PYSER - SGI LIMITED
Fircroft Way, Edenbridge, Kent,
United Kingdom, TN8 6HA
Telephone: +44 (0)1732 864111
Facsimile: +44 (0)1732 865544
Email:sales@pyser-sgi.com
www.pyser-sgi.com

Defence & Security
Products Division

NEW

PNP-MTHDS/PNP-MTHDES

The world's smallest, lightest most versatile
HIGH DEFINITION THERMAL IMAGING WEAPON SIGHTS
with DVR option

- 640 x 480 17μm
- Choice of 1x, 1.5x or 2x magniification lenses
- Digital Zoom, 2x and 4x as standard
- User selectable 7 different reticles
- Live video output
- NON ITAR

PNP-MTHDS

The world's smallest, lightest and **most versatile Thermal Imaging weapon sight**

Pyser-SGI Limited is one of the world's leading manufacturers of Night Vision products.

Over the many years of our experience in the design, development and manufacture of night vision monoculars we have worked closely with British, other NATO and non-NATO Armed Forces, Special Forces and Police Special Forces in order to produce the products and features required for today's and tomorrow's threat situations.

The PNP-MTHDS weapon sight range is the result of such close co-operations and is a state of the art world beating product which is complemented by a wide range of specially developed accessories enabling the user to perform a huge variety of missions based on just one sensor platform --- PNP-MTHDS.

Designed, developed and manufactured in Britain by Pyser-SGI to ISO 9001 quality levels the PNP-MTHDS is the world's smallest and lightest thermal imaging weapon sight. Two CR123 batteries, for light weight, give up to 7 hours' continuous operation. High quality IR optics are used for maximum image quality and the entire monocular body, electronics and optics are filled with dry nitrogen for ultimate reliability in all missions.

The unique Near Eye OLED display always produces a large crisp image right in front of the eye and overcomes the "tunnel vision" problem common in inferior designs.

This gives an image having an apparent angle of view of 35° horizontally, which is similar to that of the human eye and therefore considerably aids speed and clarity of target acquisition.

PNP-MTHDS is designed for use on all small arms in calibres 4.6mm, 5.56mm, 7.62mm and 9mm.

Technical Specifications

Thermal Image

Detector
Amorphous Silicon Microbolometer
7-14 microns wavelength
Uncooled
640 x 480 pixel array High Definition
25Hz or 9Hz (optional) refresh rate

Display
Advanced OLED 852 x 600 pixels SVGA
Monochrome
35° apparent image horizontal angle of view

Optics

High quality IR objective lenses
Fully coated eyepiece optics
25mm glass aperture
27mm eye relief
Dioptre adjustment -6 to +3

Focal length	Field of view - Real
17mm	36° x 29° (639 x 479 mils) 1x magnification
25mm	25° x 19° (444 x 337 mils) 1.5x magnification
35mm	18° x 14.5° (320 x 240 mils) 2x magnification

Other focal lengths available on option
Field of view - Apparent - 35° (620 x 465mils)

Detection Distances* (Human sized target)

Human	17mm lens	25mm lens	35mm lens
Detection:	625m	920m	1280m
Recognition:	315m	460m	640m
Identification:	160m	230m	320m

*without using electronic zoom

Controls

By single, intuitive push buttons.
On/Off/NUC (additional NUC facility by remote pressure pad)
Windage and Elevation (Windage and Elevation coordinates are displayed on screen)
1 mil per click (windage/elevation) 17mm
0.7 mil per click (windage/elevation) 25mm
0.5 mil per click (windage/elevation) 35mm
Reticule choice 5 plus no reticule
2x and 4x - electronic zoom
Polarity inversion (Black/hot : White/hot)
Screen brightness +/-
Battery indication on screen

Power
2 x CR123 Lithium batteries
(give up to 7 hours' continuous operation)
Single multipin socket for: PAL video out for recording or transmission.
External power via battery power module

Physical

Model	Length	Height	Width	Weight w/o batteries*
17mm	96mm	74mm	77mm	347g
25mm	110mm	74mm	77mm	377g
35mm	122mm	77mm	77mm	392g

Please note: E variant (DVR) add 19mm to height and 155g to weight

Construction Moulded glass filled polymer main body

Environmental

Waterproof Water resistant to 1m for 30 min
Temperature Operation -20°C to +55°C
Storage -40°C to +65°C

Note: All specifications are nominal

User selectable reticles including reticle off

Pictures show windage and elevation coordinates - number of clicks from central nominal boresight position 0.0

PNP-MTHDES High Definition Thermal Imaging weapon sight with DVR

PNP-MTHDE has an identical specification to PNP-MTHD but is fitted with a 32GB Digital Video Recorder (DVR). The DVR is powered up only when required to conserve power. Recording at 25fps with capacity for up to 120 hours, PNP-MTHDE offers an added level of post activity analysis, vital in both operational and training scenarios. The DVR is very simple to operate and easy to download via USB connector.

Digital Video Recorder

Encoding H.264
Input Channel 1 Ch.
Input impedance 75 ohm Unbalanced
Maximum Input 1.0Vp-p @ 75 Ohm Unbalanced
Output Channel 1 Ch.
Output impedance 75 ohm Unbalanced
Composite PAL
Maximum Output 1.0Vp-p @ 75 Ohm Unbalanced
Memory 32Gb

Controls

The DVR is controlled via four buttons located on top of the unit

DVR on/off, record, play and stop

Recording

Video Recording Resolution

Format	PAL
4CIF	704x576
2CIF	704x288
CIF	352x288

Format	high	normal	low
4CIF	1800Kbps	1000Kbps	500Kbps
2CIF	1200Kbps	800Kbps	400Kbps
CIF	1000Kbps	600Kbps	300Kbps

Video Recording Frame Rate
PAL 25,12,8,6,3,1 fps

Storage File system
FAT32. Recording time dependent on resolution, 40 hours to 120 hours.

PNP-MTHDS High Definition Thermal Imaging Weapon Sight

Part No.	Model Type
561-217S*	PNP-MTHDS with 17mm lens, 36° Horizontal fov 1x mag 25Hz, including pouch
561-225S*	PNP-MTHDS with 25mm lens, 25° Horizontal fov 1.5x mag 25Hz, including pouch
561-235S*	PNP-MTHDS with 35mm lens, 18° Horizontal fov 2x mag 25Hz, including pouch
561-317S*	PNP-MTHDS with 17mm lens, 36° Horizontal fov 1x mag 9Hz, including pouch
561-325S*	PNP-MTHDS with 25mm lens, 25° Horizontal fov 1.5x mag 9Hz, including pouch
561-335S*	PNP-MTHDS with 35mm lens, 18° Horizontal fov 2x mag 9Hz, including pouch

PNP-MTHDES Thermal Night Vision Weapon Sight with DVR

Part No.	Model Type PNP-MTHDES
561-217ES*	PNP-MTHDES with 17mm lens, 36° Horizontal fov 1x mag 25Hz, incorporates Digital Video Recorder
561-225ES*	PNP-MTHDES with 25mm lens, 25° Horizontal fov 1.5x mag 25Hz, incorporates Digital Video Recorder
561-235ES*	PNP-MTHDES with 35mm lens, 18° Horizontal fov 2x mag 25Hz, incorporates Digital Video Recorder
561-317ES*	PNP-MTHDES with 17mm lens, 36° Horizontal fov 1x mag 9Hz, incorporates Digital Video Recorder
561-325ES*	PNP-MTHDES with 25mm lens, 25° Horizontal fov 1.5x mag 9Hz, incorporates Digital Video Recorder
561-335ES*	PNP-MTHDES with 35mm lens, 18° Horizontal fov 2x mag 9Hz, incorporates Digital Video Recorder

All models are delivered in protective pouches, complete with 2 x CR123 Lithium batteries and full pictorial operating instructions.

Accessories for PNP-MTHDS	
550-007	Shuttered eyeguard, NSN 6650-99-789-6513
560-010	Anti-mist filter for eyepiece, NSN 6650-99-731-1262
561-401	Video Out Cable to phono plug
561-409S	External Battery Power Module fed by 6Volts DC
561-410S	6Volts DC Power Supply for 561-409 (UK)
561-411S	6Volts DC Power Supply for 561-409 (EU)
FBS-034	Small Hermetic Case, holds PNP-MTHDS in its pouch

*Export of this product from the UK is controlled under U.K. Export Licence Regulations. All goods are supplied under our standard conditions of trade.
We reserve the right to amend design and specifications without prior notification

Visit our website on www.pyser-sgi.com for further information on the complete range of products available from Pyser-SGI Limited.

PYSER - SGI LIMITED
Fircroft Way,
Edenbridge, Kent,
United Kingdom, TN8 6HA
Telephone: +44 (0)1732 864111
Facsimile: +44 (0)1732 865544
Email:sales@pyser-sgi.com
www.pyser-sgi.com

PYSER - SGI (ASIA) PTE LTD
65 Ubi Crescent,
#06-01 Hola Centre,
408559 Singapore
Telephone: +65 6749 7784
Facsimile: +65 6749 3992
Email:sales@pyser-sgi.com.sg
www.pyser-sgi.com

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