Basler Accessories

Technical Specification

POWER-I/O-PLC+ CABLE, HRS 6P/OPEN, 10 M

Order Numbers
2000034084

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1 Introduction

The Power-I/O-PLC+ cables with Hirose 6-pin connector and open end feature an integrated PLC+ electronic board.

The key feature of this board is that it is able to adjust input voltage levels coming from PLC devices (up to 24 V) to the TTL voltage levels required by the camera (0 to 5 V). Table 1 contrasts these different voltage levels.

In addition, the PLC+ electronic board protects the power supply of the camera as well as the input lines of the camera against the following:

- Reverse polarity
- Turn-on voltage spikes
- Positive or negative overvoltage spikes

The cables also offer protection of the signal transmission as well as the power supply against EMI and ESD. This is achieved by means of twisted pair cables in which each pair of wires carries just one signal: one wire carries the signal itself and the other is the signal's own return conductor.

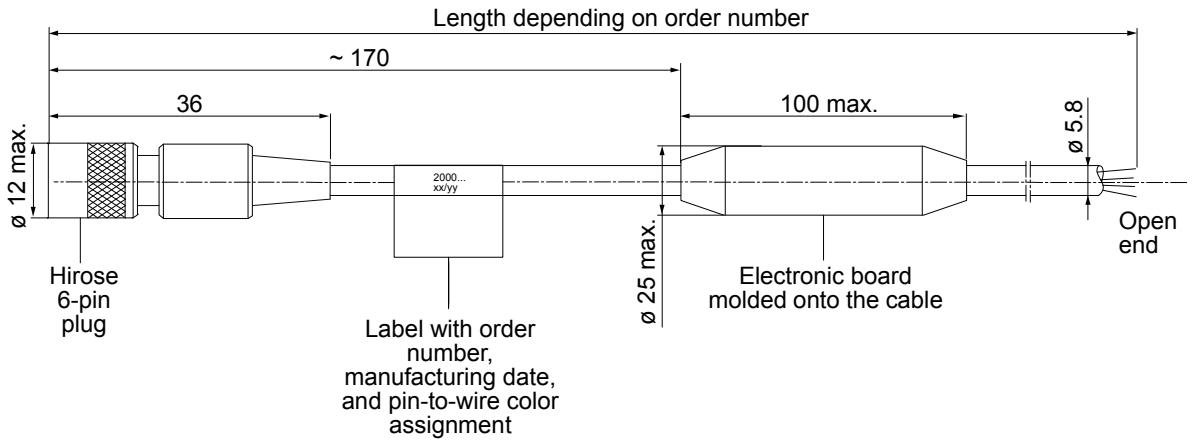
Camera I/O Signal Voltage	PLC+ Cable Input Voltage	Significance
Max. +24 VDC	Max. +24 VDC + 10 %	Operating voltage limit.
+0 to +1.4 VDC	+0 to +8.4 VDC	Voltage indicates a logical 0.
> +1.4 to +2.2 VDC	> +8.4 to +10.4 VDC	Logical state is undefined.
> +2.2 VDC	> +10.4 VDC	Voltage indicates a logical 1.

Table 1: Voltage Requirements

2 Technical Data

Order Number	Description	Applicable Cameras
2000034084	Power-I/O Cable for PLC with HRS 6-pin connector and open end, 10 m	ace GigE

Table 2: Cable Type



Dimensions in mm

Fig. 1: Cable Overview

Wiring Information

The shading in Table 3 indicates which wires form twisted pairs inside the cable.

Pin Number	Wire Color	ace GigE
1	Brown	Camera Power
2	Pink	Opto-isolated IN (Line1)
(5)	Gray	Opto-isolated IN Ground (Line1)
4	Yellow	Opto-isolated OUT (Out1)
(5)	Green	Opto-isolated OUT Ground (Out1)
6	White	Camera Power Ground

Table 3: Wiring Information

(x) means that the wire is connected internally to pin x.

For more details, see the respective camera user's manual.

Physical Specifications

Camera-Side Connector	Hirose 6 pin (HR10A-7P-6S (73))
Host-Side Connector	None, open end
Cable Cross-Section	3 x 2 x 0.14 mm^2 (close to AWG 26)
Cable Diameter	5.8
Wire Insulation	PVC
Outer Jacket	PVC
Minimum Bending Radius	34.8 mm (6 x cable diameter), fixed installation
Maximum Bending Cycles	None (fixed installation only)
Suitable for Drag Chain Applications	No
Suitable for Robotics Applications	No

Table 4: Physical Specifications

Electrical Specifications

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

Table 5: Electrical Specifications

Environmental Specifications

Operating Temperature Range	-25 °C - +80 °C (not moving)

Table 6: Environmental Specifications

Plug Specifications

Durability	> 1000 mating cycles
Contact Resistance	max. 10 mΩ
Contact Plating	Silver
Protection Rating	IP 40
Plug Insulation Material	Polyamide/PBT

Table 7: Plug Specifications

General Information

RoHS Compliant	Yes
CE Conformity	Yes (RoHS compliance)
Warranty	1 year
UL Conformity	No

Table 8: General Information

The cables are intended for use with the cameras specified in Table 2 only.

Read the respective user's manual including the safety warnings 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 user's manual and related documents for your camera free of charge from the Basler website: www.baslerweb.com.

Revision History

Doc. ID Number	Date	Changes
DG00139701000	22 Sep 2015	Initial release of this document.