

HI-QREM

User's Manual

1-20-09



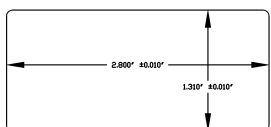
O TEK TM
CORP.
SINCE 1974

4016 E. Tennessee St.
Tucson, AZ 85714-2130
Tel: 520-748-7900
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Mounting Instructions for the HI-QREM

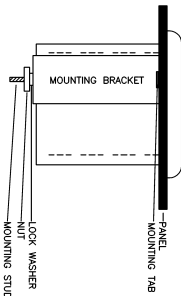
MOUNTING

PANEL CUTOUT

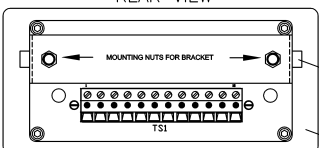


2.800" ±0.010"
1.310" ±0.010"

SIDE VIEW



REAR VIEW



MOUNTING INSTRUCTIONS:

- 1) INSTALL METER THROUGH PANEL CUTOUT.
- 2) INSTALL MOUNTING BRACKET OVER METER, WITH THE MOUNTING STUDS GOING THROUGH MOUNTING HOLES.
- 3) MOUNTING TABS SHOULD BE BETWEEN METER AND PANEL.
- 4) INSTALL LOCK WASHERS.
- 5) INSTALL NUTS AND TIGHTEN UNTIL FLUSH WITH PANEL.

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	A	INITIAL RELEASE	1/20/2009	NS

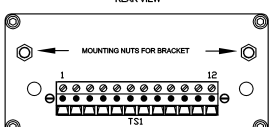
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES.

-TOLERANCES-	
DECIMALS ±0.1	FRACTIONS ±1/32
.XX = ±0.01	ANGLES ±2°
.XXX = ±0.003	

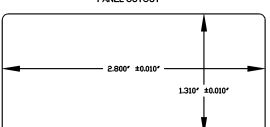
CONTRACT NO	OTEK™ CORP. SINCE 1974	
APP'D DRAWING	4016 E. Tennessee St.	
APP'D DRAWING	Tucson, AZ. 85714	
APP'D TAGGING	WWW.OTEKCORP.COM	
APP'D SPECIALS	SIZE A FSCM NO. 57861 DWG NO. 86-NPM1	REV A
	SCALE NONE	SHEET 1 OF 1

Electrical Connections for the HI-QREM

REAR VIEW



PANEL CUTOUT



2.800" ±0.010"
1.310" ±0.010"

TERMINAL DESCRIPTION

1. + Power supply input for isolated 5, 12, 24 or 48VDC options.
2. Return for isolated power supply inputs.
3. +5VDC power input for non-isolated options or +5VDC output for isolated power options.
4. Intensity Control, connect to terminal 3 for normal operation.
5. Default Pin, connect to terminal 8 to force default mode.
6. RS485 "B" / RS232 TXD
7. RS485 "A" / RS232 RXD
8. RS485 / RS232 GROUND
9. USB +5V
10. USB GND
11. USB DATA -
12. USB DATA +

NOTE: For RS485 install a 120 ohm terminating resistor across pins 6 & 7 on the first & last units on the bus.

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APP'D SPECIALS	SIZE A FSCM NO. 57861 DWG NO. 86-HI-QREM0	REV B
	SCALE NONE	SHEET 1 OF 1

2 of 6

Serial Communications Protocol for the HI-QREM

I. INTRODUCTION

The HI-QREM uses the standard OTEK communication protocol, ASCII S + <ADDRESS> + <COMMAND> + <CR>. The starting character is S followed by the address. The default address is 01. The command follows and must be terminated by a carriage return <CR>. This document applies to firmware release SL1_R101.

II. DEFAULT AND USER MODES

The HI-QREM has two modes of operation. In DEFAULT mode, the device uses factory set operating parameters defined in section IV. In USER mode, address, baud rate, configuration, flashing, and intensity settings revert to the state they were in the last time a WRITE command was issued. The run mode is determined on power-up by the connection of the default terminal. To enable the factory default settings, jumper terminals 5 & 8 together, then cycle power.

III. DISPLAYED ASCII COMMAND SET

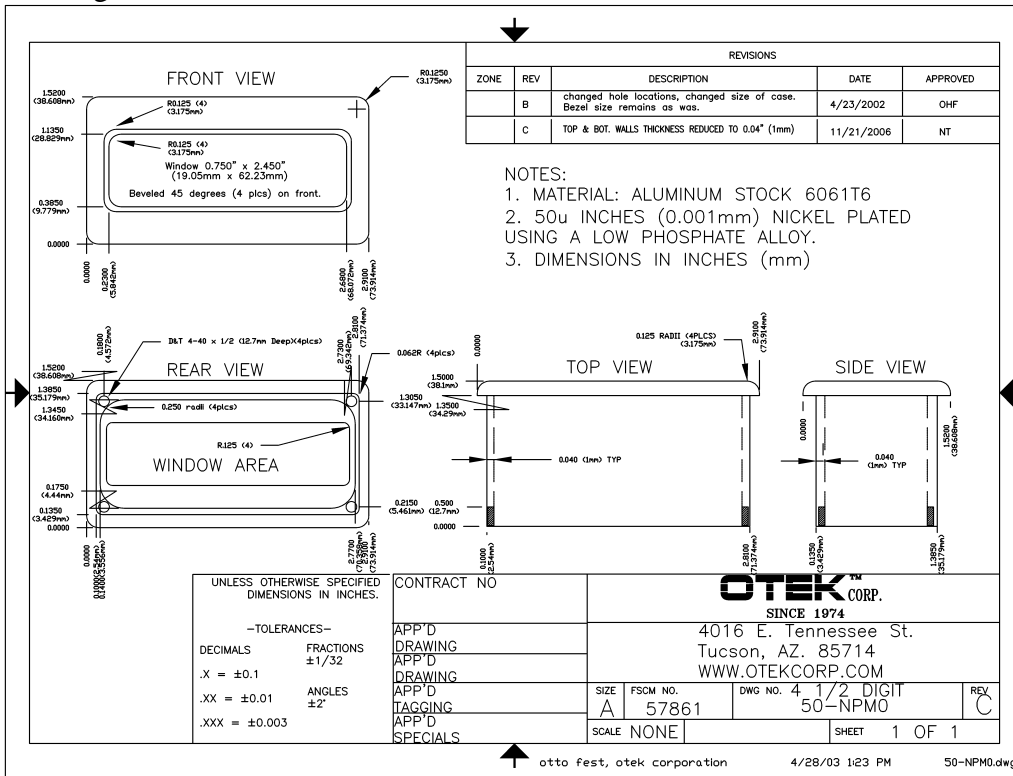
This table shows the hexadecimal ASCII number, the character for that number and the character as displayed on the HI-QREM digital display. Sending ASCII 8 (BS - destructive backspace) will erase the previous character sent to the HI-QREM input buffer. Sending ASCII 27 (ESC) will clear the HI-QREM input buffer.

HEX	CHAR	DISPLAYED		HEX	CHAR	DISPLAYED
20		(SPACE)		47	G	g
2D	-	-		48	H	H
2E	.	.		49	I	i
2F	/	-		4A	J	J
30	0	0		4B	K	-
31	1	1		4C	L	L
32	2	2		4D	M	-
33	3	3		4E	N	n
34	4	4		4F	□	o
35	5	5		50	P	P
36	6	6		51	Q	-
37	7	7		52	R	r
38	8	8		53	S	S
39	9	9		54	T	t
41	A	A		55	U	U
42	B	b		56	V	-
43	C	c		57	W	-
44	D	d		58	X	-
45	E	E		59	Y	y
46	F	F		5A	Z	-

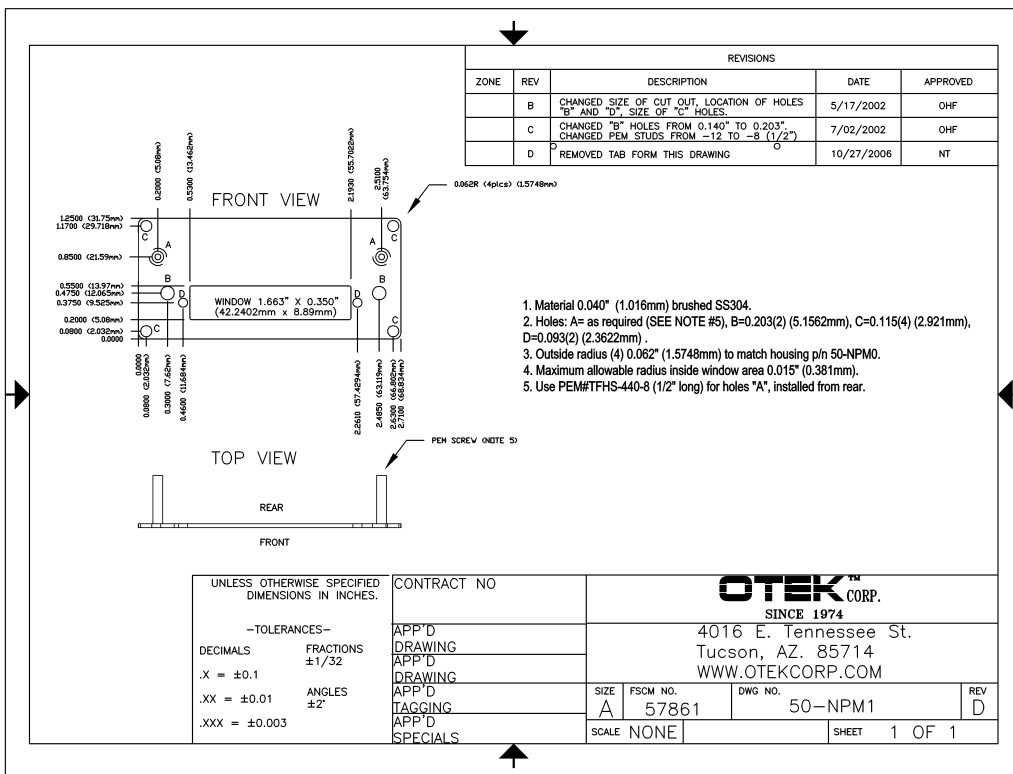
IV. COMMANDS

COMMAND	DESCRIPTION	RANGE	EXAMPLE
ADDRn	Changes the address. Default is 01.	n = 0 to 2 ASCII characters.	S01ADDR99<CR>
BAUDnn	Changes the baud rate. Default is 9600.	nn = 12 ⇒ 1200 baud. nn = 24 ⇒ 2400. nn = 48 ⇒ 4800. nn = 96 ⇒ 9600.	S01BAUD2400<CR>
Dnn	Displays ASCII characters on 7 segment display. See also section II.	nn= ASCII chars.	S01DHI<CR> display shows HI
FLASHn	Flashes display Default is 0.	n = 0 to 1 no flashing. n = 2 to 3 slowest (1.14 S). n = 4 to 5 slow. n = 6 to 7 medium. n = 8 to 9 fastest (142 mS).	S01FLASH0<CR> S01FLASH3<CR>
INTn	Change display Intensity. There are four levels. Default is 9.	n = 0 off. n = 1 to 3 dim. n = 4 to 6 medium. n = 7 to 9 brightest.	S01INT0<CR> display off S01INT9<CR> display max
PTn	Light decimal point position. Default is 0.	n = 0 no decimals on. n = 1 to 2, numbered from left of the display.	S01PT1<CR> 1st decimal point on.
RST	Resets HI-QREM to user values held in EEPROM.	N/A	S01RST<CR>
WRITE	Saves configuration data to EEPROM. Data saved includes: ADDR, BAUD, FLASH and INT	N/A	S01WRITE<CR>

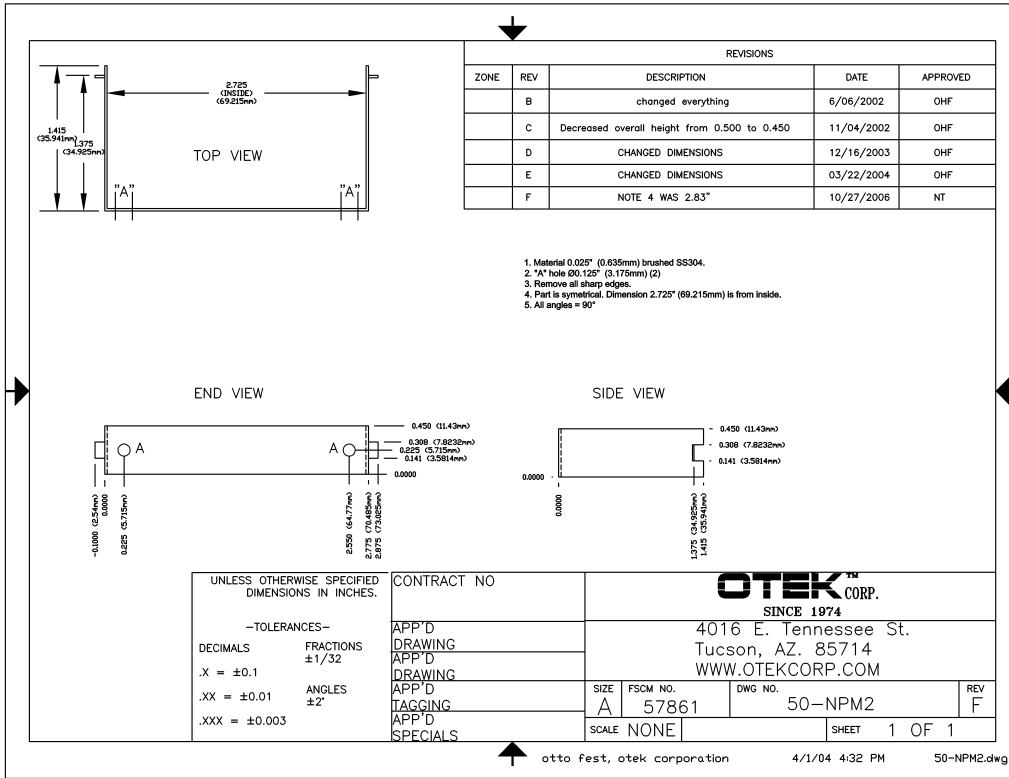
Mechanical Information for the HI-QREM Housing



Back Plate

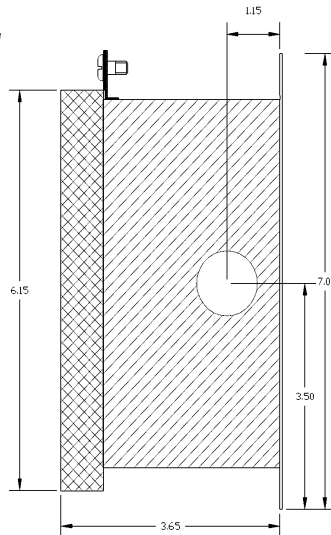
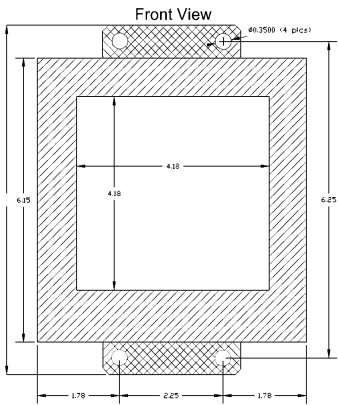


Mechanical Information for the HI-QREM CONT. Mounting Bracket



Side View

SANITARY CASE



EXPLOSION PROOF

