Automation Electronics

Oyster HHDT Hand Held Data Terminal

The HHDT is manufactured for Automation Electronics by Oyster Terminals Ltd. It was developed as a replacement for the less capable DUKS unit for our pump off controllers.

Its enhanced capabilities include the transmission of the full 7-bit ASCII character set, a much larger selection of function keys, and the ability to display dynamometer cards graphically. It responds to most ANSI VT-100 control sequences appropriate for a hand held terminal and transmits extended codes for special function keys to allow their identification and use in the controller.

Features

Display

- 8 line by 20 column layout
- Up to 160 characters can be displayed
- Standard characters are formed using a 5 x 7 dot matrix
- Double height and double width characters can be displayed
- 128 x 64 pixels are available for graphic displays
- Supports extensive subset of VT100 commands
- Display can be back-lit, contrast controlled through key pad

Key Pad

- 45-key alphanumeric membrane key pad
- 9 row by 5 column key layout
- Optimized for Automation Electronics controllers
- Four mode selectable key overlays allow transmission of all 7-bit ASCII
- Left Arrow, Right Arrow, Up Arrow, and Down Arrow
- Home, End, Page Up, and Page Down
- Insert, Delete, and Help (Alt Function Key 1)
- Normal, Shift, and Control Function Key 1 through 10, and Alt Function Key 2 and 3
- Internal HHDT controls for turning the unit off, accessing the configuration menu, turning on the back light, and adjusting the contrast.

Specifications

Mechanical	
Length:	206 mm
Width:	95 mm
Depth:	50 mm
Weight:	350 g
Environmental	
Storage temperature:	-4 to 131 °F (-20 to 55 °C)
Operating temperature:	32 to 122 °F (0 to 50 °C)
Power	
Host powered:	+5 V_{DC} ± 0.25 V_{DC}
Power consumption:	30 mA typical, 35 mA with back-light on.
Memory back up	Lithium battery protects data, screen display and setup configuration.
CPU / Memory	
CPU:	80C562
Memory:	32 kBytes ROM, 32 kBytes lithium battery backed RAM
Communication	
Baud Rates:	75 to 19200 in standard steps.
Data word format:	1 start bit, 7 or 8 data bits; odd, even, or no parity bit; 1 or 2 stop bits.
Handshaking:	DTR/CTS and X-ON/X-OFF
Data Transfer:	Special messages permit additional data download and upload capabilities with built in CRC-16 security check words for data reliability.
EMC Approvals	
Emission:	EN55022 Class B.
Static discharge:	EN55101-2 and IEC801-2 level 4.
Radiated susceptibility:	EN55101-3.
Conducted susceptibility:	IEC801-4 (1 kV).
Cables	Coiled cable HE14 one end, 25 pin D type the other.

Key Assignments

Unshifted Oyster Keys

A #41	B #42	C #43	D #44	E #45
F #46	G #47	H #48	I #49	J #4A
K #4B	L #4C	M #4D	N #4E	O #4F
P #50	Q #51	R #52	S #53	T #54
U #55	V #56	W #57	X #58	Y #59
1 #31	2 #32	3 #33	* #2A	Z #5A
4 #34	5 #35	6 #36	↑ #01#48	↓ #01#50
7 #37	8 #38	9 #39	← #01#4B	→ #01#4D
- #2D	0 #30	. #2E	Enter #0D	MODE Internal

Mode Oyster Keys

” #22	‘ #60	’ #27	: #3A	; #3B
? #3F	@ #40	$ #24	{ #7B	} #7D
# #23	\ #5C	_ #5F	~ #7E	^ #5E
[#5B	] #5D	! #21	— #7C	& #26
(#28	) #29	< #3C	> #3E	= #3D
F1 #01#3B	F2 #01#3C	F3 #01#3D	/ #2F	% #25
F4 #01#3E	F5 #01#3F	F6 #01#40	PgUp #01#49	PgDn #01#51
F7 #01#41	F8 #01#42	F9 #01#43	Home #01#47	End #01#4F
+ #2B	F10 #01#44	, #2C	Space #20	MODE Internal

Mode-Mode Oyster Keys

a #61	b #62	c #63	d #64	e #65
f #66	g #67	h #68	i #69	j #6A
k #6B	l #6C	m #6D	n #6E	o #6F
p #70	q #71	r #72	s #73	t #74
u #75	v #76	w #77	x #78	y #79
SF1 #01#54	SF2 #01#55	SF3 #01#56	Bkl Internal	z #7A
SF4 #01#57	SF5 #01#58	SF6 #01#59	Contrast Internal	Contrast Internal
SF7 #01#5A	SF8 #01#5B	SF9 #01#5C	Status Internal	Off Internal
Ins #01#52	SF10 #01#5D	Del #7F	Help #01#68	MODE Internal

Mode-Mode-Mode Oyster Keys

^A #01	^B #02	^C #03	^D #04	^E #05
^F #06	^G #07	^H #08	^I #09	^J #0A
^K #0B	^L #0C	^M #0D	^N #0E	^O #0F
^P #10	^Q #11	^R #12	^S #13	^T #14
^U #15	^V #16	^W #17	^X #18	^Y #19
CF1 #01#5E	CF2 #01#5F	CF3 #01#60	ESC #1B	^Z #1A
CF4 #01#61	CF5 #01#62	CF6 #01#63	GS #1D	FS #1C
CF7 #01#64	CF8 #01#65	CF9 #01#66	US #1F	RS #1E
AF2 #01#69	CF10 #01#67	AF3 #01#6A	NULL #00	MODE Internal

Automation and Electronics, Inc.
111 Big Horn Road
PO Box 3319
Casper, Wyoming 82601

Changed June 18, 2007 - 1:23pm

Contact Information
Phone (307) 234-9311
FAX (307) 234-9438
or www.autoelect.com