



VPT-501/HZ

Article-No.: 75304

Pan/Tilt Head with heater 24VAC,
100°/sec. max., RS-485, 24VAC, RAL7032

Main features

12kg Load Capacity
Horizontal Rotation Range: +/-185°
64 Presets
RS-485 Serial Interface (Multiple Protocol)
Protection Rating: IP66

Speed: 100°/sec. max.
Backlash: <0,2°
Autopan Function
Supply Voltage: 24VAC, 50/60Hz
Housing Finish: RAL7032




Specifications

Series	eneo VPT
Load capacity	12 kg
Load capacity	(load assembly in the horizontal and vertical center of gravity required)
Speed range at manual control	0 ~ 100° horizontal, 0 ~ 50° vertical. 0 to 100°/sec.: 0.22sec.
Preset speed	0 ~ 100° horizontal, 0 ~ 50° vertical. 180° positioning needs 2.5sec. (at max. speed)
Rotation range	359°
Tilt range	+/-90°
Backlash	<0.2°
Limit switch control	By external PC configuration Software
Autopan	yes
Pattern	no
Positioned freely	yes
Number of presets	64
Serial interfaces	RS-422, RS-485
Protocols	Videor, Fastrax IIE, Pelco D&P, Siemens (TTY), Philips, with selectable Baud rate. Other protocols: upon request

Specifications (continued)

Relay output	Aux 1~3 (open collector). Aux 1+2 control 2 Relais on R&D board. Usable for diagnose functions: Position feedback, endposition condition (active/inactive), Inside temperature, motor and camera supply voltage (42VDC, 12VDC)
Connectors	13pin and 24pin sockets
Supply voltage for lenses	4 ~ 11.5VDC
Camera voltage supply	12VDC, 24VAC; 1.0A
Supply voltage	24VAC
Power consumption	120W max. (incl. Camera and Heater)
Temperature range (Operation)	-20°C ~ +50°C
Temperature range with built-in heater	-40°C ~ +50°C
Heater	yes
Heater	24 VAC/24 W
Mounting of illuminator possible	optional
Mounting	Upright or upside down
Protection rating	IP66
Housing material	Aluminium, Plastic
Housing	Aluminium frame with plastic covers
Colour (housing)	Eloxal C0
Colour	C0 anodized / RAL7032
Weight	8.0kg
Parts supplied	Screw set, 13pin / 24pin connectors, Allen key (5mm), PC Setup and Control Software on CD ROM
Special features	No mechanical end switches, no potentiometer for positioning feedback. Stop position control configuration made by PC Control Software (included). Absolute positioning



Optional Accessories

Image	Artikel-Nr. / Typ	Description
	WD-32	Wall Bracket for Pan/Tilt Heads VPT-40/501/601/651 Series, RAL7032
	MK-21	Pole Column Spacer for Pan/Tilt Heads, 200mm Height, RAL7032
	NE-128	Voltage supply unit 230V/24VAC-5A, IP66

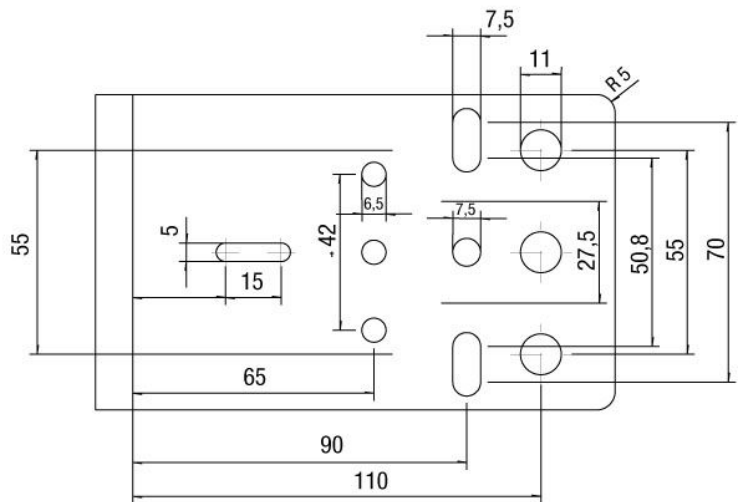
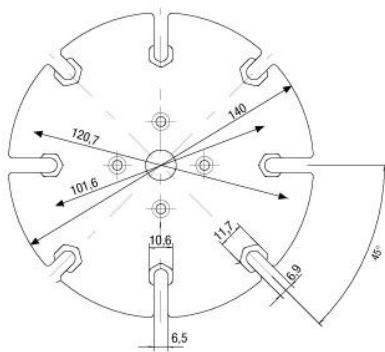
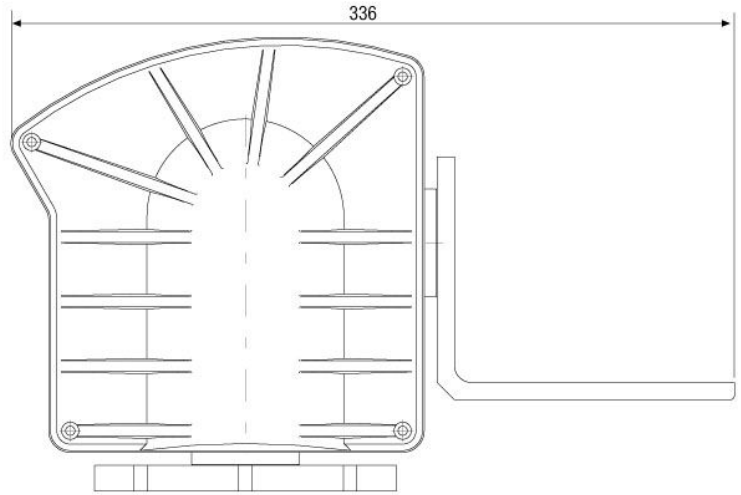
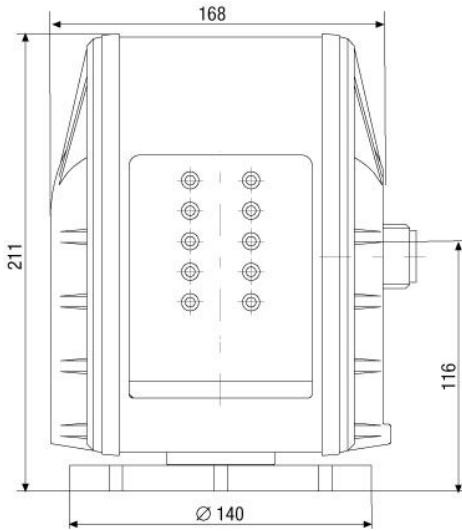
Optional Accessories (continued)

Image	Artikel-Nr. / Typ	Description
	EDC-CR1	Converter RS-232/RS-485, Repeater RS-485
	LINE DRIVER	Gender Adapter RS232C/RS485 + DB9/DB25
	VPT/CB3-W	Camera bracket #3 large for VPT-50X/601W RAL9016
	VHM/ZB-VPT-035	Connection Cable 0.35m, VHM/ZLB to VPT-42, VPT-501, VPT-601
	VHM/ZB-VPT-055	Connection Cable 0.55m, VHM/ZLB to VPT-501, VPT-601
	EDC-KBD1	System Keyboard with 3-axis Joystick, 12VDC
	EDC-KBDM-3	System Keyboard w. Joystick, 5" Monitor 12VDC, Fastrax Protocol

Optional Accessories (continued)

Image	Artikel-Nr. / Typ	Description
	EDC-COAX	Coax Telemetry Board for VPT-41/42, VPT- 501/601, EDC/EDMC Series assembled
	KBD-CSK-100	System Keyboard with 3-Axis Joystick, 12VDC

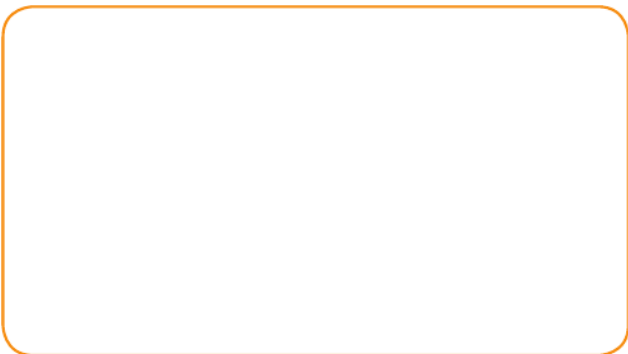
Technical Drawing



Maße/Dimensions: mm



Your partner for eneo products:





VPT-601/HZ

Article-No.: 75305

Pan/Tilt Head with heater, 360°, 100°/sec. max., RS-485, 230VAC, RAL7032

Mainfeatures

12kg Load Capacity
Rotation Range: 360° (Continuous Rotation)
64 Presets
RS-485 Serial Interface (Multiple Protocol)
Housing Finish: RAL7032

Speed: 100°/sec. max.
Backlash: <0,2°
Autopan Function
Supply Voltage: 230VAC/50Hz
Protection Rating: IP66




Specifications

Series	eneo VPT
Load capacity	12 kg
Load capacity	(load assembly in the horizontal and vertical center of gravity required)
Speed range at manual control	0 ~ 100° horizontal, 0 ~ 50° vertical. 0 to 100°/sec.: 0.22sec.
Preset speed	0 ~ 100° horizontal, 0 ~ 50° vertical. 180° positioning needs 2.5sec. (at max. speed)
Rotation range	continuous: 360°
Tilt range	+/-90°
Backlash	<0.2°
Autopan	yes
Pattern	no
Positioned freely	yes
Number of presets	64
Serial interfaces	RS-422, RS-485
Protocols	Videor, Fastrax IIE, Pelco D&P, Siemens (TTY), Philips, with selectable Baud rate. Other protocols: upon request
Connectors	5m of system cable: 230V, Video (Coax), Control (CAT5)

Specifications (continued)

Plug connections	24pin
Supply voltage for lenses	4 ~ 11.5VDC
Camera voltage supply	12VDC, 24VAC; 1.0A
Supply voltage	230VAC
Power consumption	120W max. (incl. Camera and Heater)
Temperature range (Operation)	-20°C ~ +50°C
Temperature range with built-in heater	-40°C ~ +50°C
Heater	yes
Mounting of illuminator possible	yes
Mounting	Upright or upside down
Hidden cable management	no
Sunshield	no
Protection rating	IP66
Housing material	Aluminium, Plastic
Housing	Aluminium frame with plastic covers
Colour (housing)	Eloxal C0
Colour	C0 anodized / RAL7032
Weight	12.5kg
Parts supplied	Screw set, 24pin connector, Allen key (5mm), PC Setup and Control Software on CD ROM
Special features	No potentiometer for positioning feedback. Configuration made by PC Control Software (included). Absolute positioning


Optional Accessories

Image	Artikel-Nr. / Typ	Description
	WD-32	Wall Bracket for Pan/Tilt Heads VPT-40/501/601/651 Series, RAL7032
	MK-22	Pole Column Spacer for Pan/Tilt Heads 360°, 200mm Height, RAL7032
	EDC-CR1	Converter RS-232/RS-485, Repeater RS-485

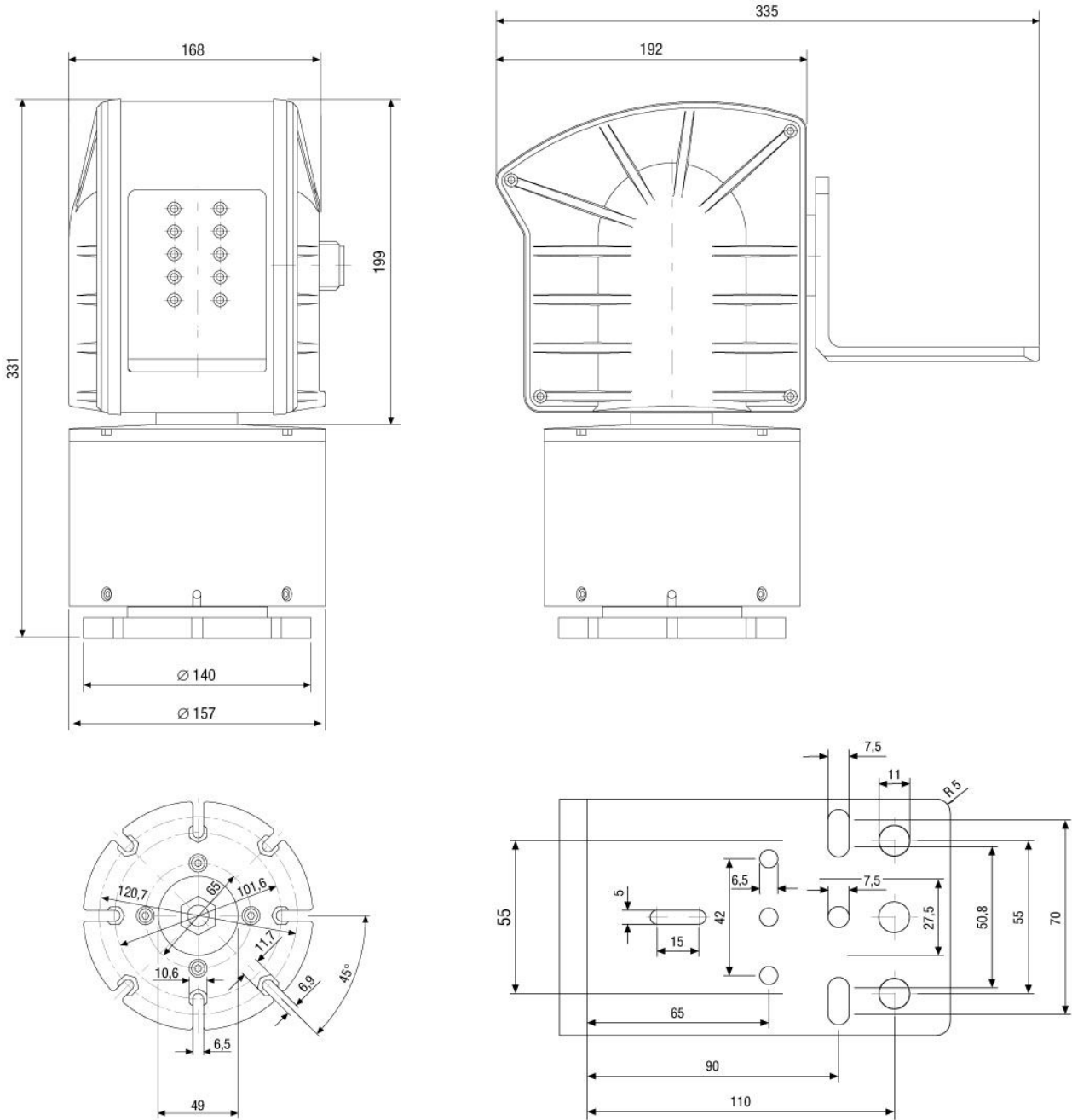
Optional Accessories (continued)

Image	Artikel-Nr. / Typ	Description
	<p>LINE DRIVER</p>	<p>Gender Adapter RS232C/RS485 + DB9/DB25</p>
	<p>VPT/CB3-W</p>	<p>Camera bracket #3 large for VPT-50X/601W RAL9016</p>
	<p>VHM/ZB-VPT-035</p>	<p>Connection Cable 0.35m, VHM/ZLB to VPT-42, VPT-501, VPT-601</p>
	<p>VHM/ZB-VPT-055</p>	<p>Connection Cable 0.55m, VHM/ZLB to VPT-501, VPT-601</p>
	<p>EDC-KBD1</p>	<p>System Keyboard with 3-axis Joystick, 12VDC</p>
	<p>EDC-KBDM-3</p>	<p>System Keyboard w. Joystick, 5" Monitor 12VDC, Fastrax Protocol</p>
	<p>EDC-COAX</p>	<p>Coax Telemetry Board for VPT-41/42, VPT- 501/601, EDC/EDMC Series assembled</p>

Optional Accessories (continued)

Image	Artikel-Nr. / Typ	Description
	KBD-CSK-100	System Keyboard with 3-Axis Joystick, 12VDC

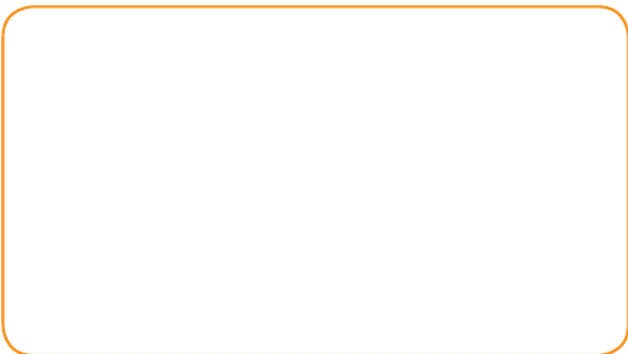
Technical Drawing



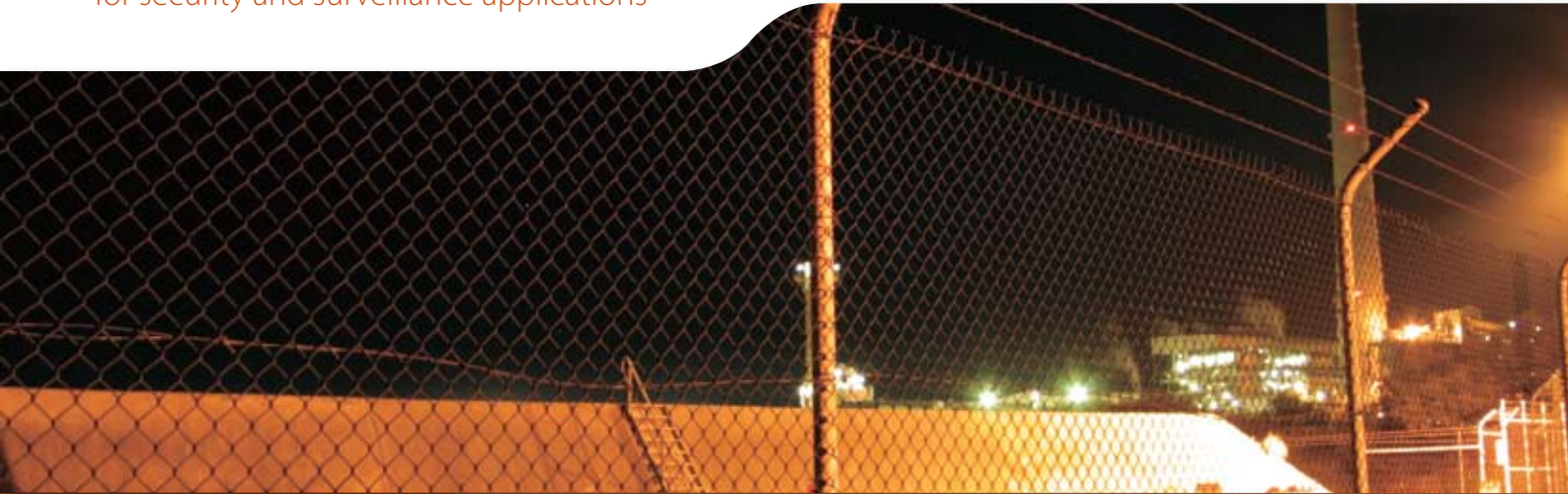
Maße/Dimensions: mm



Your partner for eneo products:



Thermal imaging cameras
for security and surveillance applications



SR-19 | SR-35 | SR-50 | SR-100

Thermal imaging camera with multiple choices
to meet a variety of needs



SR-100



SR-19, SR-35, SR-50, SR-100, from FLIR Systems, the world leader for thermal imaging systems



SR-19

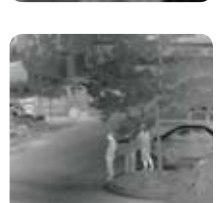
SR-35

SR-50

SR-100

The SR-19, SR-35, SR-50 and SR-100 are economic, fixed mounted thermal imagers. They provide crisp, clear thermal imagery in total darkness, light fog or smoke. They feature the same thermal imaging technology found in many of FLIR's most sophisticated security and surveillance systems, but are packaged for users who have short- to medium-range security and surveillance as their primary application. They include FLIR's advanced image processing techniques which deliver excellent contrast regardless of scene dynamics.

Unlike other night vision systems that require low amounts of light to generate an image, the SR-19, SR-35, SR-50 and SR-100 need no light at all.





Extremely affordable

The SR-19 comes at an extremely affordable price. From now on, price is no longer an object to integrate thermal imaging into your existing video security networks.

Crisp thermal images:

320 x 240 pixels

The SR-19, SR-35, SR-50 and SR-100 provide crisp, clear thermal imaging with 320 x 240 pixels. This allows the user to see more detail and detect more and smaller objects. Advanced internal camera software delivers a crisp image without the need for user adjustments. They provide high quality thermal imaging in any night- or daytime environmental conditions.

Different lenses

Different users have different needs. Therefore FLIR Systems markets the SR-cameras with different lenses. Longer lenses have a narrower field of view and give you the possibility to see targets which are further away.

The SR-19 is equipped with a 19 mm wide angle lens. It gives you an extremely wide field of view (36°), so that you can cover a large area and keep excellent situational awareness.

The SR-35 equipped with a 35 mm lens, has a horizontal field of view of 20°. The SR-50, with a 50 mm lens, has a field of view of 14°. Both are extremely suited for short range threat detection in all circumstances.

Equipped with a 100 mm lens, the SR-100 is designed for longer range security and

surveillance applications. It has a 7° field of view and can be focused over RS-232 or RS-422 protocol. With the SR-100 you will be able to detect a man-sized target at a distance of almost 2km.

Easy-to-install

All three cameras can be easily connected to common power and video interfaces found in existing and new security systems. They can be easily integrated into any existing CCTV infrastructure providing early detection and visibility 24/7 all the year round. The images from the 320 x 240 pixels detector can be displayed on virtually any existing display that accepts composite video.

Designed for use in harsh environments

The SR-19, SR-35, SR-50 and SR-100 are extremely rugged systems. Their vital core is well protected, meeting Mil-Std-810E and IP66 requirements, against humidity and water. A sealed lens maintains the environmental ratings of the existing enclosure. They all operate between -32°C and +55°C. They have a built-in heater which ensures a clear lens and perfect infrared images displayed on your monitor even in extremely cold environments.

Lightweight

Very lightweight, all four thermal imaging cameras can be installed at any position. They can be mounted at an optimal observation point providing maximum field of view.

Easy-to-use

All four versions are easy-to-use and require no operator training.

Thermal imaging for security and surveillance applications

Thermal imaging cameras create a virtual security fence and are finding their way into many security and surveillance applications. Nuclear plants, petrochemical installations, warehouses, ports and airports, ... they all are vulnerable to theft, or even worse terrorist attacks, and can be protected by using thermal imaging cameras.

Terrorism, vandalism, and random violence threaten the safety of personnel and the integrity of public and private facilities. A comprehensive security program utilizing thermal imaging is the key to asset protection and risk mitigation. Thermal imaging exposes threats hidden in the darkness, concealed by adverse weather, and veiled by obscurants like dust, fog, and smoke.

Thermal imaging offers advantages over low light and daylight cameras in applications where lighting is impossible, too expensive or long range performance is required. For border security, port security, and critical infrastructure applications, thermal imaging has proven vital to threat detection initiatives. Even with the best daylight or lowlight cameras, there are many situations where a thermal imager outperforms all other sensors.

Thermal imaging cameras are a new weapon for intrusion detection. They detect intruders sooner, provide more time to react and protect people, assets, and infrastructures. They are operational 24 hours a day even in the darkest of nights, dense fog, snow, smoke, ... They monitor large areas over long distances.



All SR-series thermal imaging cameras can be easily installed and integrated in existing CCTV networks

SR-19, SR-35, SR-50, SR-100



Technical specifications

IMAGING PERFORMANCE

Detector type	Focal Plane Array (FPA), uncooled microbolometer 320 x 240 pixels
Spectral range	7.5 to 13µm
Field of view	SR-19: 36°(H) x 27° (V) with 19 mm lens SR-35: 20° (H) x 15° (V) with 35 mm lens SR-50: 14° (H) x 10° (V) with 50 mm lens SR-100: 7° (H) x 5° (V) with 100 mm lens.
	Lenses are not interchangeable and must be specified at time of purchase.
Spatial resolution (IFOV)	SR-19: 2.0 mrad - SR-35: 1.1 mrad - SR-50: 0.8 mrad - SR-100: 0.4 mrad
Thermal sensitivity	85 mK at 25°C
Image frequency*	7.5Hz (NTSC) or 8.3 Hz (PAL)*
Focus	SR-19 / SR-35 / SR-50: fixed - SR-100: manual
Electronic zoom	2x
Image processing	Automatic Gain Control (AGC), Digital Detail Enhancement (DDE)

SYSTEM FEATURES

Remote Control	Focus: SR-100 only
Automatic heater	Yes
PelcoD compliance	SR-100 only: focus, 2x electronic zoom

IMAGE PRESENTATION

Video output	NTSC or PAL composite video
Connector types	BNC (1) provides video output

POWER

Requirements	14-32 V DC or 24 V AC +/- 10%
Consumption	SR-19 / SR-35 / SR-50: 6 W Nominal, 24 W startup peak, at 24V DC, at 23°C SR-100: 8 W Nominal, 36 W startup peak, at 24V DC, at 23°C

ENVIRONMENTAL SPECIFICATIONS

Operating temperature range	-32°C to +55°C
Storage temperature range	-50°C to +85°C
Humidity	Rain
Sand/dust	Mil-Std-810E
Encapsulation	IP66
Shock	Mil-Std-810E
Vibration	Mil-Std-810E

PHYSICAL CHARACTERISTICS

Camera Weight	SR-19 / SR-35 / SR-50: 2.7 kg, SR-100: 3.6 kg
Camera Size (L x W x H)	SR-19 / SR-35 / SR-50: 279mm x 132mm x 142 mm SR-100: 381mm x 132mm x 142 mm
Shipping weight (camera + packaging)	6.9 kg
Shipping size (camera + packaging) (L x W x H)	36 cm x 51 cm x 34 cm

INTERFACES

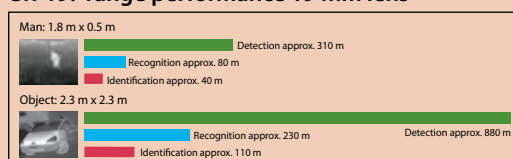
Factory configured	RS-232 for SR-19, SR-35, SR-50 RS-422 for SR-100
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Standard Package

Thermal imaging camera, operator manual

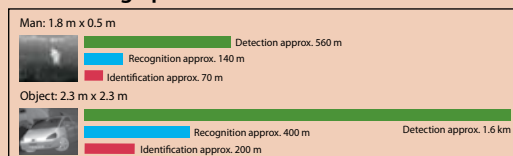
* 30 Hz NTSC or 25 Hz PAL available. Subject to approval of the US Department of Commerce for use outside the USA.

SR-19: range performance 19 mm lens



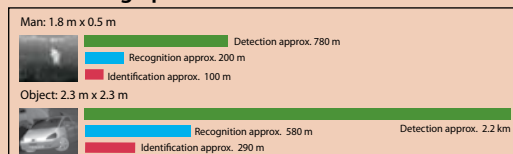
Actual range may vary depending on camera set-up, environmental conditions, user experience and type of monitor or display used.

SR-35: range performance 35 mm lens

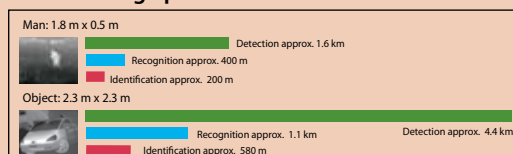


Assumptions:
50 % probability of achieving objective at specified distance given 2°C temperature difference and 0.85 / km atmospheric attenuation factor.

SR-50: range performance 50 mm lens



SR-100: range performance 100 mm lens



SR-19

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FLIR Systems: a full range of infrared cameras for thermal night vision applications

Whatever your application, FLIR Systems offers a solution to make you see clearly at night and in the most diverse weather conditions.

FLIR Systems has more than 50 years of experience in the development and production of infrared cameras for night vision applications. Recent technological developments have made it possible that know-how, which was reserved for military and high-end scientific users only, has made its way to many more applications.

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