



System 4 Thermometer Quick-start Guide

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About this guide

This guide gives the basic information necessary to install an LAND System 4 thermometer and get it working. More detailed information is contained in the 'User Guide'. Information regarding the repair and calibration of the thermometer is contained in the 'Service Manual'.

It is important to check the equipment with which you have been supplied to ensure that all ordered items and accessories have been delivered.

Notes

If the thermometer is to be used in an area of ambient temperature higher than that specified as safe for the thermometer, then the thermometer must be housed in a special cooling jacket available from Land Instruments International.

If the thermometer is to be used in an area where the atmosphere contains a high proportion of dust/smoke/steam etc, then the thermometer must be used in conjunction with a special air purge to keep the lens clean. The air purge is available from LAND.

Where an M6+ is used to measure temperatures below 30 °C / 86 °F, its stability will be improved if it is mounted in jacket 091.560, as this reduces its sensitivity to sudden changes in ambient temperature. A back cap is not required.

For more information on cooling jackets and air purges, refer to the Installation Guides supplied with those products.

SUMMARY SPECIFICATION

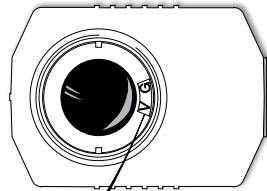
This table provide information which is required to install the Thermometer. For full specification details, refer to the Thermometer User Guide

	M1 450/1000C M1 850/1850F	M1 600/1600C M1 1100/2900F	M1 800/2600C M1 1500/4700F	M2+ 300/1100C M2+ 600/2000F	M4 50/250C M4 150/500F	M4 150/550C M4 300/1000F
Temperature range:	450 to 1000 °C 850 to 1850 °F	600 to 1600 °C 1100 to 2900 °F	800 to 2600 °C 1500 to 4700 °F	300 to 1100 °C 600 to 2000 °F	50 to 250 °C 150 to 500 °F	150 to 550 °C 300 to 1000 °F
Field of view (Nominal):	30:1	100:1	200:1	100:1	30:1	100:1
Min. target diameter:	11.7 mm / 0.46 in	3.5 mm / 0.13 in	1.8 mm / 0.07 in	3.5 mm / 0.13 in	11.7 mm / 0.46 in	3.5 mm / 0.13 in
Vibration:	3 g any axis 10 to 300 Hz					
Humidity:	0 to 99% non condensing					
Sealing:	IP65					
Ambient temperature Specified:	0 to 70 °C / 32 to 158 °F			0 to 60 °C / 32 to 140 °F		5 to 45 °C / 41 to 113 °F
Operating:	-10 to 80 °C / 14 to 176 °F			-10 to 60 °C / 14 to 140 °F		0 to 50 °C / 32 to 122 °F
CE:	EN 50-082-2 (immunity), EN 50-081-1 (emission), IEC 1010 (safety)					
	M6+ 0/300C M6+ 50/600F	M6+ 100/700C M6+ 200/1300F	R1 600/1600C R1 1100/2900F	R1 1000/2600C R1 1800/4700F		
Temperature range:	0 to 300 °C 50 to 600 °F	100 to 700 °C 200 to 1300 °F	600 to 1600 °C 1100 to 2900 °F	1000 to 2600 °C 1800 to 4700 °F		
Field of view (Nominal):	75:1	100:1	50:1	200:1		
Min. target diameter:	6.7 mm / 0.25 in	3.5 mm / 0.13 in	7.0 mm / 0.27 in	1.8 mm / 0.07 in		
Vibration:	3 g any axis 10 to 300 Hz					
Humidity:	0 to 99% non condensing					
Sealing:	IP65					
Ambient temperature Specified:	5 to 50 °C / 41 to 122 °F		0 to 50 °C / 32 to 122 °F			
Operating:	0 to 70 °C / 32 to 158 °F		-10 to 60 °C / 14 to 140 °F			
CE:	EN 50-082-2 (immunity), EN 50-081-1 (emission)					

Installation Information

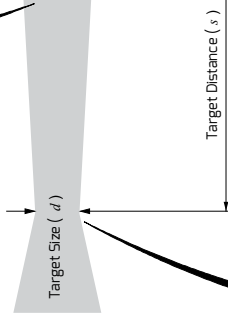
Auxiliary Lens Identification

V	= focusable 500 mm/19.7 in to infinity
S	= focusable 350 mm/13.8 in to 1000 mm/39.4 in
G	= Glass lens
F	= Calcium Fluoride lens



View on Front

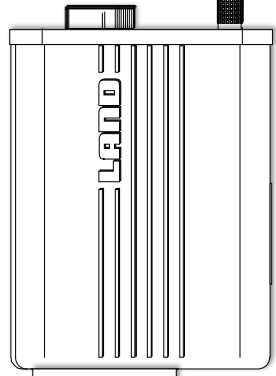
Sight Path
Ensure that the thermometer has an unobstructed view of the target



Target Size Calculation
 $d = F.O.V. \times s$ (See Thermometer Specification)

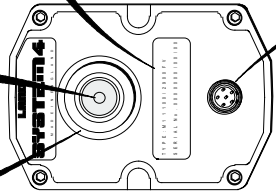
Mounting Pad (Tripod Mounting)
2 holes, 1/4 in BSW, 7 mm/0.28 in deep on 25 mm/0.98 in centres

Focus Ring
Turn clockwise to focus on near objects.
Turn anticlockwise to focus on distant objects.



View on Side

Graticule
Ensure that, for 'M' series thermometers, the target completely fills the area covered by the graticule.
Adjust focus ring to bring target into focus



View on Rear

'+' models have an additional M12 connector, which is used for service and should be capped in normal operation.

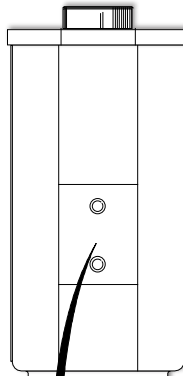
Electrical Connection

Align the two red markers (i.e. align the lugs on the plug of the pre-wired cable with the keyway in the connector on the thermometer). Push the plug into the connector.

Cable Schedule

Processor Pin Nr	Cable Colour	Function
1	Yellow	T+
2	Blue	T-
3	White	E+
4	Screen	Screen
5	Red	V+
6	Black	V-
7	Green	E-

Note
The thermometer body must be earthed electrically via its mountings



View on Base

CONTACT US

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