

**BOSCH**
Invented for life

MIC Series 400 Camera



- ▶ **Rated to an industry leading IP68**
- ▶ **Brushless motor technology**
- ▶ **Host of mounting and viewing options**
- ▶ **Integrated wiper and heater**
- ▶ **Multi-protocol operation**

The MIC Series 400 camera has been designed to offer an extremely reliable, robust, and high quality surveillance solution for security applications that demand the very best performance. Precision engineered to exacting standards, the range offers numerous benefits over the use of traditional dome and PTZ cameras, and comes with a variety of options in order to offer a best-fit solution for virtually any application.

Rated to an industry leading IP68, the compact, vandal-resistant machined aluminum camera housing is suitable for installation in the harshest of environments. Machined from solid aluminum, the MIC Series 400 cameras ensure corrosion protection by using two different processes; first an Alocrom 1200 coating, then a robust powder paint coating. Alocrom 1200 is a chromate conversion coating of aluminum, used in the aerospace and defense industries where a protective layer is required to improve corrosion resistance. Sealed with 'O'-rings, the MIC Series 400 camera can operate submerged up to 1 meter (3.3 feet) underwater by virtue of its design and construction. The optically-perfectly flat viewing window and integrated long-life silicone wiper ensure razor-sharp images are captured in even the most demanding conditions.

The brushless motor technology offers ultra-reliable, whisper-quiet operation with full 360° continuous rotation pan and 320° tilt control for exceptional viewing capability. Small increment pan/tilt speeds from just 0.2° per second to 90° per second give the user precise control. This speed control is especially important when used with video analytic systems, particularly for tracking subjects when fully zoomed in.

A choice of true day/night camera modules offering up to 36x optical zoom (12x digital) are available, providing 470 TVL NTSC/PAL typical (18x module) or 530 TVL NTSC/PAL typical (36x module). When coupled with upright 45-degree canted or inverted mounting capability, the MIC Series 400 camera allows the perfect field of view to be achieved every time.

Functions

Rated to an industry leading IP68

Zero dust ingress and able to withstand sustained periods of immersion under water, the MIC Series 400 aluminum camera is perfectly suited for installation in even the most unforgiving environments.

Brushless motor technology

Ultra-reliable brushless motors provide whisper quiet operation and smooth control.

Host of mounting and viewing options

Faultless operation, either upright or inverted, gives the user a host of mounting and viewing possibilities. A canted option is provided for upright pole-mounted applications, allowing the base of the pole to be viewed.

Integrated wiper and heater

Hot or cold, rain or shine, regardless of the weather, the MIC Series 400 camera is able to capture the highest possible quality image all year round thanks to its integrated long-life silicone wiper and heater.

Multi-protocol operation

Compatible with virtually any control equipment available today, the MIC Series 400 camera will seamlessly integrate within the vast majority of security systems.

Applications:

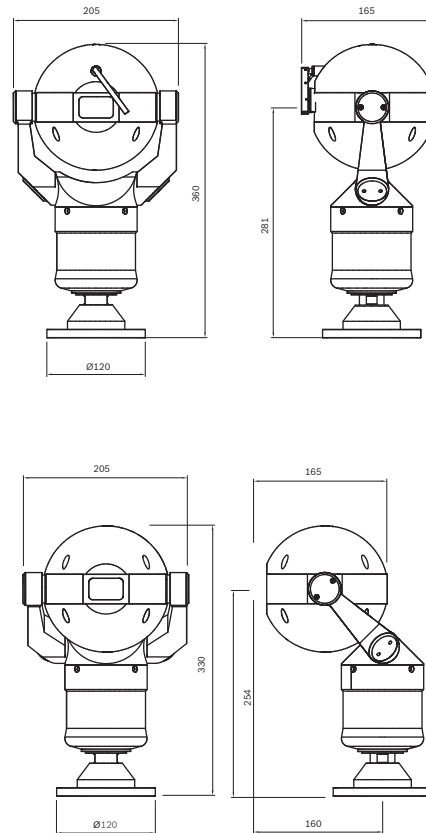
- General CCTV
- Town centers
- Extreme environments
- Rapid deployment
- High security
- Prestigious developments
- Broadcast
- Architectural

Certifications and Approvals

Electromagnetic Compatibility (EMC)	Complies with FCC part 15, ICES-003, and CE regulations including EN50130-4, EN61000-3-2:2006, EN61000-3-3:1995, and EN55022:2006 inc AL:2007
Safety	Complies with CE regulations, UL, EN, and IEC standards 60950-1 & 22
Weatherproofing	IP68

Installation/Configuration Notes

Dimensions



Technical Specifications

Camera Module

Image sensor	1/4 in EXview CCD (WDR 36x only)
Horizontal resolution	18x module, 470 TVL NTSC/PAL typical; 36x module, 530 TVL NTSC/PAL typical
Filter	Automatic mechanical IR cut filter
Focus system	Auto or manual
Iris	Auto or manual with slow shutter integration modes
Synchronization	Internal / External (V-Lock)
Signal/Noise ratio	50 dB or more
Back Light Compensation (BLC)	On/Off
White balance	Automatic
Automatic Gain Control (AGC)	-3 to -28 dB, 2 dB steps
Aperture control	16 Steps

18x Optical Zoom Module

Lens	F=4.1 mm (wide) to 73.8 mm (tele), F1.4 to F3.0
Zoom	18x optical (12x digital)
Angle of view	48° (wide) to 2.8° (tele)
Minimum illumination	0.7 lux (F1.4, 1/60s NTSC, 1/50s PAL) 0.11 lux (F1.4, 1/4s NTSC, 1/3s PAL) 0.01 lux (F1.4, 1/4s NTSC, 1/3s PAL ICR on)
Shutter speed	1/1 to 1/10,000 s (22 steps) NTSC, PAL

36x Optical Zoom Module

Lens	F=3.4 mm (wide) to 122.4 mm (tele), F1.6 to F4.5
Zoom	36x optical (12x digital)
Angle of view	57.8° (wide) to 1.7° (tele)
Minimum illumination	1.4 lux (1/60 s NTSC, 1/50 s PAL, typical, F1.6, 50IRE); 0.1 lux (1/4 s NTSC, 1/3 s PAL, typical, F1.6, 50IRE) ICR-ON mode: 0.01 lux (1/4 s NTSC, 1/3 s PAL)
Shutter speed	1/4 to 1/10,000 s (20 steps) NTSC, 1/3 to 1/10,000 s (20 steps) PAL

Operational

Auto flip	Yes
Manual flip	Yes
Dynamic privacy zones	3D privacy masking with infinite zones, (some models, see ordering guide)
Presets	64 telemetry presets utilizing resolver technology (using FV protocol, 10 camera set-up presets to allow ANPR, color correction etc.)
Preset tours	6 tours each with up to 32 presets
Sector titles	Yes (64 sectors) 20 characters per title
Preset titles	20 character caption for each of the 64 presets
Home position	Yes (preset 1 or tour)

Communication and Protocols

Communication	RS485 / RS422
Control protocol	Bosch or FV protocol cameras available, additional supported protocols are Pelco D, Kalatel, 360 Vision, American Dynamics, Panasonic, Molynx, VCL, and Vicon. These can be loaded using the MIC-USB485CVTR signal converter and Cam-set via a PC. Biphase control requires a Biphase to RS485 converter (MIC-BP4, available separately) to connect to Bi-phase equipment.

Connectivity

Video	Co-axial via composite cable
Telemetry control card	Built-in
Telemetry	Twisted pair. Simplex, half and full duplex operation via composite cable
MIC Universal Camera Setup Software Utility (Cam-set)	Supplied with each camera, Cam-set allows direct connection to a USB equipped PC via the MIC Series PSU or over a full duplex or IP network to provide access to all camera functions and useful diagnostic tools

USB to RS485 signal converter	Allows MIC Series cameras to connect to a PC (supplied free with MIC Series 400 camera or available separately)
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Power	Via composite cable
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Alarms

Alarm inputs	1 tamper input (additional inputs possible with optional alarm card in PSU)
Alarm communication	Tamper switch (ground connection)

Mechanical

Drive unit	Brushless, integral pan/tilt motor drive
Pan angle	360° continuous rotation
Pan speed	Up to 90° per second (variable)
Tilt angle	320°
Tilt speed	0.2° to 90° per second (variable)
Speed control	Closed loop electronics
Preset accuracy	Better than 0.08°
Proportional Pan/Tilt to Zoom	Yes

Construction

Construction material	Machined aluminum
Viewing window	Tempered flat glass
Window wiper	Standard, long-life silicone wiper
Heater	Standard
Standard colors	Black(RAL9005), Gray (RAL7001) or White (RAL9003)
Standard finish	Alochrom 1200 surface treatment with powder coat paint.
Dimensions	205 x 360 x 165 mm (WxHxD) 8 x 14.2 x 6.5 in (WxHxD) (upright and inverted)
Weight	5.5 kg (12 lb) including 4 in. pitch circle diameter (PCD) base
Configurations available	Upright mount or upright canted at 45° mount. (Inverted mount is possible using software setting and upright camera.)

Environmental

Operational temperature	-40 °C to +50 °C (-40 °F to +122 °F)
Weather proofing	IP68

Electrical

Input voltage	18 VAC
Power consumption	25.2 W max. with heater off 37 W max. with heater on

Ordering Information

MIC400ALBCW13518P MIC Series 400 Aluminum	MIC400ALBCW13518P
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Aluminum 18X, PAL, PTZ camera, Black, Cant-ed, FV Protocol with integrated wiper, heater and privacy function.

MIC400ALBCW13536P MIC Series 400 Aluminum	MIC400ALBCW13536P
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Aluminum 36X, PAL, PTZ camera, Black, Cant-ed, FV Protocol with integrated wiper, heater and privacy function.

MIC400ALBCW13618P MIC Series 400 Aluminum	MIC400ALBCW13618P
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Aluminum 18X, PAL, PTZ camera, Black, Cant-ed, FV Protocol with integrated wiper and heater.

MIC400ALBCW13636P MIC Series 400 Aluminum	MIC400ALBCW13636P
--	--------------------------

Aluminum 36X, PAL, PTZ camera, Black, Cant-ed, FV Protocol with integrated wiper and heater.

MIC400ALBUW13518P MIC Series 400 Aluminum	MIC400ALBUW13518P
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Aluminum 18X, PAL, PTZ camera, Black, Up-right, FV Protocol with integrated wiper, heater and privacy function.

MIC400ALBUW13536P MIC Series 400 Aluminum	MIC400ALBUW13536P
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Aluminum 36X, PAL, PTZ camera, Black, Up-right, FV Protocol with integrated wiper, heater and privacy function.

MIC400ALBUW13618P MIC Series 400 Aluminum	MIC400ALBUW13618P
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Aluminum 18X, PAL, PTZ camera, Black, Up-right, FV Protocol with integrated wiper and heater.

MIC400ALBUW13636P MIC Series 400 Aluminum	MIC400ALBUW13636P
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Aluminum 36X, PAL, PTZ camera, Black, Up-right, FV Protocol with integrated wiper and heater.

MIC400ALGCW13518P MIC Series 400 Aluminum	MIC400ALGCW13518P
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Aluminum 18X, PAL, PTZ camera, Grey, Cant-ed, FV Protocol with integrated wiper, heater and privacy function.

Ordering Information

MIC400ALGCW13536P MIC Series 400 Aluminum	MIC400ALGCW13536P
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Aluminum 36X, PAL, PTZ camera, Grey, Cant-ed, FV Protocol with integrated wiper, heater and privacy function.

MIC400ALGCW13618P MIC Series 400 Aluminum	MIC400ALGCW13618P
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Aluminum 18X, PAL, PTZ camera, Grey, Cant-ed, FV Protocol with integrated wiper and heater.

MIC400ALGCW13636P MIC Series 400 Aluminum	MIC400ALGCW13636P
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Aluminum 36X, PAL, PTZ camera, Grey, Cant-ed, FV Protocol with integrated wiper and heater.

MIC400ALGUW13518P MIC Series 400 Aluminum	MIC400ALGUW13518P
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Aluminum 18X, PAL, PTZ camera, Grey, Up-right, FV Protocol with integrated wiper, heater and privacy function.

MIC400ALGUW13536P MIC Series 400 Aluminum	MIC400ALGUW13536P
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Aluminum 36X, PAL, PTZ camera, Grey, Up-right, FV Protocol with integrated wiper, heater and privacy function.

MIC400ALGUW13618P MIC Series 400 Aluminum	MIC400ALGUW13618P
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Aluminum 18X, PAL, PTZ camera, Grey, Up-right, FV Protocol with integrated wiper and heater.

MIC400ALGUW13636P MIC Series 400 Aluminum	MIC400ALGUW13636P
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Aluminum 36X, PAL, PTZ camera, Grey, Up-right, FV Protocol with integrated wiper and heater.

MIC400ALWCW13518P MIC Series 400 Aluminum	MIC400ALWCW13518P
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Aluminum 18X, PAL, PTZ camera, White, Cant-ed, FV Protocol with integrated wiper, heater and privacy function.

MIC400ALWCW13536P MIC Series 400 Aluminum	MIC400ALWCW13536P
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Aluminum 36X, PAL, PTZ camera, White, Cant-ed, FV Protocol with integrated wiper, heater and privacy function.

MIC400ALWCW13618P MIC Series 400 Aluminum	MIC400ALWCW13618P
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Aluminum 18X, PAL, PTZ camera, White, Cant-ed, FV Protocol with integrated wiper, heater and privacy function.

MIC400ALWCW13636P MIC Series 400 Aluminum	MIC400ALWCW13636P
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Aluminum 36X, PAL, PTZ camera, White, Cant-ed, FV Protocol with integrated wiper and heater.

Ordering Information

MIC400ALWUW13518P MIC Series 400 Aluminum Aluminum 18X, PAL, PTZ camera, White, Up-right, FV Protocol with integrated wiper, heater and privacy function.	MIC400ALWUW13518P
MIC400ALWUW13536P MIC Series 400 Aluminum Aluminum 36X, PAL, PTZ camera, White, Up-right, FV Protocol with integrated wiper, heater and privacy function.	MIC400ALWUW13536P
MIC400ALWUW13618P MIC Series 400 Aluminum Aluminum 18X, PAL, PTZ camera, White, Up-right, FV Protocol with integrated wiper and heater.	MIC400ALWUW13618P
MIC400ALWUW13636P MIC Series 400 Aluminum Aluminum 36X, PAL, PTZ camera, White, Up-right, FV Protocol with integrated wiper and heater.	MIC400ALWUW13636P
MIC400ALBCP13518N MIC Series 400 Aluminum Aluminum 18X, NTSC, PTZ camera, Black, Canted, Bosch Protocol with integrated wiper, heater and privacy function.	MIC400ALBCP13518N
MIC400ALBCP13536N MIC Series 400 Aluminum Aluminum 36X, NTSC, PTZ camera, Black, Canted, Bosch Protocol with integrated wiper, heater and privacy function.	MIC400ALBCP13536N
MIC400ALBCP13618N MIC Series 400 Aluminum Aluminum, 18X, NTSC, PTZ camera, Black, Canted, Bosch Protocol with integrated wiper and heater.	MIC400ALBCP13618N
MIC400ALBCP13636N MIC Series 400 Aluminum Aluminum, 36X, NTSC, PTZ camera, Black, Canted, Bosch Protocol with integrated wiper and heater.	MIC400ALBCP13636N
MIC400ALBUP13518N MIC Series 400 Aluminum Aluminum 18X, NTSC, PTZ camera, Black, Up-right, Bosch Protocol with integrated wiper, heater and privacy function.	MIC400ALBUP13518N
MIC400ALBUP13536N MIC Series 400 Aluminum Aluminum 36X, NTSC, PTZ camera, Black, Up-right, Bosch Protocol with integrated wiper, heater and privacy function.	MIC400ALBUP13536N
MIC400ALBUP13618N MIC Series 400 Aluminum Aluminum 18X, NTSC, PTZ camera, Black, Up-right, Bosch Protocol with integrated wiper and heater.	MIC400ALBUP13618N

Ordering Information

MIC400ALBUP13636N MIC Series 400 Aluminum Aluminum 36X, NTSC, PTZ camera, Black, Up-right, Bosch Protocol with integrated wiper and heater.	MIC400ALBUP13636N
MIC400ALGCP13518N MIC Series 400 Aluminum Aluminum 18X, NTSC, PTZ camera, Grey, Canted, Bosch Protocol with integrated wiper, heater and privacy function.	MIC400ALGCP13518N
MIC400ALGCP13536N MIC Series 400 Aluminum Aluminum 36X, NTSC, PTZ camera, Grey, Canted, Bosch Protocol with integrated wiper, heater and privacy function.	MIC400ALGCP13536N
MIC400ALGCP13618N MIC Series 400 Aluminum Aluminum 18X, NTSC, PTZ camera, Grey, Canted, Bosch Protocol with integrated wiper and heater.	MIC400ALGCP13618N
MIC400ALGCP13636N MIC Series 400 Aluminum Aluminum 36X, NTSC, PTZ camera, Grey, Canted, Bosch Protocol with integrated wiper and heater.	MIC400ALGCP13636N
MIC400ALGUP13518N MIC Series 400 Aluminum Aluminum 18X, NTSC, PTZ camera, Grey, Up-right, Bosch Protocol with integrated wiper, heater and privacy function.	MIC400ALGUP13518N
MIC400ALGUP13536N MIC Series 400 Aluminum Aluminum 36X, NTSC, PTZ camera, Grey, Up-right, Bosch Protocol with integrated wiper, heater and privacy function.	MIC400ALGUP13536N
MIC400ALGUP13618N MIC Series 400 Aluminum Aluminum 18X, NTSC, PTZ camera, Grey, Up-right, Bosch Protocol with integrated wiper and heater.	MIC400ALGUP13618N
MIC400ALGUP13636N MIC Series 400 Aluminum Aluminum 36X, NTSC, PTZ camera, Grey, Up-right, Bosch Protocol with integrated wiper and heater.	MIC400ALGUP13636N
MIC400ALWCP13518N MIC Series 400 Aluminum Aluminum 18X, NTSC, PTZ camera, White, Canted, Bosch Protocol with integrated wiper and heater.	MIC400ALWCP13518N
MIC400ALWCP13536N MIC Series 400 Aluminum Aluminum 36X, NTSC, PTZ camera, White, Canted, Bosch Protocol with integrated wiper, heater and privacy function.	MIC400ALWCP13536N

Ordering Information

MIC400ALWCP13618N MIC Series 400 Aluminum Aluminum 18X, NTSC, PTZ camera, White, Canted, Bosch Protocol with integrated wiper and heater.	MIC400ALWCP13618N
MIC400ALWCP13636N MIC Series 400 Aluminum Aluminum 36X, NTSC, PTZ camera, White, Canted, Bosch Protocol with integrated wiper and heater.	MIC400ALWCP13636N
MIC400ALWUP13518N MIC Series 400 Aluminum Aluminum 18X, NTSC, PTZ camera, White, Up-right, Bosch Protocol with integrated wiper, heater and privacy function.	MIC400ALWUP13518N
MIC400ALWUP13536N MIC Series 400 Aluminum Aluminum 36X, NTSC, PTZ camera, White, Up-right, Bosch Protocol with integrated wiper, heater and privacy function.	MIC400ALWUP13536N
MIC400ALWUP13618N MIC Series 400 Aluminum Aluminum 18X, NTSC, PTZ camera, White, Up-right, Bosch Protocol with integrated wiper and heater.	MIC400ALWUP13618N
MIC400ALWUP13636N MIC Series 400 Aluminum Aluminum 36X, NTSC, PTZ camera, White, Up-right, Bosch Protocol with integrated wiper and heater.	MIC400ALWUP13636N
Accessories	
MIC-24PSU-UL 24 VAC Camera Power Supply 24 VAC, 50/60 Hz power supply for MIC Series cameras	MIC-24PSU-UL
MIC-115PSU-UL 115 VAC Camera Power Supply 115 VAC, 60 Hz power supply for MIC Series cameras	MIC-115PSU-UL
MIC-240PSU-UL 240 VAC Camera Power Supply 240 VAC, 50 Hz power supply for MIC Series cameras	MIC-240PSU-UL
MIC-BP4 Bi-phase Converter Bi-Phase converter for non-IR versions of MIC series power supply units	MIC-BP4
MIC-DCA-B Deep Conduit Adapter Deep conduit adapter for 4 in. PCD base - black RAL9005	MIC-DCA-B
MIC-DCA-G Deep Conduit Adapter Deep conduit adapter for 4 in. PCD base - grey RAL7001	MIC-DCA-G
MIC-DCA-W Deep Conduit Adapter Deep conduit adapter for 4 in. PCD base - white RAL9003	MIC-DCA-W

Ordering Information

MIC-SCA-B Shallow Conduit Adapter Shallow conduit adapter for 4 in. PCD base - black RAL9005	MIC-SCA-B
MIC-SCA-G Shallow Conduit Adapter Shallow conduit adapter for 4 in. PCD base - grey RAL7001	MIC-SCA-G
MIC-SCA-W Shallow Conduit Adapter Shallow conduit adapter for 4 in. PCD base - white RAL9003	MIC-SCA-W
MIC-SPR Spreader Plate Aluminum spreader plate suitable for brick-work surface mounting - black RAL9005	MIC-SPR
MIC-SPR-G Spreader Plate Aluminum spreader plate suitable for brick-work surface mounting; grey RAL7001	MIC-SPR-G
MIC-SPR-W Spreader Plate Aluminum spreader plate suitable for brick-work surface mounting; white RAL9003	MIC-SPR-W
MIC-CMB-B Corner Mount Bracket Corner mount bracket - black RAL9005	MIC-CMB-B
MIC-CMB-G Corner Mount Bracket Corner mount bracket - Grey RAL 7001	MIC-CMB-G
MIC-CMB-W Corner Mount Bracket Corner mount bracket - white RAL9003	MIC-CMB-W
MIC-PMB Pole Mount Bracket Pole mount bracket (includes 2 x 455 mm banding ties for pole diameters 75 to 145 mm)	MIC-PMB
MIC-WMB-B Wall Mount Bracket Wall mount bracket - black RAL9005	MIC-WMB-B
MIC-WMB-G Wall mount Bracket Wall mount bracket - grey RAL7001	MIC-WMB-G
MIC-WMB-W Wall Mount Bracket Wall mount bracket - white RAL9003	MIC-WMB-W
MIC-USB485CVTR USB to RS485 Signal Converter	MIC-USB485CVTR
MIC-ALM Alarm and Washer Pump Drive Card 8 Input alarm and washer pump drive card for PSU (Not for IR PSU)	MIC-ALM
MIC-WKT Washer Kit Washer kit for non IR MIC models (includes washer pump drive card, washer nozzle and mounting brackets for wall and 4 in. PCD base)	MIC-WKT
HAC-WAS05-20 24 VAC Washer 24 VAC washer inst. 5M 25L	HAC-WAS05-20
UPA-2450-50 Power Supply 220 VAC, 50 Hz, 24 VAC, 50 VA Out	UPA-2450-50
UPA-2450-60 Power Supply 120 VAC, 60 Hz, 24 VAC, 50 VA Out	UPA-2450-60

Ordering Information**MIC-2M-S 2 m Shielded Composite Cable MIC-2M-S**

Shielded Composite 2 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply

MIC-10M-S 10 m Shielded Composite Cable MIC-10M-S

Shielded Composite 10 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply

MIC-20M-S 20 m Shielded Composite Cable MIC-20M-S

Shielded Composite 20 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply

MIC-25M-S 25 m Shielded Composite Cable MIC-25M-S

Shielded Composite 25 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply

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Represented by

**BOSCH**
Invented for life

MIC Series 400 Infra-red Camera



- ▶ **Twin integrated IR illuminators**
- ▶ **Brushless motor technology**
- ▶ **Host of mounting and viewing options**
- ▶ **Integrated wiper**
- ▶ **Multi-protocol operation**
- ▶ **Suitable for virtually any application**

The MIC Series 400 Infra-red camera has been designed to offer an extremely reliable, robust, and high quality surveillance solution for security applications that demand the very best performance – both during the day and at night. Precision engineered to exacting standards, the range offers numerous benefits over the use of traditional dome and PTZ cameras, and comes with a variety of options in order to offer a best-fit solution for virtually any application.

Rated to an industry leading IP68, the vandal-resistant machined camera housing is suitable for installation in the harshest of environments. Machined from solid aluminum, the MIC Series 400 infra-red cameras ensure corrosion protection by using two different processes; first an Alochrom 1200 coating, then a robust powder paint coating. Alochrom 1200 is a chromate conversion coating of aluminum used in the aerospace and defense industries where a protective layer is required to improve corrosion resistance. Sealed with 'O'-rings, the MIC Series infra-red camera can operate submerged up to 1 meter (3.3 feet) underwater by virtue of its design and construction. The optically-perfect flat viewing window and integrated long-life silicone wiper ensure razor sharp images are captured in even the most demanding conditions.

The twin integrated, long-life, LED Infra-red lamps ensure clear illumination of the camera view to 55 m (180 ft) in total darkness, ensuring high quality images regardless of the lighting conditions.

Brushless motor technology ensures ultra-reliable, whisper-quiet operation. Groundbreaking resolver technology provides pinpoint accuracy and affords the user full 360° continuous rotation pan and 186.6° tilt control.

A choice of true day/night camera modules offering up to 36x optical zoom (12x digital) are available, providing 470 TVL NTSC/PAL typical (18x module) or 530 TVL NTSC/PAL typical (36x module). Preset positions, preset tours, and random tours ensure flexible surveillance options.

The unique camera module preset function allows the module itself to be mapped to a preset button on the remote keyboard. This, for example, allows the camera to be set up for overview purposes and then, at the press of a button, to be used for Automatic Number Plate Recognition (ANPR). The flexible mounting options allow the camera to be installed upright, inverted, or canted to achieve the perfect field of view.

Functions

Twin integrated IR illuminators

Two 850 nm IR illuminators are attached directly to the camera head to provide IR light exactly where it is needed.

Brushless motor technology

Ultra-reliable brushless motors provide whisper-quiet operation and smooth control.

Host of mounting and viewing options

Faultless operation, either upright or inverted, gives the user a host of mounting and viewing possibilities. A canted option is provided for upright pole-mounted applications, allowing the base of the pole to be viewed.

Integrated wiper

Rain or shine, regardless of the weather the MIC Series 400 Infra-red camera is able to capture the highest possible quality image all year round thanks to its integrated long-life silicone wiper.

Multi-protocol operation

Compatible with virtually any control equipment available today, the MIC Series 400 Infra-red camera will seamlessly integrate with the vast majority of security systems.

Suitable for virtually any application

The versatility of the MIC Series 400 Infra-red camera makes it suitable for numerous applications, such as:

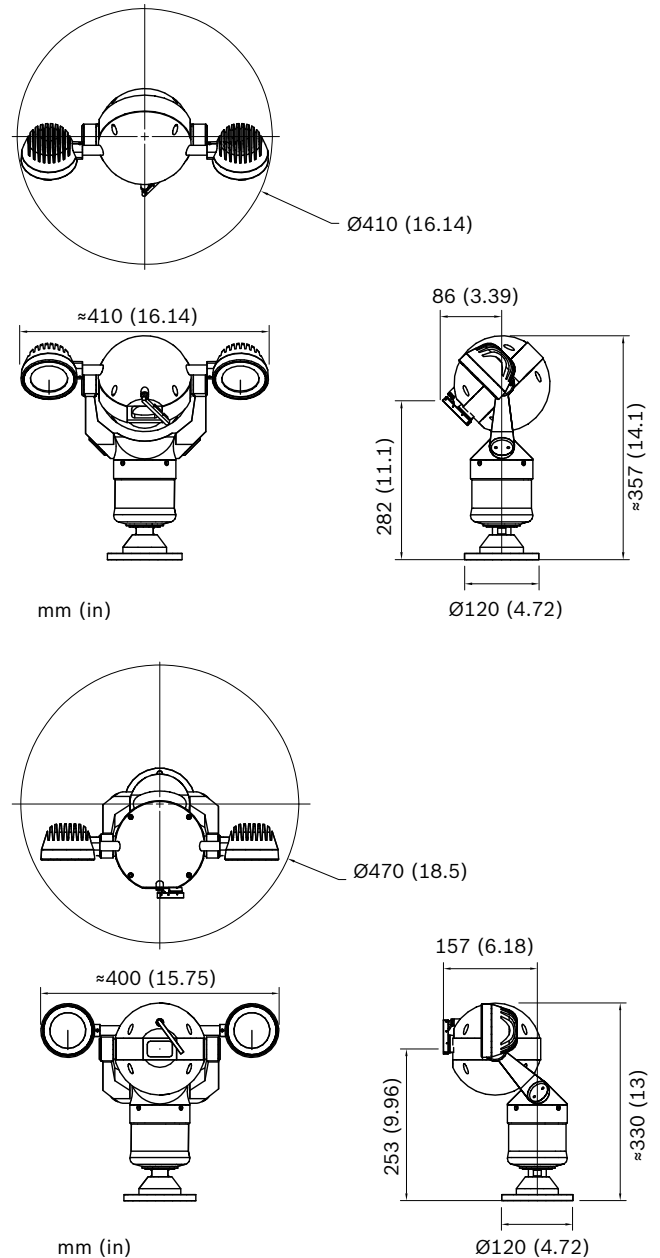
- General CCTV
- Town centers
- Railway and bus stations
- Rapid deployment
- High security
- Prestigious developments
- Architectural

Certifications and Approvals

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations including EN50130-4, EN61000-3-2:2006, EN61000-3-3:1995, and EN55022:2006 inc AL:2007
Safety	Complies with CE regulations, UL, EN, and IEC Standards 60950-1 & 22
Weatherproofing	IP68

Installation/Configuration Notes

Dimensions



Technical Specifications

Camera Module

Image sensor	1/4 in EXview CCD (WDR, 36x only)
Horizontal resolution	18x module, 470 TVL PAL/NTSC typical; 36x module, 530 TVL PAL/NTSC typical
Filter	Automatic mechanical IR cut filter
Focus system	Auto or manual
Iris	Auto or manual with slow shutter integration modes
Synchronization	Internal / External (V-Lock)
Signal/Noise ratio	50 dB or more
Back Light Compensation (BLC)	On/Off
White balance	Automatic
Automatic Gain Control (AGC)	-3 to -28 dB, 2 dB steps
Aperture control	16 Steps

18x Optical Zoom Module

Lens	F=4.1 mm (widw) to 73.8 mm (tele), F1.4 to F3.0
Zoom	18x optical (12x digital)
Angle of view	48° (wide) to 2.8° (tele)
Minimum illumination	0.7 lux (F1.4, 1/60s NTSC, 1/50s PAL) 0.11 lux (F1.4, 1/4s NTSC, 1/3s PAL) 0.01 lux (F1.4, 1/4s NTSC, 1/3s PAL ICR on)
Shutter speed	1 to 1/10,000 s (22 steps) NTSC, PAL

36x Optical Zoom Module

Lens	F=3.4 mm (wide) to 122.4 mm (tele), F1.6 to F4.5
Zoom	36x optical (12x digital)
Angle of view	57.8° (wide) to 1.7° (tele)
Minimum illumination	1.4 lux (1/60 s NTSC, 1/50 s PAL, typical, F1.6, 50IRE) 0.1 lux (1/4 s NTSC, 1/3 s PAL, typical, F1.6, 50IRE) ICR-ON mode: 0.01 lux (1/4 s NTSC, 1/3 s PAL)
Shutter speed	1/4 to 1/10,000 s (20 steps) NTSC, 1/3 to 1/10,000 s (20 steps) PAL

IR Illuminators

LED array	High efficiency Surface Mount (SMT) LEDs
No. of LEDs	7 per lamp
Wavelength	850 nm (semi-covert)
Beam angle	30°
IR distance	55 m (180 ft)
Weather proofing	IP68
Construction material	Aluminium with acrylic front window

Power consumption	9 W nominal per lamp on full power, 18 W total for twin IR
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Current	700 mA per lamp
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Operational

Auto flip	Yes
Manual flip	Yes
Dynamic privacy zones	3D privacy masking with infinite zones (some models, see ordering guide).
Presets	64 telemetry presets utilizing resolver technology (using FV protocol, 10 camera set-up presets to allow ANPR, color correction etc.)
Preset tours	6 tours each with up to 32 presets
Sector titles	Yes (64 sectors) 20 characters per title
Preset titles	20 character caption for each of the 64 presets
Home position	Preset 1 or tour

Communication and Protocols

Communication	RS485 / RS422
Control protocol	Bosch or FV protocol cameras available; additional protocols supported are Pelco D, Kalatel, 360 Vision, American Dynamics, Panasonic, Molynx, VCL, and Vicon. These can be loaded using the MIC-USB485CVTR signal converter and Cam-set via a PC. Biphase control requires a Biphase to RS485 converter (MIC-BP3, available separately) to connect to Biphase equipment.

Connectivity

Video	Co-axial via composite cable
Telemetry	Twisted pair. Simplex, half and full duplex operation via composite cable
MIC Universal Camera Setup Software Utility (Cam-set)	Supplied with each camera, Cam-set allows direct connection to a USB equipped PC via the MIC Series PSU or over a full duplex or IP network to provide access to all camera functions and useful diagnostic tools
USB to RS485 signal converter	Allows MIC Series cameras to connect to a PC (supplied free with MIC Series 400 Infra-red camera, or available separately)
Power	Via composite cable

Alarms

Alarm inputs	1 tamper input (4 alarm inputs available via the IR power supply unit)
Alarm communication	Tamper switch (ground connection)

Mechanical

Drive unit	Brushless, integral pan/tilt motor drive
Pan angle	360° continuous rotation
Pan speed	Up to 90° per second (variable)
Tilt angle	186.6°
Tilt speed	0.2° to 90° per second (variable)

Speed control	Closed loop electronics
Preset accuracy	Better than 0.08°
Proportional Pan/Tilt to Zoom	Yes
Construction	
Construction material	Machined aluminum
Viewing window	Tempered flat glass
Window wiper	Standard, long-life silicone wiper
Standard colors	Black(RAL9005), Gray (RAL7001) or White (RAL9003)
Standard finish	Alochrom 1200 surface treatment with powder coat paint.
Dimensions	403 x 360 x 165 mm (WxHxD) 15.2 x 14.2 x 6.5 in (WxHxD) (upright and inverted)
	403x330x217 mm (WxHxD) 15.2x13x8.5 in (WxHxD) (canted)
Weight	6.5 kg (14.3 lb) including 4 in. pitch circle diameter (PCD) base
Configurations available	Upright mount or upright canted at 45° mount. (Inverted mount is possible using software setting and upright camera.)
Environmental	
Operational temperature	-20 °C to +50 °C (-4 °F to +122 °F)
Weatherproofing	IP68
Electrical	
Input voltage	18 VAC
Power consumption	Max 50 W

Ordering Information

MIC400IRBCW14518P MIC Series 400 Infra-Red	MIC400IRBCW14518P
Infra-Red, 18X, PAL, PTZ camera, Black, Canted, FV Protocol, with integrated wiper and privacy function	
MIC400IRBCW14536P MIC Series 400 Infra-Red	MIC400IRBCW14536P
Infra-Red, 36X, PAL, PTZ camera, Black, Canted, FV Protocol, with integrated wiper and privacy function	
MIC400IRBCW14618P MIC Series 400 Infra-Red	MIC400IRBCW14618P
Infra-Red, 18X, PAL, PTZ camera, Black, Canted, FV Protocol, with integrated wiper	
MIC400IRBCW14636P MIC Series 400 Infra-Red	MIC400IRBCW14636P
Infra-Red, 36X, PAL, PTZ camera, Black, Canted, FV Protocol, with integrated wiper	

Ordering Information

MIC400IRBUW14518P MIC Series 400 Infra-Red	MIC400IRBUW14518P
Infra-Red, 18X, PAL, PTZ camera, Black, Upright, FV Protocol, with integrated wiper and privacy function	
MIC400IRBUW14536P MIC Series 400 Infra-Red	MIC400IRBUW14536P
Infra-Red, 36X, PAL, PTZ camera, Black, Upright, FV Protocol, with integrated wiper and privacy function	
MIC400IRBUW14618P MIC Series 400 Infra-Red	MIC400IRBUW14618P
Infra-Red, 18X, PAL, PTZ camera, Black, Upright, FV Protocol, with integrated wiper	
MIC400IRBUW14636P MIC Series 400 Infra-Red	MIC400IRBUW14636P
Infra-Red, 18X, PAL, PTZ camera, Black, Upright, FV Protocol, with integrated wiper	
MIC400IRGCW14518P MIC Series 400 Infra-Red	MIC400IRGCW14518P
Infra-Red, 18X, PAL, PTZ camera, Grey, Canted, FV Protocol, with integrated wiper and privacy function	
MIC400IRGCW14536P MIC Series 400 Infra-Red	MIC400IRGCW14536P
Infra-Red, 36X, PAL, PTZ camera, Grey, Canted, FV Protocol, with integrated wiper and privacy function	
MIC400IRGCW14618P MIC Series 400 Infra-Red	MIC400IRGCW14618P
Infra-Red, 18X, PAL, PTZ camera, Grey, Canted, FV Protocol, with integrated wiper	
MIC400IRGCW14636P MIC Series 400 Infra-Red	MIC400IRGCW14636P
Infra-Red, 36X, PAL, PTZ camera, Grey, Canted, FV Protocol, with integrated wiper	
MIC400IRGUW14518P MIC Series 400 Infra-Red	MIC400IRGUW14518P
Infra-Red, 18X, PAL, PTZ camera, Grey, Upright, FV Protocol, with integrated wiper and privacy function	
MIC400IRGUW14536P MIC Series 400 Infra-Red	MIC400IRGUW14536P
Infra-Red, 36X, PAL, PTZ camera, Grey, Upright, FV Protocol, with integrated wiper and privacy function	
MIC400IRGUW14618P MIC Series 400 Infra-Red	MIC400IRGUW14618P
Infra-Red, 18X, PAL, PTZ camera, Grey, Upright, FV Protocol, with integrated wiper	
MIC400IRGUW14636P MIC Series 400 Infra-Red	MIC400IRGUW14636P
Infra-Red, 36X, PAL, PTZ camera, Grey, Upright, FV Protocol, with integrated wiper	

Ordering Information

MIC400IRWCW14518P MIC Series 400 Infra-Red Infra-Red, 18X, PAL, PTZ camera, White, Canted, FV Protocol, with integrated wiper and privacy function	MIC400IRWCW14518P
MIC400IRWCW14536P MIC Series 400 Infra-Red Infra-Red, 36X, PAL, PTZ camera, White, Canted, FV Protocol, with integrated wiper and privacy function	MIC400IRWCW14536P
MIC400IRWCW14618P MIC Series 400 Infra-Red Infra-Red, 18X, PAL, PTZ camera, White, Canted, FV Protocol, with integrated wiper	MIC400IRWCW14618P
MIC400IRWCW14636P MIC Series 400 Infra-Red Infra-Red, 36X, PAL, PTZ camera, White, Canted, FV Protocol, with integrated wiper	MIC400IRWCW14636P
MIC400IRWUW14518P MIC Series 400 Infra-Red Infra-Red, 18X, PAL, PTZ camera, White, Upright, FV Protocol, with integrated wiper and privacy function	MIC400IRWUW14518P
MIC400IRWUW14536P MIC Series 400 Infra-Red Infra-Red, 36X, PAL, PTZ camera, White, Upright, FV Protocol, with integrated wiper and privacy function	MIC400IRWUW14536P
MIC400IRWUW14618P MIC Series 400 Infra-Red Infra-Red, 18X, PAL, PTZ camera, White, Upright, FV Protocol, with integrated wiper	MIC400IRWUW14618P
MIC400IRWUW14636P MIC Series 400 Infra-Red Infra-Red, 36X, PAL, PTZ camera, White, Upright, FV Protocol, with integrated wiper	MIC400IRWUW14636P
MIC400IRBCP14518N MIC Series 400 Infra-Red Infra-Red, 18X, NTSC, PTZ camera, Black, Canted, Bosch Protocol, with integrated wiper and privacy function	MIC400IRBCP14518N
MIC400IRBCP14536N MIC Series 400 Infra-Red Infra-Red, 36X, NTSC, PTZ camera, Black, Canted, Bosch Protocol, with integrated wiper and privacy function	MIC400IRBCP14536N
MIC400IRBCP14618N MIC Series 400 Infra-Red Infra-Red, 18X, NTSC, PTZ camera, Black, Canted, Bosch Protocol, with integrated wiper	MIC400IRBCP14618N
MIC400IRBCP14636N MIC Series 400 Infra-Red Infra-Red, 36X, NTSC, PTZ camera, Black, Canted, Bosch Protocol, with integrated wiper	MIC400IRBCP14636N

Ordering Information

MIC400IRBUP14518N MIC Series 400 Infra-Red Infra-Red, 18X, NTSC, PTZ camera, Black, Upright, Bosch Protocol, with integrated wiper and privacy function	MIC400IRBUP14518N
MIC400IRBUP14536N MIC Series 400 Infra-Red Infra-Red, 36X, NTSC, PTZ camera, Black, Upright, Bosch Protocol, with integrated wiper and privacy function	MIC400IRBUP14536N
MIC400IRBUP14618N MIC Series 400 Infra-Red Infra-Red, 18X, NTSC, PTZ camera, Black, Upright, Bosch Protocol, with integrated wiper	MIC400IRBUP14618N
MIC400IRBUP14636N MIC Series 400 Infra-Red Infra-Red, 36X, NTSC, PTZ camera, Black, Upright, Bosch Protocol, with integrated wiper	MIC400IRBUP14636N
MIC400IRGCP14518N MIC Series 400 Infra-Red Infra-Red, 18X, NTSC, PTZ camera, Grey, Canted, Bosch Protocol, with integrated wiper and privacy function	MIC400IRGCP14518N
MIC400IRGCP14536N MIC Series 400 Infra-Red Infra-Red, 36X, NTSC, PTZ camera, Grey, Canted, Bosch Protocol, with integrated wiper and privacy function	MIC400IRGCP14536N
MIC400IRGCP14618N MIC Series 400 Infra-Red Infra-Red, 18X, NTSC, PTZ camera, Grey, Canted, Bosch Protocol, with integrated wiper	MIC400IRGCP14618N
MIC400IRGCP14636N MIC Series 400 Infra-Red Infra-Red, 36X, NTSC, PTZ camera, Grey, Canted, Bosch Protocol, with integrated wiper	MIC400IRGCP14636N
MIC400IRGUP14518N MIC Series 400 Infra-Red Infra-Red, 18X, NTSC, PTZ camera, Grey, Upright, Bosch Protocol, with integrated wiper and privacy function	MIC400IRGUP14518N
MIC400IRGUP14536N MIC Series 400 Infra-Red Infra-Red, 36X, NTSC, PTZ camera, Grey, Upright, Bosch Protocol, with integrated wiper and privacy function	MIC400IRGUP14536N
MIC400IRGUP14618N MIC Series 400 Infra-Red Infra-Red, 18X, NTSC, PTZ camera, Grey, Upright, Bosch Protocol, with integrated wiper	MIC400IRGUP14618N
MIC400IRGUP14636N MIC Series 400 Infra-Red Infra-Red, 36X, NTSC, PTZ camera, Grey, Upright, Bosch Protocol, with integrated wiper	MIC400IRGUP14636N

Ordering Information

MIC400IRWCP14518N MIC Series 400 Infra-Red Infra-Red, 18X, NTSC, PTZ camera, White, Canted, Bosch Protocol, with integrated wiper and privacy function	MIC400IRWCP14518N
MIC400IRWCP14536N MIC Series 400 Infra-Red Infra-Red, 36X, NTSC, PTZ camera, White, Canted, Bosch Protocol, with integrated wiper and privacy function	MIC400IRWCP14536N
MIC400IRWCP14618N MIC Series 400 Infra-Red Infra-Red, 18X, NTSC, PTZ camera, White, Canted, Bosch Protocol, with integrated wiper	MIC400IRWCP14618N
MIC400IRWCP14636N MIC Series 400 Infra-Red Infra-Red, 36X, NTSC, PTZ camera, White, Canted, Bosch Protocol, with integrated wiper	MIC400IRWCP14636N
MIC400IRWUP14518N MIC Series 400 Infra-Red Infra-Red, 18X, NTSC, PTZ camera, White, Up-right, Bosch Protocol, with integrated wiper and privacy function	MIC400IRWUP14518N
MIC400IRWUP14536N MIC Series 400 Infra-Red Infra-Red, 36X, NTSC, PTZ camera, White, Up-right, Bosch Protocol, with integrated wiper and privacy function	MIC400IRWUP14536N
MIC400IRWUP14618N MIC Series 400 Infra-Red Infra-Red, 18X, NTSC, PTZ camera, White, Up-right, Bosch Protocol, with integrated wiper	MIC400IRWUP14618N
MIC400IRWUP14636N MIC Series 400 Infra-Red Infra-Red, 36X, NTSC, PTZ camera, White, Up-right, Bosch Protocol, with integrated wiper	MIC400IRWUP14636N
Accessories	
MIC-BP3 Bi-phase Converter Biphase converter for IR power supplies or non-IR power supplies without a free expansion slot available	MIC-BP3
MIC-IR-24PSU-UL 24 VAC Camera/IR Power Supply 24 VAC, 50/60 Hz power supply for MIC Series cameras with Infrared Illuminators	MIC-IR-24PSU-UL
MIC-IR-115PSU-UL 115 VAC Camera/IR Power Supply 115 VAC, 60 Hz power supply for MIC Series cameras with Infrared Illuminators	MIC-IR-115PSU-UL
MIC-IR-240PSU-UL 240 VAC Camera/IR Power Supply 240 VAC, 50 Hz power supply for MIC Series cameras Infrared Illuminators	MIC-IR-240PSU-UL

Ordering Information

MIC-DCA-B Deep Conduit Adapter Deep conduit adapter for 4 in. PCD base - black RAL9005	MIC-DCA-B
MIC-DCA-G Deep Conduit Adapter Deep conduit adapter for 4 in. PCD base - grey RAL7001	MIC-DCA-G
MIC-DCA-W Deep Conduit Adapter Deep conduit adapter for 4 in. PCD base - white RAL9003	MIC-DCA-W
MIC-SCA-B Shallow Conduit Adapter Shallow conduit adapter for 4 in. PCD base - black RAL9005	MIC-SCA-B
MIC-SCA-G Shallow Conduit Adapter Shallow conduit adapter for 4 in. PCD base - grey RAL7001	MIC-SCA-G
MIC-SCA-W Shallow Conduit Adapter Shallow conduit adapter for 4 in. PCD base - white RAL9003	MIC-SCA-W
MIC-SPR Spreader Plate Aluminum spreader plate suitable for brick-work surface mounting - black RAL9005	MIC-SPR
MIC-SPR-G Spreader Plate Aluminum spreader plate suitable for brick-work surface mounting; grey RAL7001	MIC-SPR-G
MIC-SPR-W Spreader Plate Aluminum spreader plate suitable for brick-work surface mounting; white RAL9003	MIC-SPR-W
MIC-CMB-B Corner Mount Bracket Corner mount bracket - black RAL9005	MIC-CMB-B
MIC-CMB-G Corner Mount Bracket Corner mount bracket - Grey RAL 7001	MIC-CMB-G
MIC-CMB-W Corner Mount Bracket Corner mount bracket - white RAL9003	MIC-CMB-W
MIC-PMB Pole Mount Bracket Pole mount bracket (includes 2 x 455 mm banding ties for pole diameters 75 to 145 mm)	MIC-PMB
MIC-USB485CVTR USB to RS485 Signal Converter	MIC-USB485CVTR
MIC-WKT-IR Washer Kit Washer kit for IR power supplies only (includes washer nozzle and mounting brackets for wall or 4 in. PCD base)	MIC-WKT-IR
HAC-WAS05-20 24 VAC Washer 24 VAC washer inst. 5M 25L	HAC-WAS05-20
UPA-2450-50 Power Supply 220 VAC, 50 Hz, 24 VAC, 50 VA Out	UPA-2450-50
UPA-2450-60 Power Supply 120 VAC, 60 Hz, 24 VAC, 50 VA Out	UPA-2450-60
MIC-2M-S 2 m Shielded Composite Cable Shielded Composite 2 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply	MIC-2M-S

Ordering Information**MIC-10M-S 10 m Shielded Composite Cable**

Shielded Composite 10 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply

MIC-10M-S**MIC-20M-S 20 m Shielded Composite Cable**

Shielded Composite 20 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply

MIC-20M-S**MIC-25M-S 25 m Shielded Composite Cable**

Shielded Composite 25 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply

MIC-25M-S

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Represented by

**BOSCH**
Invented for life

MIC Series 400 Public Address Camera



- ▶ **Built-in speakers**
- ▶ **Brushless motor technology**
- ▶ **Host of mounting and viewing options**
- ▶ **Integrated long-life silicone wiper**
- ▶ **Multi-protocol operation**

The MIC Series 400 public address camera has been designed to offer an extremely reliable, robust, and high quality surveillance solution for security applications that demand the very best performance. Precision engineered to exacting standards, the range offers numerous benefits over the use of traditional dome and PTZ cameras, and comes with a variety of options in order to offer a best fit solution for virtually any application that requires video and voice communication.

The MIC Series 400 public address camera affords the user directional one-way voice communication thanks to its 100 dB built-in twin speaker system. Coupled with leading PTZ camera technology, the range is suitable for a host of crowd control and public space applications.

Rated to an industry leading IP68 (speakers rated to IP67), the compact, vandal-resistant, machined aluminum camera housing is suitable for installation in the harshest of environments. Machined from solid aluminum, the MIC Series 400 cameras ensure corrosion protection by using two different processes; first an Alocrom 1200 coating, then a robust powder paint coating. Alocrom 1200 is a chromate conversion coating of aluminum, used in the aerospace and defense industries where a protective layer is required to improve corrosion resistance. The optically-perfect flat viewing window and integrated, long-life silicone wiper ensure razor sharp images are captured in even the most demanding conditions.

The brushless motor technology offers ultra-reliable, whisper-quiet operation with full 360° continuous rotation pan and 196° tilt control for exceptional viewing capability. Small-increment pan/tilt speeds, from just 0.2° per second to 90° per second, give the user precise control. This speed control is especially important when used with video analytic systems, particularly for tracking subjects when fully zoomed in.

A choice of true day/night camera modules, offering up to 36x optical zoom (12x digital) are available, providing either 470 TVL NTSC/PAL typical (18x module) or 530 TVL NTSC/PAL typical (36x module). When coupled with upright or inverted mounting capability, the MIC Series 400 public address camera allows the perfect field of view to be achieved every time.

Functions

Built-in speakers

Twin 100 dB speakers offer directional voice communication in addition to the units' flexible surveillance capability.

Note: Requires suitable third party amplifier and microphone.

Brushless motor technology

Whisper-quiet operation and smooth control is provided through the use of ultra-reliable brushless motors.

Host of mounting and viewing options

Faultless operation either upright or inverted gives the user a host of mounting and viewing possibilities.

Integrated wiper

Hot or cold, rain or shine - regardless of the weather the MIC Series 400 public address camera is able to capture the highest possible quality image all year round thanks to its integrated long-life silicone wiper.

Multi-protocol operation

Compatible with virtually any control equipment available today, the MIC Series 400 public address camera is able to seamlessly integrate with the vast majority of security systems

Applications:

- Town Centers
- Railway Stations
- Events
- Crowd Control
- Rapid Deployment
- Stadia
- Remote Locations
- Airports

Certifications and Approvals

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations, including EN50130-4, EN61000-3-2:2006, EN61000-3-3:1995, and EN55022:2006 inc AL:2007
Safety	Complies with CE regulations, UL, EN, and IEC Standards 60950-1 & 22
Weatherproofing	IP68 camera housing, IP67 speakers

Technical Specifications**Camera Module**

Image sensor	1/4-inch EXview CCD, WDR (36x only)
Horizontal resolution	18x module, 470 TVL NTSC/PAL typical 36x module, 530 TVL NTSC/PAL typical
Filter	Automatic mechanical IR cut filter
Focus system	Auto or manual
Iris	Auto or manual with slow shutter integration modes
Synchronization	Internal / External (V-Lock)
Signal/Noise ratio	50 dB or more
Back Light Compensation (BLC)	On/Off

White balance	Automatic
Automatic Gain Control (AGC)	-3 to -28 dB, 2 dB steps
Aperture control	16 Steps

18x Optical Zoom Module

Lens	F=4.1 mm (wide) to 73.8 mm (tele), F1.4 to F3.0
Zoom	18x optical (12x digital)
Angle of view	48° (wide) to 2.8° (tele)
Minimum illumination	0.7 lux (F1.4, 1/60s NTSC, 1/50s PAL) 0.11 lux (F1.4, 1/4s NTSC, 1/3s PAL) 0.01 lux (F1.4, 1/4s NTSC, 1/3s PAL ICR on)
Shutter speed	1/1 to 1/10,000 s (22 steps) NTSC, PAL

36x Optical Zoom Module

Lens	F=3.4 mm (wide) to 122.4 mm (tele), F1.6 to F4.5
Zoom	36x optical (12x digital)
Angle of view	57.8° (wide) to 1.7° (tele)
Minimum illumination	1.4 lux (1/60 s NTSC, 1/50 s PAL, typical, F1.6, 50IRE) 0.1 lux (1/4 s NTSC, 1/3 s PAL, typical, F1.6, 50IRE) ICR-ON mode: 0.01 lux (1/4 s NTSC, 1/3 s PAL)
Shutter speed	1/4 to 1/10,000 s (20 steps) NTSC, 1/3 to 1/10,000 s (20 steps) PAL

Twin Speakers

Output	6 W / 8 ohm
Construction	Polyamide UL94 V0
Weatherproofing	IP67
Control	Third party amplifier and microphone

Operational

Auto flip	Yes
Manual flip	Yes
Dynamic privacy zones	Standard, 3D privacy masking with infinite zones
Presets	64 telemetry presets utilizing resolver technology (using FV protocol, 10 camera set-up presets to allow ANPR, color correction etc.)
Preset tours	6 tours each with up to 32 presets
Sector titles	Yes (64 sectors) 20 characters per title
Preset titles	20 character caption for each of the 64 presets
Home position	Yes (preset 1 or tour)

Communication and Protocols

Communication	RS485 / RS422
Control protocol	Bosch or FV protocol cameras available; additional protocols supported are Pelco D, Kalatel, 360 Vision, American Dynamics, Panasonic, Molynx, VCL, and Vicon. These can be loaded using the MIC-USB485CVTR signal converter and Cam-set via a PC. Biphase control requires a Biphase to RS485 converter (MIC-BP4, available separately) installed in the MIC Series PSU to connect to Bi-phase equipment.

Connectivity

Video	Co-axial via composite cable
Telemetry	Twisted pair. Simplex, half and full duplex operation via composite cable
MIC Universal Camera Setup Software Utility (Cam-set)	Supplied with each camera, Cam-set allows direct connection to a USB equipped PC via the MIC Series PSU or over a full duplex or IP network to provide access to all camera functions and useful diagnostic tools
USB to RS485 signal converter	Allows MIC Series cameras to connect to a PC (supplied free with MIC Series 400 public address camera or available separately)
Power	Via composite cable

Alarms

Alarm inputs	1 tamper input (additional inputs possible with optional alarm card in PSU)
Alarm communication	Tamper switch (ground connection)

Mechanical

Drive unit	Brushless, integral pan/tilt motor drive
Pan angle	360° continuous rotation
Pan speed	Up to 90° per second (variable)
Tilt angle	196°
Tilt speed	0.2° to 90° per second (variable)
Speed control	Closed loop electronics
Preset accuracy	Better than 0.08°
Proportional Pan/Tilt to Zoom	Yes

Construction

Construction material	Machined aluminum
Viewing window	Tempered flat glass
Window wiper	Standard, long-life silicone wiper
Standard color	Black (RAL9005) or Grey (RAL7001)
Standard finish	Alochrom 1200 surface treatment with powder coat paint.
Dimensions	205(W) x 420(H) x 165(D)mm (upright and inverted)

Weight	6.5 Kg including 4-inch. pitch circle diameter (PCD) base
Configurations available	Upright mount or upright canted at 45° mount. (Inverted mount is possible using software setting and upright camera.)

Environmental

Operational temperature	-20°C to +50°C (-4 °F to 122 °F)
Weatherproofing	IP68 Camera, IP67 for Speakers

Electrical

Input voltage	18 VAC
Power consumption	25.2 W max

Ordering Information

MIC400PABUW14518P MIC Series 400 public address Public address, 18X, PAL, PTZ camera, Black, Upright, FV Protocol with integrated wiper and privacy function	MIC400PABUW14518P
MIC400PABUW14536P MIC Series 400 public address Public address, 36X, PAL, PTZ camera, Black, Upright, FV Protocol with integrated wiper and privacy function	MIC400PABUW14536P
MIC400PAGUW14518P MIC Series 400 public address Public address, 18X, PAL, PTZ camera, Grey, Upright, FV Protocol with integrated wiper and privacy function	MIC400PAGUW14518P
MIC400PAGUW14536P MIC Series 400 public address Public address, 36X, PAL, PTZ camera, Grey, Upright, FV Protocol with integrated wiper and privacy function	MIC400PAGUW14536P
MIC400PABUP14518N MIC Series 400 public address Public address, 18X, NTSC, PTZ camera, Black, Upright, Bosch Protocol with integrated wiper and privacy function	MIC400PABUP14518N
MIC400PABUP14536N MIC Series 400 public address Public address, 36X, NTSC, PTZ camera, Black, Upright, Bosch Protocol with integrated wiper and privacy function	MIC400PABUP14536N
MIC400PAGUP14518N MIC Series 400 public address Public address, 18X, NTSC, PTZ camera, Grey, Upright, Bosch Protocol with integrated wiper and privacy function	MIC400PAGUP14518N
MIC400PAGUP14536N MIC Series 400 public address Public address, 36X, NTSC, PTZ camera, Grey, Upright, Bosch Protocol with integrated wiper and privacy function	MIC400PAGUP14536N

Ordering Information

Accessories

MIC-24PSU-UL 24 VAC Camera Power Supply 24 VAC, 50/60 Hz power supply for MIC Series cameras	MIC-24PSU-UL
MIC-115PSU-UL 115 VAC Camera Power Supply 115 VAC, 60 Hz power supply for MIC Series cameras	MIC-115PSU-UL
MIC-240PSU-UL 240 VAC Camera Power Supply 240 VAC, 50 Hz power supply for MIC Series cameras	MIC-240PSU-UL
MIC-BP4 Bi-phase Converter Bi-Phase converter for non-IR versions of MIC series power supply units	MIC-BP4
MIC-DCA-B Deep Conduit Adapter Deep conduit adapter for 4 in. PCD base - black RAL9005	MIC-DCA-B
MIC-DCA-G Deep Conduit Adapter Deep conduit adapter for 4 in. PCD base - grey RAL7001	MIC-DCA-G
MIC-SCA-B Shallow Conduit Adapter Shallow conduit adapter for 4 in. PCD base - black RAL9005	MIC-SCA-B
MIC-SCA-G Shallow Conduit Adapter Shallow conduit adapter for 4 in. PCD base - grey RAL 7001	MIC-SCA-G
MIC-SPR Spreader Plate Aluminum spreader plate suitable for brick-work surface mounting - black RAL9005	MIC-SPR
MIC-SPR-G Spreader Plate Aluminum spreader plate suitable for brick-work surface mounting; grey RAL7001	MIC-SPR-G
MIC-CMB-B Corner Mount Bracket Corner mount bracket - black RAL9005	MIC-CMB-B
MIC-CMB-G Corner Mount Bracket Corner mount bracket - Grey RAL 7001	MIC-CMB-G
MIC-PMB Pole Mount Bracket Pole mount bracket (includes 2 x 455 mm banding ties for pole diameters 75 to 145 mm)	MIC-PMB
MIC-WMB-B Wall Mount Bracket Wall mount bracket - black RAL9005	MIC-WMB-B
MIC-WMB-G Wall mount Bracket Wall mount bracket - grey RAL7001	MIC-WMB-G
MIC-USB485CVTR USB to RS485 Signal Converter	MIC-USB485CVTR

Ordering Information

MIC-ALM Alarm and Washer Pump Drive Card 8 Input alarm and washer pump drive card for PSU (Not for IR PSU)	MIC-ALM
MIC-WKT Washer Kit Washer kit for non IR MIC models (includes washer pump drive card, washer nozzle and mounting brackets for wall and 4 in. PCD base)	MIC-WKT
HAC-WAS05-20 24 VAC Washer 24 VAC washer inst. 5M 25L	HAC-WAS05-20
UPA-2450-50 Power Supply 220 VAC, 50 Hz, 24 VAC, 50 VA Out	UPA-2450-50
UPA-2450-60 Power Supply 120 VAC, 60 Hz, 24 VAC, 50 VA Out	UPA-2450-60
MIC-2M-S 2 m Shielded Composite Cable Shielded Composite 2 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply	MIC-2M-S
MIC-10M-S 10 m Shielded Composite Cable Shielded Composite 10 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply	MIC-10M-S
MIC-20M-S 20 m Shielded Composite Cable Shielded Composite 20 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply	MIC-20M-S
MIC-25M-S 25 m Shielded Composite Cable Shielded Composite 25 m cable that provides power, telemetry and video connection from a MIC Series camera to a MIC Series power supply	MIC-25M-S

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