Basler Accessories

Technical Specification

GP-I/O CABLE 6P/OPEN

Order Number
2000034087

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Order Number	Description	Applicable Cameras
2000034087	GP-I/O Cable, 6p/open, 10 m 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 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

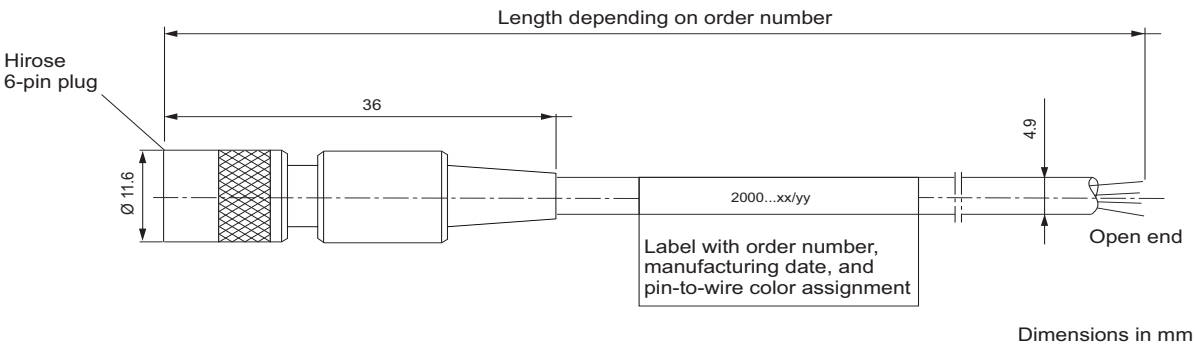

Fig. 1: Cable Overview

⚠ CAUTION

Personal Injury Hazard and Risk of Damage to Camera in Case of Short Circuits (applies to GigE cameras only)

Short circuits may cause an extreme rise in temperature of the camera's housing. This may damage the camera and may also lead to personal injuries, e.g., burns if touching the housing. In the worst case, the overheating may cause a fire.

In order to prevent that, you should take additional measures to limit the current flowing through each individual wire during a short circuit. **The maximum current allowed is 2 A.** There are two ways how to do this:

- Using a fuse
- Using a limited power supply

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 × 2 × 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	-25–80 °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.
DG00113303000	29 Aug 2017	Added warning about additional short circuit protection on page 1.