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*Invented for life*

# MIC Series Accessories

▸ **Designed to seamlessly integrate with the MIC series**

▸ **Best-fit solution for virtually any application**

▸ **Extends functionality**

A range of accessories is available for the MIC Series 400 PTZ cameras. These accessories extend the functionality of the camera so that it best fits your application.

## System Overview

### Composite Cables

MIC Series composite cables provide all power, video and telemetry connections between a MIC Series camera and a MIC Series power supply unit in a single shielded cable. The high quality 12-core cable is fitted at one end with a 12-pin, IP67 sleeved female connecter which connects to, and shields, the male connecter in the base of the camera. This provides a reliable, easy to install, common connection for all MIC Series cameras. The other end of the cable has individual tinned wires for quick installation in the power supply unit. The cable shield connects to a metal cable gland to ensure minimum EMC interference.

| | |
|---|---|
| Cable Lengths | 2 m, 10 m, 20 m and 25 m |
| Cable diameter | 8 mm |
| Cable Impedance | 75 Ohm |
| Temperature range | −55° to +85℃ (−67° to +185℉) |
| Compliant | ROSH and Sony 00259 |
| Connecter diameter | 25 mm |
| Connecter | IP67, 12-pin female sleeved |

### MIC-USB485CVTR Converter

The MIC Series USB to RS485 signal converter is a compact unit that allows a PC without a serial port to connect directly to the MIC Series cameras via the telemetry connector in MIC Series power supplies. The converter is connected in 4-wire two-way mode (Full Duplex); in 2-wire two-way mode (Half Duplex) or in 2-wire one-way mode (Simplex)

The converter allows the Bosch MIC Universal Camera Set-up Software (cam-set) to connect to MIC Series cameras thereby providing full control of all camera setup and operation functions. This converter and the CamSet software are supplied with every MIC Series camera but are also available separately.

| | |
|---|---|
| Dimensions (WxHxD) | 24 x 10 x 78 mm (0.94 x 0.39 x 3.07 in) |
| Weight | 10 g (0.35 oz) |
| Max Current | 100 mA |
| Isolation | None |

### Bi-Phase Converter

The Bosch MIC-BP Series Bi-phase converter cards allow up to eight MIC Series cameras to be interfaced with Bosch Bi-phase compatible equipment. The card translates Bosch Bi-phase protocol to RS485, half duplex telemetry signals. It also allows the camera address to be set through its integrated DIP switch selector.

The **MIC-BP3** has its own enclosure with its own power supply. This enables it to be used by MIC Series power supplies that do not have an available expansion slot. (MIC Series IR power supplies use the MIC-BP3).

The **MIC-BP4** is a plug-in card that fits into an available expansion slot within a non-infrared MIC Series power supply unit.

| Dimensions (W x H x D) | |
| --- | --- |
| • MIC-BP3 IP65 Enclosure | 120 x 55 x 80 mm (4.72 x 2.17 x 3.15 in) |
| • MIC-BP3 Card | 60 x 10 x 70 mm (2.36 x 0.39 x 2.76 in) |
| • MIC-BP4 Card | 60 x 10 x 70 mm (2.36 x 0.39 x 2.72 in) |
| Weight | |
| • MIC-BP3 with Power Supply | 381 g |
| • MIC-BP4 | 35.2 g |
| Bi-phase Specifications | Shielded 2-wire, half-duplex, multi-drop, 5000 ft cable limit requires 18 AWG wire |
| Cable Type | Shielded Twisted Pair (STP) |
| Distance | 1524 m (5000 ft) Belden 8760 recommended |
| Transmission Rate | 31.25 kHz |
| Gage | 1.02 mm (18 AWG) |
| Termination | 110 Ohm |
| Terminal Connector | Screw terminals |
| Voltage | 4 Vpp |

### MIC-501KBD Controller

The MIC Series 501 single channel telemetry controller is a compact and robust joystick PTZ controller that is ideal for vehicle mounting. It provides basic control functions for a single MIC Series camera. The controller is supplied with a mounting bracket to mount it on a dashboard. The unit can also be used as a free-standing desktop controller. A die-cast case provides durability and a single connector on the back is used for all electrical connections. The unit control functions include focus and iris control, wash/wipe control, lamp control, home preset, and self-test.

| Dimensions (LxD) | 190 x 120 mm excluding rear connector |
| --- | --- |
| Height | 60 mm excluding joystick |
| Weight | 1.0 kg |
| Color | Black anodized aluminum |
| Temperature range | 0° to +40°C (32° to +104°F) |
| Mode | Simplex mode only |
| Telemetry | Signals conform to the RS485 / RS422 standards |
| Connector | 9-way D-type (supplied) |
| Mounting | Mounting bracket (supplied) |

### MIC-516KBD Controller

The MIC Series 516 16-channel telemetry controller is a robust, high functionality PTZ joystick controller for control room applications. It provides programming and control functions for up to 16 MIC Series cameras. Constructed of tough, powder-coated steel, the controller has a sensitive joystick, multiple keys for routine operations, six programmable function keys, on-board LCD display, a security key-lock to prevent unauthorized access and a self-test capability. The controller provides full control of all MIC series camera functions including frame integration, low light integration, camera addressing, presets, multiple preset tours, soft-stop setup, backlight control, black/white control, wash/wipe control, infrared lamp control, on-screen data, captions, privacy masks, baud rates, quick and slow sequences, etc.

| Dimensions (LxD) | 360 x 175 mm excluding rear connector |
| --- | --- |
| Height | 56 mm excluding joystick. |
| Weight | 2.0 kg |
| Construction Material | Painted steel |
| Color | Black |
| Temperature range | 0° to +40°C (32° to +104°F) |
| Connector | 9-way D-type (supplied) |
| Mode | Simplex or Duplex mode |
| Power Supply | Integrated 240 VAC 13 A mains power supply providing 9 VAC rated at 300 mA |
| Max. current draw | 250 mA |
| Nominal current draw | 155 mA |
| Telemetry | Signals conform to the RS485 / RS422 standards |
| Security | Serial numbered key (for security key lock) |
| Option | 8-Input alarm card |

### Wiper Blade Assemblies

The Bosch MIC Series replacement wiper blade assembly is a complete anodized aluminum wiper arm with a fixed long-life silicone wiper blade.

| MIC Series 400 cameras | |
| --- | --- |
| MIC-400-RWAB | black |
| MIC-400-RWAC | clear |
| MIC-400-RWAS | 316L stainless steel |
| Dimensions | 67 mm x 15 mm x 9 mm |
| MIC Series 412 cameras | |
| MIC-412-RWAB | black |
| MIC-412-RWAC | clear |
| Dimensions | 104 mm x 12.7 mm x 9 mm |
| MIC Series 440 cameras | |
| MIC-440-RWAB | black |

| MIC-440-RWAC | clear |
|---|---|
| Dimensions | 95 mm x 12.4 mm x 9 mm |

### MIC-RWB Wiper Blade

The Bosch MIC Series replacement wiper blade for the MIC Series 400 cameras is a pivoting metal-backed rubber wiper blade. Dimensions: 36 mm x 13 mm x 3.5 mm

### Washer Kits

The Bosch MIC Series MIC-WKT and MIC-WKT-IR washer kits provide the necessary components to allow a washer pump and reservoir to be connected to a MIC Series camera and controlled via the camera telemetry. The washer kit comes in two versions, one for MIC Series Infrared cameras and another for all other MIC Series cameras.

The MIC-WKT kit contains the washer pump drive card, the mounting bracket and the washer nozzle. The MIC-WKT-IR kit contains the washer nozzle and bracket only as the washer pump drive function is already built into MIC Series IR variant power supplies.

MIC-WKT parts include

| Quant. | Component |
|---|---|
| 1 | MIC-WSH card (Washer Pump Drive Card) |
| 1 | MIC-WNB-PCD (Washer Nozzle Mounting Bracket) |
| 1 | MIC-WN (Washer Nozzle) |

MIC-WKT-IR parts include

| Quant. | Component |
|---|---|
| 1 | MIC-WNB-PCD (Washer Nozzle Mounting Bracket) |
| 1 | MIC-WN (Washer Nozzle) |

The MIC-WSH is the washer pump drive card provides electrical connections, a washer pump relay and a push to test / pump prime function. The MIC-WSH fits into an empty expansion slot of the non-infrared MIC Series power supply units.

MIC infrared power supplies have an integral washer pump drive function and 4 alarm inputs and do not require the MIC-WSH washer pump drive card.

The MIC-WNB-PCD is a stainless steel bracket for fixing the washer nozzle to the MIC Series camera base in a position that allows cleaning of the camera lens.

The MIC-WN is a plastic single, jet washer nozzle that fits to the end of the MIC washer nozzle bracket.

| Dimensions (W x H x D) | 125 x 25 x 60 mm (4.92 x 0.98 x 2.36 in.) |
|---|---|
| Weight | 44 g (1.6 oz) |

(The washer pump, tubing and reservoir are not supplied with the kit.)

### MIC-ALM Alarm and Washer Pump Drive Card

The Bosch MIC-ALM 8 Input Alarm Card is designed to work with a MIC Series power supply with a free expansion slot. The MIC-ALM card provides MIC Series cameras with eight alarm inputs, a washer pump drive function with test/pump priming capability and two additional relays which can be configured to operate external equipment when an alarm signal is received.

The MIC-ALM 8 input alarm card is compatible with non-infrared MIC Series power supply units. (The card cannot be used with a MIC Series Infrared power supply.)

| Dimension (H x W x D) | 25 x 125 x 60 mm (0.98 x 4.92 x 2.36 in) |
|---|---|
| Weight | 61 g |
| Material: | PCB Card |
| Alarm Inputs | 8 with LEDs |
| Relays | 2; Washer Pump Drive Function with prime/test button |

## Ordering Information

| | | |
|---|---|---|
| **MIC-2M Composite Cable** 2 m composite cable with plug for power, data and video | **MIC-2M** | |
| **MIC-10M Composite Cable** 10 m composite cable with plug for power, data and video | **MIC-10M** | |
| **MIC-20M Composite Cable** 20 m composite cable with plug for power, data and video | **MIC-20M** | |
| **MIC-25M Composite Cable** 25 m composite cable with plug for power, data and video | **MIC-25M** | |
| **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-BP3 Bi-phase Converter** Biphase converter for IR power supplies or non-IR power supplies without a free expansion slot available | **MIC-BP3** | |
| **MIC-BP4 Bi-phase Converter** Bi-Phase converter for non-IR versions of MIC series power supply units | **MIC-BP4** | |
| **MIC-501KBD Keyboard Controller** Keyboard controller with 3-axis joystick for 1 camera (FV PROTOCOL ONLY) | **MIC-501KBD** | |
| **MIC-516KBD Keyboard Controller** Keyboard controller with 3-axis joystick for 1 to 16 cameras (FV PROTOCOL ONLY) | **MIC-516KBD** | |
| **MIC-516ALM Alarm Card** 8 Input alarm card for MIC-516KBD | **MIC-516ALM** | |

## Ordering Information

| | |
|---|---|
| **MIC-RWB Replacement Wiper Blade**<br>Replacement wiper blade (single) | MIC-RWB |
| **MIC-WKT Washer Kit**<br>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 |
| **MIC-WKT-IR Washer Kit**<br>Washer kit for infrared power supplies only (includes washer nozzle and mounting brackets for wall or 4 in. PCD base) | MIC-WKT-IR |
| **MIC-WN Washer Nozzle**<br>Spare washer nozzle | MIC-WN |
| **MIC-WNB-PCD Washer Nozzle**<br>Spare washer nozzle mounting bracket for 4 in PCD Base | MIC-WNB-PCD |
| **MIC-WNB-WMB Washer Nozzle**<br>Spare washer nozzle mounting bracket for wall bracket | MIC-WNB-WMB |
| **HAC-WAS05-20 24 VAC Washer**<br>24 VAC washer inst. 5M 25L | HAC-WAS05-20 |
| **UPA-2450-60 Power Supply**<br>120 VAC, 60 Hz, 24 VAC, 50 VA Out | UPA-2450-60 |
| **UPA-2450-50 Power Supply**<br>220 VAC, 50 Hz, 24 VAC, 50 VA Out | UPA-2450-50 |
| **MIC-ALM Alarm and Washer Pump Drive Card**<br>8 Input alarm and washer pump drive card for PSU (Not for IR PSU) | MIC-ALM |