# Basler Accessories

## Technical Specification

## GP-I/O CABLE 6P/OPEN

**Order Number**
**2000034087**

Document Number: DG001133
Version: 02    Language: 000 (English)
Release Date: 12 July 2016

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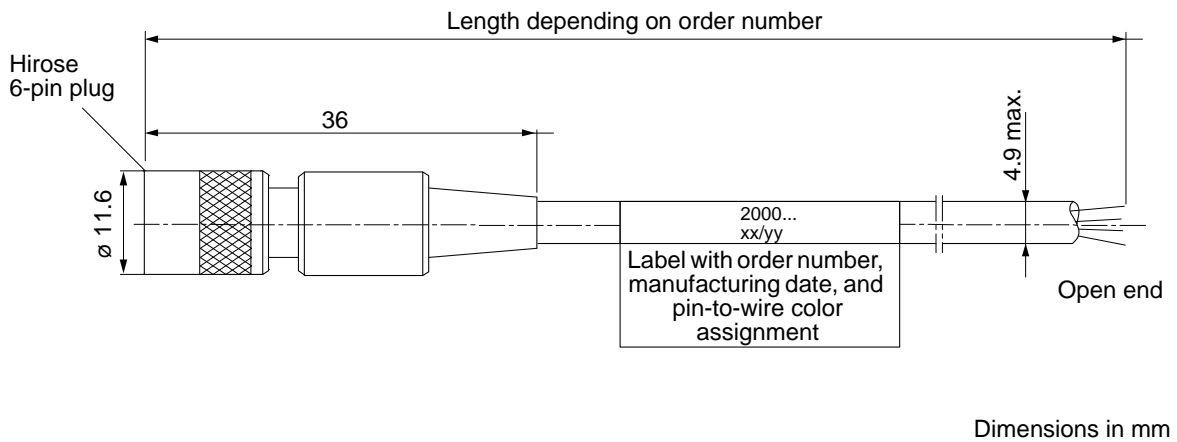| Order Number | Description | Applicable Cameras |
|---|---|---|
| 2000034087 | GP-I/O Cable, 6p/open, 10 m<br><br>Input/Output (I/O) cable connecting to the direct-coupled GPIO pins (GPIO, GPIO Ground) of the camera's 6-pin connector. | ace USB 3.0 |
| | GP-I/O Cable, 6p/open, 10 m<br><br>Input/Output (I/O) cable connecting to the direct-coupled GPIO pin (GPIO, GPIO Ground) and power supply of the camera's 6-pin connector. | ace GigE (only models with GPIO) |

Table 1: Cable Type



Fig. 1: Cable Overview

## Wiring Information

| Pin Number | Wire Color | USB 3.0 Cameras | GigE Cameras with GPIO |
|:---:|---|---|---|
| 1 | Brown | GPIO (Line 3) | Camera Power |
| 2 | n/a | Not connected | Not connected |
| 3 | Yellow | GPIO (Line 4) | GPIO (Line 3) |
| 4 | n/a | Not connected | Not connected |
| 5 | n/a | Not connected | Not connected |
| 6 | White | GPIO Ground | Camera Power Ground |
|   | Green |  | GPIO Ground |

Table 2: Wiring Information

> ⓘ  To achieve the best possible signal-to-noise ratio, both GPIO ground wires have to be connected to ground. Additionally, if you're not using one of the GPIO lines, connect the wire of that GPIO line to ground as well.

## Physical Specifications

| | |
|---|---|
| Camera-side Connector | Hirose 6 pin [HR10A-7P-6S (73)] |
| Host-side Connector | None, open end |
| Cable Cross-section | $2 \times 2 \times 0.14$ mm$^2$ (close to AWG 26) |
| Cable Diameter | 4.9 mm max. |
| Wire Insulation | PVC |
| Outer Jacket | PVC |
| Color Outer Jacket | Yellow |
| Minimum Bending Radius | 34.3 mm (7 x cable diameter) |
| Maximum Bending Cycles | None (fixed installation only) |
| Suitable for Drag Chain Applications | No |
| Suitable for Robotics Applications | No |

Table 3: Physical Specifications

## Electrical Specifications

| Maximum Operating Voltage | See the camera user's manual |
|---|---|
| Wire Resistance | ≤ 142 Ω/km |

Table 4: Electrical Specifications

## Environmental Specifications

| Operating Temperature Range | -25 °C …+80 °C |
|---|---|

Table 5: Environmental Specifications

## Plug Specifications

| Durability | > 1000 mating cycles |
|---|---|
| Contact Resistance | 10 mΩ max. |
| Contact Plating | Silver |
| Protection Rating | IP40 |
| Plug Insulation Material | Polyamide/PBT |

Table 6: Plug Specifications

## General Information

| RoHS Compliance | Yes |
|---|---|
| CE Conformity | Yes (RoHS compliance) |
| UL Conformity | No |
| Warranty | 1 year |

Table 7: General Information

The cables are intended for use with the cameras specified in Table 1 only.

Read the camera user's manual including the precautions before connecting the cable to the camera. The user's manual also contains further information about pin assignments, power requirements, as well as comprehensive information about installing and using the camera.

You can download the camera user's manual and related documents free of charge from the Basler website: www.baslerweb.com.

# Revision History

| Doc. ID Number | Date | Changes |
|---|---|---|
| DG00113301000 | 25 Jun 2015 | Initial release of the document. |
| DG00113302000 | 12 Jul 2016 | Added information about using cable with ace GigE camera models with GPIO in Table 1 on page 1 and Table 2 on page 2. |