

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ADDED NOTE 11, 8 AMPS WAS 8 AMPS	041299	
B	REMOVE MODEL MP460, ADD MODEL MP 462 OR MP463. REMOVE PATRIOT 7032. ADD MODEL ES825-100(F), LS600 SERIES, LS610, RSU800 SERIES AND HS100 SERIES.	010201	

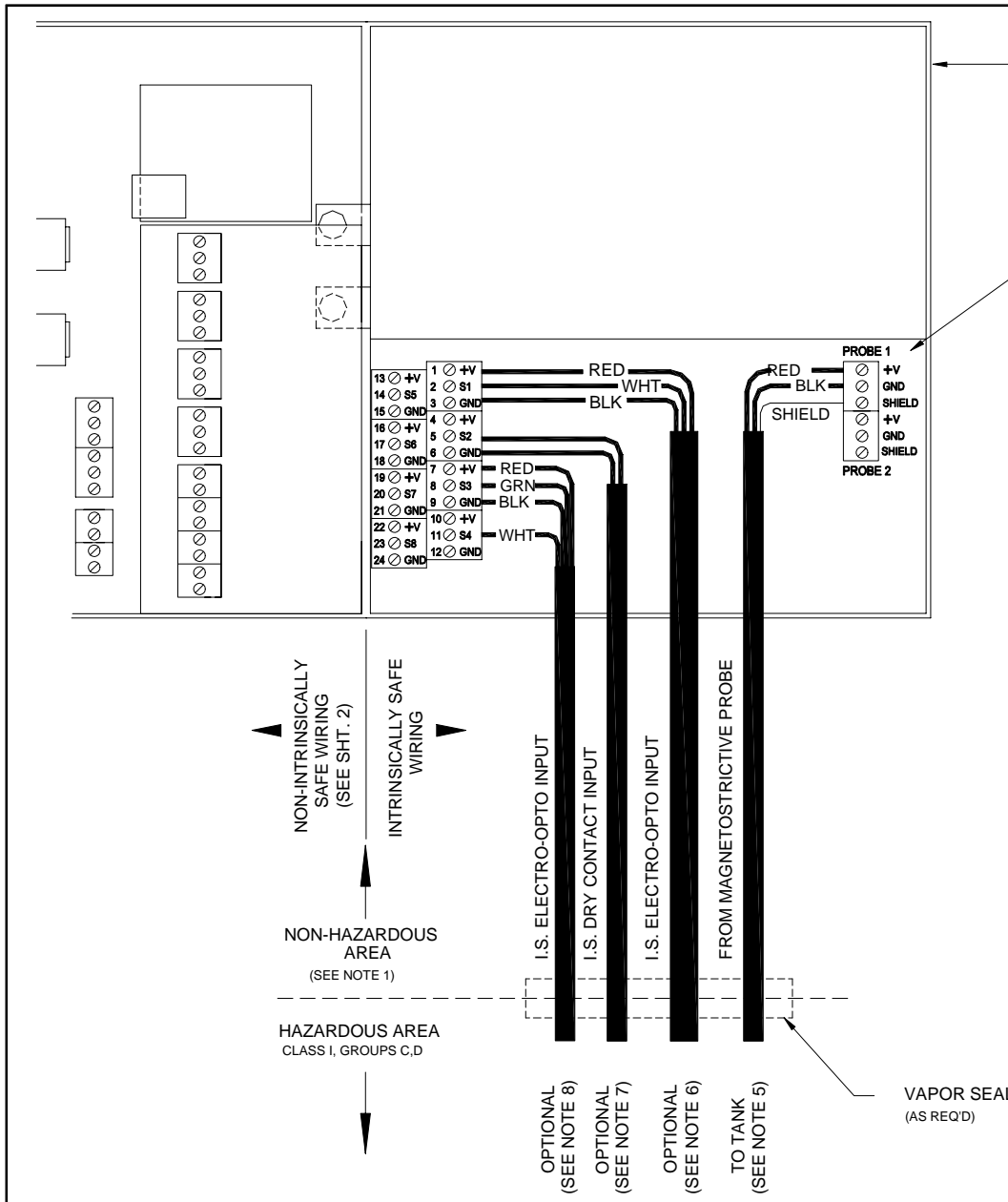
LISTED INDICATOR MODEL NUMBER

MODEL TMS 2000

IMPORTANT NOTES-READ CAREFULLY BEFORE INSTALLATION

NOTES - INTRINSIC SAFETY

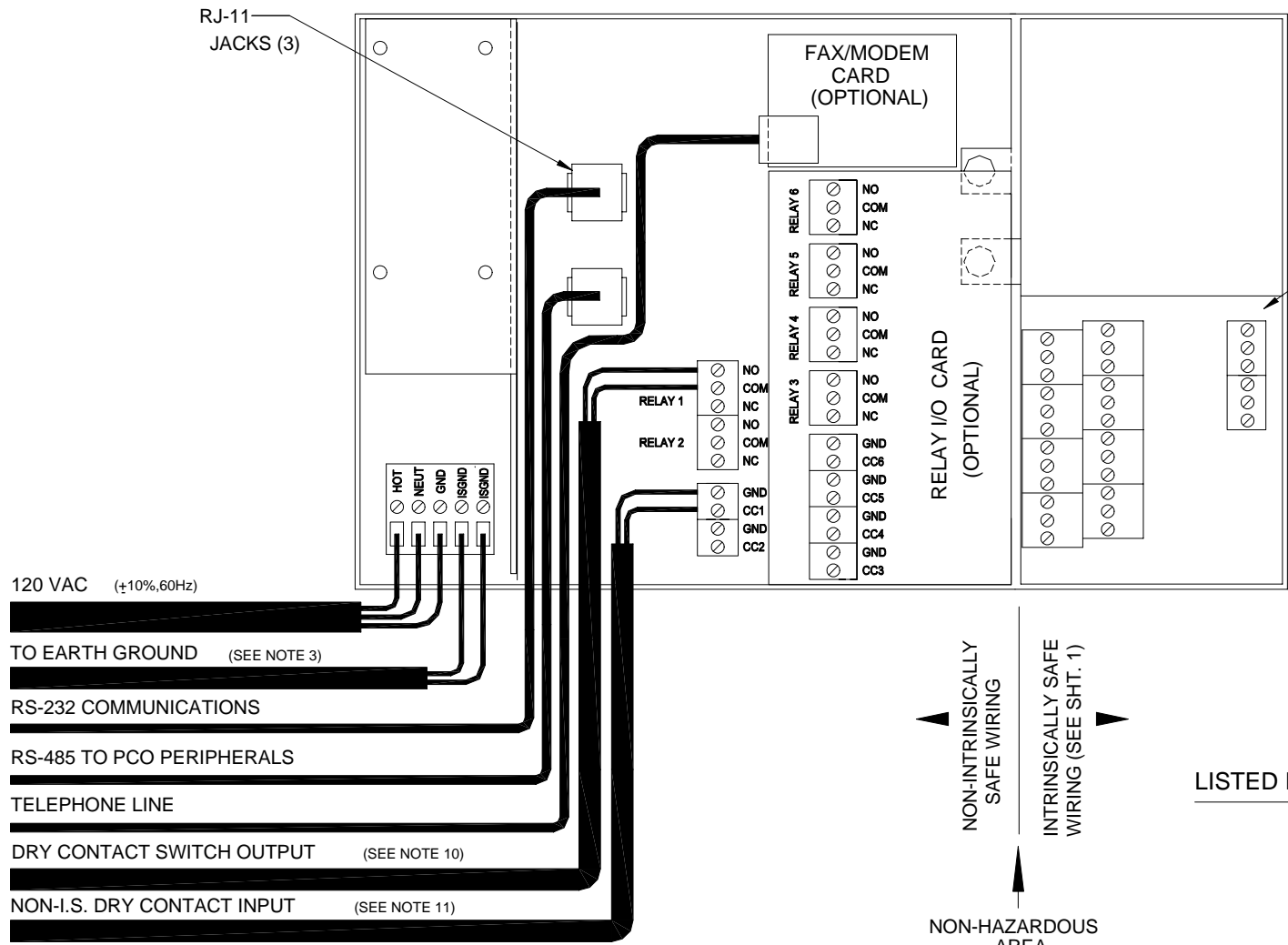
- INDICATOR MOUNTING: MOUNT AS CLOSE AS PRACTICAL TO DIVIDING BOUNDARY OF THE HAZARDOUS AND NON HAZARDOUS AREAS. NEVER MOUNT INSIDE HAZARDOUS AREA.
- INTRINSICALLY SAFE INPUT WIRING: WIRE AND INSTALL IN ACCORDANCE WITH ARTICLE 504 OF NATIONAL ELECTRICAL CODE ANSI/NFPA 70. NON-INTRINSICALLY SAFE WIRING CANNOT BE RUN IN CONDUIT OR OPEN RACEWAYS TOGETHER WITH INTRINSICALLY SAFE WIRING.
- WARNING: TO INSURE INTRINSIC SAFETY, A 12 AWG WIRE MUST BE CONNECTED TO EACH TERMINAL ON THE EARTH GROUND TERMINAL BLOCK. EACH WIRE MUST THEN BE CONNECTED TO THE SYSTEM EARTH GROUND. THE RESISTANCE BETWEEN THE EARTH GROUND TERMINAL BLOCK AND EARTH GROUND SHALL BE LESS THAN 1 OHM.
- INDICATOR CANNOT BE CONNECTED TO EQUIPMENT THAT USES OR GENERATES MORE THAN 250 VOLTS WITH RESPECT TO EARTH.
- THE FOLLOWING PART NUMBERS MAY BE USED; MODEL MP440, MP450, MP451, MP452, MP461, MP462 OR MP463 (PAT. 7030 OR 7100 SERIES). USE ONLY CABLE P/N'S SPECIFIED ON SHEET 3.
- THE FOLLOWING PART NUMBERS MAY BE USED; MODEL ES825-100(F), MODEL ES825-200(F) OR MODEL ES820-100 (IMO IND. PART NUMBER 148941 (ELS-1100)). USE ONLY CABLE P/N'S SPECIFIED ON SHEET 3.
- MAY BE ANY PASSIVE, DRY CONTACT DEVICE INCLUDING MODEL LS600 SERIES, LS610, RSU800 SERIES OR HS100 SERIES (GEMS WP525A SERIES).
- THE FOLLOWING PART NUMBERS MAY BE USED; MODEL ES820-200 (IMO IND. P/N 148797 (ECS-1100)). USE ONLY CABLE P/N'S SPECIFIED ON SHEET 3.



APPROVALS		DATE	PNEUMERCATOR CO. 120 FINN COURT FARMINGDALE, N.Y. 11735		
DRAWN	R. KHARE	091297	INTRINSICALLY SAFE LOOP MODEL TMS 2000		
CHECKED			SIZE	CAGE CODE	DWG. NO.
ISSUED			D	47876	50253
DO NOT SCALE DRAWING		SCALE	NONE	SHEET	1 OF 3
					REV. B

RJ-11 JACKS (3)

REVISIONS			
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120 VAC (±10%, 60Hz)

TO EARTH GROUND (SEE NOTE 3)

RS-232 COMMUNICATIONS

RS-485 TO PCO PERIPHERALS

TELEPHONE LINE

DRY CONTACT SWITCH OUTPUT (SEE NOTE 10)

NON-I.S. DRY CONTACT INPUT (SEE NOTE 11)

NON-INTRINSICALLY SAFE WIRING
 INTRINSICALLY SAFE WIRING (SEE SHT. 1)
 NON-HAZARDOUS AREA
 (SEE NOTE 1)
 HAZARDOUS AREA
 CLASS I, GROUPS C,D

LISTED INDICATOR MODEL NUMBER

MODEL TMS 2000

NOTES - NON-INTRINSIC SAFETY

- 10. DRY CONTACT SWITCH OUTPUT WIRING: WIRE TO COMMON AND EITHER NORMALLY OPEN OR NORMALLY CLOSED FOR DESIRED SWITCH CONTACT. OUTPUT RATED 10 AMPS AT 120 VAC, 6 AMPS AT 240 VAC. (VOLTAGE MUST BE LESS THAN 120 VAC OR 240 VAC RESPECTIVELY).
- 11. NEC CLASS 2 CIRCUITS.

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ISSUED			D	47876
DO NOT SCALE DRAWING		SCALE	NONE	DWG. NO.
				50253
			REV.	B
			SHEET 2 OF 3	

CABLE SELECTION GUIDE FOR INTRINSIC SAFETY

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GROUP C

GROUP D

TYPE (SEE NOTE 2)	MANUFACTURERS		COLOR CODE	TOTAL LENGTH FEET (SEE NOTE 3)		CHANNEL MAXIMUM LENGTH FEET (SEE NOTE 4)		TOTAL LENGTH FEET (SEE NOTE 3)		CHANNEL MAXIMUM LENGTH FEET (SEE NOTE 4)	
	BELDEN	ALPHA									
MAG. PROBE MP440, MP450, MP451, MP452, MP461, MP462 OR MP463 (PAT. 7030 OR 7100 SERIES)											
S	8441	1736C	BLK/RED	5300	3000	6000	3000	6000	3000		
S	8761	2401C	BLK/CLR	9200	4600	9200	4600	9200	4600		
S	82761	-	BLK/RED	9200	4600	9200	4600	9200	4600		
S,B	83552	-	BLK/WHT	6000	3000	6000	3000	6000	3000		
3-WIRE OPTO-SENSOR ES825-100(F), ES825-200(F), ES820-100 (ELS-1100)											
NS	8443	1173C	BLK/RED/GRN (BELDEN) BLK/RED/WHT (ALPHA)	2700	2700	11300	5500	11300	5500		
S	9608	6327	BLK/RED/WHT	2600	2600	11000	5500	11000	5500		
S	-	2403C	BLK/RED/WHT	3800	3800	16000	5500	16000	5500		
S,B	83553	-	BLK/RED/WHT	2700	2700	11000	5500	11000	5500		
4-WIRE OPTO SENSOR ES820-200 (ECS-1100)											
NS	8444	1174C	BLK/RED/WHT/GRN	2700	2700	11300	5500	11300	5500		
S	9609	6328	BLK/RED/WHT/GRN	2600	2600	11000	5500	11000	5500		
S	-	2404C	BLK/RED/WHT/GRN	4000	4000	16000	5500	16000	5500		
S,B	83554	-	BLK/RED/WHT/GRN	2800	2800	11000	5500	11000	5500		

NOTES:

- 1.) ALL CABLES SPECIFIED HAVE A NOMINAL PAIR INDUCTANCE OF 0.2uH/FT.
- 2.) TYPE SPECIFIERS
NS = NON-SHIELDED
S = SHIELDED
B = DIRECT BURIAL (IF ALLOWABLE PER LOCAL CODES)
- 3.) TOTAL LENGTH: MAG. PROBES - TOTAL COMBINED CABLE LENGTH FOR ALL MAG. PROBES
LEAK SENSORS - TOTAL COMBINED CABLE LENGTH FOR ALL LEAK SENSORS
- 4.) CHANNEL MAXIMUM LENGTH: MAXIMUM CABLE LENGTH PER MAG. PROBE OR SENSOR.
- 5.) FOR OPTO-SENSORS, SHIELDED CABLE IS NOT REQUIRED, BUT IF USED IN THE APPLICATION, THE SHIELD MUST BE CONNECTED TO "SHD" TERMINAL IN CONSOLE I.S. COMPARTMENT.

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CHECKED		SIZE	CAGE CODE	DWG. NO.	50253	REV.	B
ISSUED		D	47876				
DO NOT SCALE DRAWING				SCALE	1/1	SHEET 3 OF 3	