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Select

vehicle

your

Heavy haulage combination

Fire truck

Bus

# Why Orlaco?

Welcome to the Orlaco product catalogue. We are personally committed to bringing you the best camera and monitor solutions possible. To help create safer and more secure workplaces around the world. Our professional team has spent over thirty years designing and manufacturing a variety of certified, reliable and complete camera display solutions that effectively eliminate the blind spots around vehicles, machinery and vessels. We are confident that the options offered in this catalogue will not only help you to improve the safety, security and efficiency of your fleet, but also to enhance the ergonomics and comfort for your operators. That is what Orlaco stands for. We invite you to share your ideas and experiences with us.









Traffic is becoming increasingly busier. Not only are you expected to have a good view of the situation, but you are also expected to arrive at your destination safely, on time, and without damage. Good visibility around your truck is not possible without help. Orlaco's vision solutions improve the efficiency of your actions. No longer will you have to get out of your vehicle to determine the distance each time you load and unload. This could result in immediate economic benefits. An Orlaco camera system enables you to do your job more efficiently while reducing your risk of overlooking someone or something. Less risk and improved safety and efficiency.

Efficiency

Good posture is just as important as good visibility. Orlaco asked TNO to produce a report on the optimum position for a cab monitor. This report takes into consideration details like the diagonal size of the image on the monitor, the position of the mirrors, the windscreen and the driver. These test results have been included in the installation manual for each system. They ensure that operators can carry out their work ergonomically, without the need for additional stretching or straining.

and Comfort

Certified Quality

At Orlaco, quality is never taken lightly. We keep a clear and persistent focus on customer satisfaction. A focus that is maintained throughout the manufacturing process of our quality products, which are custom designed in various formats. We are able to uphold our level of quality by providing detailed servicing. To top it all off, we have secured the highest achievable automotive certification: IATF 16949. At Orlaco, we invest in continuous improvement in order to secure a long term, satisfied customer base. We believe that compatibility in products, systems, and operations is the key element to creating reliable partnerships. All our products are controlled and clearly documented to give our customers a zero-defect product with operation that works right, every time.

Why Orlaco Why Orlaco

6 Truck

#### CornerEye-



CornerEye offers a complete and detailed view of 270° of the area around the cabin. The system

of 270° of the area around the cabin. The system delivers HD digital image quality in real time.





0401270 - PAGE 43



The class VI camera support has been specifically designed for the analog Frontview camera. It enlarges the field of vision. Cables are well protected and tucked away neatly.





0400511 / 0400521 - PAGE 22 0400270 - PAGE 36

The Frontview camera provides the required field of view at the front of the truck. A quick look at the monitor and you will know whether you can drive off safely without overlooking a cyclist, pedestrian or object.

The monitor can be integrated or surface-mounted, depending on the vehicle. It is also equipped with handy options, such as automatic brightness adjustment. No matter how brightly the sun is shining or how dark it is, you always have good visibility.



#### **Frontview HD**



PAGE 20

The Orlaco Frontview system is also available as a digital surveillance system.

# **FI** INFORMATION

The new **EU mirror directive** came into force in 2006 and was extended in January 2007. It includes front view mirrors for all new trucks in Europe. Only an approved camera system may replace the front view mirror. The front camera provides a perfect view of the blind spot in front of the cab. This makes it possible to notice cyclists and pedestrians in time.



The front view mirror may be replaced by a front camera provided it meets, among others, the following requirements:

- Mandatory front vision at forward speeds of between 0 and 10km per hour.
- It must be possible to see the class VI field of vision. (2m in front of and 2m across the entire width of the cab)
- The monitor and camera must meet all technical requirements.

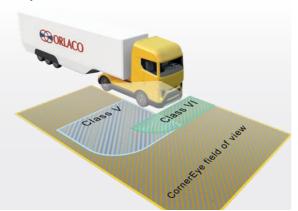
The EG\*2003/97\*2005/27 directive describes the specifications that a truck's mirrors must comply with. Orlaco's analog front view system meets all these requirements. (See page 55)



RDW has granted the CornerEye system a "**System Approval**" for replacing front and kerb mirrors as of 2016. CornerEye fully depicts vision class VI and V, and even a few meters beyond these vision classes. The blind spots at the cabin's front and side are perfectly depicted. The operator notes cyclists, pedestrians and objects timely.

For actual replacement, a "Final Installation Approval" is needed as well. The exact positioning of the camera and monitor differs per truck. Installation approval can be granted when correctly positioned. Therefore, Orlaco offers installation support if desired.

The R46 describes the guidelines for indirect view. Orlaco's CornerEye system meets all requirements.



Truck-trailer combination 9 Rigid truck

#### **Surround view**



PAGE 35

Blind spots are a thing of the past thanks to surround view. Surround view offers 360 degrees field of view around a vehicle. When manoeuvring through narrow streets or busy areas, surround view gives the driver maximum view on all sides of the truck via one central monitor. This is due to the camera images overlapping. Therefore the driver is able to see every person and object around his vehicle.

Contact Orlaco for more information regarding surround view and the EU standards.



# **Trailer switcher**

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reverse the entire combination safely. The trailer switcher is only applicable with analog cameras.

#### Frontview



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The monitor can be integrated or surface-mounted, depending on the vehicle. It is also equipped with handy options, such as automatic brightness adjustment. No matter how brightly the sun is shining or how dark it is, you always have good visibility.





PAGE 24

The Rearview camera lets you see the area immediately behind the truck. The monitor in the cab automatically switches over to this camera if you select reverse gear, allowing you to reverse safely. The rear view camera on the rigid provides vision when the drawbar-trailer or center axle-trailer is not connected. Orlaco has special cable sets (with or without spiral interconnection) for Rearview cameras on your rigid and drawbar- / center axle-trailer.

**Recommendation:** Add RadarEye to increase safety & efficiency. (see page 40-41)



The switcher is included in the special cable set. This trailer switcher ensures that the monitor automatically displays the rearmost camera. This is one less thing for the driver to think about and he can

Vision solutions Vision solutions

Camera setting: Horizontal and vertical line marks.

an affetive aid when connecting the trailer.

With this option the camera on the back of the rigid is also

# 10 Longer Heavier Vehicles (Ecocombi)

#### Rearview



PAGE 32

The Rearview camera lets you see the area immediately behind the truck. The monitor in the cab automatically switches over to this camera if you select reverse gear, allowing you to reverse safely.

A longer and heavier truck combination (LHV), is a truck that can and may transport more freight than an ordinary truck combination. Various LHV models are available, which is why the cables are always customised to order.

















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#### **M** INFORMATION

The transportation of hazardous materials by road is regulated in Europe in the ADR. The vehicle must comply with a significant number of safety requirements, just like the camera system. Safety is of paramount importance for these companies, and cameras provide a significant amount of support in this regard. The ADR regulations contain stringent requirements for cabling. All of Orlaco's cameras and cables meet these stringent requirements, and have been marked "ADR approved" by the TÜV.



#### Rearview



0401861 / 0400280 - PAGE 22

The Rearview camera lets you see the area immediately behind the truck. The monitor in the cab automatically switches over to this camera if you select reverse gear, allowing you to reverse safely.

**Recommendation:** Add RadarEye to increase safety & efficiency. (see page 40-41)





12 Bulk truck Container- / hooklift truck 13

#### Sideview



PAGE 30-31

Extra visibility when manoeuvring and swinging out. As these trucks enter farmyards, they have to be able to manoeuvre accurately between the farmhouse and the sheds which often have low roofs. The outer mirrors do not provide a direct view of the side of the-trailer in bends. It is important for the driver to be able to see whether he can swing the rear of the vehicle out safely. Orlaco's Sideview camera provides a clear image of this.



#### Rearview



**€**SORLAC

0401861 / 0400280

The Rearview camera lets you see the area immediately behind the truck. The monitor in the cab automatically switches over to this camera if you select reverse gear, allowing you to reverse safely.

**Recommendation:** Add RadarEye to increase safety & efficiency. (see page 40-41)





Camera setting: Horizontal line mark.
This option shows a reference line on the monitor

# Hookliftview - Rearview



Hooking up a container requires several critical actions to be carried out in a short space of time. As the driver, it is important for you to check that the container is hooked up properly, positioned onto the rollers correctly and locked securely. The Orlaco camera brings it all into view. A camera with a small angle (60° or 80°)on the rear of the cab. How well you see is especially important. A camera with a wide angle (102°) on the rear bumper. What you see is especially important. The horizontal and vertical line marks shown on the monitor will enable you to position your vehicle correctly.



#### **Frontview**



0400511 / 0400521 - PAGE 22 0400270 - PAGE 36

The Frontview camera provides the required field of view at the front of the truck. A quick look at the monitor and you will know whether you can drive off safely without overlooking a cyclist, pedestrian or object.

The monitor can be integrated or surface-mounted, depending on the vehicle. It is also equipped with handy options, such as automatic brightness adjustment. No matter how brightly the sun is shining or how dark it is, you always have good visibility.



# Combined set

#### Front-Rearview

0401971 / 0401981 - PAGE 23

The Frontview system can be expanded with a Rearview camera. This makes optimum use of your monitor.

14 Tipper truck

Municipal vehicles 15

#### Frontview



0400511 / 0400521 - PAGE 22 0400270 - PAGE 36

The Frontview camera provides the required field of view at the front of the truck. A quick look at the monitor and you will know whether you can drive off safely without overlooking a cyclist, pedestrian or object.







#### Rearview



0401861 / 0400280

The Rearview camera lets you see the area immediately behind the truck. The monitor in the cab automatically switches over to this camera if you select reverse gear, allowing you to reverse safely.

In accordance with EN 1501, rear vision is always mandatory for refuse collection trucks, even when driving forwards.

# **Dumperview - Rearview**



If you want to keep an eye on the load, then the solution is to install a camera in the dumper. The camera also provides an accurate indication of whether your vehicle is positioned correctly and whether the container is sufficiently filled. Put simply, it eliminates the need for extra staff and the driver no longer has to keep climbing in and out. The cameras are heated and waterproof (IP69K). The cameras can be cleaned with a high pressure cleaner, for example, when the vehicle is being washed.



# Combined set

# Front-Rearview

0401971 / 0401981 - PAGE 23

The Frontview system can be expanded with a Rearview camera. This makes optimum use of your monitor.





#### **Rearview HD**



PAGE 20

The Orlaco Rearview system is also available as a digital system.

#### **₽** INFORMATION

Vehicles used in the environmental sector often operate in busy residential areas. Within this sector, the problem of blind spots is a crucial issue. It is therefore logical that cameras are mandatory on the back of refuse collection vehicles. They enable the driver to not only keep sight of the situation behind the truck, but also to maintain contact with the loaders. Orlaco cameras also provide field of view around side loaders, street sweepers, drain cleaning vehicles and container trucks. Orlaco cameras comply with **EN 1501-1 up to and including EN1501-5**, the European safety standard for refuse vehicles.

16 Heavy haulage combination Fire truck 17

#### Frontview



0400511 / 0400521 - PAGE 22 0400270 - PAGE 36

The Frontview camera provides the required field of view at the front of the truck. A quick look at the monitor and you will know whether you can drive off safely without overlooking a cyclist, pedestrian or object.

The monitor can be integrated or surface-mounted, depending on the vehicle. It is also equipped with handy options, such as automatic brightness adjustment. No matter how brightly the sun is shining or how dark it is, you always have good visibility.









View of the axles. These truck combinations must comply with very specific safety requirements. Although a camera system is not mandatory, it certainly adds significant value. Please contact Orlaco for a system tailored to your requirements.

#### Rearview



0401861 / 0400280 - PAGE 22

The Rearview camera increases the safety of professional response personnel and bystanders. You can manoeuvre more easily because you can see the area behind the vehicle. The monitor in the cab automatically switches over to the rear view camera if you select reverse gear.

Recommendation: Add RadarEye to increase safety & efficiency. (see page 40-41)





#### **Frontview**



0400511 / 0400521 - PAGE 22 0400270 - PAGE 36

The Frontview camera provides the required field of view at the front of the truck. A quick look at the monitor and you will know whether you can drive off safely without overlooking a cyclist, pedestrian or object.





18 **Bus** 19

#### Sideview



A bus driver has limited field of vision in the right-side area of a bus. A sideview camera on the front provides a better field of view on the large, risky right side area of the bus. Monitor image switches when the turn signal is activated.



# Tail swing view



Dangerous situations can occur while swinging out the rear of the bus because the bus driver has a limited view on the rear of the bus. Two cameras on both rear corners provide a clear view on the rear of the bus when swinging out. Combined with a rear view camera the entire area behind the bus is clearly visible.



# CornerEye



PAGE 20

CornerEye offers a complete and detailed view of 270° of the area around the cabin. The system delivers HD digital image quality in real time.

# Combined set

# Tail swing-side view

PAGE 34

The side view camera is a perfect addition to the rear corner view. Both rear and side view cameras are displayed simultaniously on the monitor to ensure optimum vision.



# Rearview



0400910 - PAGE 36

The rear view camera lets you see the area immediately behind the bus. The monitor in the cab automatically switches over to this camera if you select reverse gear, allowing you to reverse safely.



# Frontview -

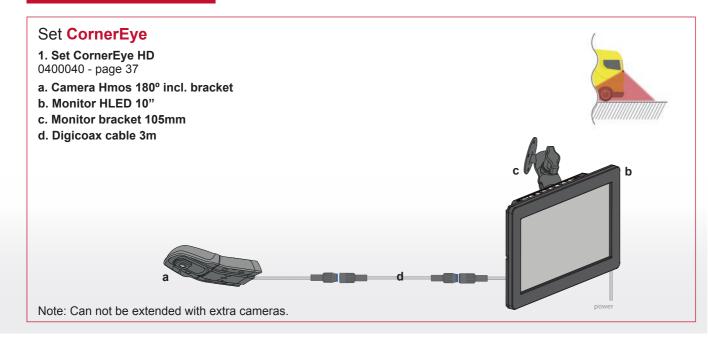


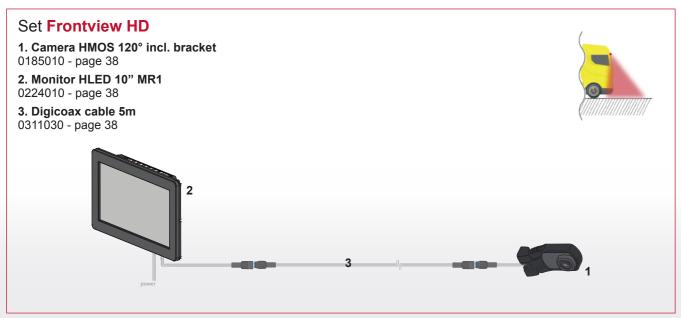
0400920 - PAGE 36

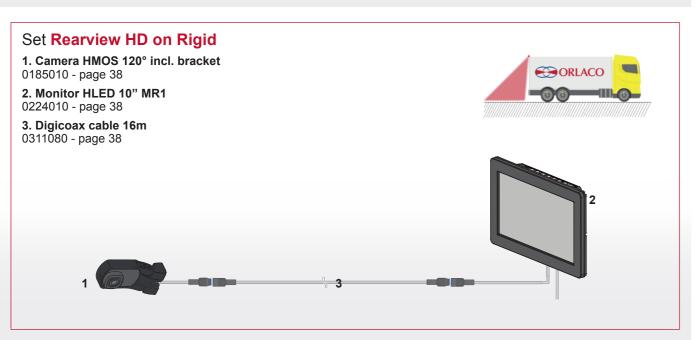
Buses may not be covered by the mirror directive, but this does not mean front view cameras are an unnecessary luxury. When approaching a bus stop along the street or at the station, the front view camera will ensure no passengers are overlooked.

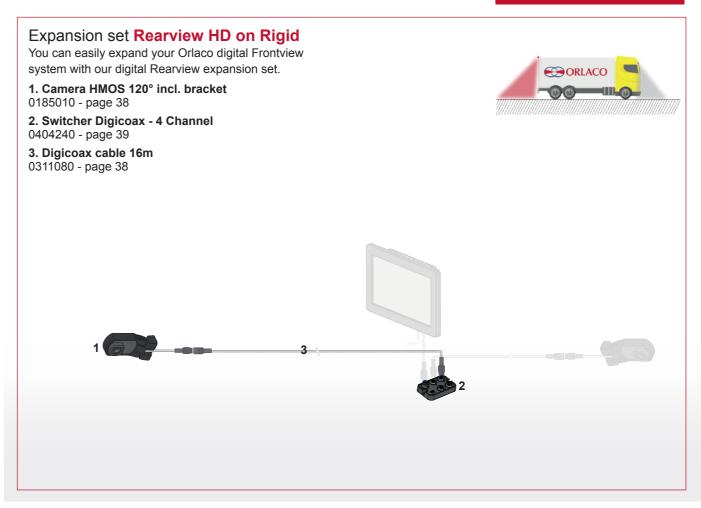


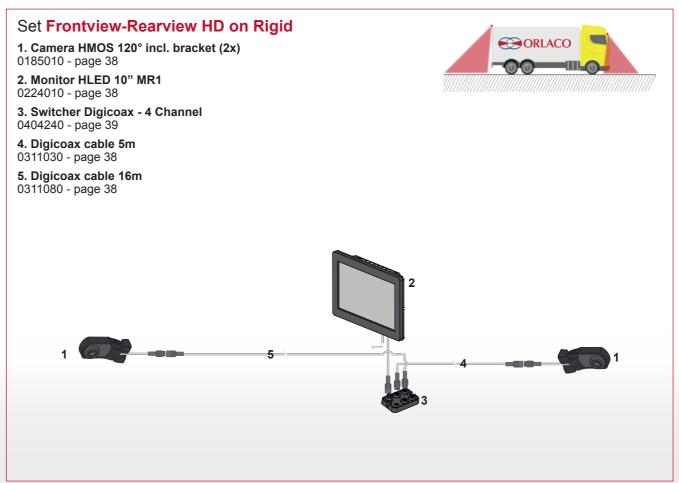


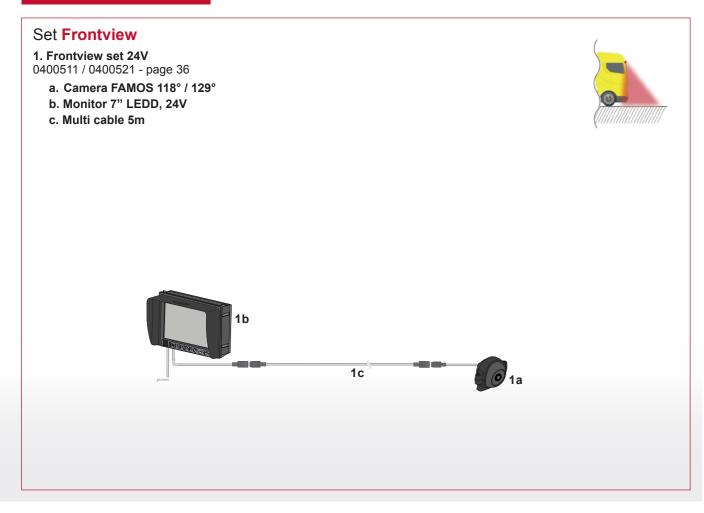


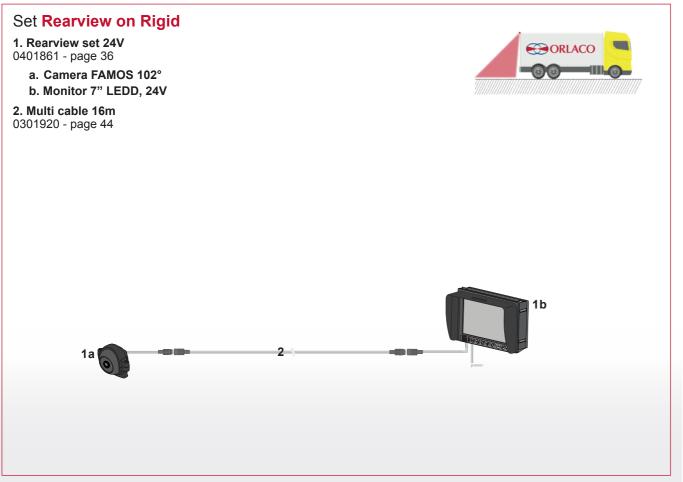


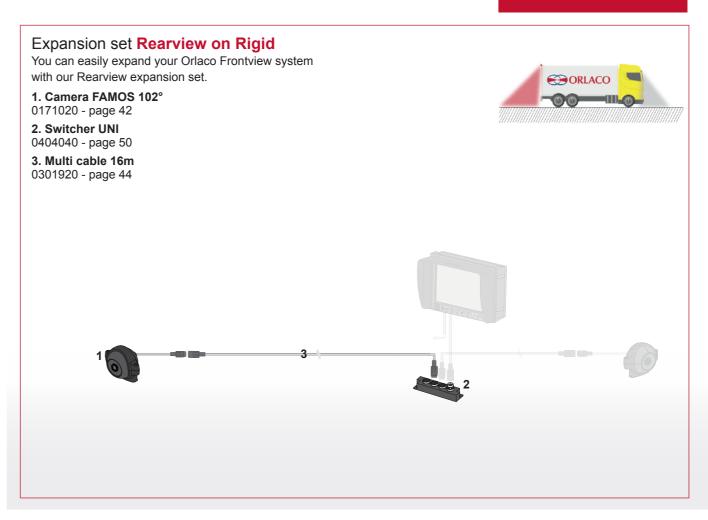


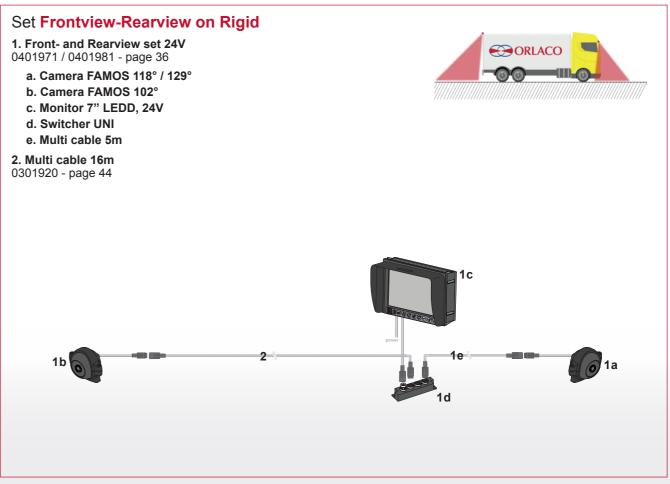


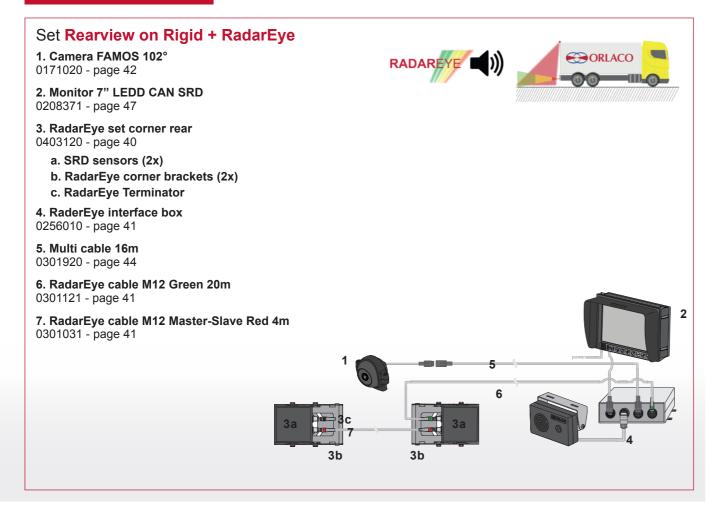


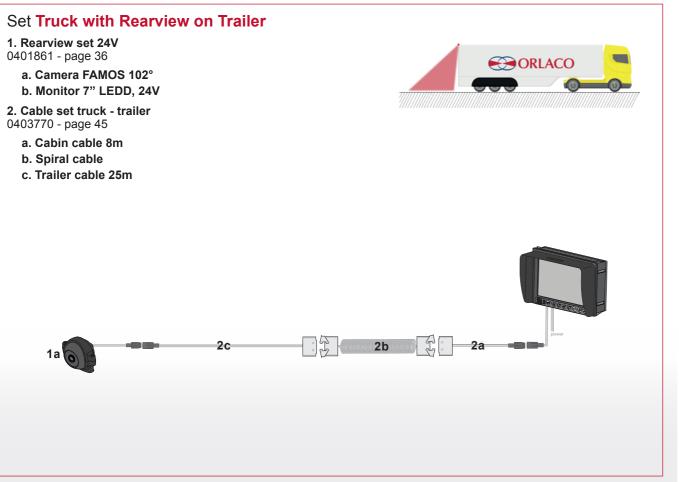


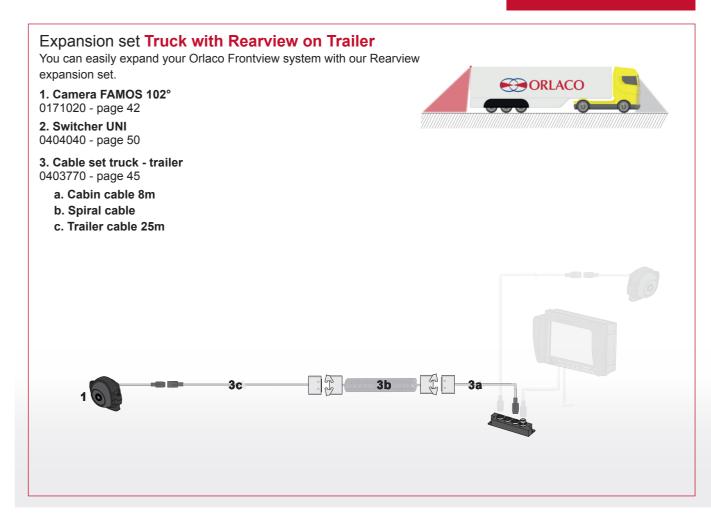


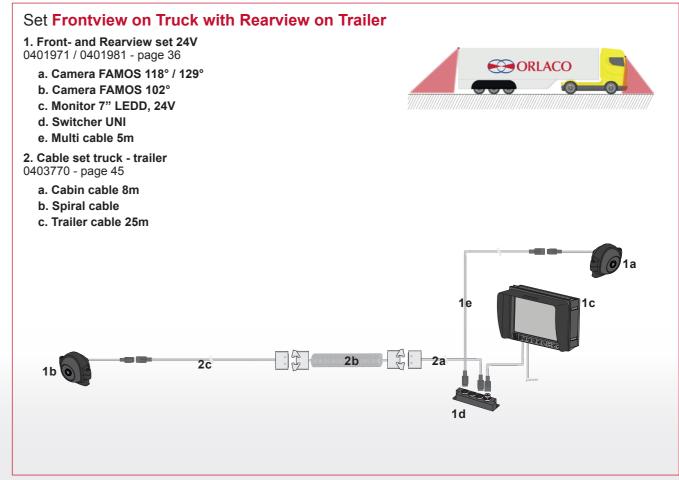


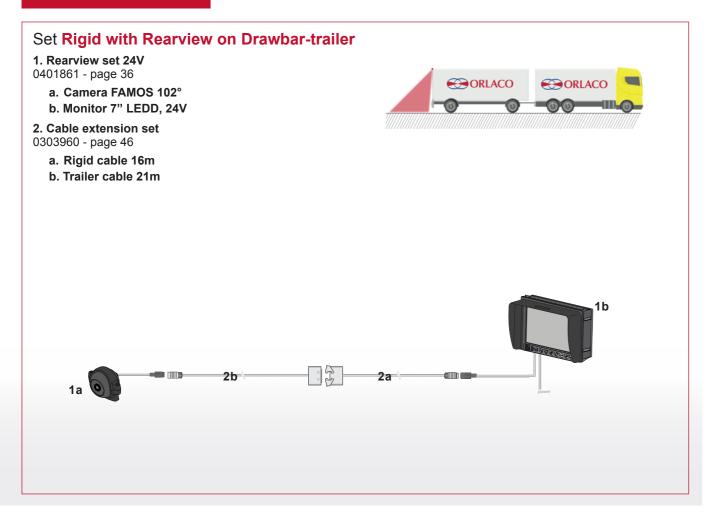


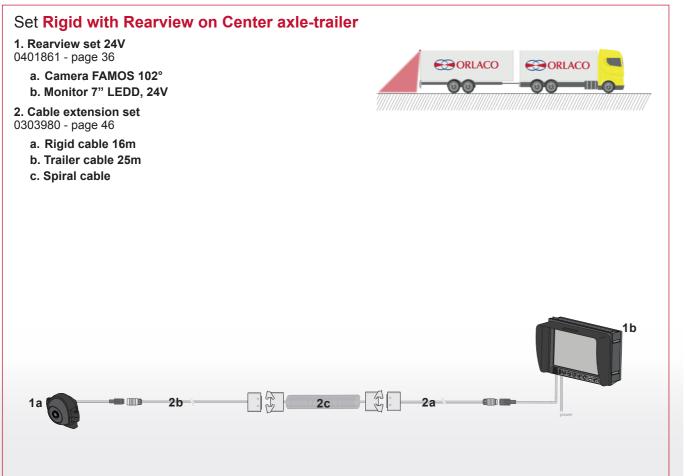


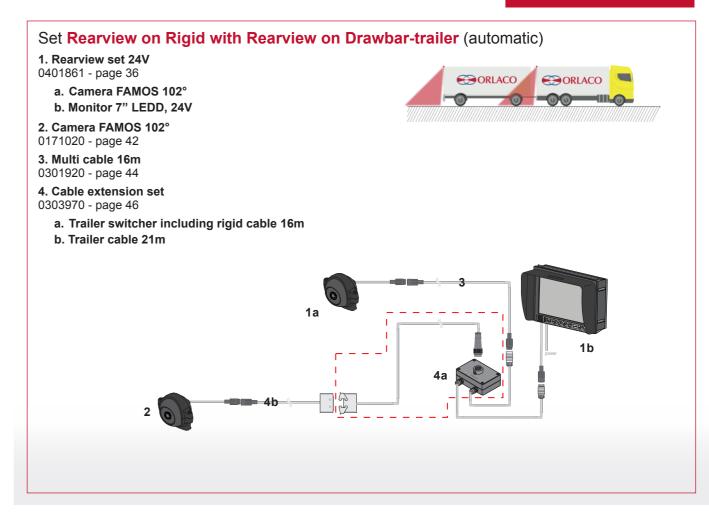


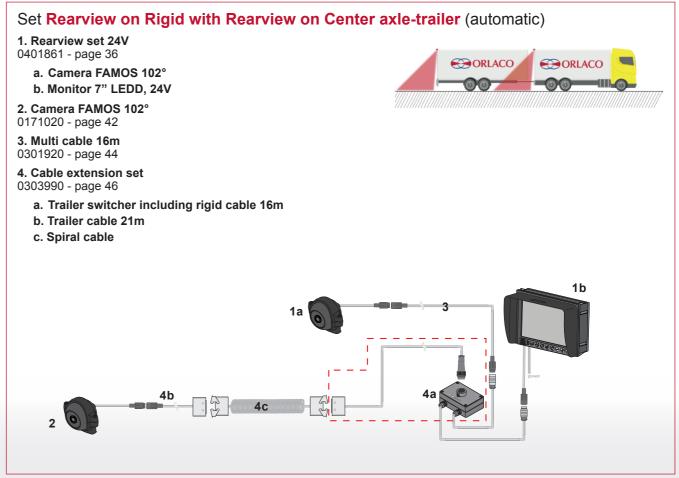


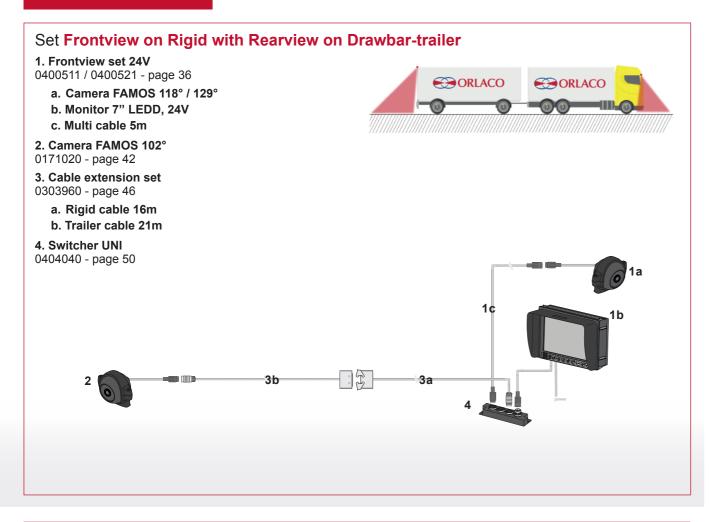


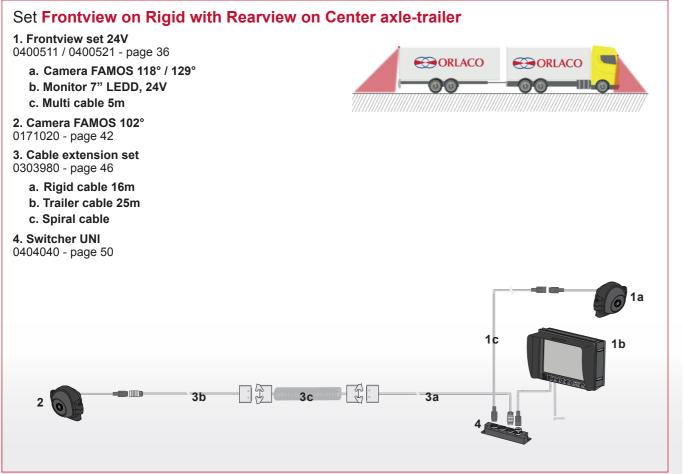


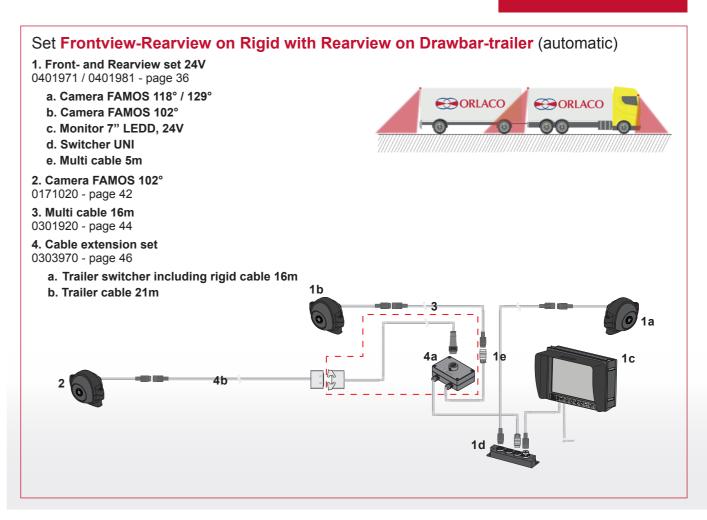


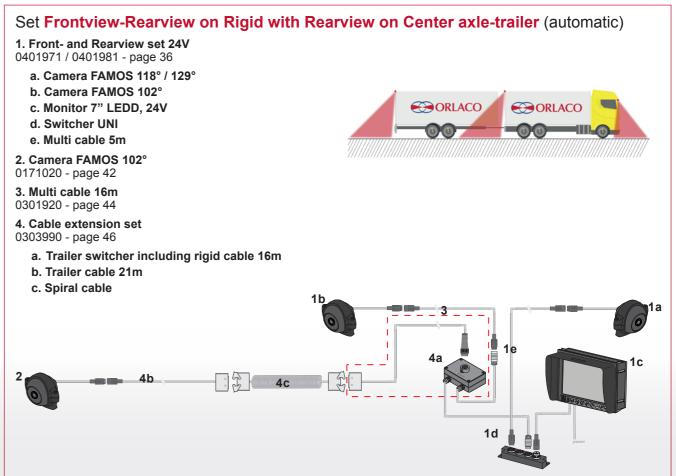


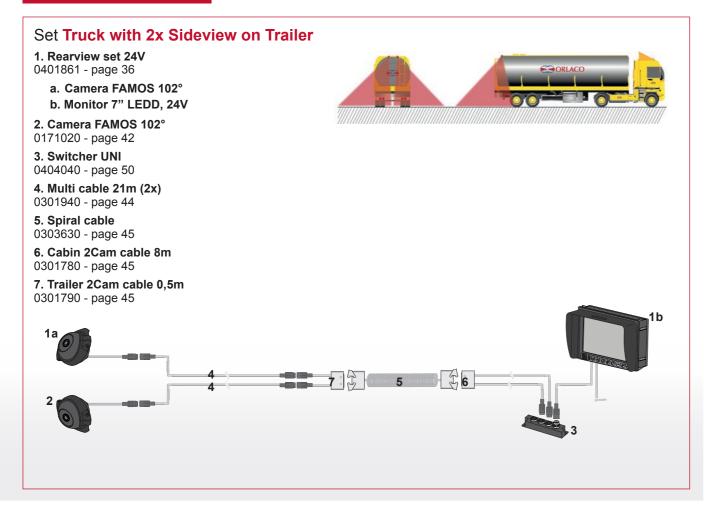


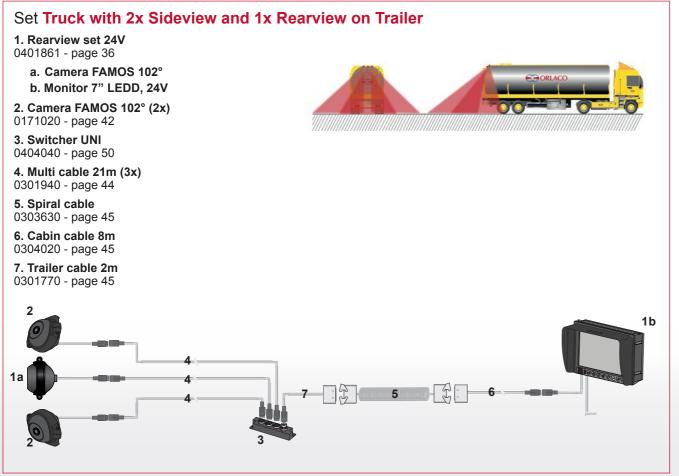


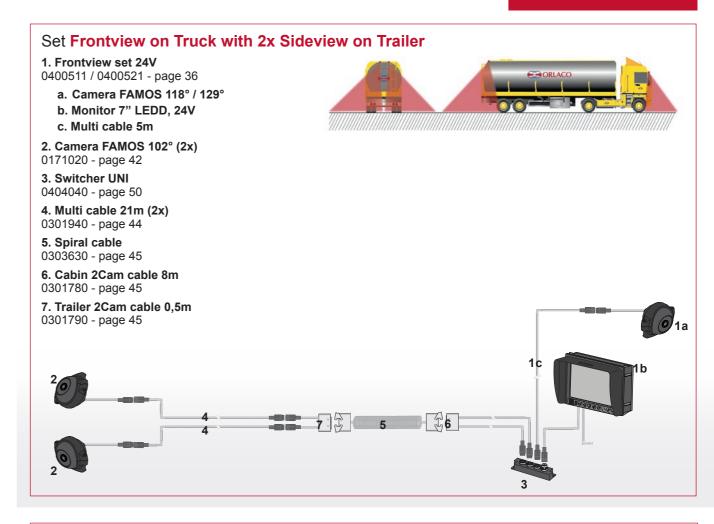


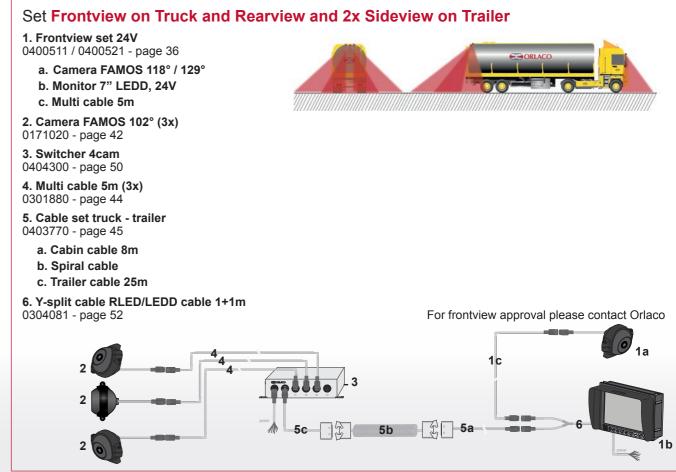


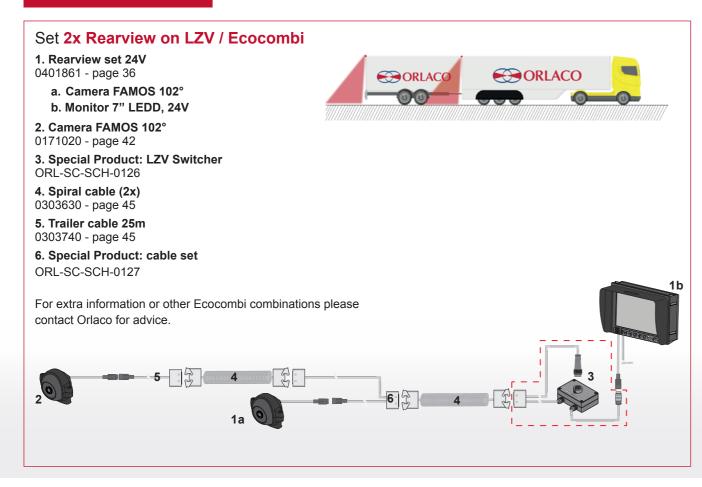


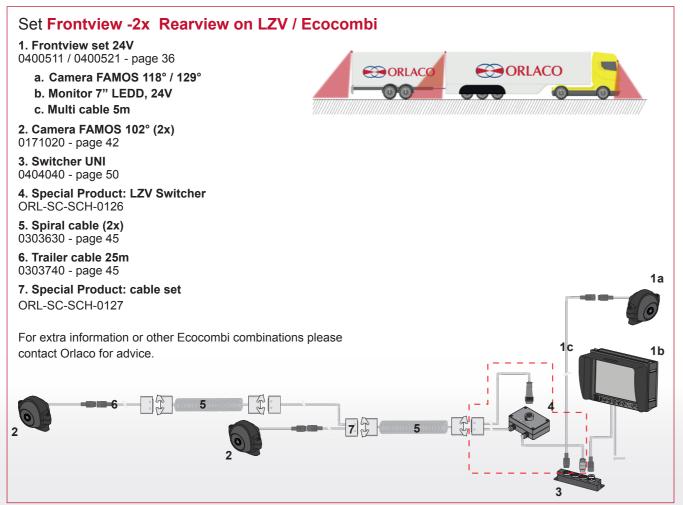


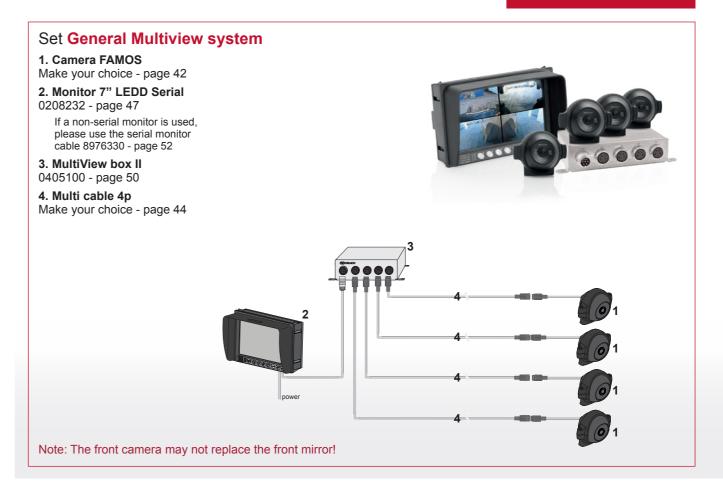


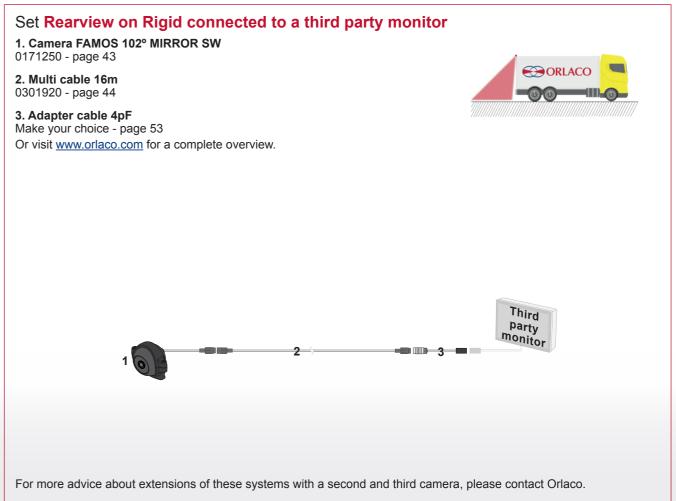


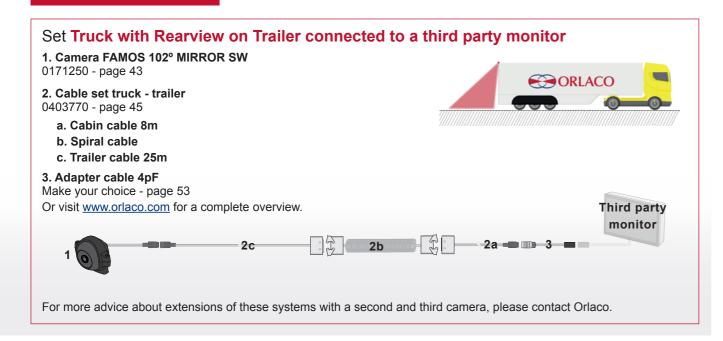


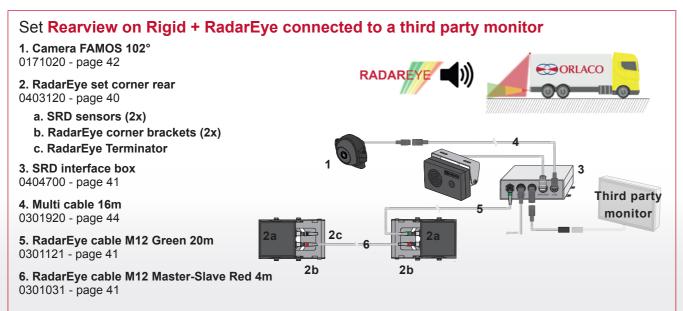


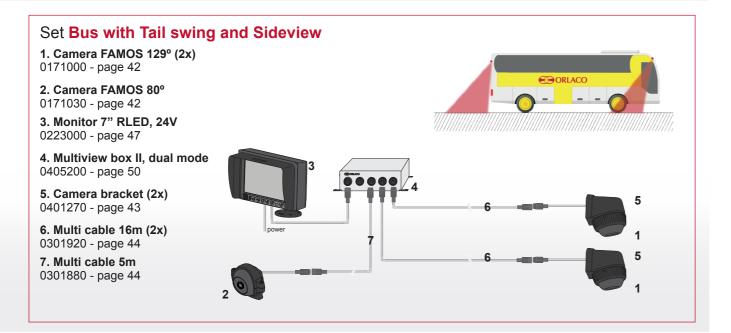


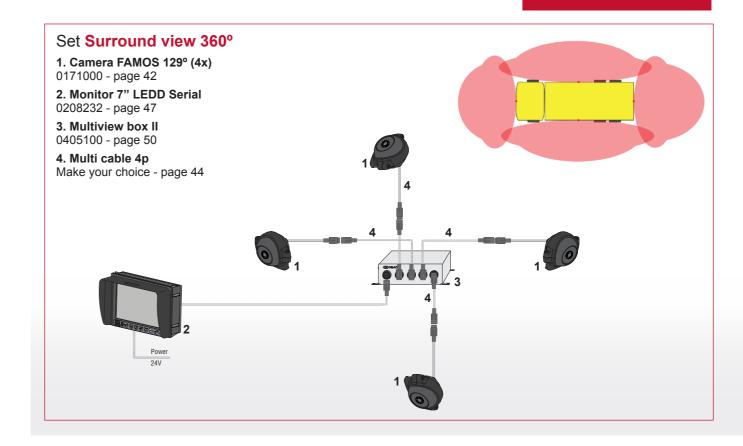












#### Surround view



Three hundred and sixty degrees field of view around a vehicle increases safety. The dimensions of a truck make it hard for a driver to get a complete overview of what is happening around his vehicle. Surround view gives him that overview. While manoeuvring and at loading and unloading docks, the system gives the driver maximum view on all sides of the truck via a single central monitor. The camera images overlap, allowing the driver to see every person and all objects around his vehicle. This greatly increases safety and efficiency. At street level, the surrounding area of the vehicle is clearly visible, even the corners. People and objects captured on the camera are shown in real size. This gives the driver an immediate, clear overview of the situation.

- · Surround view can be applied on any type of vehicle.
- Increased field of view when manoeuvring in narrow streets and busy areas.
- Images available: 180°, 270° or 360°.
- Surround view offers an overview of objects and people around a vehicle. They are always visible, thanks to overlapping camera images.
- Suitable for both 7" and 12" Orlaco monitors.
- Operating temperature between -40° and +85°C.
- A maximum of four different overviews can be programmed.
- · No time-consuming calibration of cameras.
- Surround view can be designed and programmed in accordance with the customer's wishes.
- · Contact Orlaco for more information and advice.



Forward manoeuvring



Reverse mode

# Standard sets

# 0400511 / 0400270 Frontview set 118°, 24V / 12V

The Orlaco Frontview set provides the required field of view at the front of the truck.

- Camera FAMOS PAL 118° (0171010 page 42)
- Monitor 7" LEDD, 24V (0221000 page 47) / Monitor 7" LEDD, 12V (0208203 - page 47)
- Multi cable 5m (0301880 page 44)

# 0400521 Frontview set 129°, 24V

The Orlaco Frontview set provides the required field of view at the front of the truck.

- Camera FAMOS PAL 129° (0171000 page 42)
- Monitor 7" LEDD, 24V (0221000 page 47)
- Multi cable 5m (0301880 page 44)



# 0401971 / 0401981

# Front- and Rearview set 118° / 129°, 24V

The Orlaco Front- and Rearview set provides the field of view at the front and the back side of the truck.

- Camera FAMOS PAL 118° (0171010 page 42) / Camera FAMOS PAL 129° (0171000 - page 42)
- Camera FAMOS PAL 102° (0171020 page 42)
- Monitor 7" LEDD , 24V (0221000 page 47)
- Multi cable 5m (0301880 page 44)
- Switcher UNI (0404040 page 50)

Any required cables for the Rearview camera can be ordered separately. (see page 44)



# 0401861 / 0400280 Rearview set 24V / 12V

The Orlaco Rearview camera lets you see the area immediately behind the truck. The monitor in the cab automatically switches over to this camera when the reverse gear is selected.

- Camera FAMOS PAL 102° (0171020 page 42)
- Monitor 7" LEDD, 24V (0221000 page 47) / Monitor 7" LEDD, 12V (0208203 - page 47)

Any required cables for the Rearview camera can be ordered separately. (see page 44)



# 0400910 / 0400920 Set RLED 102° / 118°, 24V

- Camera FAMOS PAL 102° (0171020 page 42) / Camera FAMOS PAL 118° (0171010 - page 42)
- Monitor 7" RLED, 24V (0223000 page 47)

Any required cables can be ordered separately. (see page 44)

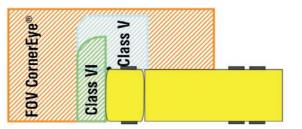
# CornerEye® covers field of vision Class V & VI with one camera



Get excellent view on blind spots around trucks with the revolutionary new CornerEye camera monitor system. Ultimate digital technology and effective application come together in this u nique vision system. The system has a wide angle lens that, combined with the latest technologies, delivers a field of vision of 270°. CornerEye covers the obligatory Class V & VI and even beyond, increasing your vision.



Check our CornerEye video on the Orlaco YouTube channel.



- · HD camera and 10" HD monitor
- · 270° field of vision
- · Real time: zero latency
- · Shock and vibration proof
- · Ruggedized design
- · Designed to comply with automotive requirements
- Camera IP69K watertight
- · Short mounting time
- · Custom made bracket per brand on request

# CornerEye Set

# 0400040 Set CornerEye HD

- Including HMOS camera with bracket, 10" monitor with bracket and 3m digicoax cable.
- · Can not be extended with extra cameras.



# **CornerEye Parts**

# 0185610 Set HMOS camera with bracket

Including camera HMOS 180° and extension bracket.

# 0402620 Camera bracket

· Camera HMOS not included



# 0224000 Monitor 10" HLED

 1m multi cable (power) open wired, 1m multi cable (video) including 4p molded female coax connector.



# The qualifications of our Digital Cameras

- 1280 x 960 video image
- Light sensitivity 0.1 lux
- · Excellent impact- and vibrationresistance
- Improved EMC-standards
- High resolution CMOS rolling shutter Automotive molding-filled housing, watertight IP69K according to DIN 40050-9
  - Operating temperature between -40°C to +85°C
- IP68 dust- and waterproof according to IEC 60529
- The camera has a 0,5m digicoax cable including a digicoax waterproof molded 4p male connector

# **Cameras HMOS**

Compact, industrial high definition Digicoax camera.

Туре	Art. no.
30°	0185040
60°	0185030
90°	0185020
120°	0185010
180°	0185000

· Including camera bracket

# **Monitor HLED**

- · Automotive TFT liquid crystal display module, LED backlight
- 1m multi cable (power) open wired, 1m multi cable (video) including 4p molded female digicoax connector
- 1280 x RGB x 800 video image

0224010 Monitor 10" HLED MR1

# Digicoax cable

Designed for use with HMOS cameras.

0311000	1m	0311010	2m
0311020	3m	0311030	5m
0311040	7,5m	0311050	8m
0311060	9m	0311070	11m
0311080	16m	0311090	21m

# **Digicoax switcher**

Inputs and power supply for a maximum of 4 Digicoax HMOS cameras.

• Cameras can be switched over automatically with a HLED MR1 monitor

0404240 Switcher Digicoax - 4 channel



# **Monitor brackets**

• Suitable for Monitor 10" HLED.

0402610 Monitor Bracket 105mm



0401290 Monitor Bracket 127mm

Dashboard mounting



2015740 Clamp unit with ball joint

• Accommodates rails from ø 12,7mm to 31,75mm.



1000499 Digital Camera bracket



# RadarEye unites visibility and active detection



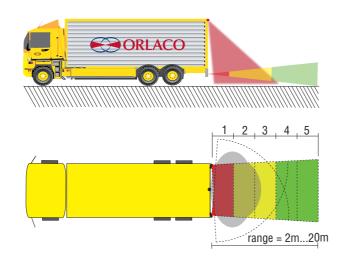
Orlaco has developed this radar unit in addition to the camera-monitor systems. By combining the vision solution with an active signaling system, RadarEye offers additional safety and efficiency.

RadarEye is an integrated active view system designed to detect and see objects in zones obscured from the driver's view. The radar system detects stationary as well as moving objects in a designated coverage area. With this view system the driver is actively warned with audible tones that increase in rate as objects come closer. When an object is detected it can be seen on the monitor and the driver can respond immediately. This prevents damage to the drivers truck and any other equipment he may reverse into. The radar units have a rugged design, are shockproof, waterproof and is not influenced by the environment, such as snow, rain, mud and or temperature changes.



Check our demo RadarEye videos on the Orlaco YouTube channel.

- · RadarEye can be used on various machines
- RadarEye is capable of visualizing the radar-zones on the display. As soon as an object enters the zone it will activate colored dots (default setting) or a transparent visualization (standard/custom preset settings) to make the driver aware of the potential danger
- 2...20m detection area, divided in 5 equally sized segments
- Separation distance: 1-4m (configurable)
- Antenna beam horizontal: 70°(typ.), vertical: 11°(typ.)
- Operating temperature between -40°C to +85°C
- Obstacle reaction delay 50ms
- Can be connected to an Orlaco monitor or third party monitor with PAL/NTSC input
- RadarEye can be extended with multiple sensor and camera units for all around detection and visibility
- · Please contact Orlaco for advice and installation





# RadarEye Sets

# 0403120 Set SRD Corner Rear

Active Rearview system for corner mounting.

- · Including SRD sensors, brackets and terminator
- Interface Box is required
- Cables, camera and monitor CAN SRD are not included



# 0403100 Set SRD Center Rear

Active Rearview system for center mounting.

- Including SRD sensors, bracket, cable master-slave (0301080) and terminator
- Interface Box is required
- · Cables, camera and monitor CAN SRD are not included

# RadarEye Interface boxes

# 0256010 Interface Box CAN/SRD/camera

The Interface Box is designed to connect SRD sensors to camera and CAN SRD monitor.

# 0504820 Interface Box with ext. speaker CAN/SRD/camera

The Interface Box is designed to connect SRD sensors to a camera, CAN SRD monitor and external speaker.

- Set consists of: External speaker and Interface Box
- Sound pressure speaker: 85dB (+/-3dB) distance 1m





# RadarEye Interface box for existing monitors

# 0404700 SRD Interface Box with ext. speaker

The Interface Box is designed to connect the RadarEye components to a non-radar third party monitor (PAL/NTSC) or existing standard camera system.

- Set consists of: Interface box, external speaker, adapterplug and open wired multicable with 8p connector.
- Sound pressure speaker: 85dB (+/-3dB) distance 1m



# RadarEye Cables

# Cable M12 Green

Connection cable between Interface box and master SRD sensor or connection cable between slave SRD sensor and next SRD sensor.

0301051	5m	0301061	10m
0301071	15m	0301121	20m
0301131	25m	0301141	30m

# Cable M12 Master-Slave Red

Connection cable between master SRD sensor and slave SRD sensor.

0301081	0,25m	0301021	1m
0301031	4m	0301041	8m
0301091	16m		



# RadarEye Brackets

# 0401330 Bracket SRD Sensor Corner Rear

Mounting bracket for SRD Sensor for corner mounting

- · Stainless steel
- SRD sensor not included

# 0401320 Bracket SRD Sensor Center Rear

Mounting bracket for SRD Sensor for center mounting

- · Stainless steel
- SRD sensors not included





# Or design your system yourself

Step 1: Select your camera

Step 2: Select your desired cable

Step 3: Select your monitor

Step 4: Select the required options

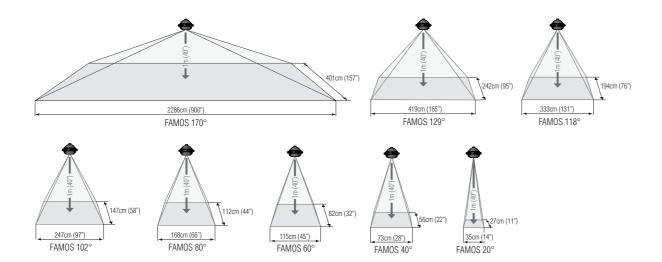
It is also possible to configure your system online on our website: www.orlaco.com

Whatever you select, the system can be easily installed and is plug-and-play.

**Note**: For two or more cameras a Switcher, Y-split cable or MultiView Box II and additional cables are required. Contact us for support.

# The qualifications of our FAMOS analog compact cameras

- Next generation CMOS sensor
- Light sensitivity 0.05 lux
- Integrated *Safety ticker* to show that camera is running and active
- Optimized impact- and vibrationresistance
- · Chemically hardened lens
- Automotive molding-filled housing, watertight IP69K according to DIN 40050-9
- Improved EMC-standards
- Operating temperature between -40°C to +85°C
- · Heated lens glass, therefore no
- problems with condensation or frost
- · Fixed lens
- IP68 dust- and waterproof according to IEC 60529
- The camera has a 0,5m cable including a watertight molded 4p male connector





# **Cameras FAMOS**

Туре	Art. no. PAL	Art. no. NTSC
20°	0171060	0171160
40°	0171050	0171150
60°	0171040	0171140
60° MIRROR	0171960	-
80°	0171030	0171130
102°	0171020	0171120
102° MIRROR	0171220	0171240
118°	0171010	0171110
118° MIRROR	0171210	0171230
129°	0171000	0171100
129° MIRROR	0171880	-
170°	0171070	0171170

# **Cameras FAMOS MIRROR SW**

Camera with mirrored image and guiding lines.

 Type
 Art. no. PAL
 Art. no. NTSC

 102° MIRROR
 0171250
 0171260



# **Cameras FAMOS IR LED**

Day-night camera including 4 High Power Infrared LEDs 850nm. The IR LED's are automatically activated. Based on the output of the CMOS sensor the IR illumination value is set to ensure the best possible image.

Art. no. PAL	Art. no. NTSC
0171610	0171630
0171600	0171620
0171900	0171910
	0171610 0171600

• UV-transparent front cover



# 0403310 Shock-absorbers for Compact Camera

In situations where shock absorption plays a major role, we recommend that the specially developed shock absorbers are used when installing the Compact Camera.



# **Mounting means - Compact Cameras**

# 0401270 Camera bracket

Compact bracket specially designed for the Compact Camera.

- · Cap can be resprayed in the color of the vehicle
- · Including mounting kit
- · Compact Camera is not included

# 0401210 Camera bracket with extension

Extended bracket specially designed for Volvo FM / FH Frontview and Mercedes-Benz.

- · Including mounting kit
- Rubber extension part
- · Compact Camera is not included





Products Products

# The advantages of Orlaco cables

- All cables are specially developed by Orlaco
- · ADR approved

- Special cables are available for various circumstances
- · Resistant to oil and petrol
- · Watertight cable connectors
- Operating temperature -40°C to +85°C

#### Multi cable standard

This standard cable can be used if no special requirements like mechanical protection or dynamic movement of the cable

# Including 4p molded connectors:

0301960	1m	0301870	2m
0301890	3m	0301880	5m
0301910	7,5m	0301930	8m
0301950	9m	0301900	11m
0301920	16m	0301940	21m
0301990	40m		

# Including 7p molded connectors:

0304420	0,5m	0304260	2m
0304410	6m	0304610	11m
0304620	16m	0305030	21m

# Dynamic cable

Designed for dynamic use.

· Soft cover with small bend radius

# Including 4p molded connectors:

	.b		
0304371	0,5m	0304281	1m
0305341	3,5m	0304341	5m
0304381	6m	0304391	8m
0304431	9m	0304441	10m
0301811	11m	0304451	12m
0301731	15m	0301831	20m
ncluding 7p connectors:			

0304460	3m	0304470	4m
0304480	5m	0304490	8m
0304560	9m	0304570	10m
0304580	11m	0304590	17m

# Cable per metre (connectors not included)

1220110	Multi cable 1x coax, 2x power, 1x data
1220170	Multi cable 1x coax, 5x wires
1220250	Multi cable 1x coax, 12x wires PUR
1220350	Multi cable 2x coax, 5x wire PUR
1220600	Dynamic cable 1x coax, 5x wire PUR
1220900	Power cable 7x wire AWG20
1222000	Coax cable 75 OHM RG59

Any required connectors can be ordered separately. (see page 50)

# **Truck- and Trailer cables**

- · Oil and petrol resistant
- IP67 Watertight

# 0304020 Cabin cable 8m

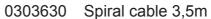
Cable suitable for lead through on truck.

- Fitted with 4p molded male and 10p Harting female connectors
- · Including extra mounting housing

# 0301780 Cabin 2Cam cable 8m

Two camera cable suitable for lead through on truck.

- Fitted with two 4p molded male and 10p Harting female connectors
- · Including extra mounting housing



3,5m spiral cable between truck and trailer.

- Fitted with 10p Harting connectors
- Double coax



# 0301770 Trailer cable 2m 0303740 Trailer cable 25m

Cable suitable for lead through on trailer.

• Fitted with 4p molded female and 10p Harting male connectors

# 0301790 Trailer 2Cam cable 0,5m

Two camera cable suitable for lead through on trailer.

• Fitted with two 4p molded female and 10p Harting male connectors



# 0303870 Swivelling arm cable 11m

Cable suitable for lead through on truck/cabin.

- Fitted with 4p male connector and 10p Harting female connector
- Multi cable fitted with 10m protection hose



# 0403770 Cable set for truck - trailer

Cable set for connecting the camera on the trailer.

This set contains:

- 0304020 Cabin cable 8m
- 0303630 Spiral cable 3,5m
- 0303740 Trailer cable 25m







# Cable extension sets

0303960 Cable extension rigid - drawbar trailer (manual)

Two cables suitable for lead through on rigid and drawbar trailer.

This set contains:

- 16m multi cable 4p male 10p female Harting
- 21m multi cable 4p female 10p male Harting
- Including push button (for manually switching between cameras)



# 0303970 Cable extension rigid - drawbar trailer (automatic)

Two cables suitable for lead through on rigid and drawbar trailer.

This set contains:

- 16m multi cable 7p male 10p female Harting
- 21m multi cable 4p female 10p male Harting
- Including Trailer switcher (Switches automatically on connection)



# 0303980 Cable extension rigid - center axle trailer (manual)

Two cables suitable for lead through on rigid and center axle trailer.

This set contains:

- 16m multi cable 4p male 10p female Harting
- 25m multi cable 4p female 10p male Harting
- Spiral cable 3,5m, 10p Harting connectors
- · Including push button (for manually switching between cameras)



# 0303990 Cable extension rigid - center axle trailer (automatic)

Two cables suitable for lead through on rigid and center axle trailer.

This set contains

- 16m multi cable 7p male 10p female Harting
- 21m multi cable 4p female 10p male Harting
- Spiral cable 3,5m, 10p Harting connectors
- Including Trailer switcher (Switches automatically on connection)

# The possibilities offered by Orlaco LED monitors

- Automotive 7inch TFT liquid crystal display module, LED backlight
- Operating temperature between -40°C to +85°C
- Impact and vibration resistance meet the stringent requirements
- Power protected against:
- Induction voltages

- Load dumps
- Over- and undervoltage
- Mirror image setting
- High resolution pixel WVGA 800xRGBx480
- Brightness automatically adjusts to the ambient light
- Option of a marker line per camera

on the screen for the optimum determination of distance

- · Integrated sun visor
- IP67 according to IEC 60529
- Full On-Screen-Display (OSD) in 12 languages
- Watertight molded connectors



Monitor 7" RLED (Incl. 132mm bracket)



Monitor 7" LEDD



Monitor 12" RLED (Incl. 190mm bracket)

# **Monitors LEDD**

· For double DIN slide opening in the dashboard

Type 7" 7" Serial • Input Voltage 1830	Video cable / connector 2m / 4p female 6m / 7p female 0V/DC +/-10%	Power cable 2m open wired 6m open wired	Bracket - -	Art. no. 0221000 0208232
7"	2m / 4p female	2m open wired	-	0208203
7" CAN SRD 6	6m / 7p female	6m open wired		0208371

# **Monitors RLED 7"**

Input Voltage 12...60V/DC +/-10%

Туре	Video cable / connector	Power cable	Bracket	Art. no.
7"	2m / 4p female	2m open wired	132mm	0223000
7" Serial R6	6m / 7p female	6m open wired	132mm	0208632
7" 4Cam SP	2m / 4p female	2m open wired	132mm	0223220
<ul> <li>Input Voltage 18</li> </ul>	•		-	

**Monitors RLED 12"** 

Туре	Video cable / connector	Power cable	Bracket	Art. no.
12" Serial	6m / 7p female	6m open wired	190mm	0411130

• Input Voltage 18...30V/DC +/-10%

Serial For serial connection (MultiView box II)

CAN SRD Specially designed for RadarEye systems. (see page 40-41)

4Cam Y-split cable can be used to easily extend your system to display two cameras on one monitor or up to four

cameras per monitor in combination with a Switcher.

SP Splitscreen and picture in picture options available.

Products Products

# Mounting means - LEDD monitor

Brand	Model	DDIN slot	Necessary mounting brackets
DAF	Euro 5 CF/XF	Yes	None
DAF	Euro 6 CF/XF/LF	Yes	None
Iveco	All models	No	0400610 or 0400600
MAN	All models	No	0400610 or 0400600
Mercedes-Benz	Actros Euro 5	Yes	0400610 or 0400600
Mercedes-Benz	Actros Euro 6	No	0400610 or 0400600
Mercedes-Benz	Other models	No	0400610 or 0400600
Renault	Euro 5 Premium / Euro 6 Renault T	Yes	0400610 or 0400600
Renault	Magnum	Yes	0400630
Renault	Other models	No	0400610 or 0400600
Scania	Long dashboard: Euro 5 / Euro 6	Yes	None
Volvo	Euro 5 FM / FE	Yes	None
Volvo	Euro 5 FH	No	0400680
Volvo	Euro 6 FM	Yes	None
Volvo	FL	No	0400610 or 0400600



0400610 Monitor mounting bracket For assembly of the Monitor 7" LEDD.

• ABS + aluminium

0400600 Monitor mounting bracket flexible For flexible assembly of the Monitor 7" LEDD.

• ABS + aluminium



# **Mounting means - Compact Cameras**

0402280 Camera Extension 155 Stainless steel Extended heavy duty bracket specially designed for Rearview.

- 155mm extension
- Including camera bracket (0401270)
- · Stainless steel housing
- Including mounting kit
- · Compact Camera is not included



# Camera extension brackets

Specially designed for the Compact Camera. Matches the hole pattern of the Compact Camera bracket.

· Stainless steel

0402250 Camera extension 155mm

0402270 Camera extension 250mm

0403400 Compact Camera magnet bracket For quick mounting of Compact Camera on steel profiles.

8400670 Compact Camera bracket Assembly set for Compact Camera.



0402450 Camera Housing Dome Ceiling mount for Compact Camera.

- Aluminum housing
- · Including mounting hardware
- · Compact Camera is not included



# Covers

Cover specially designed for the Compact Camera.

· Stainless steel

0402320 Protective cover



0402360 Aerodynamic cover

0402310 Aerodynamic cover + nozzle

The nozzle allows high pressure cleaning of the camera lens.

 Hose (2270140), pump (3500810) and water tank are not included



# **Switchers**

0405600 Trailer switcher

For connecting the Rearview cameras to the rigid and trailer

- · Switches automatically on connection
- Including 16m multi cable 7p 10p Harting



Input and power supply for three cameras and in combination with a Y-split cable: four cameras.

· Cameras can be switched over automatically or manually

# 0404040 Switcher UNI

- Waterproof IP54 according to IEC 60529
- 4p output for monitor

# 0404080 Switcher UNI IP67

- Waterproof IP67 according to IEC 60529
- · 4p output for monitor

# 0404060 Switcher Serial IP67

- · Waterproof IP67 according to IEC 60529
- 7p output for monitor
- · Only in combination with a Serial monitor



# 0404300 Switcher 4Cam

This video switcher for third party monitors has 4 video inputs and 1 video output

- Connect up to 4 cameras (PAL or NTSC) to a third party monitor (only applicable for third party monitors)
- Including 3,85m power cable



The MultiView box II is an advanced video imaging system for up to 4 cameras. There are many possibilities of different split views in 5 selectable video channels.

- · Stainless steel housing
- A MultiView box II can only be connected to an Orlaco Serial Monitor. Or via the Serial Cable 6m (8976330) when a non-serial monitor is used

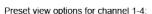
# 0405100 MultiView box II

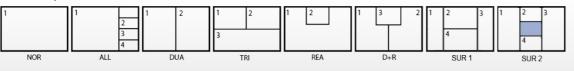
• 4 camera inputs (4x Compact Camera)



#### 0405200 Multiview box II dual mode

- · Pre-progammed splitscreen
- Including adapter plug 4p male 7p female







# Video distributor

0407070 Video distributor 1 in - 2 out, 4p

For connecting a second monitor.

• Including 0,2m cables and 4p connectors



# Digital video recorder

Digital video recorder with one camera input and one video output

# 0000300 DVR one channel

- Can be used with a compact camera (4p) or serial camera (7p)
- Video loop function
- 9-30V/DC
- Automatic timestamp
- Including 32GB SDHC-card for max 72 hours of storage and SD-card reader



# 0000250 DVR - Multi view (4 channel)

Digital video recorder with four camera inputs and one video output with multiview options.

- Suitable for compact cameras (4p)
- Automatic timestamp
- Including 128GB 80 MB/s SDXC-card for max 72 hours of storage



# Interface / Power supply

0004601 Power supply 9-36V

- · Maximum cable length 200m
- Power input 9-36V/DC
- Power output 12V/DC



# 0256270 Monitor activator

This activator can be adjusted for automatic activation of the front camera at speeds between 0 and 30 km per hour.

· Including connector for tachometer/speed meter output



Products Products







# Y-split and power cables

0304081 Y-Split cable LEDD

- · With two 4p molded female connectors (video) and open wire cable (power)
- · For connections 2 to 4 cameras (with Switcher)

# 8975171 Cable LEDD 2m

• 2m multi cable (power) open wired, 2m multi cable (video) including 4p molded female connector

# 8976330 Cable Serial 6m

A non-serial LEDD monitor can be connected to the MultiView Box II (0405100) via this cable.

• 6m multi cable (power) open wired, 6m multi cable (video) including 7p female connector



8975760 Push button yellow For manually switching between cameras.





# Adapter plugs

0357500 Adapter plug 4p male - 7p female

0357510 Adapter plug 4p female - 7p male



# Adapter cables

0304000 Adapter cable 4pF - 4pF



0304050 Adapter cable 4pM - 4pM

# Interface cables

To connect an Orlaco MIRROR Compact Camera to a third party monitor.

Note: with sideview camera always use adapter cable in combination with 0404300 Switcher 4Cam.

Visit www.orlaco.com for a complete overview.

0303770 Adapter cable 4pF - Cinch / power wires

(Iveco Connect rearview, Alpine, Pioneer, Kenwood, JVC, Trimble,

TomTom, Garmin Fleet 670V)

0303860 Adapter cable 4pF - BNC

0304060 Adapter cable 4pF - 3,5mm Jack plug

(Snooper 7000/8000/8500, Mercedes Telematics-Fleetboard dispo pilot II,

TomTom Bridge pro 827x)

0308430 Adapter cable b4F - 2,5mm Jack plug

(Snooper 5700/5800/6400/6800/8100)

0304990 Adapter cable m4F

(Volvo FH 4 / FM 4 SID High, AUD High, Renault T 6YR02)

(1 adapter cable per camera, up to 4 camera's possible)

Adapter cable 4pF - Bosch (MAN/DAF/SCANIA) radio

0306680 Adapter cable b4F - MAN TGE

(For vehicles with camera preparation KA8 in combination

with a NTSC camera)

0308400 Adapter cable MAN MMT.2 / 2016 - r4M m4

(For vehicles with camera preparation 351 MA/MC/ME/MF)

0308410 Adapter cable MAN MMT.2 / 2016 - r4M RA m4F

(For vehicles without camera preparation)

0306980 Adapter cable r4F - m4F Scania Premium radio

next generation

0308440 Adapter cable b4F - 3,5mm Jack plug

(Garmin Truck navigation DEZL770 LMT)

# Mercedes interface cables

Note: The monitor automatically switches to rearview when reversing. Additional cameras require manual switching (on steering wheel or radio) from navigation to camera view.

0304660 Adapter cable 4pF - Mercedes-Benz radio/navigation

(For 7" multimedia system without camera preparation)

0306680 Adapter cable b4F - HMI Fakra Male b4F

(For vehicles with camera preparation J9J in combination with an instrument-

display or multimedia system)









0306980





# Connectors

1310841 Connector 4p female Gold
This connector is recommended for the multi cable 6mm.

1312001 Connector 4p male Gold
This connector is recommended for the multi cable 6mm.

1310850 Connector 4p female PG9 Gold This connector is recommended for the dynamic cable 9mm.

1312050 Connector 4p male PG9 Gold This connector is recommended for the dynamic cable 9mm.

1311201 Connector 7p female Gold
This connector is recommended for the multi cable 6mm.

1322401 Connector 7p male Gold
This connector is recommended for the multi cable 6mm.



# Cable disconnection sets

- Watertight
- With caps

0351070 7p

0351100 10p harting



# **Connector kit**

0351120 Connector kit Chassis parts to cable 0303630



# **Spare parts 10p Harting**

1399510 Mounting housing 1399610 Female insert

1399500 Housing

1399600 Male insert 2200250 Reducer

2205200 Cable gland

# **Certifications**

All Orlaco products are manufactured according to the latest *Quality Management System Standards*:

IATF 16949 : 2016 ISO 9001 : 2015

Additionally, all Orlaco products are manufactured according to the latest *Environmental Management System Standard*:

ISO 14001: 2004







# **Type-Approval Certifications**

Regulations 10 and 46 are used to determine the Type-Approval for EMC and Indirect Vision (Mirror Directive). R46 describes mirror specifications for truck compliancy. Orlaco Frontview systems meet all these requirements. R10 describes the EMC behavior of the Orlaco Camera and Monitor systems.

# **TÜV Automotive Certifications**

The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) demands additional equipment. Orlaco Camera and Monitor systems and connection cables comply with these regulations.

# Compliance

Our Camera and Monitor systems are produced entirely in line with the **CE-marking** and the most recent applicable directives and product standards (e.g. **EMC**, **FCC**, **Machinery**, **R&TTE**). Orlaco products are compliant with **RoHS** and **REACH**.



Products Certification





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deale

It is Orlaco's viewpoint that optimal vision around every vehicle and vessel should be the norm. It provides safety, less damage, comfort and efficiency. *Vision is our mission*®. A revealing mission. We develop professional vision solutions for every situation:















Check our website for all our brochures (pdf).



