

# Switcher 4Cam, Ext switch wires

Installation manual  
No. IM0973680 A 01

Art No: 0404300

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English



## Switcher 4Cam, Ext switch wires

Art. No. 0404300



### Safety

In order to guarantee safe operation, these safety instructions must be read before you start using this equipment.

- The Switcher must not be connected to the power supply when opening the housing. This can cause damage, short circuit or electric shock.
- Do not expose the equipment to extreme temperatures. This can cause deformation of the enclosure or damage to internal components. Repairs may only be undertaken by Orloco.
- The equipment must be assembled as shown in this manual.
- If there have been alterations or changes to this equipment that have not been specifically approved by Orloco, use of this equipment is not permitted.



Art. No. 0404300

### Preface

Before you start using this equipment, please read this manual carefully and follow all instructions. This installation manual describes the functions of the equipment, outlines the connection options and explains how to put the equipment into operation. We recommend that you keep this manual in a safe place for reference purposes.

If you have any questions or issues concerning the operation of this equipment, consult the relevant section in the manual or contact the Orloco Products BV Service department.

All data subject to change without notice. All dimensions are for commercial purpose only. The camera/display systems from Orloco comply with the latest CE, ADR, EMC and mirror-directive regulations, where applicable. All products are manufactured in accordance with the ISO 9001 quality management system, IATF 16949 quality automotive, ISO 14001 environmental management systems, where applicable.



### Contents

	Page
1. Functional description	3
2. Features	3
3. Dipswitches	4
4. Electrical connections	5
5. Fuse	5
6. Specifications	6
7. Maintenance and cleaning	6
8. Disposal	6
9. General terms and conditions	6
10. Version details	10

### Available documentation

Data sheet: DS0963050-0404300 EN

Data sheet: DS0963051-0404300 DE

## 1. Functional description

This Video switcher has 4 video inputs and 1 video output. The power supply to the switcher is normally done via the video output.

The video output will be displayed on the monitor.

To choose one of the video inputs to be displayed on the monitor the switch wires can be used. Another way to select the input to be displayed is by using mA switching from the Orlaco monitor.

To activate the video channel on a monitor the switcher has a feedback cam select output. This output is active high when a switch wire is activated. The 0404300 Video switcher is designed for standard PAL / NTSC signals with the video signal sync tip clamped at 0V or more.

The Video switcher has been tested on Orlaco cameras based CMOS technology and will function properly.

## 2. Features

- Selectable external switch wire switching or switching by mA.
- Selectable high or low trigger for external switch wires.
- Selectable Delay on switch wires (blinking light input).
- Output "Feedback Cam Select" for trigger to navigation-systems.

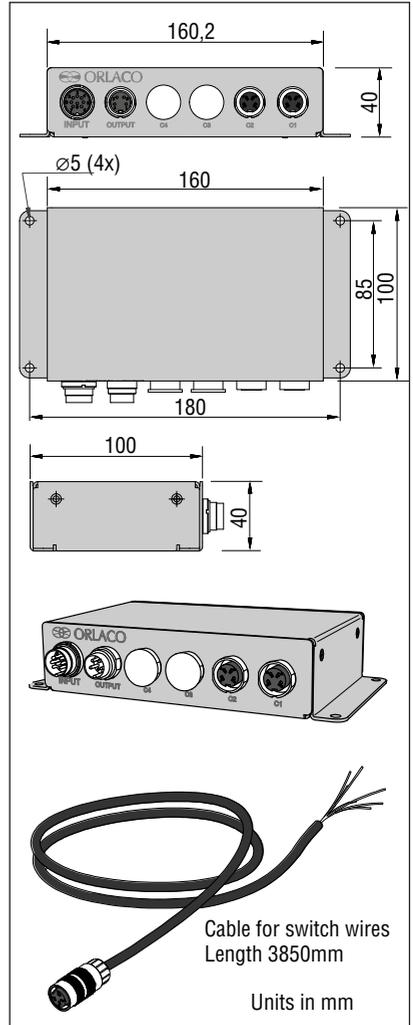


Figure 1, Dimensions

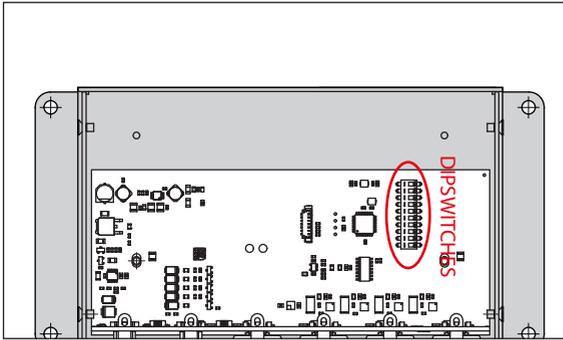


Figure 2



Figure 3

## 3. Dipswitches

To change the dipswitch settings the housing must be opened by removing the 4 screws at the sides and take the top lit of. See figure 2 and 3.

- DP1 = ON** - ORL537 smartboard mode, no camera selected means camera 4 is active by default  
**DP1 = OFF** - Normal mode, video output is high impedance when no switchwire is active (when switchwires are selected by DP2).
- DP2 = ON** - Switching is controlled by the switchwire inputs  
**DP2 = OFF** - Switching is controlled by the mA signal which is fed in through the video output terminal, no high impedance output possible

*When DP2 = ON*

- DP3 = ON** - Switchwire input is activated by a high signal (2V - 24V)  
**DP3 = OFF** - Switchwire input is activated by a low signal (0V - 2V)  
**DP4 = ON** - Reserved  
**DP4 = OFF** - Reserved

*When DP2 = OFF*

- DP3 = ON** - Reserved  
**DP3 = OFF** - Reserved  
**DP4 = ON** - 4mA switch levels (only experimental use)  
**DP4 = OFF** - 3mA switch levels (Standard for Orlando monitors)
- DP5 = ON** - Delay is active on switchwire 1 (fast turn-on, delayed turn-off).  
**DP5 = OFF** - No delay on switchwire 1
- DP6 = ON** - Delay is active on switchwire 2 (fast turn-on, delayed turn-off).  
**DP6 = OFF** - No delay on switchwire 2
- DP7 = ON** - Delay is active on switchwire 3 (fast turn-on, delayed turn-off).  
**DP7 = OFF** - No delay on switchwire 3
- DP8 = ON** - Delay is active on switchwire 4 (fast turn-on, delayed turn-off).  
**DP8 = OFF** - No delay on switchwire 4
- DP9** - Reserved  
**DP10** - Feedback cam select  
 ON = Output is 75% Power in  
 OFF = Output is 40% Power in

## 4. Electrical connections

### Camera connectors, 4p female connector

Cam 1,2,3,4

1 = Video in

2 = Video GND

3 = Power out

4 = GND

### Output connector, 4p male connector

Monitor

1 = Video out

2 = Video GND

3 = Power in (When fuse in FH101)

4 = GND

### Input connector, switch wires, 8p male connector

1 = Red = Power in (When fuse in FH100)

2 = White = GND

3 = Blue = Select Cam 1

4 = Brown = Select Cam 2

5 = White/yellow = Select Cam 3

6 = Grey = Select Cam 4

7 = Yellow - Feedback Cam select, see dipswitch settings

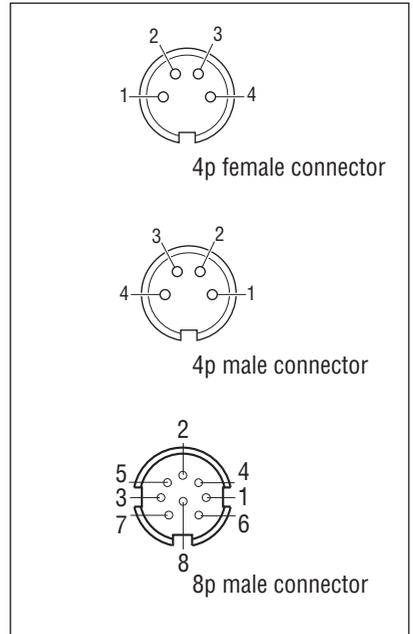


Figure 4

## 5. Fuse

If the fuse is in “FH101: Output”, the unit is powered via the Output connector.

If the fuse is in “FH100: Input”, the unit is powered via the Input connector.

**A fuse may only be placed in 1 of both.**

## 6. Specifications

<b>Housing</b>	Dimensions: 160 x 100 x 40mm, RVS housing.
<b>Input/output</b>	4x PAL or NTSC video inputs. 4x switch wire input(C1...C4). 1x switch wire output. 1x monitor input/output.
<b>Input voltage</b>	12/24VDC - Input voltage = Output voltage to cameras.
<b>Weight</b>	0,79kg.
<b>Protection</b>	IP54.
<b>Including</b>	3,85m Cable for switch wires, Art. No. 1220900 Multi cable 7 x data + shielding and 8p female connector.

## 7. Maintenance and cleaning

First, do not touch the screen with your fingers. The underlying transistors will react to the static electricity in your fingers, or may get damaged by the pressure thus exerted. This will eventually produce dead pixels; tiny, inoperative, or colored dots impairing picture quality.

So take care when cleaning your delicate LCD Screen. Use a high quality and safe foam cleaner and a soft cloth. Do absolutely not use aggressive chemicals or abrasive cleaning agents.

## 8. Disposal

Disassembly, removal and disposal. Local regulations for dealing with waste must be followed when disposing of disassembled components or entire units.

## 9. General terms and conditions

Orlaco Products BV is not liable for damage resulting from inadequate servicing, incorrect usage or alterations made to the equipment without informing the manufacturer in writing.

This installation manual has been made available by Orlaco Products BV. All rights reserved. No part of this manual may be reproduced and/or made public in printed form, in photocopy form or on microfilm, or in any other way, without the prior written permission of Orlaco. This also applies to the associated drawings and figures.

Orlaco reserves the right to make changes to components at any time without informing customers beforehand or directly. All dimensions given are for commercial purposes.

For information regarding repairs that is not covered in this manual, please contact the Orlaco Products BV service department.

This manual has been prepared with all due care and attention. However, Orlaco Products BV cannot be held responsible for any errors in this manual or any consequences thereof.

## 10. Version details

**Version A 01** First issue, January 2020.

Orlaco is a Manufacturing company that specializes in making cameras and monitor systems for commercial vehicles, fork-lift trucks, cranes, off shore and maritime.

Our objective is to design and produce camera systems for the professional market that improve the drivers' view and increase operating efficiency.

At our facility in Barneveld we locate our design, manufacturing, warehousing and service department.

Vision is our mission®, Orlaco therefore deploys the development, manufacture, supply and service of camera and display systems that will improve safety and efficiency of all vehicles, machinery and vessels.

Our systems give the end user a view on each blind spot and will create comfort and improved working conditions. Our active approach will support market demands and innovations and will lead to enthusiastic ambassadors in the market; our customers.

For more information: [www.orlaco.com](http://www.orlaco.com)

