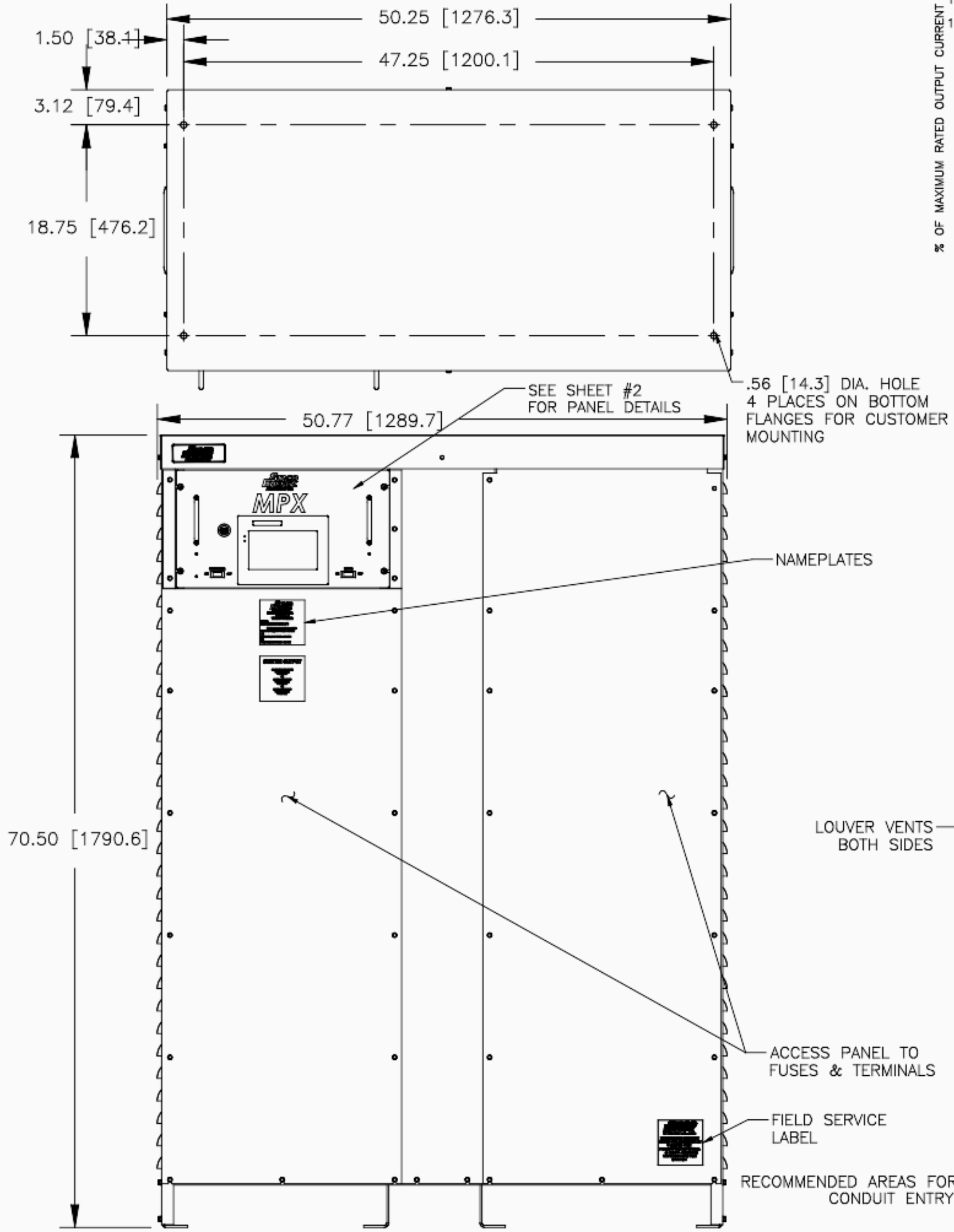


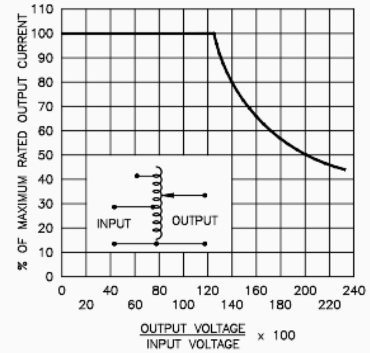
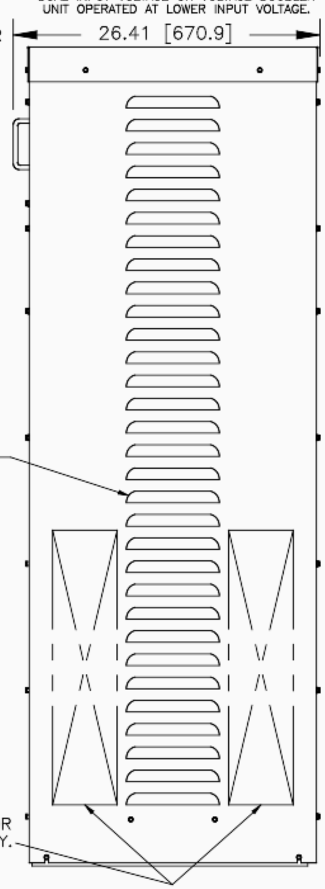


FIGURE A

MAXIMUM OUTPUT CURRENT OF ANY DUAL INPUT VOLTAGE OR VOLTAGE DOUBLER UNIT OPERATED AT LOWER INPUT VOLTAGE.



DWG. SIZE D | DWG. NO. 032–8710

REVISIONS				
SYM.	E.C.O.	DATE	APVD.	
A	RELEASED			

THE MICRORPROCESSOR (MPX) CONTROLLED VARIABLE TRANSFORMER (MX) COMPRISES A MOTOR DRIVEN AUTOTRANSFORMER AND MANUAL RAISE/LOWER SWITCH. THE MPX CONTROLLER AUTOMATICALLY POSITIONS EACH PHASE OF THE AUTOTRANSFORMER TO HOLD THE OUTPUT CONSTANT.

SPECIFICATIONS:
WAVEFORM DISTORTION----------------ZERO ADDED
FREQUENCY RANGE------------------47Hz TO 63Hz
OUTPUT REGULATION-----------------±1%
CONTROL BAND (USER SELECTABLE)------DOWN TO .5V
INTERNAL IMPEDANCE-----------------LESS THAN 1%
PHASE SHIFT----------------------NEGLIGIBLE
EFFICIENCY-----------------------97% TYPICAL
TEMPERATURE RANGE-----------------0°C (32°F) TO +40°C (104°F)
MOTOR SPEED----------------------60 SECONDS EACH PHASE

<u>CONTROLS:</u>
MPX CONTROLLER: THE TERMINAL IS PROVIDED FOR LOCAL CONTROL OF THE UNIT WITH AN INTERACTIVE TOUCHSCREEN DISPLAY FOR PRECISION OUTPUT VOLTAGE READINGS AND REGULATION. SEE THE MPX USER'S HANDBOOK (FORM #003–2753) FOR DETAILED INFORMATION ON EXPANDED AUTOMATION CAPABILITIES.

<u>CONTROLLER ON/OFF SWITCH:</u> THIS SWITCH TURNS OFF POWER TO THE MICROPROCESSOR CONTROLLER ONLY.

<u>MOTOR ON/OFF SWITCH:</u> THIS SWITCH TURNS OFF POWER FROM THE MICROPROCESSOR TO EACH OF THE AUTOTRANSFORMER MOTORS.

<u>RAISE/LOWER SWITCHES:</u> THESE SWITCHES ARE LOCATED INTERNALLY AND ARE ACCESSIBLE FROM THE FRONT VIA THE REMOVABLE ACCESS PANEL. THE SWITCHES ALLOW FOR EACH PHASE OF THE VARIABLE TRANSFORMER TO BE MANUALLY CONTROLLED INDIVIDUALLY.

<u>WIRE RANGES FOR CUSTOMER WIRING:</u>
INPUT/OUTPUT TERMINALS: (4) (300MCM–#6 AWG) COMPRESSION (2) INPUT (2) OUTPUT
NEUTRAL TERMINALS (4) (300MCM – #6 AWG) (2) INPUT (2) OUTPUT
PHASE GROUND TERMINAL: (1) (#1/0–#14 AWG) COMPRESSION

MAXIMUM OUTPUT CURRENT IN OUTPUT VOLTAGE RANGE FROM 0 TO 25% ABOVE LINE VOLTAGE. AT HIGHER OUTPUT VOLTAGES, OUTPUT CURRENT MUST BE REDUCED ACCORDING TO RATING CURVE, FIGURE A.

++ MAXIMUM KVA AT MAXIMUM OUTPUT AND CORRESPONDING DE–RATED CURRENT. MAXIMUM KVA AT LOWER OUTPUT VOLTAGES MAY BE CALCULATED FROM RATING CURVE, FIGURE A.

V.D.= VOLTAGE DOUBLER.

SPECIFICATIONS (INDIVIDUAL PHASE CONTROL)

WIRING	INPUT		OUTPUT			SHAFT ROTATION FOR VOLTAGE INCREASE	TERMINAL CONNECTIONS FOR INCREASING VOLTAGE AS VIEWED FROM TOP	
	VOLTS	HERTZ	VOLTS	CONSTANT CURRENT LOAD MAX. AMPS	CONSTANT CURRENT LOAD MAX. KVA		INPUT	OUTPUT
THREE PHASE	480/277	50/60	0–480	245	203.4	CW	4–4–4	D–D–D
		60	0–560	245	237.4	CW	2–2–2	D–D–D
	400/230	50	0–480	245	203.4	CW	2–2–2	D–D–D
	240	60	0–560	245#–105 V.D.	101.7++	CW	5–5–5	D–D–D

UNLESS OTHERWISE SPECIFIED, TOLERANCE IS ± DECIMALS .XX .010 .XXX .005 HOLES .005 ANGLES 1° DRAFT 1–1/2°	UNITS IN [mm]	TITLE: SPEC. CONTROL DRAWING VARIABLE TRANSFORMER MX60M6020E–21YA–IPC
MATERIAL: SEE NOTES	ALL DIMENSIONS APPLY AFTER PLATING	STACO ENERGY PRODUCTS CO.

The information and design disclosed herein was originated by and is the property of STACO ENERGY PRODUCTS CO., which reserves all patent, proprietary, design, manufacturing, reproduction, use and sale rights thereto, and to any article disclosed therein except to the extent rights are expressly granted to others. The foregoing does not apply to vendor proprietary parts.

DRAWN BY BER	DATE 8/19/26	FIRST USED ON	DO NOT SCALE DWG.		
CHECKER L.BRAGG	DATE 09/15/26	WEIGHT APPROX.	CAGE CODE 83008	DWG. SIZE D	DWG. NO. 032–8710
ENGINEER L.BRAGG	DATE 09/15/26	SCALE	SHEET 1 OF 3		

SIZE	DWG. NO.
D	032-8710

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SYM.	E.C.O.	DATE	APVD.
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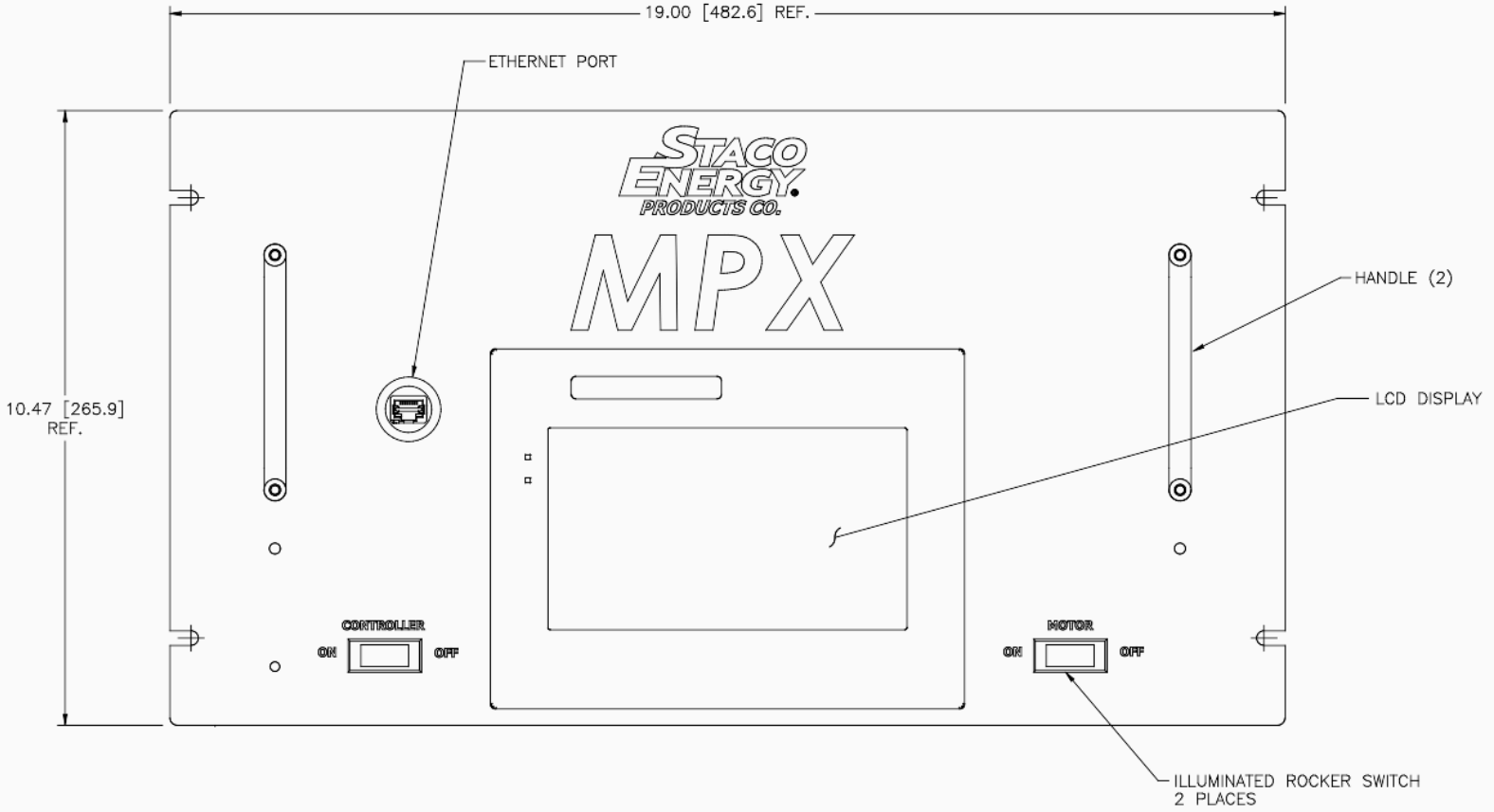

UNLESS OTHERWISE SPECIFIED, TOLERANCE IS ± DECIMALS .XX .010 .XXX .005 HOLES .005 ANGLES 1° DRAFT 1-1/2°	UNITS IN [mm]	TITLE: SPEC. CONTROL DRAWING VARIABLE TRANSFORMER MX60M6020E-21YA-IPC	STACO ENERGY PRODUCTS CO.
MATERIAL: SEE NOTES	ALL DIMENSIONS APPLY AFTER PLATING		
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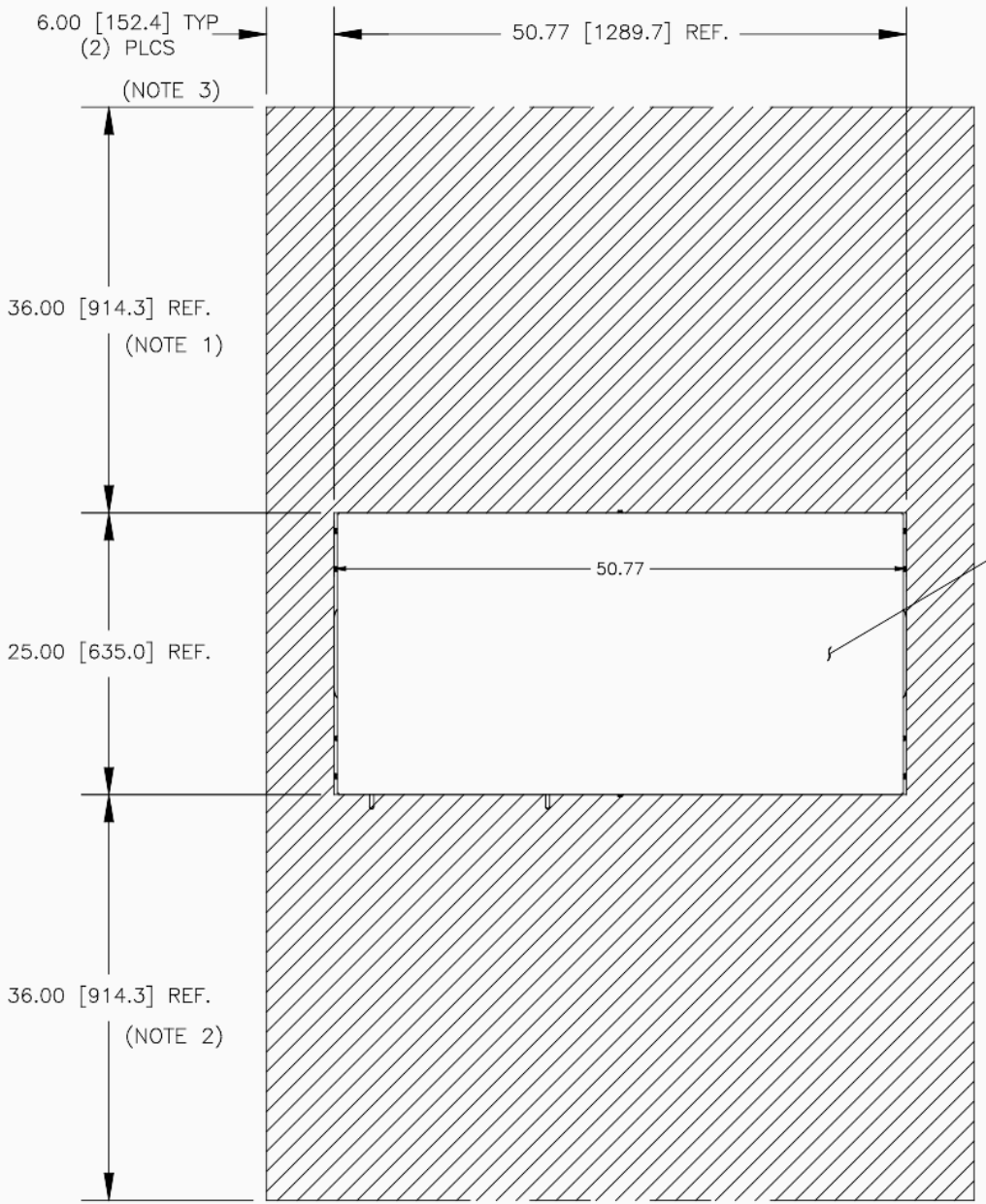
		CHECKED: L.BRAGG DATE: 9/15/2026	VENDOR APPROVAL: CAGE CODE: 53005
		ENGINEER: L.BRAGG DATE: 9/15/2026	SCALE: SHEET 2 OF 3
			SIZE: D DWG. NO.: 032-8710



NOTES:

1. REAR CLEARANCE REQUIRED FOR MAINTENANCE. 36" IS RECOMMENDED WITH 24" MINIMUM TO ASSIST IN BRUSH REPLACEMENT.
2. FRONT CLEARANCE REQUIRED PER CODE REQUIREMENTS. 36" IS TYPICAL REQUIREMENT. CHECK LOCAL CODES AS REQUIRED.
3. SIDE CLEARANCE REQUIRED FOR COOLING. 6" IS RECOMMENDED BUT 3" IS ABSOLUTE MINIMUM FOR PROPER COOLING.

DWG. SIZE	D
DWG. NO.	032-8710

REVISIONS			
SYM.	E.C.O.	DATE	APVD.
A	RELEASED		

UNLESS OTHERWISE SPECIFIED, TOLERANCE IS ± DECIMALS .XX ±.02 .XXX ±.005; HOLES .005; ANGLES 1°; DRAFT 1-1/2°. UNITS IN [mm]. MATERIAL: SEE NOTES. ALL DIMENSIONS APPLY AFTER PLATING.

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TITLE: SPEC. CONTROL DRAWING VARIABLE TRANSFORMER MX60M6020E-21YA-IPC

DRAWN BY	BER	DATE	8/19/26
CHECKED	L.BRAGG	DATE	9/15/2026
ENGINEER	L.BRAGG	DATE	9/15/2026
FIRST USED ON		DO NOT SCALE DWG.	
WEIGHT APPROX.		CAGE CODE	53005
SCALE	N/A	SHEET 3 OF 3	

STACO ENERGY PRODUCTS CO.

DWG. SIZE	D
DWG. NO.	032-8710