

ASCII command list for optris CT

Description	Char	Format	Poll	Set	Legal Values	Factory default
Ambient temperature compensation	A	nnn.n	√	√	-40...900°C	
Advanced hold + average	AA	nnn.n	√	√	000.0...999 s	0.0 s
Control ambient temperature compensation	AC	n	√	√	0=head temperature 1=fixed value 2=external input	0
Advanced hold threshold	C	nnn.n	√	√	in current scale (C/F)	300
Device adjustment gain	DG	n.nnn	√	√	0.8000...1.2000	1.0000
Device adjustment offset	DO	nnn	√	√	-200...200	0
Emissivity internal	E	n.nnn	√	√	0.100...1.100	0.970
Error Code	EC	nnnn	√		Hex value of ErrCode	
Preselected emissivity pointer ¹⁾	EP	n	√	√	0...7	5
Source: emissivity/ setpoint for alarm output	ES	X	√	√	1=constant number (E=0.950) E=external analogue input (F2) D=external digital selected (F1-F3)	1
Preselected emissivity value	EV	n.nnn	√	√	0.100-1.100	
Valley hold time ²⁾	F	nnn.n	√	√	000.0-999.9 s	0.0 s
Average time	G	nnn.n	√	√	000.0-999.9 s	0.2 s
Upper limit temperature range	H	nnn.n	√	√	-40...600(900) °C	500.0
Head ambient temperature	I	nnn.n	√		in current scale (C/F)	
Switch panel lock	J	X	√	√	L=locked U=unlocked	U
Lower limit temperature range	L	nnn.n	√	√	-40...600(900) °C	0.0
Output voltage	O	nn.nnn	√	√	0.000...10.000 V 6=controlled by unit	6
Output current	O	nn.nn	√	√	0.00...20.00 mA 21=over range 60=controlled by unit	60
Peak hold time ²⁾	P	nnn.n	√	√	000.0...999.9 s (999=infinite)	
Power	Q	nnnn	√			
Preselected setpoint/ relay function	SV	nnn.n		√	-40...600(900) °C	
Target temperature	T	nnn.n	√		in current scale (C/F)	
Temperature unit	U	X	√	√	C/F	C
Multidrop address	XA	nnn	√	√	000...032 000=single unit	000
Lower limit of device range	XB	nnn.n	√		-40 °C	
Transmission	XG	n.nnn	√	√	0.100...1.000	1.000
Upper limit of device range	XH	nnn.n	√		600(900) °C	
Sensor initialization	XI	n	√	√	1 after reset 0 if XI=0	
Box temperature	XJ	nnn.n	√		in current scale (C/F)	
Analog output mode	XO	n	√	√	0=0-20 mA 4=4-20 mA 5=t/c J 6=t/c K 9=mV	9
Firmware revision	XR		√		current revision number (e.g. 43)	
Serial number	XV		√		e.g. 6100101	
Advanced hold hysteresis ²⁾	XY	nnn.n	√	√		
Head calibration	XZ		√			
Optris protocol	ZZ			√		
¹⁾ E0=1.100, E1=0.500, E2=0.600, E3=0.700, E4=0.800, E5=0.970, E6=1.000, E7=0.950						
²⁾ Setting of Average, Peak, Valley or Advanced hold cancels all other hold modes						
n=number X=capital letter						

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General command structure						
Requesting a parameter (Poll Mode)						
?ECR	"?"	is the command for "Request"				
	"E"	is the parameter requested				
	"CR"	(carriage return, 0Dh) is closing the request				
	It is possible to close with "CR", "LF", 0Dh, 0Ah, but not necessary.					
Setting a parameter (Poll Mode)						
The parameter will be stored into the EEPROM.						
E=0.855CR	"E"	is the parameter to be set				
	"="	is the command for "set a parameter"				
	"0.855"	is the value for the parameter				
	"CR"	(carriage return, 0Dh) is closing the request				
	It is possible to close with "CR", "LF", 0Dh, 0Ah, but not necessary.					
Device response format						
!E0.855CRLF	!"	is the parameter for "Answer"				
	"E"	is the parameter				
	"0.855"	is the value for the parameter				
	"CR" "LF"	(0Dh 0Ah) is closing the answer				
Notification after switching power on						
#XICRLF	"#"	is the parameter for "Notification"				
	"XI"	is the value for the notification (here: XI = unit switched on)				
	"CR" "LF"	(0Dh 0Ah) is closing the answer				
Error message						
Syntax Error "" is the character for "Error"						