

ELECTRONIC REAR VIEW MIRROR SYSTEM

The complete system including cameras, monitors and the control unit **VX12** is **SIL1** certified and designed specially for operating at tramways.

Additional to the standard functionality „rearview mirror“ the monitoring of the door areas when getting in and out is certainly realized. To give the driver an unobstructed view of the door area, the rearview cameras should be installed on the front and back side. This installation enables also the clear view of the doors of long train sets and vehicles.

The rearview mirror system is designed for vehicle sets with a maximum of four vehicles (one or two directions vehicles). In train operation, all relevant video rearview mirror systems from each individual vehicle are automatically assigned to a complete system and works like a single vehicle.



HIGHLIGHTS

- Essential smaller dimensions than conventional mirrors
- Reduced risk of damages
- Better overview by using multiple cameras
- Optimized 3:4 display
- Visibility of front and rear side
- Easier approval through SIL1 certificate

ELECTRONIC REAR VIEW MIRROR SYSTEM

Working smarter
to improve safety
and efficiency

COMPONENTS • TECHNICAL DATA



Rear view mirror camera

The **rearview mirror camera** has an aluminum bottom plate and a plastic housing. The camera can be painted according to customer requirements (RAL). The heating can be started either automatically or manually. The camera module is tailored to the requirements of an electronic rearview mirror system.

Resolution	420 TVL (640 x 480 pixel)
Image sensor	1/4" CMOS / PAL
Sensitivity	0,025 lux
Focal length / opening angle	variable adjustment possible
Video output	balanced, composite
Protection class	IP 67



10,4" train monitor

The **10.4" train monitor** has been developed for use in rail traffic and has obtained the EN50155 certificate.

It can be mounted vertically or horizontally with standard VESA mounting points. Video inputs: either coaxial with BNC or twisted pair with M12.

Resolution	800 x 600 pixels (SVGA)
Luminance	400 cd / m ²
Contrast	700 : 1
Voltage	24 VDC (9 ... 36VDC)
Video inputs	2 x CVBS (1 x 75Ω asymmetr. & 1 x 110Ω two-wire)
Dimensions / Weight	220 x 280 x 70mm / appr. 3kg



Video matrix VX12

The **VX12 video matrix** is the central control unit for the system and it allows the automatic rear-view mirror function while driving as surveillance door areas at the station with cameras and monitors. It can be used for bi-directional vehicles in traction of up to 4 cars.

Unit	19" format 3 RU reduced width
Input voltage	9 ... 36 VDC
In- & outputs	M12-D, BNC
Power supply	central for monitors and cameras
Control	11 digital inputs
Dimensions / weight	147 x 100 x 175mm / appr. 1.75kg