



RADIATION TOLERANT CAMERA

C981™

Compact System Camera



A high-performance radiation tolerant camera offering versatile functionality in a compact footprint.

The C981 Compact camera range builds on the success of the standard C981 camera but offers a low radiation tolerant pan, tilt and zoom camera with a smaller sized envelope.

Ideal for locating in areas where space comes at a premium, the C981 combines the camera and pan and tilt into an integral unit and provided three positions for additional lights and microphone. The color CCD compact can be configured into multi-camera configurations, or a single camera system can be supplied.

Mirion is an experienced world-leading supplier of large turnkey television surveillance systems to the nuclear industry. The C981 Compact camera exemplifies one of these solutions, delivering high-performance and versatility in a small package.

FEATURES

- ✓ High performance color picture
- ✓ Pan, tilt, zoom, video and power over three twisted pairs
- ✓ One 19 in. sub-rack to control up to eight cameras
- ✓ 8-channel lighting and microphone sub-racks
- ✓ RS-485 control of sub-racks
- ✓ Change camera outstation without adjustment
- ✓ Software protocol and hardware can address up to 128 channels of cameras and lighting
- ✓ Update any channel to a high radiation tolerant channel as required
- ✓ Simple cable

APPLICATIONS

- ✓ Process monitoring
- ✓ Safeguard surveillance
- ✓ In-containment viewing
- ✓ Waste management
- ✓ Guidance and posting

C981 COMPACT SYSTEM CAMERA

SPECIFICATIONS AND PERFORMANCE

CAMERA OUTSTATION

- Housing Material: Stainless steel
- Operating Temperature in Air: 0 to 40 °C (32 to 104 °F)
- Operating Temperature in Water: 0 to 50 °C (32 to 122 °F)
- Radiation Tolerance:
100 Gy [⁶⁰Co] (H₂O)
10⁴ Rad [⁶⁰Co] (H₂O)
- Operating Dose Rate: 100 Gy/hour (10⁴ Rad/hr)
- Sealing: IP68 (IEC529) 60 m water depth (W.W. Fischer stainless steel connector type SE105Z069-27) IP66 (IEC529) fully washable (LEMO stainless steel remote handling cable connector type FZJ3N318TLMY)
- Maximum Operating Depth: 20 m (66 ft)
- Maximum Submersion Depth: 60 m (197 ft)
- Cable Connection: 18-way remote handling LEMO or 12-way Fischer
- Pan and Tilt
Speed: 6° per second
Travel: ±180° (adjustable)
- Size with Pan and Tilt: 221 x 162 x v160 mm (H x W x D)
(8.8 x 6.5 x 6.3 in)
- Weight: 3.2 kg (7 lb) without lights or microphone

CAMERA CHANNEL PERFORMANCE

- Horizontal Resolution: 460 tvl per picture height (optical)
- Illumination: 1 lux
- Signal-to-Noise Ratio: 48dB (weighted)

OPTICS

- Zoom Lens: 18x optical (4.1-73.8 mm) 4x digital
- Iris: Auto F1.4
- Electronic Shutter:
Auto:
1/60 to 1/10,000 sec NTSC
1/50 to 1/10,000 sec PAL

8-CHANNEL CAMERA SYSTEM SUB-RACK

- Nominal Power Supply Input: 100–120/200–240 V (auto-ranging); 50/60 Hz
- Operation Range: 85–132/170–264 V (auto-ranging); 47–440 Hz
- Power Requirement: 150 VA for a fully populated 8-channel CCU
- Outstation Cable Length: 300 m (984 ft) maximum CCU to camera (consult Mirion)
- Operating Ambient Temperatures:
Fully populated, convection cooling: 0 to 40 °C (32 to 104 °F).
Up to six channels, convection cooling: 0 to 50 °C (32 to 122 °F)
Fully populated, forced air cooling at 500 liters (132 gallons)/minute: 0 to 50 °C (32 to 122 °F)
- Relative Humidity: 20%-75% non-condensing
- Size: 134 x 483 x 300 mm (H x W x D) (5.3 x 19 x 11.8 in) (excluding handles and connectors)
- Weight: 7 kg (15.4 lb)

CCU CONNECTOR TYPES

- AC Power: IEC 320 plug (fitted with T4A fuse)
- Camera Inputs (8 off): 15-way Type D socket
- Video Outputs (8 off): 75R BNC
- Genlock Input: 75R BNC (with 75R termination switch)
- Sync Pulse Output: 75R BNC
- Serial Control Input: 9-way Type D plug
- Serial Control Loop Through: 9-way Type D socket

OPTIONAL ACCESSORIES

- Camera Attachments: Camera allows for up to three attachment positions for a combination of microphone and lights
- Lights for Underwater: Up to 200 W using 100 W lamps
- Lights in Air: Up to 150 W using sealed 50 W lamps or 75 W vented lamps
- Lighting Sub-rack: 8-Channel
- Microphone: For in-air use only
- Microphone Sub-rack: 8-Channel



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TECHNOLOGIES

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