BOSCH

Invented for life

MIC Series 400 Stainless Steel Camera

▸ **Grade 316L stainless steel construction**

▸ **Rated to an industry leading IP68**

▸ **Host of mounting and viewing options**

▸ **Integrated heater and long-life wiper**

▸ **Multi-protocol operation**

The MIC Series 400 stainless steel camera has been designed to offer an extremely reliable, robust, and high quality surveillance solution for security applications that demand the very best performance, regardless of the installed environment. Precision engineered to exacting standards, the range offers numerous benefits over the use of traditional dome and PTZ cameras with a range of options available to ensure a best-fit solution is achieved.

Rated to an industry leading IP68, the vandal resistant grade 316L stainless steel camera housing has enhanced corrosion-resistant properties to provide the ultimate protection in the harshest of environments, including marine applications where the salt content of the air is especially high and constant exposure can dramatically reduce the lifespan of traditional camera and dome units.

Featuring an optically-perfect flat viewing window and integrated wiper, the MIC Series 400 stainless steel camera is able to capture razor-sharp images in even the most demanding conditions.

The brushless motor technology offers ultra-reliable, whisper-quiet operation with full 360º continuous rotation pan and 320º tilt control for exceptional viewing capability. Small-increment pan/tilt speeds, from just 0.2º per second to 90º 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, 45 degree canted, or inverted mounting capability, the MIC Series 400 stainless steel camera allows the perfect field of view to be achieved every time.

Functions

Grade 316L stainless steel construction

Anti-corrosion stainless steel construction ensures long-life and reliable operation in demanding conditions, such as maritime environments.

Rated to an industry leading IP68

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

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 heater and wiper

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

Multi-protocol operation

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

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

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

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 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 stainless steel 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	320°
Tilt speed	0.2° to 90° per second (variable)
Speed control	Closed loop electronics
Preset accuracy	Better than 0.08°
Proportional P/T to zoom	Yes

Construction

Construction material	Grade 316L stainless steel
Viewing window	Tempered flat glass
Window wiper	Standard, long-life silicone wiper
Heater	Standard
Standard colors	Stainless Steel (no color options)
Standard finish	Stainless Steel (no finish options)
Dimensions (W x H x D)	205 x 360 x 165 mm (8.07 x 14.17 x 6.50 in.) (upright and inverted)
Weight	16.5 Kg (36.38 lb) (including 4-in. 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)
Weatherproofing	IP68

Electrical

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

Ordering Information

MIC400STSCW13518P MIC Series 400 Stainless Steel Stainless steel, 18X, PAL, PTZ camera, Canted, FV Protocol with integrated wiper, heater and privacy function	**MIC400STSCW135 18P**
MIC400STSCW13536P MIC Series 400 Stainless Steel Stainless steel, 36X, PAL, PTZ camera, Canted, FV Protocol with integrated wiper, heater and privacy function	**MIC400STSCW135 36P**
MIC400STSUW13518P MIC Series 400 Stainless Steel Stainless steel, 18X, PAL, PTZ camera, Upright, FV Protocol with integrated wiper, heater and privacy function	**MIC400STSUW135 18P**
MIC400STSUW13536P MIC Series 400 Stainless Steel Stainless steel, 36X, PAL, PTZ camera, Upright, FV Protocol with integrated wiper, heater and privacy function	**MIC400STSUW135 36P**
MIC400STSCP13518N MIC Series 400 Stainless Steel Stainless steel, 18X, NTSC, PTZ camera, Canted, Bosch Protocol with integrated wiper, heater and privacy function	**MIC400STSCP1351 8N**
MIC400STSCP13536N MIC Series 400 Stainless Steel Stainless steel, 36X, NTSC, PTZ camera, Canted, Bosch Protocol with integrated wiper, heater and privacy function	**MIC400STSCP1353 6N**
MIC400STSUP13518N MIC Series 400 Stainless Steel Stainless steel, 18X, NTSC, PTZ camera, Upright, Bosch Protocol with integrated wiper, heater and privacy function	**MIC400STSUP1351 8N**
MIC400STSUP13536N MIC Series 400 Stainless Steel Stainless steel, 36X, NTSC, PTZ camera, Upright, Bosch Protocol with integrated wiper, heater and privacy function	**MIC400STSUP1353 6N**
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**

Ordering Information

MIC-DCA-S Deep Conduit Adapter
Deep conduit adapter for 4 in. PCD base - grade 316 stainless steel, plain finish
MIC-DCA-S

MIC-SCA-S Shallow Conduit Adapter
Shallow conduit adapter for 4 in. PCD base - grade 316 stainless steel, plain finish
MIC-SCA-S

MIC-SPR-S Spreader Plate
316L stainless steel spreader plate suitable for brickwork surface mounting; plain finish
MIC-SPR-S

MIC-CMB-S Corner Mount Bracket
Corner mount bracket - grade 316 stainless steel
MIC-CMB-S

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-S Wall Mount Bracket
Wall mount bracket - grade 316 stainless steel (requires MIC-SPR or MIC-PMB for secure mounting due to weight)
MIC-WMB-S

MIC-USB485CVTR USB to RS485 Signal Converter
USB to RS485 signal converter to allow MIC Series cameras to connect to a PC, supplied with each camera
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 infrared 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

Ordering Information

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