MIRION
TECHNOLOGIES

RADIATION TOLERANT CAMERA

C983™

Compact System Camera

Mirion's C983 Camera offers a compact, sealed, underwater capable, high performance pan/tilt/zoom color CCD camera. Ideal for locating in areas where space is at a premium, the camera features an integral pan and tilt with mounting provision for additional lights and microphone. The integrated microcontroller supports many additional features, including position feedback, temperature monitoring and optional radiation dosimetry for when the camera is used in radiation environments. The camera controller options provide for easy and cost-effective integration of multi-camera systems including those requiring a mix of C983 and R981 radiation tolerant cameras.

Mirion Technologies is a recognized leader in turnkey television surveillance systems design for the nuclear industry providing experience, innovation and reliability for your inspection and surveillance needs.

FEATURES

✔ Telemetry (RS-485), video and power over three twisted pairs

✔ Integral pan/tilt with ±180° travel and variable speed which can automatically reduce as the camera is zoomed in

✔ Outstanding viewing performance achieved by using a high performance CCD module with 18:1 optical and 4:1 digital variable speed zoom

✔ Position feedback system to provide for preset positioning and adjustable end stops

✔ Camera internal temperature monitoring and over-temperature alarm

✔ Sealed housing for in-air and underwater operation

✔ Optional high power tracking lights

✔ Simple camera cable

✔ One 19 in. controller to control up to eight cameras

✔ Option of dedicated controller (C983 cameras only) or flexible sub-rack (mixed R981™/C983 cameras)

✔ 8-channel lighting and microphone sub-racks

✔ RS-485 telemetry to camera and lighting controllers

✔ Software protocol and hardware can address up to 128 cameras/16 controllers

C983 COMPACT SYSTEM CAMERA

SPECIFICATIONS AND PERFORMANCE

CAMERA

- Image Sensor: ¼ type Super HAD CCD
- Temperature Rating (camera module): 0 to 50 °C (32 to 122 °F)
- Resolution:
  NTSC 470 TV Lines
  PAL 460 TV Lines
- Zoom: 18:1 optical (4.1 mm - 73.8 mm) 4:1 digital
- Focus: Manual or Auto
- Iris Control: Manual or Auto
- Construction: Stainless steel housing
- Weight: 3.2 kg (7 lb) without lights or microphone
- Depth Rating: 60 m (197 ft)
- Radiation Tolerance:
  100 Gy [^{60}Co] (H$_2$O)
  10^4 Rad [^{60}Co] (H$_2$O)
- Operating Dose Rate: 100 Gy/h (10^4 Rad/h)
- Range - Pan: ± 180° (adjustable)
- Range - Tilt: ± 180° (adjustable)
- Speed - Pan: Variable (up to 6°/sec)
- Speed - Tilt: Variable (up to 6°/sec)

8-CHANNEL C983 CONTROLLER

- Power Input: 85 to 264 V ac, 47 - 440 Hz, 80 VA max
- Dimensions: 88 x 483 x 360 mm (H x W x D) (3.5 x 19 x 14.2 in.)
  Excluding handles and connectors
- Weight: 6 kg (13.2 lb)
- Video Outputs: Composite, 75R, BNC
- RS-485 Termination: On/off switch
- Front Panel Controls:
  Cable compensation switches to set three different
  cable length ranges
  Rotary switch to select one of eight cameras for
  configuration via RS-232 port
- Front Panel Connector: RS-232 port for camera configuration
- Front Panel Indicators:
  Camera control: Data from host and data from camera
  Camera configuration: Data in/data out

8-CHANNEL FLEXIBLE SUB-RACK (FOR A MIX OF C983 AND R981 CAMERAS)

- Power Input: 85 to 264 V ac, 47 - 440 Hz, 80 VA max
- Dimensions: 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)
- Video Outputs: Composite, 75R, BNC
- Genlock Input: BNC with switched 75R termination
- Serial Control Input: 9-way Type D plug
- Serial Control Loop Through: 9-way Type D socket
- Serial Protocol: Mirion or Pelco D
  (selected by sub-rack part numbers)

ACCESSORIES

- Lighting in-air/underwater lamps
  (tracking up to 100 W using 50 W lamps
- Microphone (in-air use only)
- Camera attachments
- 8-Channel lighting sub-rack
- 8-Channel microphone sub-rack

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