



R941

Compact Nuclear Zoom Camera



Nuclear
Power



Homeland
Security
& Defense



Industrial and
Manufacturing



Healthcare



Labs and
Education

OVERVIEW

The R941 compact zoom camera from Mirion has been developed to provide a radiation tolerant zoom facility in a compact 55mm diameter case. The zoom facility comprises a non-browning 8 to 24mm, f/2.8 to f/16 zoom lens with all the optical functions (ie, focus, zoom, iris and macro) fully motorized to allow complete remote control via the R90 Mk 3 Camera Control Unit. Housed in a stainless steel case the R941 camera incorporates a zoom lens that can focus and track from 50mm to infinity.

The R941 camera is designed to be used in conjunction with Mirion's R90 Series Mk 3 Camera Control Units. Fully compatible with international video standards, R90 Mk 3 Control Units can be integrated or locked to external sources, image processors or machine vision systems. A range of portable or rack mounted versions are available with local control, or remote control over twisted pair or video coaxial cables.

KEY FEATURES

- Compact Casing
- Radiation Tolerant
- Non-browning Zoom Lens
- Remotely Controlled

APPLICATIONS

- Fuel Inspection
- Search and Retrieval
- Reactor Inspection
- Robotics and Manipulator Surveillance

SPECIFICATIONS AND PERFORMANCE

General	
Length	269 mm (10.6")
Diameter	55 mm (2.16")
Weight (approximate)	1.8 kg (2.16")

System Performance	
Resolution	600 TV lines per picture height (centre zone)
Sensitivity	30 lux scene illumination (1 volt composite video signal, chalnicon, 80% average scene reflectivity, tungsten illumination 2856K)

Environmental	
Operating Temperature	0 to 55 °C (32 to 130 °F)
Storage	0 to 60 °C (32 to 140 °F)
Depth Rating	50 metres (165')
Radiation Tolerance	2 MGy (H ₂ O) [⁶⁰ Co] (2 x 10 ⁸ rads) Total dose
	>30 kGy/hour (>3 x 10 ⁶ rads/hour) Vidicon
	1 kGy/hour (1 x 10 ⁵ rads/hour) Chalnicon

Optics		
Iris Range	f/2.8 to f16	
Viewing Angles in Air	Zoom Out	Zoom In
Horizontal	57.6°	20.8°
Vertical	44.8°	15.7°
Focus Range	Tracking 50mm (1.96") to infinity 0mm to infinity (using macro and fully zoomed out)	
Cable Length	100 metres (328')	

Specification Notes

1. A "good" picture is defined as one where the illumination available is sufficient for the camera to produce a 1 volt composite video signal with a fully open aperture.
2. A "usable" picture can usually be obtained, dependent on the scene viewed and environmental factors, etc, when the illumination available is only one third that required to achieve a 1 volt composite video signal at full aperture.
3. Mirion Technologies should be consulted to verify critical viewing requirements, or in cases where there are important lighting, resolution, environmental or viewing angle considerations.
4. In applications where there are severe space constraints care should be taken to allow for the size of the camera cable mating connector and if necessary, the bend radius of the connecting camera cable. Please refer to the R90 series cables and connectors data sheets.
5. Mirion Technologies should be consulted if longer cable lengths are required.

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Specifications may vary according to system configuration. We reserve the right to modify or amend the information herein without prior warning. Please contact your Mirion representative for further information.

Mirion Technologies (IST) Ltd and Mirion Technologies (Imaging), LLC are ISO 9001:2008 certified companies (certificates available on request or at www.mirion.com).

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