

**INSTALLATION, OPERATION, AND MAINTENANCE
M-511C D.C. WHISTLE CONTROL**

1) **GENERAL** - The function of the Whistle Control is to provide convenient operation of sound signaling device from a single control panel for At-Will, Restricted Visibility, and Maneuvering signaling as required. The M-511C also generates the SOLAS General Alarm Signal, or may be integrated with another alarm system on board which generates this signal.

2) **DESCRIPTION** - The M-511C is a compact solid state electronic Whistle Control within a watertight powder coat finished aluminum enclosure. It is operated from a flush mounted membrane switch keypad with embossed keys.

3) **OPERATION** -

- CURRENT REQUIREMENT OF M-511C: .25 Amps
- **SWITCHING CAPACITY OF M-511C: 1.75 Amps Maximum**
- D.C. VOLTAGE REQUIREMENT: 12 TO 24 VOLT D.C.

CAUTION: THE M-511C IS FUSE PROTECTED, HOWEVER, BE CERTAIN NOT TO EXCEED THE 1.75 AMP MAXIMUM SWITCHING CAPACITY. THIS CAN OCCUR IF MULTIPLE DEVICES ARE CONNECTED SUCH AS ADDITIONAL LIGHTS OR SOUND PRODUCING DEVICES. A SUITABLE RELAY MUST BE INSTALLED FOR CONTROLLING THESE DEVICES. SEE WIRING DIAGRAM 3-6220 HEREIN.

The M-511C is powered by 12 or 24 DC voltages with a current requirement of .25 amps (maximum) and a switching capacity of 1.75 amps (maximum). It is also available in a 110-240 Volt A.C. 50/60 Hz version and is easily identified by having an additional galvanized electrical enclosure attached on the backside.

The M-511C is designed to activate a solenoid valve or similar horn-activating device operating on the same voltage as the M-511C. Activation of the horn can be accomplished several ways depending upon the type of signal desired. For "At-Will" operations use the "Manual/At-Will" button, this button will signal the device instantly at all times regardless of the mode of operation. There are five (5) predetermined Restricted Visibility codes within the M-511C and they are indicated on the associated button of the keypad. For a definition of these codes and their uses, refer to the reference sheet included with these instructions. Pressing the "Auto On/Off" button activates the five code buttons. Upon activation of the Automatic mode, the red LED light of the activated code will light and signaling of the device for that code will commence after a 10 second delay. This designed delay is to prevent commencement of the activated code prior to selection of a new code or proper preparation at listening posts. A new code can be selected at any time during automatic operation and will commence after the 10 second delay. Termination of the Automatic Mode can be accomplished by either depressing the "Auto On/Off" button, activating any of the Maneuvering Signal codes, activating the "At-Will"

button (the latter two will also cause instantaneous signaling of the device), or activating the "General Alarm" button.

The M-511C has the ability to change the cycle times between restricted visibility signaling. The default setting is 120 seconds between blasts, which is also regulation. When initially powered up the 120 second LED on the "Auto On/Off" will be lit, signifying the 2-minute interval. The other two intervals are 90 seconds, and 60 seconds. To change the signaling interval depress and hold the "Auto On/Off" button for 5 seconds then release and the next LED will be lit, continue this procedure until the desired interval is attained.

For quick easy signaling of required maneuvering codes the M-511C includes four (4) preset codes with a descriptive reference included on the keypad. For a complete explanation of these codes please refer to the attached reference sheet. When a maneuvering code button is pressed, the horn will instantaneously signal the code and terminate the Auto mode (if on).

The M-511C is designed to be used as a single unit or in conjunction with other M-511C units, and with multiple remote "At-Will" buttons, such as the Kahlenberg M-131A, M-126, or any customer supplied two contact button. Refer to the wiring diagram included with these instruction sheets for your particular application.

The M-511C is also equipped with a General Alarm code which is activated by depressing and holding the "General Alarm" button for 3 seconds. This function will stop all other functions on the M-511C and can only be stopped by depressing the "Auto On/Off" button. When the General Alarm is activated all three LED's on the "Auto On/Off" button will be illuminated at the same time.

*****NOTE: The "Horn 1, Horn 2 Select" button is inoperable on the M-511C. This switch functions only when this unit is supplied with the Kahlenberg KB-30 Electronic Horn/Hailer unit.***

4) **INSTALLATION -**

WARNING: HIGH VOLTAGE MAY BE PRESENT INSIDE ENCLOSURES. BE SURE TO SHUT OFF POWER, TAG OUT, AND VERIFY NO VOLTAGE IS PRESENT BEFORE INSTALLING OR ATTEMPTING TO SERVICE THIS UNIT. FAILURE TO FOLLOW THIS WARNING COULD RESULT IN SERIOUS INJURY OR DEATH.

The M-511C mounts easily into a console and is secured by fastening the bezel to the console with four (4) #8 x 1-1/4" self clinching studs already attached. An opening of 4-3/8" wide by 2-7/8" high should be made in the console where the unit is to be placed. See the enclosed template drawing 2-5437 for details. The M-511C is shipped with 1 loose gasket for installations exposed to the elements. The gasket has a removable adhesive backing and is used to provide a seal between the Bezel and Console. Simply remove the adhesive backing and

secure in place. An additional bead of RTV silicone sealant may be applied around the perimeter of the Bezel for additional weather protection.

It is suggested that the wiring to the disconnectable terminal block be completed prior to securing the bezel (Refer to the attached wiring diagram). Connect the terminal plug to the timer. It is recommended that the perimeter of the terminal block be sealed with a RTV silicone sealant.

5) **CARE AND MAINTENANCE** - The M-511C Whistle Control is designed to provide many years of maintenance free operation and there are no spare parts we suggest you keep on hand. However if any parts listed on the attached Parts List drawings are required for any reason, please refer to the associated part number when ordering. If the M-511C should fail to operate properly please contact Kahlenberg Brothers Company for recommended action or return to Kahlenberg for prompt analysis and repair.

When cleaning the membrane switch panel, we recommend the use of Windex (or equivalent) or a mild soap/water solution applied with a soft cotton cloth.

6) **DRAWING REFERENCES**

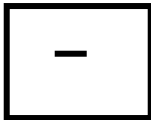
Outline Dimensions 12 & 24 Volt D.C. Units	#3-6428
Parts List of 12 & 24 Volt D.C. Units:	#3-6430
Template for Cutout	#2-5437
Wiring Diagrams:	
D.C., For use with DC Solenoid & Remote At-Will Buttons:	#3-6273
D.C., For use with G.A. Function and Whistle Light:	#3-6220

**For custom installations other than those shown in the above wiring diagrams see custom wiring diagrams provided by Kahlenberg or contact Kahlenberg Bros. Company with specific requirements.

RESTRICTED VISIBILITY CODES

**RULE 35
INTERNATIONAL & INLAND**

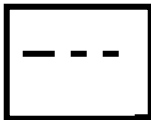
IN OR NEAR AN AREA OF RESTRICTED VISIBILITY, WHETHER BY DAY OR NIGHT,
THE SIGNALS PRESCRIBED IN THIS RULE ARE AS FOLLOWS:



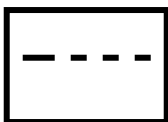
One Prolonged Blast (Every 2 minutes)
Making Way through the water



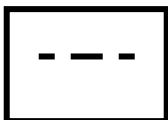
Two Prolonged Blasts (Every 2 minutes)
Underway but stopped and making no way through the water



One Prolonged Blast and Two Short Blasts (Every 2 minutes)
Vessel not under command
Vessel restricted in her ability to maneuver
Vessel constrained by her draft
Sailing Vessel
Vessel engaged in fishing
Vessel engaged in towing or pushing another vessel



One Prolonged Blast and Three Short Blasts (Every 2 minutes)
A Vessel towed or if more than one Vessel is towed the last Vessel of the tow, if manned. When practicable, this signal shall be made immediately after the signal made by the towing Vessel.



One Short Blast, One Prolonged Blast, One Short Blast (Every Minute) **Vessel at Anchor**

*Note: The above is intended as a quick reference guide only and in no way is intended to be a replacement for the complete Rule 35 as included in the 72' COLREGS

MANEUVERING CODES

RULE 34

INTERNATIONAL - RULE (A)

WHEN VESSELS ARE IN SIGHT OF ONE ANOTHER, A POWER-DRIVEN VESSEL UNDERWAY, WHEN MANEUVERING AS AUTHORIZED OR REQUIRED BY THESE RULES, SHALL INDICATE THAT MANEUVER BY THE FOLLOWING SIGNALS ON HER WHISTLE:



One Short Blast
“I am altering my course to Starboard”



Two Short Blasts
“I am altering my course to Port”



Three Short Blasts
“I am operating Astern Propulsion”



Five Short Blasts
“Danger”
Failure to understand intentions or actions, or in doubt

*Note: The above is intended as a quick reference guide only and in no way is intended to be a replacement for the complete Rule 34 as included in the 72' COLREGS

INLAND - RULE (A)

WHEN POWER-DRIVEN VESSELS ARE IN SIGHT OF ONE ANOTHER AND MEETING OR CROSSING AT A DISTANCE WITHIN HALF A MILE OF EACH OTHER, EACH VESSEL UNDERWAY, WHEN MANEUVERING AS AUTHORIZED OR REQUIRED BY THESE RULES:



One Short Blast
“I intend to leave you on my Port side”
In Agreement



Two Short Blasts
“I intend to leave you on my Starboard side”
In Agreement



Three Short Blasts
“I am operating Astern Propulsion”
In Agreement



Five Short Blasts
“Danger”
Doubt Safety of Proposed Maneuver

*Note: The above is intended as a quick reference guide only and in no way is intended to be a replacement for the complete Rule 34 as included in the 72' COLREGS

INLAND - RULE (C)

WHEN IN SIGHT OF ONE ANOTHER (I) A POWER DRIVEN VESSEL INTENDING TO OVERTAKE ANOTHER POWER DRIVEN VESSEL SHALL INDICATE HER INTENTION BY THE FOLLOWING SIGNALS ON HER WHISTLE:



One Short Blast
“I intend to overtake you on your Starboard side”
In Agreement

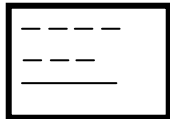


Two Short Blasts
“I intend to overtake you on your Port side”
In Agreement



Five Short Blasts
“Danger”
Failure to understand intentions or actions, or in doubt

GENERAL EMERGENCY ALARM CODE:

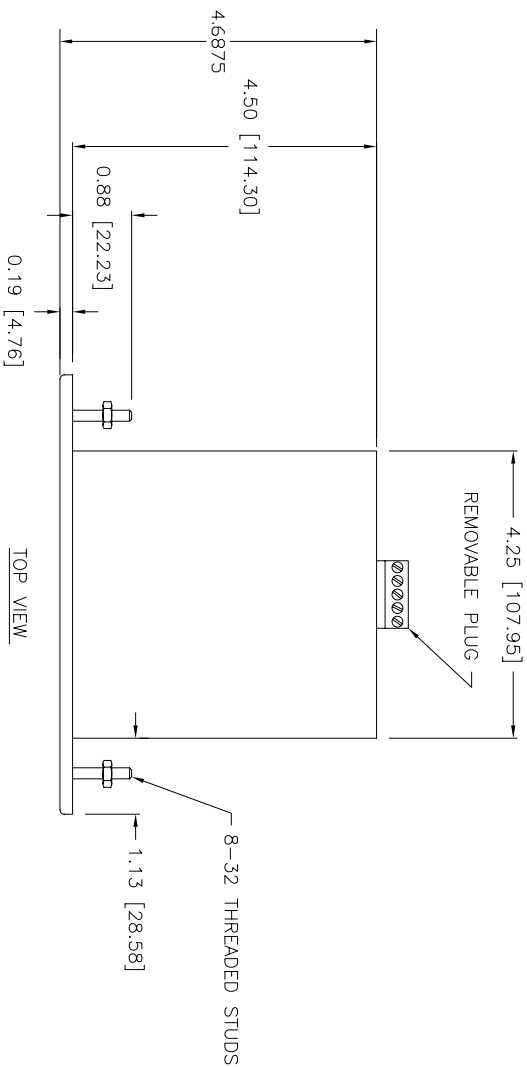


Seven Short Blasts followed by 1 long blast (repeats every 10 seconds)
IMO SOLAS GENERAL EMERGENCY ALARM SIGNAL

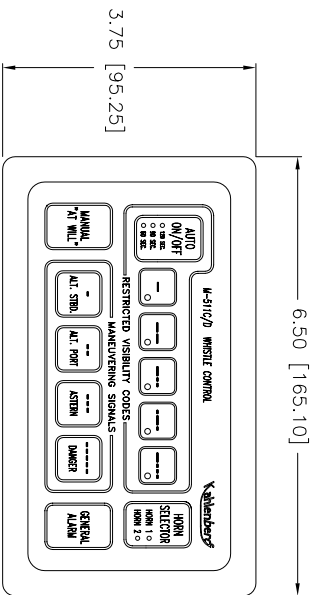
*Note: The above is intended as a quick reference guide only and in no way is intended to be a replacement for the complete Rule 34 as included in the 72' COLREGS

3-6428

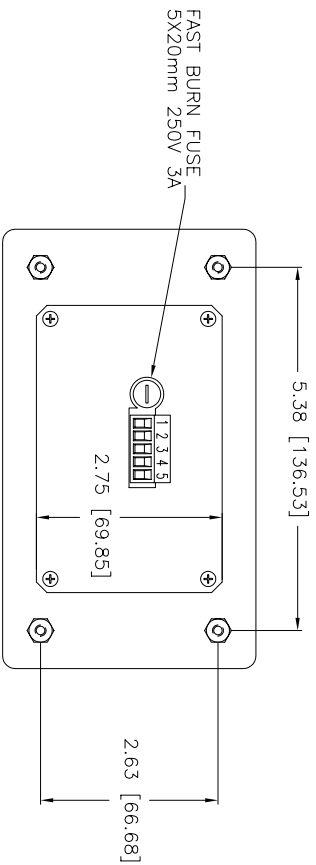
REV.	BY	DATE	DESCRIPTION	APP'D.



12/24 V.D.C. REQUIRED
FOR OPERATION.
DRAW OF .25 AMPS.
1.75 AMPS (MAX) TO
SOLENOID VALVE.



FRONT VIEW

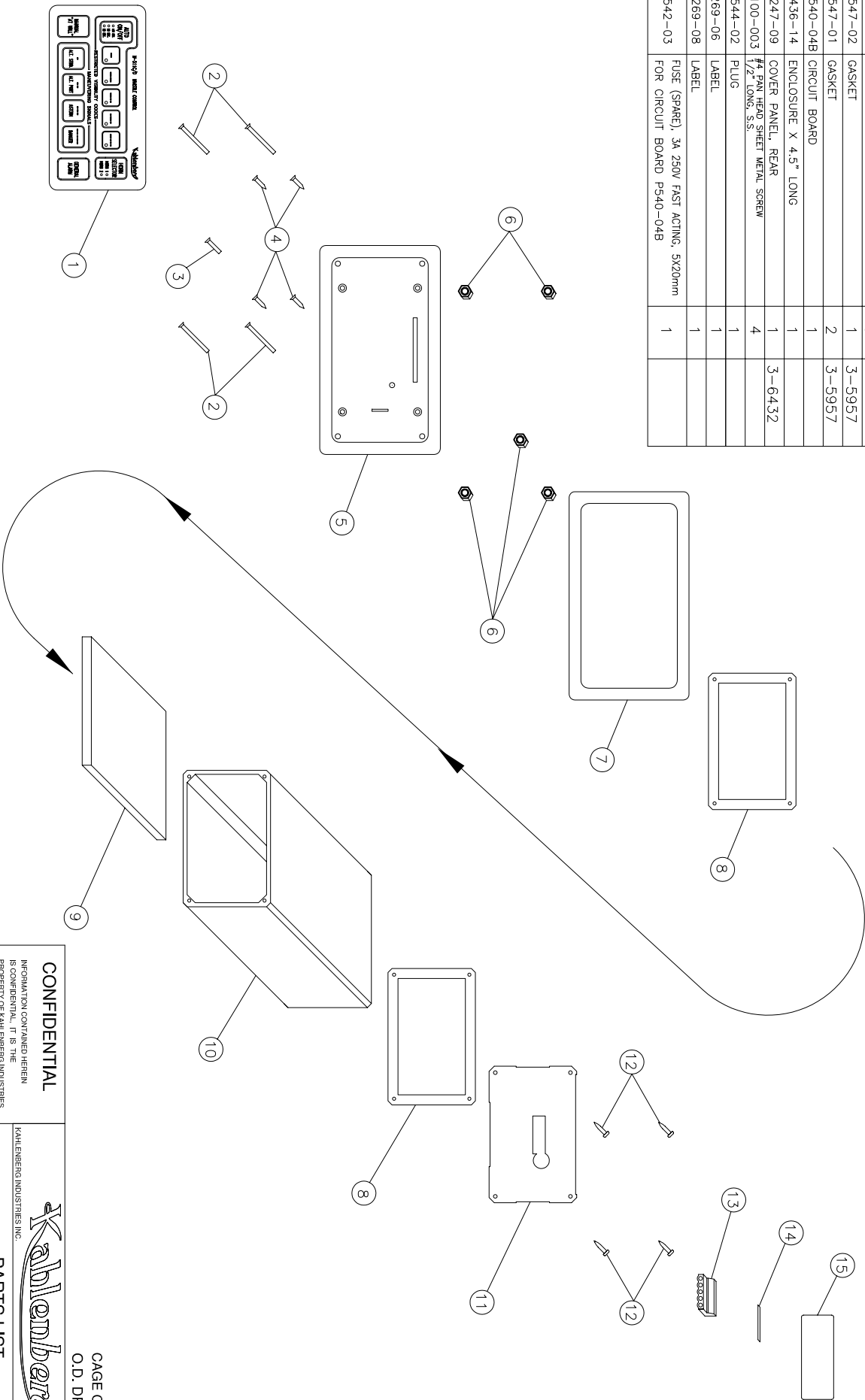


REAR VIEW

Kahlenberg					
KAHLENBERG BROS. CO. TWO RIVERS, WISCONSIN 53441					
OUTLINE DIMENSIONS M-511C WHISTLE CONTROL (D.C. OPERATION)					
DR.	DATE	CKD.	SCALE	DRWG. NO.	REV.
ZJM	07/03/07	EMK	N.T.S.	3-6428	

3-6430

ITEM#	PART #	DESCRIPTION	QUAN	DWG. #
1	P546-03	MEMBRANE SWITCH PANEL	1	3-6418
2	P167-06	STUD, SELF CLINCHING, 8-32 X 1-1/4"	4	
3	P167-07	STUD, SELF CLINCHING, 8-32 X 3/8"	1	
4	W100-002	#4 FLAT HEAD SHEET METAL SCREW 1/2" LONG, S.S.	4	
5	P247-08	BEZEL	1	3-6352
6	W018-016ST	NUT, 8-32	5	
7	P547-02	GASKET	1	3-5957
8	P547-01	GASKET	2	3-5957
9	P540-04B	CIRCUIT BOARD	1	
10	P436-14	ENCLOSURE X 4.5" LONG	1	
11	P247-09	COVER PANEL, REAR	1	3-6432
12	W100-003	#4 PAN HEAD SHEET METAL SCREW 1/2" LONG, S.S.	4	
13	P544-02	PLUG	1	
14	P269-06	LABEL	1	
15	P269-08	LABEL	1	
16	P542-03	FUSE (SPARE), 3A 250V FAST ACTING, 5X20mm FOR CIRCUIT BOARD P540-04B	1	



REV.	BY	DATE	DESCRIPTION	APP'D.
A	ZJN	08/07/07	ADDED ITEM 16 (SPARE FUSE)	EMK
B	ZJN	07/05/11	ITEM 16 WAS 5 AMP FUSE	EMK

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Kaleberg
TWO OWNERS, WI, U.S.A.

PARTS LIST
M-511C WHISTLE CONTROL UNIT
(GENERAL D.C. OPERATION)

CAGE CODE: 75214
O.D. DRG. #3-6428

DR.	DATE	CHD.	SCALE	DRWG. NO.	REV.
ZJN	06/29/07	EMK	N.T.S.	3-6430	B

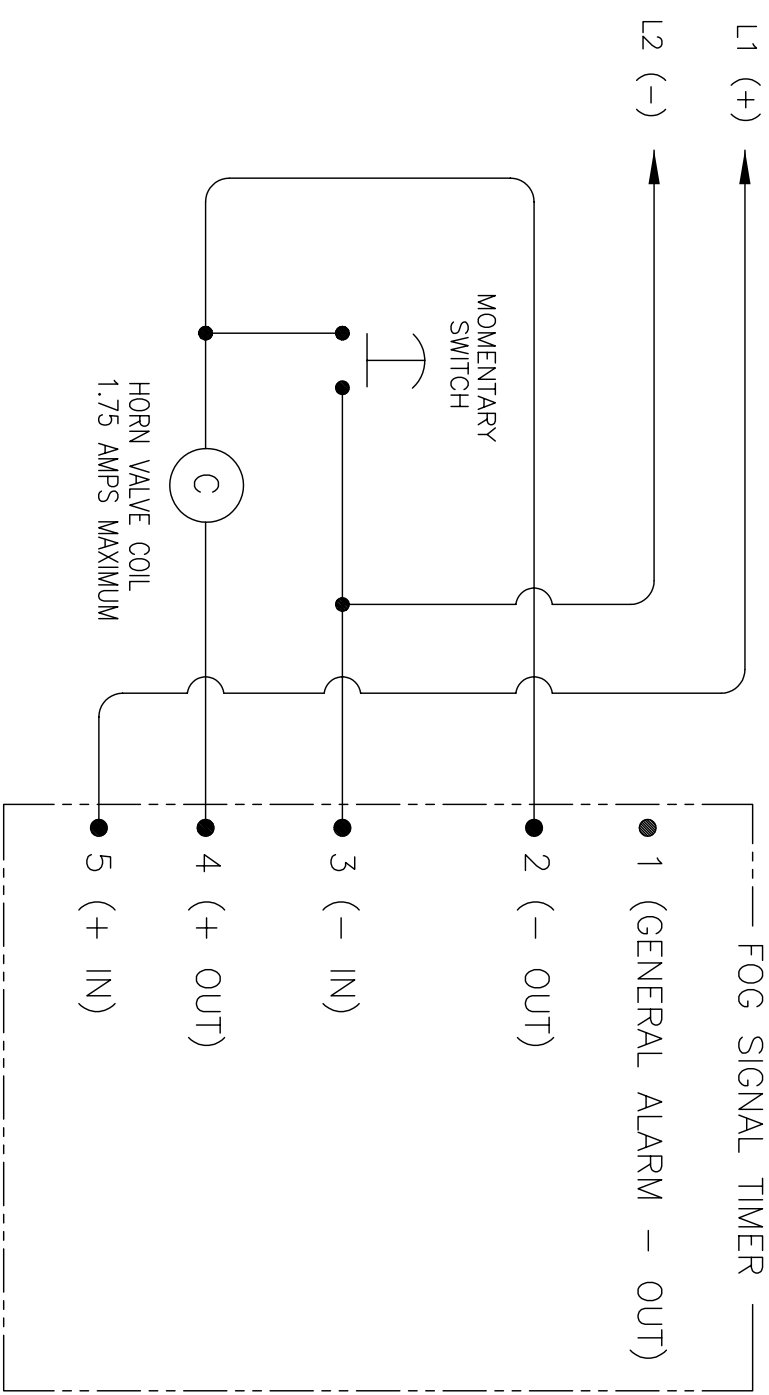
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REV.	BY	DATE	DESCRIPTION	APP'D.
A	EMK	3/20/08	CHANGED FROM M-511A TO M-511A/M-511C	EMK
B	ZJN	12/09/11	ADDED NOTE: 1.75 AMPS MAXIMUM	

M-511A/M-511C

DRG. 3-6219/DRG. 3-6428

12 or 24 V.D.C.
FUSED CIRCUIT




 KAHLENBERG BROS. CO. TWO RIVERS, WI. U.S.A.

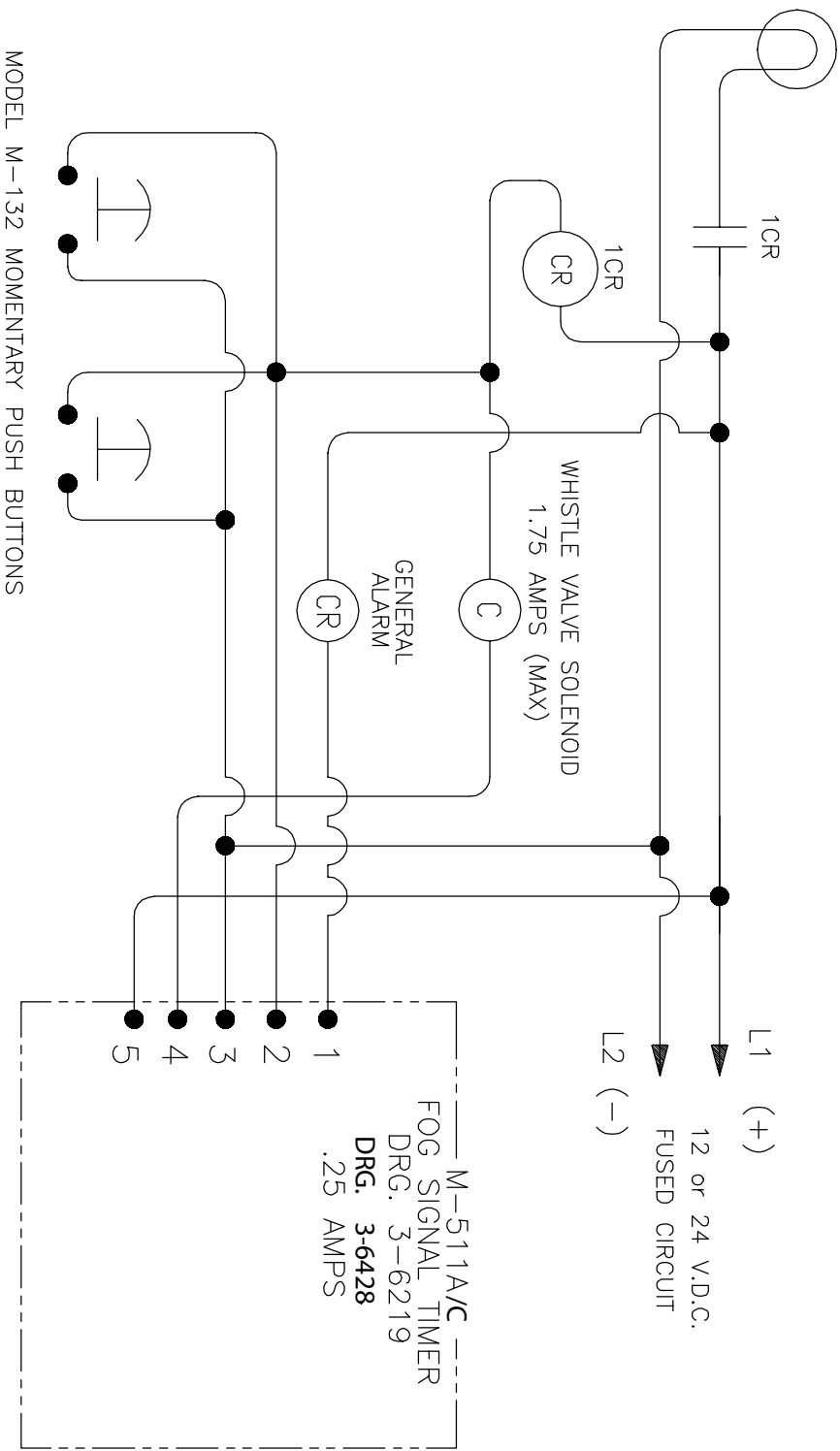
WIRING DIAGRAM (D.C.)
 M-511A/M-511C, "AT-WILL" SWITCH
 & AIRHORN SOLENOID COIL

DR.	DATE	CKD.	SCALE	DRWG. NO.	REV.
ZJN	02/06/04	ZJN	N.T.S.	3-6273	B

3-6220

WHISTLE LIGHT

REV.	BY	DATE	DESCRIPTION	APP'D.
A	EK	3/20/08	CHANGED TO M-511A/M-511C	EMK



NOTE:
 WHEN AUTOMATIC CONTROL HAS BEEN STOPPED BY BLOWING THE WHISTLE FROM THE "AT-WILL", "GENERAL ALARM", OR PUSH BUTTON STATION, IT MAY BE RESTARTED BY DEPRESSING THE "AUTO ON/OFF" BUTTON ON THE M-511 TIMER UNIT.



KAHLENBERG BROS. CO. TWO RIVERS, WI. U.S.A.

D.C. WIRING DIAGRAM
 MODEL M-511A /M-511C (D.C.)
 HORN SOLENOID, SIGNAL LIGHT,
 & MOMENTARY PUSH BUTTONS

DR.	DATE	CKD.	SCALE	DRWG. NO.	REV.
ZJN	05/13/03	ZJN	N.T.S.	3-6220	A

Wiring Conversion from M-511 to M-511C

D.C. Versions

<u>M-511</u>	<u>M-511C</u>
(+) in	Terminal 5
(-) in	Terminal 3
S	Terminal 2
A	Terminal 3
R	Terminal 2

A.C. Version

<u>M-511</u>	<u>M-511C</u>
Black	Black
White	Brown
Red	Orange
	Green (Ground)
	Red (Disregard)

AT THIS JUMPER THERE ARE 3 PINS. JUMPER IS PLACED OVER TWO PINS ON THE RIGHT AS SHIPPED FROM FACTORY.

