HARNESS



THIRD ANGLE PROJECTION

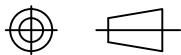


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APPLIED PRACTICES UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	MODEL	MAS	07/12/21	Tru Control System ABB Integrated Controller Design	
	DETAIL				
TOLERANCES ON: 2 PL. DECIMALS ± .020 3 PL. DECIMALS ± .005 ANGLES ± 1° FRACTIONS ± 1/64 FINISH ✓	CHECKED			FIRST MADE FOR: ABB for ZENITH SIZE D CAGE CODE DWG NO 77A-3000 SCALE: - SHEET 8 of 15	
	ENGRG	MAS	07/12/21		
	MFG				
	QUALITY				
	ISSUED				
DRAWING FILE:		CRITICAL TO QUALITY CHARACTERISTIC			
MODEL / ASSEMBLY FILE:		# CTOs			
AutoCad Generated					

Article or Material Must Conform to REACH Procedure 519000000 Sec.14
Article or Material Must Conform to RoHS Procedure 519000000 Sec.13
Part Must Conform to ISO90000 Sec.4 Toxicity Procedure
Geometric Dimensioning & Tolerancing as per ASME Y14.5-2009

Neutral Bar mounting location.
(Located on rear side of panel).

Customer Auxiliary contacts
Tethered from Power Panel.

Auxiliary panel mounting
location for customer add-on
options.

Ekip connect access cover

TruCONTROL Microprocessor Control System.

Customer Engine Start Terminal block.

HMI user interface panel.

Field Installable
lift angles for
product
installation and
positioning.

Location of handle when in storage
(Enclosed units)

Document retention
container.

Door prop assembly
with storage clip.

Equipment ground lug.

Optional ground bar
mounting location.

ATS power panel
assembly.

Location of handle when in use.

Removable side and rear access panels.
Available on all Nema type enclosures.
(Recommended 36" clearance for panel
access, removal, and installation).

THIRD ANGLE PROJECTION

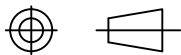
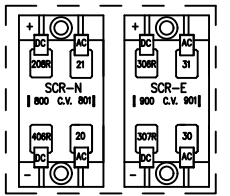


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APPLIED PRACTICES UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.	MODEL	MAS	07/12/21	ABB Nema enclosed landscape ABB Integrated Controller Design	
	DETAIL				
	CHECKED				
	ENGRG	MAS	07/12/21		
TOLERANCES ON:		QUALITY		FIRST MADE FOR: ABB for ZENITH	
2 PL. DECIMALS ± .020		ISSUED		SIZE	CAGE CODE
3 PL. DECIMALS ± .005		DRAWING FILE:		D	
ANGLES ± 1°		MODEL / ASSEMBLY FILE:		DWG NO	
FRACTIONS ± 1/64		# CTOs		77A-3000	
FINISH ✓		CRITICAL TO QUALITY CHARACTERISTIC		SCALE:	SHEET
AutoCad Generated				-	9 of 15



SEE PAGE 12 FOR
OPEN TRANSITION

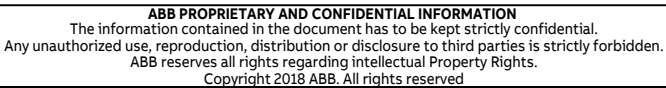
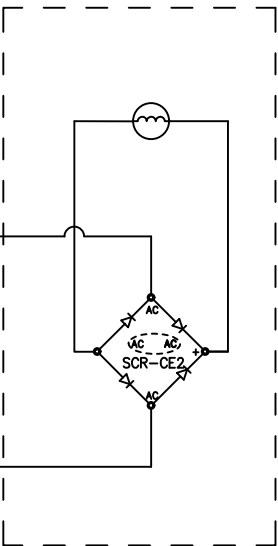
TO ABB CONTROLLER

(CLOSE S1)

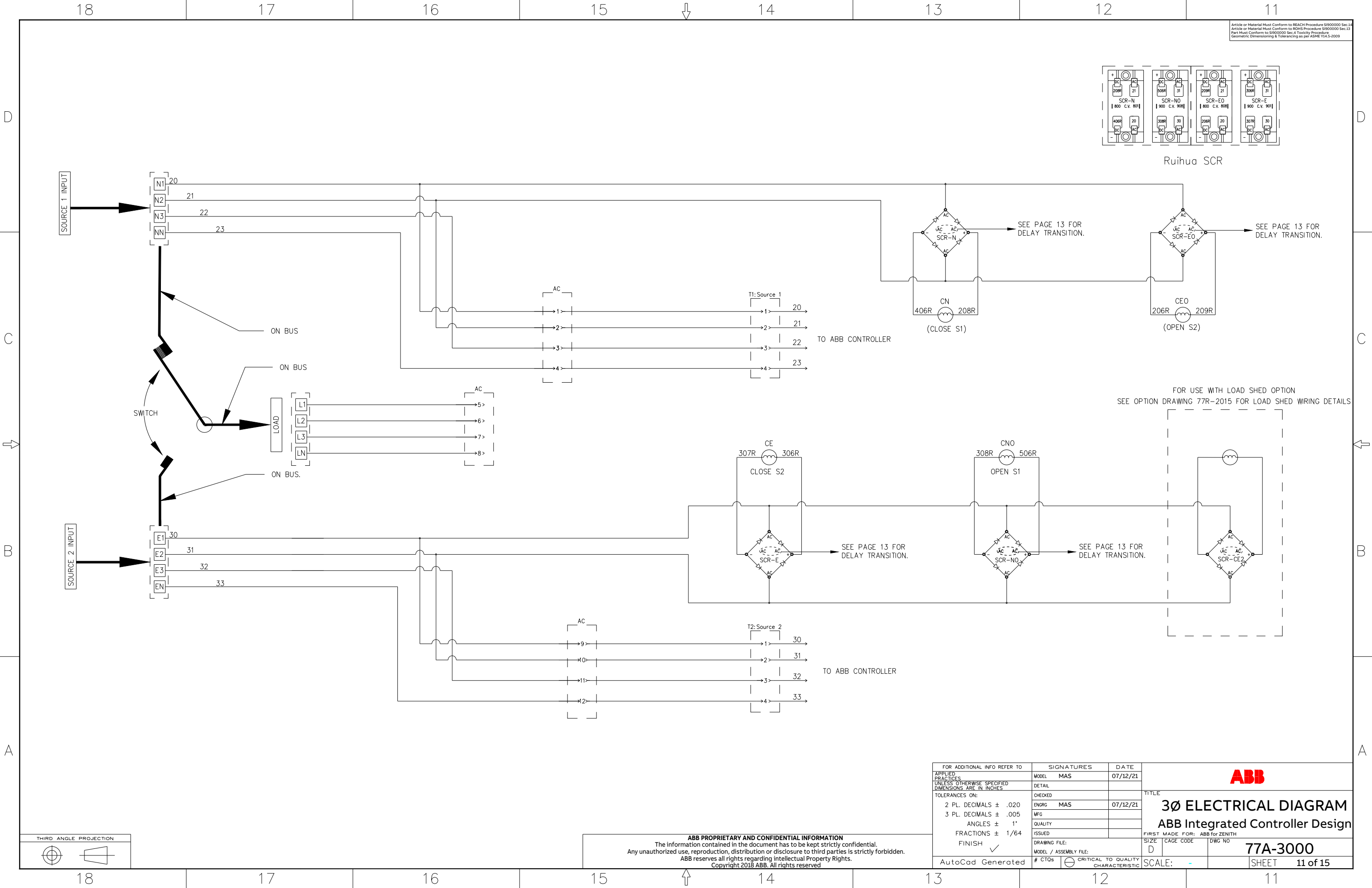
FOR USE WITH LOAD SHED OPTION
SEE OPTION DRAWING 77R-2015 FOR LOAD SHED WIRING DETAILS

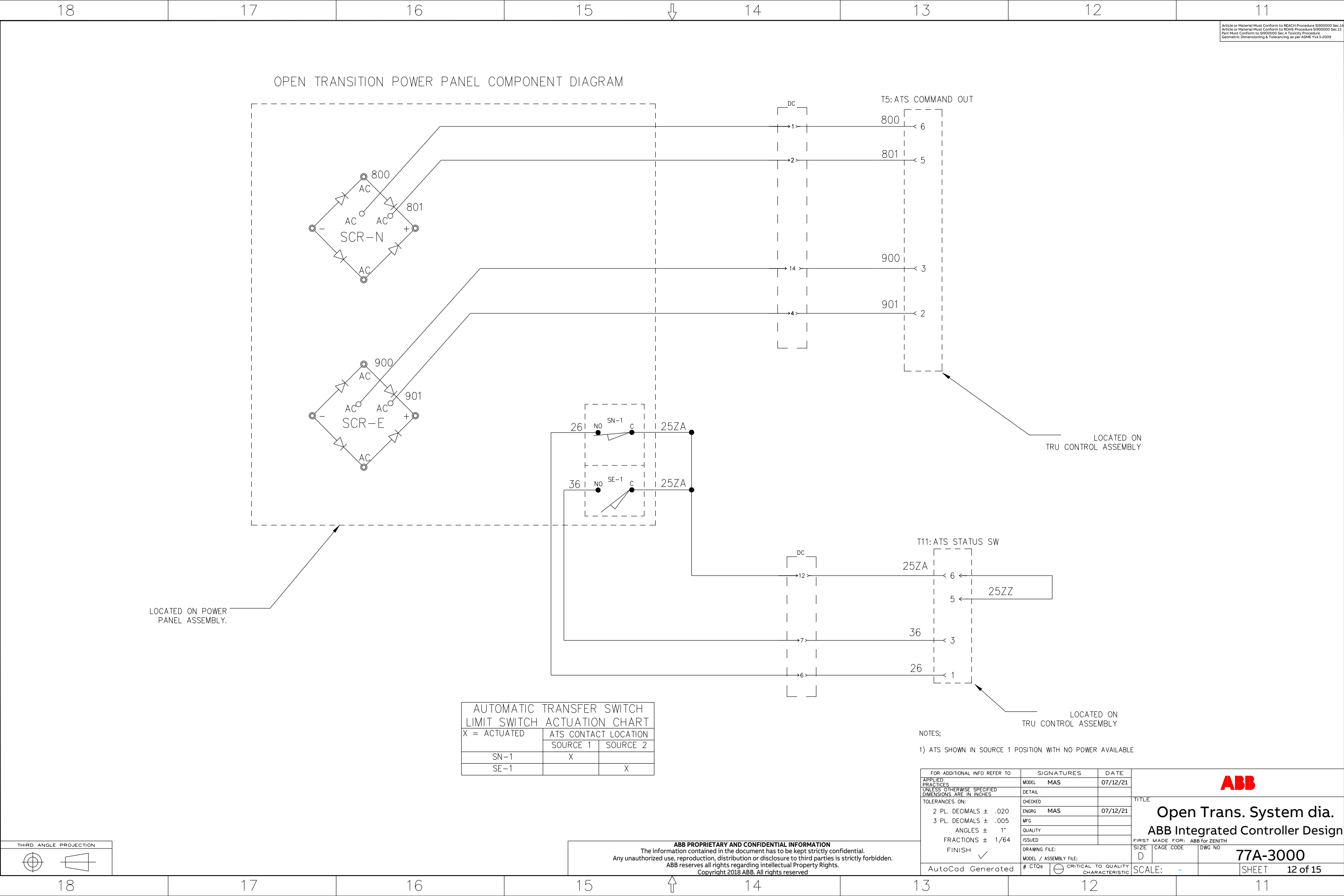
SEE PAGE 12 FOR OPEN
TRANSITION

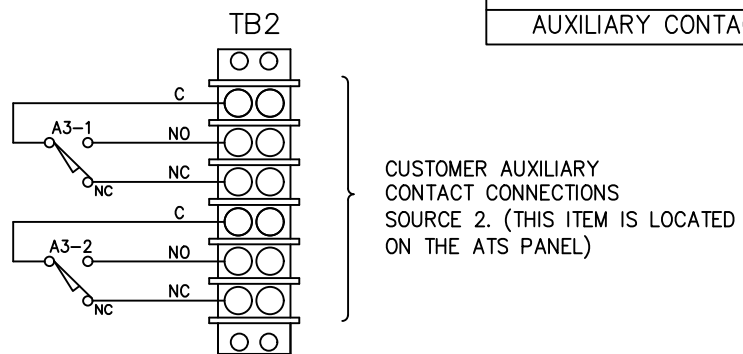
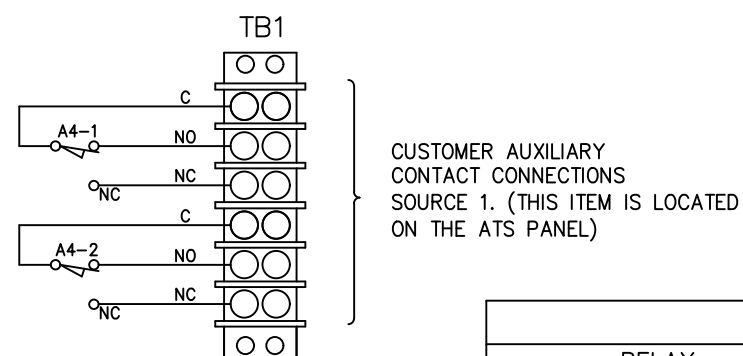
TO ABB CONTROLLER



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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DETAIL					
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2 PL. DECIMALS ± .020		ENGRG MAS		07/12/21		TITLE 3Ø ELECTRICAL DIAGRAM ABB Integrated Controller Design	
3 PL. DECIMALS ± .005		MFG					
ANGLES ± 1°		QUALITY					
FRACTIONS ± 1/64		ISSUED					
FINISH ✓		DRAWING FILE:		FIRST MADE FOR: ABB for ZENITH			
AutoCad Generated		MODEL / ASSEMBLY FILE:		SIZE D		CAGE CODE	
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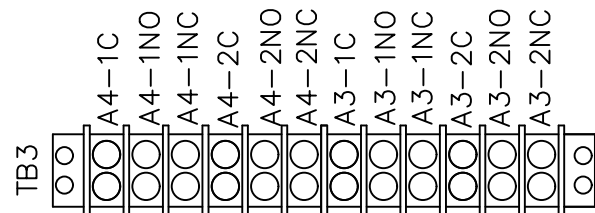






AUTOMATIC TRANSFER SWITCH LIMIT SWITCH ACTUATION CHART			
X = ACTUATED	ATS CONTACT LOCATION		
	SOURCE 1	OPEN	SOURCE 2
A3-1,2			X
A4-1,2	X		

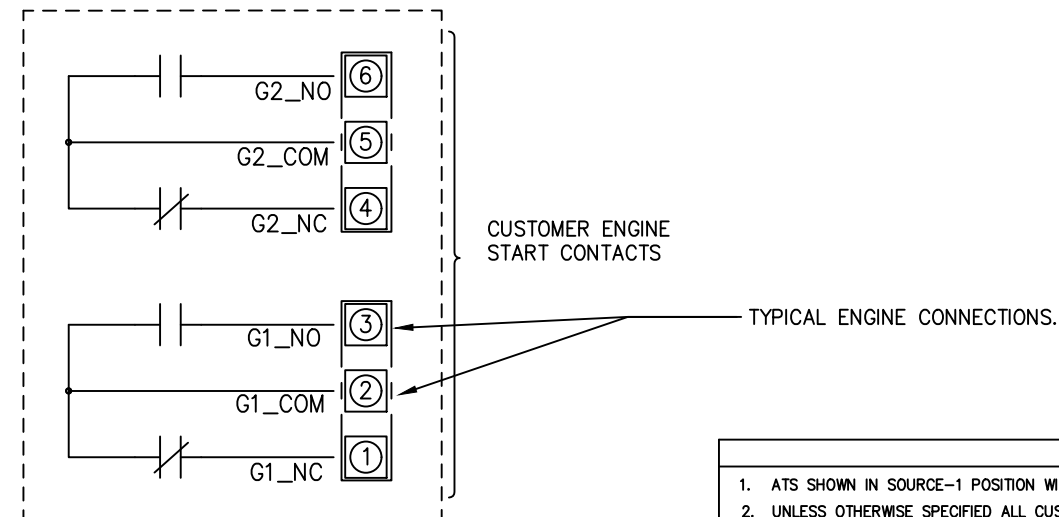
CONTACT RATINGS		
RELAY	CONTACT	RATING
P	E	5 AMP @ 250 VAC 5 AMP @ 30 VDC
AUXILIARY CONTACTS	A3, A4	15 AMP @ 125, 250 VAC



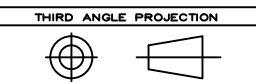
AUXILIARY CONTACT TERMINAL BLOCK. ATTACHED ON THE ENCLOSURE ASSEMBLY AND TETHERED FROM TB1 AND TB2 AUXILIARY BLOCKS LOCATED ON THE ATS PANEL. SEE PAGE 8 FOR TB3 INSTALLED LOCATION.

NOTE: DIAGRAMS SHOWN WITH ATS IN SOURCE 1 POSITION AND NO POWER AVAILABLE.

(SEE PAGE 8 FOR ENGINE START CONNECTION LOCATION)



NOTE: DIAGRAM SHOWN WITH ATS IN NORMAL POSITION
WITH POWER AVAILABLE.



NOTES
1. ATS SHOWN IN SOURCE-1 POSITION WITH NO POWER AVAILABLE
2. UNLESS OTHERWISE SPECIFIED ALL CUSTOMER CONNECTION WIRES TO BE MAXIMUM #16 -#14 AWG., 600 VOLTS, UL LISTED.

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Ekip Connect Input / Output User Modules

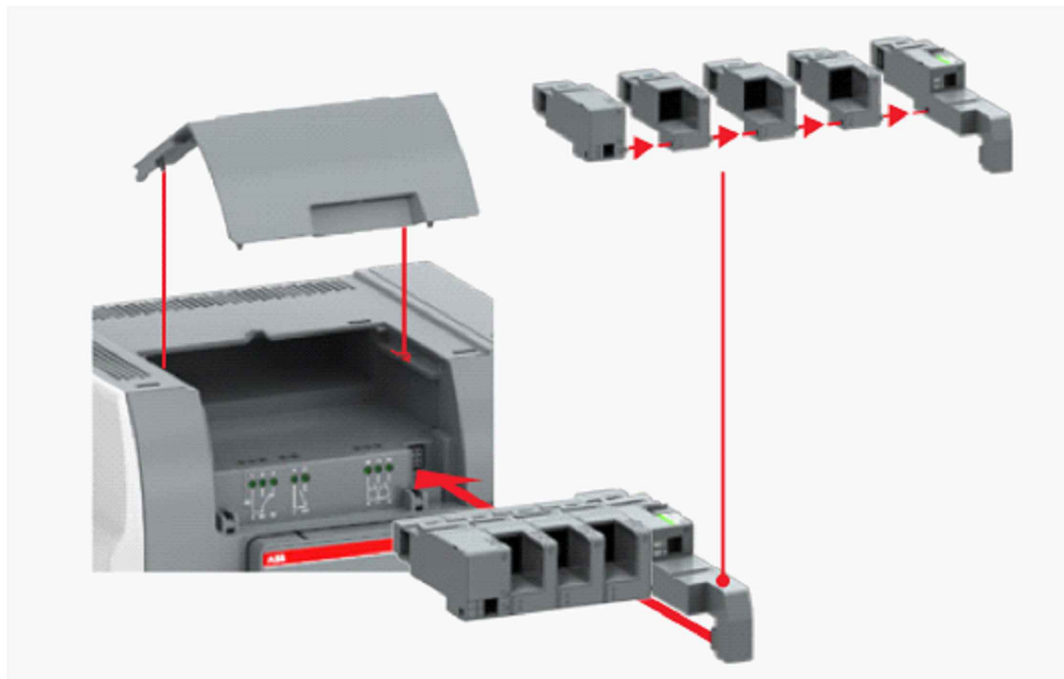
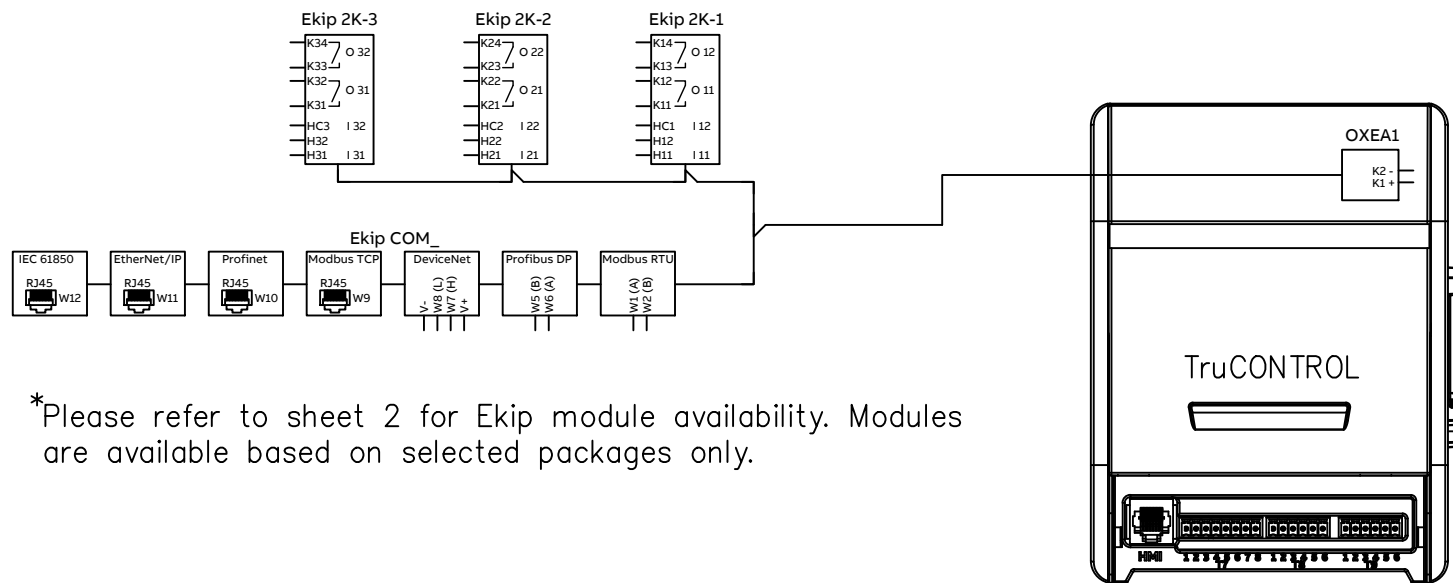


ABB TruControl Automatic Transfer Switch Equipment makes use of ABB Ekip Connect option modules. Please refer to the ABB TruControl Operation and Maintenance Guide for detailed part numbers, operation and settings description for each, and related software for ease of programming.

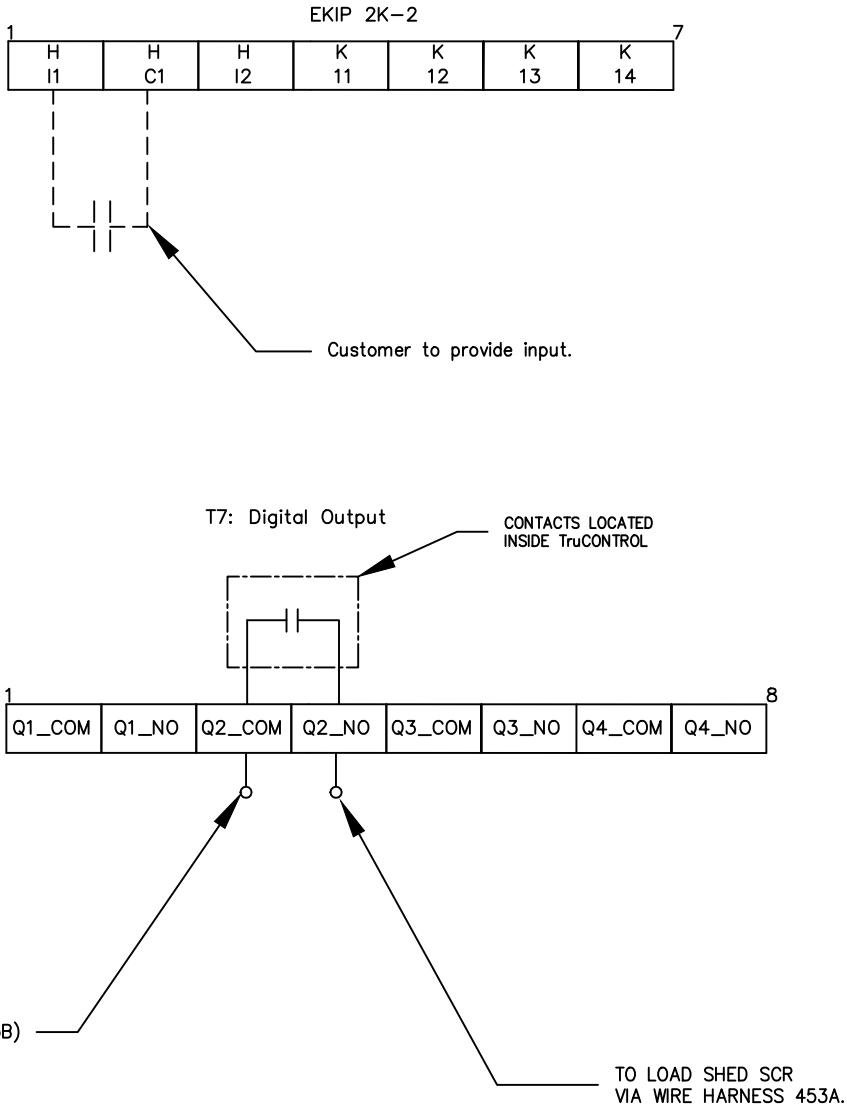
EQUIP TruCONTROL CONNECTIONS.*



*Please refer to sheet 2 for Ekip module availability. Modules are available based on selected packages only.

FOR ADDITIONAL INFO REFER TO		SIGNATURES		DATE			
APPLIED PRACTICES		MODEL MAS		07/12/21			
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DETAIL				TITLE Customer I/O connection diag ABB Integrated Controller Design	
TOLERANCES ON:		CHECKED					
2 PL. DECIMALS ± .020		ENGRG MAS		07/12/21			
3 PL. DECIMALS ± .005		MFG					
ANGLES ± 1'		QUALITY					
FRACTIONS ± 1/64		ISSUED				FIRST MADE FOR: ABB for ZENITH	
FINISH ✓		DRAWING FILE:		SIZE		CAGE CODE	
		MODEL / ASSEMBLY FILE:		D		DWG NO	
						77A-3000	
AutoCad Generated		# CTQs		SCALE: -		SHEET 14 of 15	
		 CRITICAL TO QUALITY CHARACTERISTIC					

THE FOLLOWING CONNECTIONS ARE DEDICATED FOR WITH UNITS THAT HAVE THE LOAD SHED OPTION BUILT IN AND ACTIVE.



TruCONTROL PROGRAM I/O SETTINGS:

SET DIGITAL INPUT E2K-I21 TO: LOAD SHED INPUT SIGNAL
SET CONTACT TYPE TO: NO

DIGITAL OUTPUT 2 HAS BEEN DESIGNATED AS A
THE ONLY AVAILABLE OUTPUT FOR THE LOAD SHED FUNCTION.
FOR THIS FUNCTION, THERE IS NO NEED TO MAKE ANY CHANGES TO THE DO2 SETTINGS

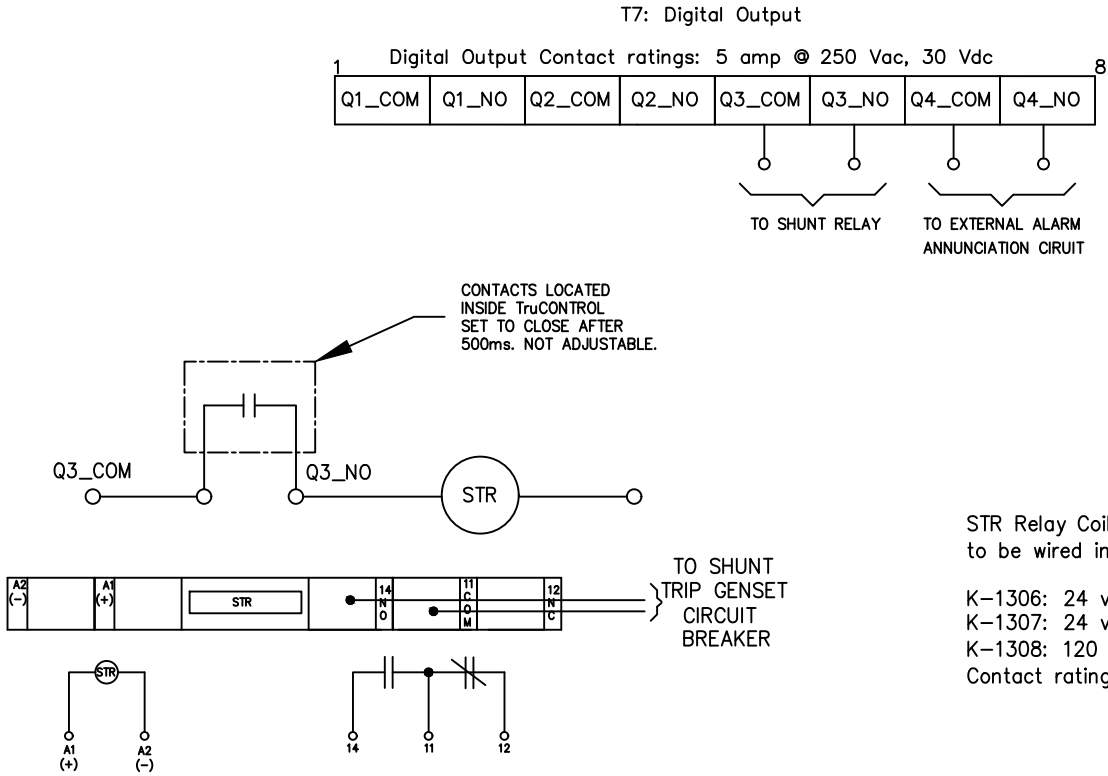
DO2 SETTINGS SHOULD READ AS FOLLOWS:
DIGITAL OUTPUT 2: NO FUNCTION
CONTACT TYPE: NO

PLEASE REFER TO DRAWING 77R-2015 FOR FULL DETAILS

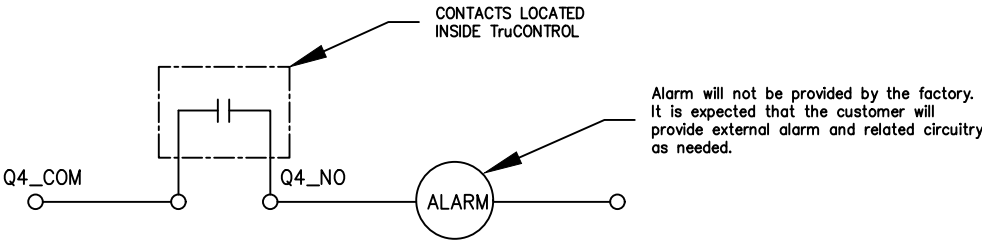
NOTES

1. UNLESS OTHERWISE SPECIFIED ALL CUSTOMER CONNECTION WIRES TO BE MAXIMUM #16 -#14 AWG., 600 VOLTS, UL LISTED.

THE FOLLOWING CONNECTIONS ARE DEDICATED FOR USE ON CLOSE TRANSITION UNITS ONLY.



RECOMMENDED CONNECTION FOR EXTERNAL SHUNT TRIP



RECOMMENDED CONNECTION FOR EXTERNAL ALARM CIRCUIT

STR Relay Coil Selection (Factory supplied – to be wired in the field):

K-1306: 24 volt AC
K-1307: 24 volt DC
K-1308: 120 volt AC/DC
Contact rating: 6Amp @250Vac / 30Vdc.

THIRD ANGLE PROJECTION

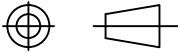


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FOR ADDITIONAL INFO REFER TO		SIGNATURES	DATE	TITLE	
APPLIED PRACTICES UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	MODEL	MAS	07/12/21	ABB Customer I/O connection diag. ABB Integrated Controller Design	
	DETAIL				
	CHECKED				
	ENGRG	MAS	07/12/21		
TOLERANCES ON: 2 PL. DECIMALS ± .020 3 PL. DECIMALS ± .005 ANGLES ± 1° FRACTIONS ± 1/64 FINISH ✓	MFG			FIRST MADE FOR: ABB for ZENITH	
	QUALITY			SIZE	CAGE CODE
	ISSUED			D	DWG NO
	DRAWING FILE:				77A-3000
MODEL / ASSEMBLY FILE:		# CTOs		SCALE:	-
AutoCad Generated		CRITICAL TO QUALITY CHARACTERISTIC		SHEET 15 of 15	