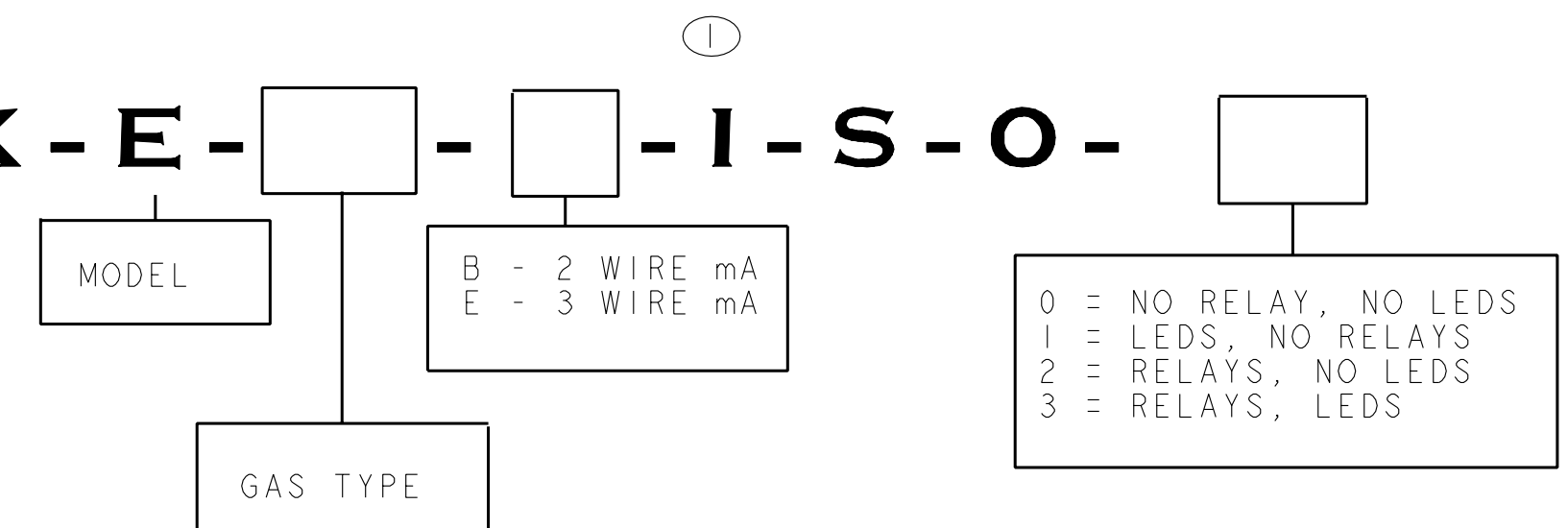


A - ULTIMAX - E - - - I - S - O -

REVISION CODE



CABLE LENGTH AND WIRE SIZE (TOXIC GAS OR OXYGEN) SENSOR, 4-20 mA SIGNAL OUTPUT (TWO WIRE SENSOR)

WIRE SIZE	MAXIMUM CABLE LENGTH IN FEET @ 24 VDC	MAXIMUM LOAD RESISTANCE	MAXIMUM CABLE LENGTH IN FEET @ 12 VDC	MAXIMUM LOAD RESISTANCE
22 AWG	7000	600 Ohms	4000	100 Ohms

CABLE LENGTH AND WIRE SIZE (COMBUSTIBLE GAS) SENSOR, 4-20 mA SIGNAL OUTPUT (THREE WIRE SENSOR)

WIRE SIZE	MAXIMUM CABLE LENGTH IN FEET @ 24 VDC	MAXIMUM LOAD RESISTANCE	MAXIMUM CABLE LENGTH IN FEET @ 12 VDC	MAXIMUM LOAD RESISTANCE
22 AWG	1000	600 Ohms	--	250 Ohms
18 AWG	2500		900	
16 AWG	4200		1400	
12 AWG	10000		3600	

CABLE LENGTH AND WIRE SIZE (POWER SUPPLY 24 VDC) (TOXIC GAS OR OXYGEN) SENSOR, 4-20 mA SIGNAL OUTPUT (THREE WIRE SENSOR)

WIRE SIZE	MAXIMUM CABLE LENGTH IN FEET @ 24 VDC	MAXIMUM LOAD RESISTANCE
22 AWG	12000	600 Ohms

POWER CABLE DISTANCES FOR THE ULTIMA X SERIES GAS MONITOR WITH INTERNAL RELAYS (4-20 mA MODEL)

SENSOR TYPE	POWER SUPPLY VOLTAGE	WIRE SIZE	MAXIMUM CABLE LENGTH (IN FEET)	MAXIMUM LOAD RESISTANCE (mA OUTPUT ONLY)
CATALYTIC COMBUSTIBLE	12 VDC	16 AWG	900	300 Ohms
CATALYTIC COMBUSTIBLE	24 VDC		3000	600 Ohms
TOXIC OR OXYGEN	12 VDC		2500	300 Ohms
TOXIC OR OXYGEN	24 VDC		8000	600 Ohms

CUSTOMER _____

P.O.# _____

MSA # _____

LOCATION _____

TAG # _____

TOTAL NO. OF UNITS _____

CURRENT DRAW

SUPPLY VOLTAGE	7 VDC	24 VDC	7 VDC	24 VDC
OXYGEN	21mA MAX	21mA MAX	220mA MAX	60mA MAX
COMBUSTIBLE	N/A	N/A	610mA MAX	200mA MAX
WIRE	2 WIRE	2 WIRE	3 WIRE	3 WIRE

- NOTES:
- INSTRUMENT WEIGHT = 10.4 LBS (4.72 KG).
 - INSTRUMENT HOUSING IS MADE OF 316 STAINLESS STEEL.
 - DIMENSIONS SHOWN IN INCHES (MILLIMETERS).
 - GROUND SHIELD AT POWER SUPPLY AND TERMINATE THROUGH RC NETWORK AT FAR END.
 - CHECK TAG FOR AREA CLASSIFICATION.
 - - - INDICATES FIELD CONNECTIONS BY OTHERS.
 - CHECK SENSOR LABEL FOR GAS TYPE, RANGE, AND ATO ORDERING NUMBER.
 - CUSTOMER INSTALLED NORMALLY OPEN PUSH BUTTON SWITCH.
 - MOUNT UNIT WITH SENSOR INLET FACING DOWN.

AUTHORIZED COUNTRY	MSA MINE SAFETY APPLIANCES CO. PITTSBURGH, PA 15230, USA	THIS DRAWING IS THE PROPERTY OF MSA AND IS MADE AVAILABLE TO YOU IN CONFIDENCE AND SUBJECT TO THE FOLLOWING: NO PERMISSION IS GRANTED TO PUBLISH, USE, REPRODUCE, TRANSMIT OR DISCLOSE THIS DRAWING, OR ANY INFORMATION CONTAINED THEREIN TO OTHERS WITHOUT THE PRIOR WRITTEN CONSENT OF MSA EXCEPT FOR THE MANUFACTURE OF ARTICLES FOR MSA. SCHUTZVERMERK NACH DIN 34 BEACHTEN. MSA AUER GmbH.	DO NOT SCALE DWG.
MSA STANDARD SHOP PRACTICES APPLY	JOB NO. 30002141 PH0718	APPROVAL AGENCY CODE: (N, M, I, Q, S, H, R, T, R, I, D, O, C, .)	
CRITICAL SYMBOLS	DRAWN BY LCR 9/13/02	DATE	
MAJOR A (NO MARK)	CHECKED BY K. McKEEVER 9-26-02	PROJ. ENGR.	
MAJOR B	S. TURNER 9-26-02	QUALITY ASSURANCE	
100% INSPECTION	B. APEL 9-26-02	MANUFACTURING	
TOLERANCES UNLESS OTHERWISE SPECIFIED	R. SMIDL 9-26-02		
FRACTIONAL ± 1/64			
2 PL DEC. ± 0.01			
3 PL DEC. ± 0.005			
ANGULAR ± 1 deg.			
SEE MSA STANDARD SHOP PRACTICES FOR DRILLED HOLE TOLERANCES			
D SK 10000015095		DOCUMENT NO.	
		CADD REF: 10000015095	SCALE: 1:000
			SHEET 1 OF 1

REVISIONS

SEP 26 2002	7-7-2004
"1" WAS "0"	
ECO#500000159520	KPR
JUL 7 2004	

INSTALLATION OUTLINE, ULTIMA XE