

OPERATING INSTRUCTIONS

Pan Tilt Unit with USB-Connection for MOBOTIX M16 Cameras

Article No. / EAN: 0745751300862

Customs Tariff Code: 85437090



Features

Material	Cast aluminium/powder-coated
Load capacity	4Kg
Weight	6Kg (Incl. packaging 8Kg)
Rotation range	360° (continuously)
Rotation speed	80°/s
Tilt range	-90° -> +90°
Tilt speed	60°/s
Dimensions	240x170x210mm
Presets	128
Tours	4
Operating voltage	38-56VDC Pin 4/5+ 7/8-
Power consumption	15W
Protection class	IP66
Max ambient temperature	-20°C -> +50°C
Pack size	51 × 42 × 26 cm
3 pcs in one carton	Carton: 75 × 50 × 54 cm

INSTRUCTIONS

Packing contents
1 x Pan & Tilt motor
1 x Bag with bolts and screws for mounting the camera
1 Passive-PoE Adapter

After the delivery, check that the packing is not damaged and shows no evident signs of falls or abrasions. If this should be the case, immediately contact the supplier.
Check that the contents correspond to the above-mentioned list of materials.

Contents of this Manual

This manual describes pan & tilt motors, together with their specific procedures of installation, configuration and use. Read this manual carefully, in particular the chapter concerning the safety rules, before installing and using the pan & tilt motor.

Safety rules

Pan & tilt motors comply with the normative laws in force at the time of editing of this manual, concerning electric safety, electromagnetic compatibility and general requirements.

Anyway, in order to ensure the users (installer, technician and operator), the following warnings are specified for your safety:

The appliance (and the complete system, which it belongs to) must be installed only by qualified technical staff.

The appliance must be opened only by qualified technical staff.

The tampering of the appliance may void the guarantee terms.

Connect to a device corresponding to the specifications indicated on the data plate (see next chapter Identification data).

Before any shifting or technical operations on the appliance, the cables connected to other appliances must be removed.

Do not use voltage cables showing wear or ageing, since they may seriously expose the users' safety.

Do not use the appliance in the presence of inflammable substances.

Do not allow children or people not familiar with the appliance to use it.

Make sure the appliance is fixed in a solid and reliable way.

The appliance is completely off-line only when the cables connected to other appliances have been removed.

For after-Sale service call only authorised technical staff.

Keep this manual close to hand for any future reference. Identification data on pan & tilt motors there is one plate complying with EC specifications.

This plate includes:

Model identification code

Mounting

ATTENTION: Before powering the P/T-Unit, you have to take notice of the mounting-position.

The camera and possible mounting-devices may not come in contact with other parts.

All screws must be tightend.

The P/T-Unit must be mounted horizontal in all areas.

Startup-Procedure

Before connecting the appliance:

Check that the material supplied corresponds to the specifications indicated on the data plate, following the chapter identification data.

Check that pan & tilt motor and the other components of the installation are closed in order to avoid direct contact with energized parts.

Check that all the EMC Regulations, valid at the mounting-place, are adhered to and maybe upgrade components to ensure the business-protection and the equipment protection.

Make sure that all the parts are fixed in a solid and reliable way.

Check that the electrical capacity and the connection cables will support the system power consumption.

Using unqualified hardware can endanger the security of the staff and installation.

Check if the power supplys and cables can handle the consumption.

The cables must be connected as shown in this manual.

After powering, the Unit has to do a calibration run in horizontal and vertical direction.

Maintenance

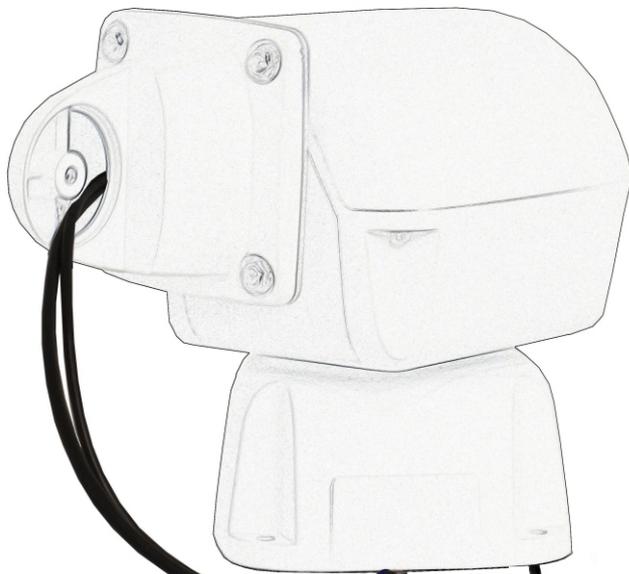
The PT-Units don't need a special maintenance.

We recommend to make a service at the manufactory every 2 years.

Connection plan

The cables, coming out of the top of the unit, must be connected without benches and pinch points. (referring to the Mobotix guidelines)

90-260VAC, 47-63Hz



incl. 1m MX-OPT-CBL-LAN
(optional: 2m / 5m / 10m)



PIN-Assignment:

Camera:

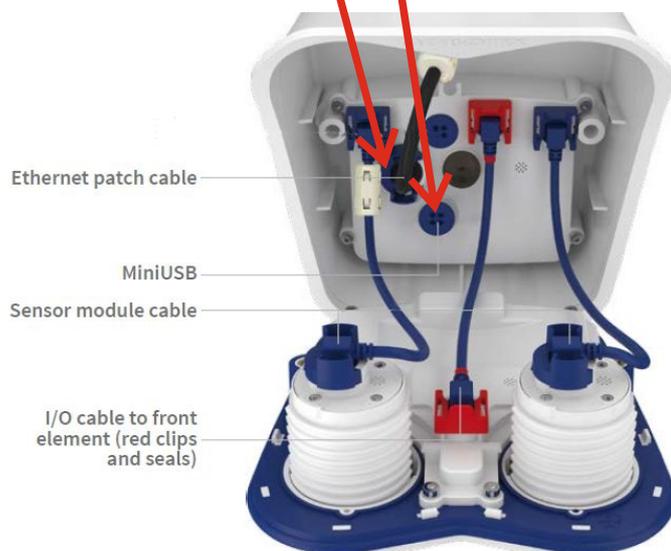
1,2 = 50V PoE +

3,6 = 50V PoE -

P/T-Unit:

4,5 = 50V PoE +

7,8 = 50V PoE -



LAN 100 MBit/s without PoE

Settings for MOBOTIX Cameras

1.

Admin Menü

↳ Network Setup

↳ Ethernet Interface

MOBOTIX Ethernet Interface

General Interface Setup

Ethernet	Enabled	Enable/disable the Ethernet interface. Usually, there is no reason to disable the Ethernet interface. If you would like to have a running camera announce its network settings over camera speaker, simply press the R button of the camera. This audio feature can be disabled in the Speaker and Microphone dialog.
Power Supply	Power over Ethernet (Class 3) Change...	Power is usually supplied via the camera's network interface (Power over Ethernet). Setting the camera's PoE class allows you to fine-tune the power allocation in the connected PoE switch. The setting also determines which expansion hardware you can use with your camera.
Additional IP Address	On ▾	Configures a second network interface using the factory defaults (IP address: 10.13.106.211, network mask: 255.0.0.0). This allows accessing the camera using two different IP addresses.
BOOTP/DHCP	<input checked="" type="radio"/> Off. Set network configuration <i>manually</i> . <input type="radio"/> On, client mode. Use BOOTP/DHCP to set network configuration <i>automatically</i> . <input type="radio"/> On, server mode. This camera provides DHCP service to clients on the local network. In server mode, the IP address of the camera will be 192.168.0.19 with netmask 255.255.255.0 by default.	Select On to configure the Ethernet interface automatically with values provided by a BOOTP/DHCP server on your local network. Ask your network administrator if BOOTP/DHCP is available! BOOTP/DHCP will be tried first and, if successful, will overwrite previous settings. If it fails, the given or factory default values are used. Note: When using BOOTP/DHCP client mode, the Default Route always uses

Set Factory Restore Close

Settings for MOBOTIX Cameras

2.

Admin Menü

↳ Hardware-Configuration

↳ Manage Hardware Expansions

MOBOTIX Manage Hardware Expansions

Network Interface

- ExtIO (Ethernet)** Select this option to connect an ExtIO via Ethernet.
IP IP address of the ExtIO to connect to via Ethernet.

USB Connector

- ExtIO (USB)** Select this option to connect an ExtIO via USB interface.
This device cannot be connected at the moment. *ExtIO (USB) would conflict with active device USB RS232 Serial Stick.*
- USB RS232 Serial Stick** Allows connecting an FTDI-to-USB adapter for attaching standard RS232 devices.
- USB Stick / Flash-based Solid State Drive** Allows connecting a USB stick or a Flash-based solid state drive for event download or event recording. Do not select this option if you want to connect a harddisk.
This device cannot be connected at the moment. *USB Stick / Flash-based Solid State Drive would conflict with active device USB RS232 Serial Stick.*
- External USB Harddisk** Allows connecting an external USB harddisk for event download or event recording. Do not select this option if you want to connect a Flash-based USB stick or solid state drive. **Note that the camera only supports externally powered USB harddisks (the drives must bring their own power supply).**
This device cannot be connected at the moment. *External USB Harddisk would conflict with active device USB RS232 Serial Stick.*

Settings for MOBOTIX Cameras

3.

Admin Menü

↳ Serial Interface

↳ Setup of serial interface, modem and weather station

The screenshot shows the 'Serial Interface and Modem Setup' configuration page in the MOBOTIX web interface. The page has a blue header with the MOBOTIX logo and the title 'Serial Interface and Modem Setup'. Below the header, there are several configuration options, each with a dropdown menu and a description. The options are: Serial Interface (Data), Speed (2400 bps), Bits (8), Parity (N), Stop Bits (1), Flow Control (Off), Echo (On), End of Line (None), Buffer Size (10 kB), and Timestamp (Off). At the bottom, there are four buttons: Set, Factory, Restore, and Close. A 'Relevant Links' section contains a link to 'Serial Terminal'.

Setting	Value	Description
Serial Interface:	Data	Off: serial interface deactivated. Data: serial interface used as data terminal or for extended signaling. Modem: serial interface used by modem (phone or GSM). Weather: serial interface used to receive data from supported weather stations.
Speed:	2400 bps	Speed of serial interface
Bits:	8	Number of data bits per character.
Parity:	N	Parity mode for error detection. N: None E: Even O: Odd
Stop Bits:	1	Number of stop bits.
Flow Control:	Off	Flow control: Off: no flow control CRTSCTS: hardware flow control
Echo:	On	Toggles echo in terminal on or off.
End of Line:	None	Selects characters to send as End of Line in terminal. Valid selection depends on your device.
Buffer Size:	10 kB	Size of buffer reserved for logging incoming signals on serial interface.
Timestamp:	Off	Insert timestamp in log buffer before every input line.

Relevant Links: [Serial Terminal](#)

Buttons: Set, Factory, Restore, Close

Settings for MOBOTIX Cameras

4. Define Softbuttons

Admin Menü

↳ Page Administration

↳ Softbuttons

Name	Color	Action	Command	Remo
PicInPic	Grey	Setup Control	section=general camera=RiL size	<input type="checkbox"/>
Play Last Event	Green	Link	url=/control/player?play_loop	<input type="checkbox"/>
Play Sound	Yellow	Sound	soundfile=Standard	<input type="checkbox"/>
Preset 1 speichern	Grey	Put RS232 Text	rs232outtext=%A0%0E%00%03%	<input type="checkbox"/>
Preset 1	Grey	Put RS232 Text	rs232outtext=%A0%0E%00%07%	<input type="checkbox"/>
Preset 2 speichern	Grey	Put RS232 Text	rs232outtext=%A0%0E%00%03%	<input type="checkbox"/>
Preset 2	Grey	Put RS232 Text	rs232outtext=%A0%0E%00%07%	<input type="checkbox"/>
Preset 3 speichern	Grey	Put RS232 Text	rs232outtext=%A0%0E%00%03%	<input type="checkbox"/>
Preset 3	Grey	Put RS232 Text	rs232outtext=%A0%0E%00%07%	<input type="checkbox"/>
Preset 4 speichern	Grey	Put RS232 Text	rs232outtext=%A0%0E%00%03%	<input type="checkbox"/>
Preset 4	Grey	Put RS232 Text	rs232outtext=%A0%0E%00%07%	<input type="checkbox"/>
Preset 5 speichern	Grey	Put RS232 Text	rs232outtext=%A0%0E%00%03%	<input type="checkbox"/>
Preset 5	Grey	Put RS232 Text	rs232outtext=%A0%0E%00%07%	<input type="checkbox"/>

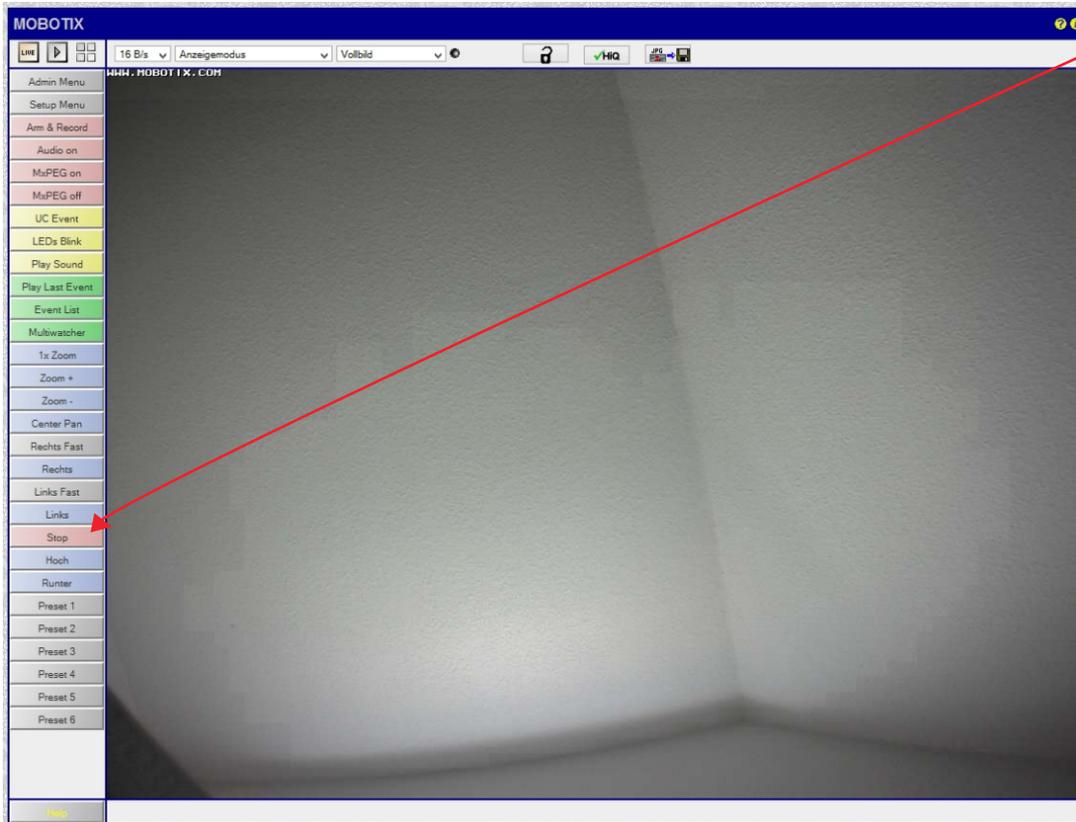
Buttons: Set, Factory, Restore, Close

You can find the Commands for the different Functions on the last Page.

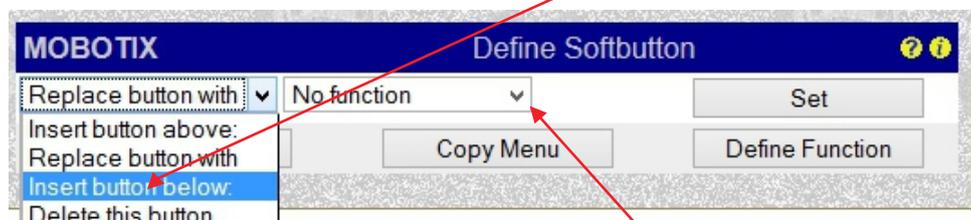
Settings for MOBOTIX Cameras

5. Insert Softbuttons

Click on a Softbutton, holding the „Shift“-Button



Choose the Position for the new Softbutton.



and then choose the Function you want to have.

Settings for MOBOTIX Cameras

6. Calling Presets at predefined Times

Admin Menü

↳ Transfer Profiles

↳ IP Notify Profiles

MOBOTIX IP Notify Profiles

IP Notify Profile 5 HttpRequest Delete

IP Notify Type Custom Configuration

Destination Address localhost:80
Parallel send to all

Data Protocol HTTP/1.0 Request
/control/rcontrol

Data Type Plain text
action=putrs232&rs232outtext=%A0%0E%0

Predefined Configuration:
"MxCC Alarm" sends predefined network messages to the MxCC alarm list. Acknowledge Required prompts the MxCC user to confirm the message. If the alarm is not acknowledged within the specified acknowledge time, the camera triggers a transmission error. Select Custom Configuration to see the extended configuration.

Destination Addresses:
Receiver IP address and port. Separate IP address and port using a colon. Enter one address per line.

Send Order:
Send notification to one or more destinations. Sequential and parallel will send a notification to each destination address. Send to next on error will stop after the first successful notification or will try the next address if unsuccessful.

Transfer Protocol:
Transfer notification data using these protocol headers.

CGI-Path:
Absolute CGI path beginning with '/'. This parameter allows using variables.

HTTP Authentication:
User name and password for HTTP authentication separated by colon. Example: admin:meism

Notification Data:
Select type of IP notification data.

Message:
Message to include in Plain text notification data. When using HTTP protocol this text is used for QUERY_STRING in GET request. This parameter allows using variables.

Set Factory Restore Close Less

Data Type: action=putrs232&rs232outtext= z.B. %AO%0E...usw.

7. Timing

Admin Menü

↳ Camera Administration

↳ Time Tasks

MOBOTIX Time Tasks

Task	Minutes (0 .. 59)	Hours (0 .. 23)	Days of Month (1 .. 31)	Months (1 .. 12)	Week Days (0 .. 7)	Options
Reboot randomly within one hour	0	3	*	*	1	<input type="checkbox"/> Inactive <input type="checkbox"/> Delete
IP Notify "HttpRequest"	*/1	*	*	*	*	<input type="checkbox"/> Inactive <input type="checkbox"/> Delete
Select task...	*	*	*	*	*	<input type="checkbox"/> Inactive

Set Factory Restore Close

IP NOTIFY "HttpRequest" (Example is on 1 Minute)

Control Commands

Up
Slow %FF%01%00%08%00%01%0A
%FF%01%00%08%00%0F%18
Medium %FF%01%00%08%00%1F%28
%FF%01%00%08%00%2F%38
Fast %FF%01%00%08%00%FF%08

Down
Slow %FF%01%00%10%00%01%12
%FF%01%00%10%00%0F%20
Medium %FF%01%00%10%00%1F%30
%FF%01%00%10%00%2F%40
Fast %FF%01%00%10%00%FF%10

Stop
%FF%01%00%00%00%00%01

Tour Record Start
1 %FF%01%00%1F%00%00%20
2 %FF%01%00%1F%00%01%21
3 %FF%01%00%1F%00%02%22
4 %FF%01%00%1F%00%03%23

Tour Record Stop
1 %FF%01%00%21%00%00%22
2 %FF%01%00%21%00%01%23
3 %FF%01%00%21%00%02%24
4 %FF%01%00%21%00%03%25

Save Preset 1-32
1 %FF%01%00%03%00%01%05
2 %FF%01%00%03%00%02%06
3 %FF%01%00%03%00%03%07
4 %FF%01%00%03%00%04%08
5 %FF%01%00%03%00%05%09
6 %FF%01%00%03%00%06%0A
7 %FF%01%00%03%00%07%0B
8 %FF%01%00%03%00%08%0C
9 %FF%01%00%03%00%09%0D
10 %FF%01%00%03%00%10%14
11 %FF%01%00%03%00%11%15
12 %FF%01%00%03%00%12%16
13 %FF%01%00%03%00%13%17
14 %FF%01%00%03%00%14%18
15 %FF%01%00%03%00%15%19
16 %FF%01%00%03%00%16%1A
17 %FF%01%00%03%00%17%1B
18 %FF%01%00%03%00%18%1C
19 %FF%01%00%03%00%19%1D
20 %FF%01%00%03%00%20%24
21 %FF%01%00%03%00%21%25
22 %FF%01%00%03%00%22%26
23 %FF%01%00%03%00%23%27
24 %FF%01%00%03%00%24%28
25 %FF%01%00%03%00%25%29
26 %FF%01%00%03%00%26%2A
27 %FF%01%00%03%00%27%2B
28 %FF%01%00%03%00%28%2C
29 %FF%01%00%03%00%29%2D
30 %FF%01%00%03%00%30%34
31 %FF%01%00%03%00%31%35
32 %FF%01%00%03%00%32%36

Right
Slow %FF%01%00%02%01%00%04
%FF%01%00%02%0F%00%12
Medium %FF%01%00%02%1F%00%22
%FF%01%00%02%2F%00%32
Fast %FF%01%00%02%FF%00%02

Left
Slow %FF%01%00%04%01%00%06
%FF%01%00%04%0F%00%14
Medium %FF%01%00%04%1F%00%24
%FF%01%00%04%2F%00%34
Fast %FF%01%00%04%FF%00%04

Remote Reset
%FF%01%00%0F%00%00%10

Tour Start
1 %FF%01%00%23%00%00%24
2 %FF%01%00%23%00%01%25
3 %FF%01%00%23%00%02%26
4 %FF%01%00%23%00%03%27

Call Preset 1-32
1 %FF%01%00%07%00%01%09
2 %FF%01%00%07%00%02%0A
3 %FF%01%00%07%00%03%0B
4 %FF%01%00%07%00%04%0C
5 %FF%01%00%07%00%05%0D
6 %FF%01%00%07%00%06%0E
7 %FF%01%00%07%00%07%0F
8 %FF%01%00%07%00%08%10
9 %FF%01%00%07%00%09%11
10 %FF%01%00%07%00%10%18
11 %FF%01%00%07%00%11%19
12 %FF%01%00%07%00%12%1A
13 %FF%01%00%07%00%13%1B
14 %FF%01%00%07%00%14%1C
15 %FF%01%00%07%00%15%1D
16 %FF%01%00%07%00%16%1E
17 %FF%01%00%07%00%17%1F
18 %FF%01%00%07%00%18%20
19 %FF%01%00%07%00%19%21
20 %FF%01%00%07%00%20%28
21 %FF%01%00%07%00%21%29
22 %FF%01%00%07%00%22%2A
23 %FF%01%00%07%00%23%2B
24 %FF%01%00%07%00%24%2C
25 %FF%01%00%07%00%25%2D
26 %FF%01%00%07%00%26%2E
27 %FF%01%00%07%00%27%2F
28 %FF%01%00%07%00%28%30
29 %FF%01%00%07%00%29%31
30 %FF%01%00%07%00%30%38
31 %FF%01%00%07%00%31%39
32 %FF%01%00%07%00%32%3A