



# SHRI GURU NANAK DEV ENGINEERING WORKS

AN ISO 9001:2015 COMPANY

Manufacturer of HEMM Mines Safety Products

## PROXIMITY WARNING SYSTEM

As per DGMS (Tech) Circular No. 06 of 2020 Dhanbad Dtd. 27.02.2020



**MSME**

सूक्ष्म, लघु एवं मध्यम उद्यम  
MICRO, SMALL & MEDIUM ENTERPRISES

Rear  
Proximity  
Sensor  
&  
Camera



Front  
Proximity  
Sensor  
&  
Camera

### MANUFACTURER - SHRI GURUNANAK DEV ENGINEERING WORKS

#### PROXIMITY WARNING DEVICE SYSTEM 24 VOLT DC

Proximity Warning Device System with Recording 7 inch LED Display Having 40 Meters Front Dynamic Detection and 40 Meters Rear Dynamic Detection Range with Complete Wiring Kit as per DGMS (Tech) Circular No. 06 of 2020. Suitable for one to one Fitment in all KOMATSU, CAT, BEML, BELAZ & TATA HITACHI Dumpers, Water tankers & all other HEMM equipments.

# Proximity Warning System Radar Based Designed for Mining Vehicles

The Proximity Warning Device System comply to DGMS (Tech) Circular No. 06 of 2020  
Dhanbad Dtd. 27.02.2020

**Proximity Warning Device System is tested & certified for the following standards :**  
IEC 61000-4-5, IEC 61000-4-6, JSS 55555 : 2012, IS-9000 : Part-V / Part-II / Part-III / Part-XIV, & IP-66  
**Tested and Certified by Government Lab / NABL Accredited Institutions with Valid Test Report**

Proximity Warning Device System with Recording 7 inch LED Display Having 40 Meters Front Dynamic Detection and 40 Meters Rear Dynamic Detection Range with Complete Wiring Kit as per DGMS (Tech) Circular No. 06 of 2020.

## KEY FEATURES

### LED 7 inch Display Monitor with Visual & Audio Alerts:

7 inch display for live video footage from front camera, front proximity sensor with distance measurement on screen with Green, Yellow & Red zone detection when vehicle moving in forward direction. And similarly when reversing live footage from rear camera and rear sensor with distance measurements having Green, Yellow & Red zones. The monitor displays live distance measurements in meters with visual cues using a three-color warning system for easy recognition:

- **Green** : Safe Distance Mode
- **Yellow** : Conscious Distance Mode
- **Red** : Alert Distance Mode

Additionally, audio alerts provide the operator with further notification of potential hazards.

### Front Side Object Position Detection:

Experience **Next-Level Safety** with our Proximity Warning System's Precise Object **Detection**.

### Adjustable Detection Range:

The radar sensor allows customization of the detection range, with a maximum length of **40 meters** and adjustable width tailored to vehicle specifications and operational needs.

### Intelligent Alarm System :

The system has an intelligent tone alarm system.

### Dynamic Capability:

The system features Dynamic Detection, adjusting its detection range with the vehicle's speed:

- When Stationary or below 10 km/hr : Detects objects up to **15 meters**.  
10 km/hr to 20 km/hr : Detects objects up to **25 meters**,  
20 km/hr to 30 km/hr : Detects objects up to **30 meters**.
- Above 30 km/hr : Detects objects up to **40 meters**.
- This dynamic range adjustment ensures optimal safety by increasing the detection range as the vehicle's speed increases.
- Also Capable of adjusting Dynamic Detection to meet customers specific needs.



## SMART RECORDING FACILITY

The Proximity Warning System is equipped with a 7 inch screen with front & rear camera recording facility that stores data of last 96 operating working hours in video format. This smart system detects Proximity of humans / machinery / obstacles from 40 meters, dynamically adjusted with speed, whether the vehicle is stationary or in motion.

## TECHNICAL DATA

TECHNICAL PARAMETER	SPECIFICATION
Front Sensor Sensing Range	Length up to 40 meters (programmable)
Rear Sensor Sensing Range	Up to 40 meters or Adjustable based on vehicle length
Sensor Width Sensing Range	Adjustable based on vehicle width up to 12 meters
Sensor Detection Angle	Adjustable based on the application
Recording Facility	Video recordings of front & rear for the past 96 operating working hours
Dynamic Detection	15m (Stationary or < 10km/hr), 25m (10 to 20 km/hr), 35m (20 to 30 km/hr), 40m (> 30km/hr)
Rated Voltage	12-24V DC
Protection	IP69K



- 7 inch Display for Front & Rear Sensor and Night vision Camera
- Detect Proximity of Humans / Machinery / Obstacles from 40 meters, Dynamically Adjusted with Speed



The Proximity Warning System with Dynamic Detection Capability provides enhanced safety by adjusting detection ranges based on vehicle speed. Coupled with customizable radar sensing, visual and audio alerts, and object positioning, this system significantly improves the safety of mining vehicle operations.

- When Stationary or below 10km/hr :  
Detect objects up to 15 meters

### DYNAMIC DETECTION



- 10 km/hr to 20 km/hr :  
Detect objects up to 25 meters

### DYNAMIC DETECTION



- 20 km/hr to 30 km/hr :  
Detect objects up to 30 meters

### DYNAMIC DETECTION



- Above 30 km/hr  
Detect objects up to 40 meters

### DYNAMIC DETECTION



- Location & Orientation  
Detect Proximity of Humans / Machinery /  
Obstacles from 40 meters, Dynamically  
Adjusted with Speed

### DYNAMIC DETECTION



- Rear Sensor Position



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## SHRI GURU NANAK DEV ENGINEERING WORKS

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