



## Rear Vision System with Recording Function

### MODEL RVS 2020

As per DGMS Circular No 6, 2020 - REAR VISION SYSTEM is an equipment that has a rare mission aimed at achieving zero accident target for mining vehicles. Reversing mining vehicles like dumpers and tippers is not free of the possibility of accidents at the rear end. Several accidents have occurred in opencast mines while reversing.

Till date, only audio-visual alarm and rear view mirrors were available for the vehicles. Although the audio visual alarm gives warning to the working persons, the operator does not have a clear view of rear side of the vehicle. It is a practice in mines that the operator takes assistance of the spotter while reversing. At times, the spotter may commit a mistake in haste to cause accident or he himself may be exposed to the danger of being crushed by the vehicle.

AUTOMATION INDIA Introduce REAR VISION SYSTEM that can be installed in vehicles like Dumpers, Tippers and otherHEMM.

### The System provides:

A : LCD Monitor : To provide good quality video picture in nearly pitch dark and poor weather conditions, transmitted by camera.

B. Infrared Day & Night Camera : To provide clear picture of the object situated at the rear side of vehicle. Infra Red LED: to provide sufficient illumination on the object to enable Camera to provide sharp & clear picture even in dark.

C. Cover for Camera : In order to protect Camera from water, dust & mud, when not in use (while running forward) a cover along with solenoid operated lid specially designed for this camera is also provided. This lid uncovers the camera and infrared LED only in reverse gear automatically. For rest of the period it covers equipment properly to protect it.

D. Power Supply Switching Unit: To provide power to the LCD Monitor and Camera as soon as the reverse gear is applied.

Camera & Infra red LED along with their cover for protection is fitted on the rear of the vehicle, whereas Monitor is installed before Operator in his cabin. They are mounted with the suitable arrangement to adjust for according to vehicle heights so as to have clear view of rear side which helps operator to avoid any accident.

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The System is actuated with reverse gear mechanism of the vehicle and functions only while reversing. It does not distract operator or interfere with the operator's safe operation in normal forward running. All the components of system are installed properly in water proof, shock proof & vibration resistant case suitable for high pressure washing.

The system operates on 24/12 V DC supply available within the vehicle itself. The components are connected with high quality cable having detachable waterproof joints.

## TECHNICAL SPECIFICATION:

### AHD LCD Monitor:

- 7" TFT LCD Color Monitor
- 16:9 High Resolution Wide screen display With Screen Size 7".
- Display Resolution: 1024 (H) x 600 (V).
- Power requirement 12/35 V DC.
- Power Consumption: Less than 7.64W.
- Operating Temperature: -20\* C to +70\* C.
- Video Quality AHD
- Inbuilt Real Time Recording SD card support Maximum 256 GB.
- Recording 96 Hours, Automatic Recycle mode.

### AHD Camera :

- Camera and IR LEDs are housed properly in dustproof case. Suitable bracket is provided to adjust clear view. The Camera is also provided with solenoid operated lid cover to protect it from dust & mud. This lid opens only in reverse gear.
- Waterproof Rating : IP69K
- Highly Sensitive, offers excellent image quality
- Image device : 1/3" CMOS AHD color
- View angle : 120\*
- Picture Element : NTSC : 510x492, PAL : 500x582
- Resolution: 2 Million Pixels.
- TV Line : 700tvl.
- Minimum Illumination : 0.02Lux/F 2.0 (LED ON)
- Lens Furnished : Board lens 3.6 mm
- Inbuilt Infrared Illuminator with Camera
- Infrared Luminary : 24 INFRA RED-LED
- Wave length : 850nm
- Illuminate Distance : 20M
- Auto power On/ off : Built-in light source Sensor, activates automatically when the luminous intensity drops
- Power Supply automatic Switching Unit
- Input Voltage – 12 / 24 DC
- Gives voltage to LCD Monitor and Camera, when received signal from reverse gear of vehicle.

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## System Device/Construction:

- Operating Voltage : 12 / 24 V DC
- Operating Temp : -20° C to 70° C
- LCD Monitor is fixed in specially designed case with suitable fixing arrangement made for HEMM.
- IR Illuminator and Camera is housed properly in aluminum case and provided with specially designed bracket to adjust its focus.
- Highly resistant to Shock and Vibration, Waterproof Suitable for HEMM. (Design and specifications are subject to change for improvement of the System.)