



Saras Equipments Private Limited



PRODUCTS FOR TOWER CRANE SAFETY

OUR STORY

Saras Equipments Private Limited is an ISO-certified manufacturer and a trusted name in **crane safety solutions**. With years of expertise and a strong focus on innovation, we specialize in designing and delivering advanced safety devices that protect people, machinery, and businesses across industries.

Tower cranes play a vital role in modern construction, but they also face critical safety challenges such as **overloading, high winds, collisions, and human error**. To address these risks, Saras Equipments offers a complete range of **Tower Crane Safety Products**.

Our Mission

We, **Saras Equipments Private Limited**, our mission is to create **innovative, reliable, and affordable crane safety solutions** that protect lives, prevent accidents, and enhance operational efficiency.

We are dedicated to:

- ✔ Safeguarding people working around cranes
- ✔ Protecting cranes and equipment from damage
- ✔ Supporting businesses with compliance and uninterrupted productivity

By combining technology, expertise, and a commitment to safety, we strive to be a **trusted partner in building safer workplaces worldwide**.

Safety is not an option — it's an investment.

→	15 Years of operations	3000 Happy clients
→	3 Offices around the world	200+ Employees

Tower Crane Safety Products

Tower cranes are the backbone of modern construction — but they also operate in one of the **most hazardous environments**. Risks such as **overloading, strong winds, crane collisions, and human error** can lead to accidents, downtime, and costly losses.

At **Saras Equipments Pvt. Ltd.**, we provide **advanced Tower Crane Safety Products** designed to eliminate these risks and ensure smooth, secure, and compliant operations. Our solutions are trusted by industries for their **accuracy, reliability, and durability**.

With products like **Safe Load Indicators, Crane Anemometers, Anti-Collision Devices, A2B Limit Switches, and Human Sensors**, we help construction companies build not only safely but also confidently

with advanced safety solutions

👉 *Protect your people.*

👉 *Protect your cranes.*

👉 *Protect your business.*

Barkha Gautam

Tailored Solutions for Your Tower Cranes

At Saras Equipments Private Limited., we understand that every crane, site, and project has unique safety challenges. That's why we provide customized safety solutions designed to match your exact requirements.

Whether it's a tower crane working at extreme heights, an EOT crane in a manufacturing plant, or multiple cranes operating in congested spaces, our team engineers solutions that fit seamlessly into your operations.

- ✓ Customized design and integration
- ✓ Scalable solutions for different crane models
- ✓ On-site installation and technical support
- ✓ Compliance with international safety standards

Products for Tower Cranes Safety

- Safe Load Indicators (SLI / LMI)
- Anti-Collision Devices (ACD)
- Crane Anemometers
- Human Sensors
- Aviation Light

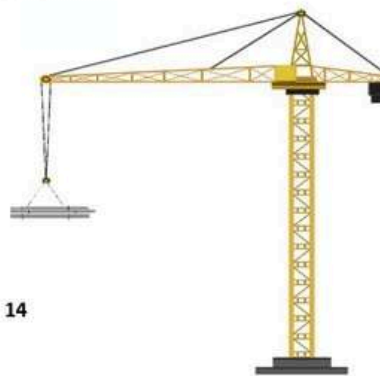
1. Safe Load Indicator

The Safe Load Indicator (SLI), also referred to as a Load Moment Indicator (LMI), is a vital safety system for **Tower Cranes**. It continuously monitors lifting conditions to ensure the crane operates within safe working limits. By calculating the relationship between load, jib angle, trolley radius, and rated capacity, the SLI provides real-time protection against overloading and unsafe lifting practices.

Ideal for: High-rise construction projects, congested urban sites, and multi-crane operations where precise load monitoring is critical.



SC112



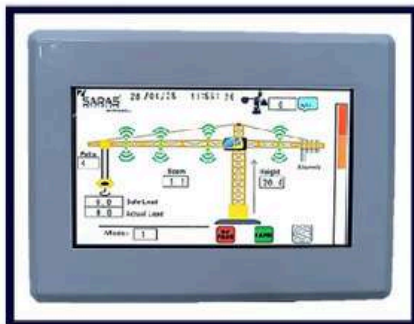
GI 14



Tension meter



Jib Length Box



ST 01



Aviation Light



Power Supply

Technical Specifications

- **Power Supply:** 24 VDC (18–32 VDC), < 20 W
- **Inputs:** Load sensors, trolley sensors, angle encoders, hoist depth encoders
- **Outputs:** Relay contacts for alarm/interlock; CAN/Modbus (optional)
- **Update Rate:** ≥ 10 Hz
- **Display Size:** 7" or 10" sunlight-readable
- **Alarm Output:** ≥ 85 dB buzzer, LED beacon
- **Ingress Protection:** IP65 (display), IP67 (sensors)
- **Operating Temp:** -20 °C to +70 °C
- **Compliance:** CE, EN ISO 13849-1 Cat. 3 PLd, IEC 60204-32

Key Benefits

- Prevents tower crane overloading accidents
- Ensures operator confidence during complex lifts
- Protects structural integrity of crane and load
- Complies with global safety norms and project requirements
- Generates digital logs for audits and compliance

Scope of supply.

- Display Unit (Digital/Graphical/Touch Screen Display)
 - Tension Meter with Load Cell
 - Jib Length Box
 - Power Supply
 - Aviation Light (Optional)
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Display Model

A. SC-112 Digital Display



Features:

- Bright **digital LED display** for instant visibility
 - Real-time load monitoring with high accuracy
 - **Audio-visual alarms** for overload or unsafe conditions
 - Rugged and durable for harsh environments
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B. GI-14 Graphical Display



Features:

- Graphical LCD display with easy-to-read visuals
- Real-time crane working range and load curves
- Multi-language support for global usability
- Alarm system with clear visual indicators

C. ST01 Touch Screen



Features:

- **High-resolution touch screen** with intuitive navigation
- Real-time load, boom angle, and working radius monitoring
- Customizable interface for specific crane types
- Data logging and reporting for safety compliance

2 Anti-Collision Device (ACD)

The Anti-Collision Device (ACD) is an intelligent safety system that prevents collisions between tower cranes, jib/boom-to-structure impacts, and prohibited zone breaches. Designed for fast retrofit and new installations, the ACD continuously monitors crane positions, motion vectors, and defined geofences to trigger graded warnings and automatic slowdown/stop (when interfaced with the crane drives or SLI/LMI).



Technical Specifications

- **Working Principle**-Microcontroller-based system with ultrasonic / RF sensor technology
- **Detection Range**-Adjustable up to 3–5 meters (customizable)
- **Display Unit**-Digital / Graphical display with real-time crane position monitoring
- **Warning System**-Audio-Visual Alarms (Hooter + Flashing Beacon)
- **Control Action**-Automatic braking / motion cut-off when cranes come within set limits
- **Communication Mode**-Wired / Wireless (RF-based up to 1 km range)
- **Operating Voltage**-24V DC / 220V AC (model dependent)
- **Response Time**-< 1 second
- **Data Logging**-Event recording with error history (optional feature)
- **Protection Level** IP65-Weather & dustproof
- **Operating Temperature**-10°C to +55°C
- **Compliance**-Meets DGMS, ISO, and International Crane Safety Standards
- **Installation**-Suitable for Tower Cranes, Gantry Cranes, and EOT Cranes

Ideal for: Multi-crane sites, congested urban projects, high-risk lifting operations, and sites with restricted zones (power lines, buildings, highways).

Features:

- **Real-time monitoring** of crane positions and movement
- Intelligent **distance sensors** with high accuracy
- **Audio-visual alarms** to warn operators of unsafe proximity
- Automatic braking or motion cut-off to prevent collisions
- Reliable performance in **multi-crane operations** and congested sites
- Rugged design suitable for construction and industrial environments

Key Benefits

- **Prevents Crane-to-Crane Collisions:** Continuous calculation of approach risk on radius, height, and slewing plane.
- **Protects Surroundings:** Define geofences around buildings, roads, and powerlines; system warns before breach.
- **Boosts Productivity:** Clear, early warnings reduce operator hesitation and site downtime.
- **Fast Retrofit:** Modular sensors and compact control unit; minimal wiring.
- **Scalable:** From 2 to 30+ cranes on one site network.
- **Data & Traceability:** Event logs support incident review and compliance reporting.

Scope of supply

- Display (Touch Screen)
- Processor Unit
- Gear Box
- Angle Sensor
- Connecting Cable

How It Works

1. **Position & Motion Tracking:** Real-time monitoring of slew angle, trolley radius, hook height, and load state.
 2. **Dynamic Safe Envelopes:** Calculates separation distances between cranes and compares with user-defined safe zones and no-go areas.
 3. **Smart Alerts & Intervention:** Multi-level audio-visual alarms for operators; optional slowdown/stop via relay/inverter interface.
 4. **Site-Wide Coordination:** Wireless networking allows cranes to share status, enabling coordinated, conflict-free movement.
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3 Anemometer for Tower Crane (Wind Speed Indicator)

An **Anemometer** is an essential safety device designed to monitor and display **real-time wind speed** at crane operation height. Sudden gusts and high wind speeds pose serious risks to tower cranes, making it critical for operators to receive accurate and instant wind speed information.



Model- SARAS A02

Technical Specifications

- **Model:** A02
- **Power Supply:** 12V / 24V DC and 220V AC
- **Testing Range:** 0.5 m/s ~ 50 m/s
- **Start Wind Speed:** ≤ 0.5 m/s
- **Accuracy:** ± 0.5 m/s (< 5 m/s) ; $\pm 3\%$ FS (≥ 5 m/s)
- **Working Temperature:** $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$ ($\pm 0.5^{\circ}\text{C}$)
- **Limit Wind Speed (Max):** 60 m/s for 30 minutes
- **Environmental Protection:** IP65 (Dust & Weatherproof)
- **Relay Cut-Off:** Yes
- **Over-Speed Buzzer:** Yes
- **Warranty:** 1 Year
- **Batteries:** Not Required
- **Fan Box Dimensions (L×H×W):** 195 × 62 × 90 mm
- **Display Box Dimensions (L×H×W):** 160 × 140 × 60 mm
- **Wire Range:** Up to 100 meters
- **Colour:** As per image (may vary 5–10%)

Features:

- **Real-time wind speed display** with high accuracy

- Available in **digital, wireless, and wired models**
- **Programmable alarm levels** for maximum safety
- Rugged and weather-resistant design for outdoor use
- Clear **audio-visual alerts** when wind exceeds safe limits
- Easy installation on tower cranes, gantry cranes, and mobile cranes

Scope of supply

- Display (Touch Screen)
 - Processor Unit
 - Gear Box
 - Angle Sensor
 - Connecting Cable
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4 Ultrasonic Object Detector / Human Sensor

The **Ultrasonic Object Detection/ Human Sensor** is a combined crane safety solution designed to prevent accidents involving both **human proximity hazards** and **crane-to-crane/jib collisions**. It enhances overall site safety by detecting workers in dangerous zones and avoiding collisions between cranes, structures, and restricted areas.



Technical Specifications

- **Technology:** Ultrasonic proximity detection
- **Detection Range:** 0.3 m ~ 6 m (adjustable)
- **Accuracy:** $\pm 3\%$ of full scale
- **Sensing Angle:** 90° (typical)
- **Response Time:** ≤ 200 ms
- **Audio-Visual Alerts** – Optional hooter and beacon integration for warnings.
- **Power Supply:** 12V / 24V DC
- **Operating Temperature:** -20°C ~ +55°C
- **Protection Class:** IP65 – Dustproof & Weatherproof
- **Housing Material:** Industrial-grade ABS / Aluminium Alloy
- **Mounting Options:** Adjustable brackets for crane booms, cabins, or structures
- **Interface:** Can be integrated with ACD / SLI systems for automatic safety action
- **Ultrasonic Detection Technology** – Accurately senses human presence or obstacles.
- **Wide Detection Range** – Adjustable from **0.3 m to 6 m** for flexible applications.

- **High Accuracy & Fast Response** – Detects within milliseconds to prevent accidents.
- **All-Weather Performance** – Reliable in low light, dust, or fog where cameras fail.
- **Automatic Safety Control** – Can trigger **motion cut-off** in cranes and machines.
- **Rugged & Durable** – IP65-rated housing for outdoor/industrial environments.
- **Easy Mounting & Integration** – Fits with Tower cranes, gantries, EOT safety systems.
- **Low Power Consumption** – Efficient 12V/24V DC operation.

Features:

- **Advanced motion & proximity detection** technology
- **Audio-visual alarms** to alert both operator and personnel
- Adjustable sensing range for flexible site applications
- Rugged and weather-resistant design for industrial environments
- Easy integration with existing crane safety systems

Benefits:

- Prevents worker accidents near crane operations.
 - Reduces risk of struck-by incidents.
 - Enhances operator awareness in blind spots.
 - Complies with modern site safety mandates.
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5 Solar Aviation Light

The **Aviation Light** is a mandatory safety device for **tower cranes, high-rise structures, and tall equipment** to ensure visibility for low-flying aircraft. It provides bright, reliable illumination at the top of the crane to meet aviation authority regulations. Designed for rugged outdoor use, it ensures uninterrupted operation in harsh construction environments.

Ideal for: Tower Cranes, High-Rise Buildings under construction, Wind Turbines, and Industrial Structures exceeding aviation height limits.

Solar Aviation Light



Technical Specifications

- **Light Source:** High-intensity LEDs (Red/White – ICAO/FAA compliant)
- **Visibility Range:** Up to 3–5 km (depending on model)
- **Operating Mode:** Steady / Flashing (programmable)
- **Solar Panel:** High-efficiency Monocrystalline / Polycrystalline panel
- **Battery Type:** Inbuilt rechargeable Lithium / NiMH battery
- **Battery Backup:** 3–5 nights without sunlight
- **Charging Time:** 6–8 hours under sunlight
- **Operating Voltage:** 3.7V / 6V / 12V (model-dependent)
- **Automatic Control:** Dusk-to-Dawn sensor for auto ON/OFF
- **Ingress Protection:** IP65 / IP66 – Dustproof & Weatherproof
- **Material:** UV-stabilized Polycarbonate / Aluminium Alloy housing
- **Operating Temperature:** -20°C to +55°C
- **Mounting Options:** Pole mount / Bracket mount
- **Compliance:** ICAO Type A & B (Low Intensity) / FAA standards
- **Warranty:** 1 Year standard warranty

Key Features

- **High-Intensity Illumination:** Ensures crane visibility during night and low-visibility conditions.
- **LED-Based Design:** Long lifespan ($\geq 50,000$ hours), low power consumption.
- **Automatic Day/Night Sensor:** Switches on at dusk and off at dawn.
- **Weatherproof Construction:** IP66 housing suitable for outdoor installations.
- **Low Maintenance:** Solid-state electronics with minimal servicing required.
- **Redundant Options:** Dual-light design available for compliance and reliability.

OUR SERVICES

We, Saras Equipments Private Limited, don't just provide safety products — we deliver end-to-end solutions that ensure reliable, long-lasting performance for every crane.

What We Offer:

- **Product Design & Customization**
Tailored safety solutions to match specific crane types, capacities, and site conditions.
- **Installation & Commissioning**
Professional on-site installation with complete calibration and testing for accurate performance.
- **Training & Support**
Operator and maintenance team training to ensure safe, efficient use of our products.
- **After-Sales Service**
Dedicated support team providing prompt service, spare parts, and periodic maintenance.
- **Annual Maintenance Contracts (AMC)**
Comprehensive preventive maintenance to keep your crane safety systems running flawlessly.

Why Choose **Saras Equipments**

- ISO-certified safety systems manufacturer
- Proven expertise in **Crane Safety Solutions**
- Integrated packages with **SLI, Anti-Collision Devices, and Anemometers**
- On-site service, training, and spare support

OUR WORKS



PRODUCT RANGE

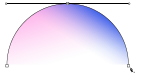
Our comprehensive range of crane safety devices is designed to ensure maximum protection, reliability, and efficiency across every lifting operation

- Crane Safe Load Indicators (SLIs) Digital, Graphical, Touch Screen
- Load Moment Indicators (LMI)
- Anti-Two Block Limit Switch
- Custom Crane Safety Solutions
- Crane Anemometers
- Load Cells
- Overload Protection Device
- Rear View Camera
- Biometric Sensor Access Device
- Spring Operated Cable Reeling Drum
- Load Moment Indicator (LMI) for Boom Lift, Scissor Lift Etc.
- SMPS
- Aviation Light
- Solar Aviation Light
- Buzzer
- Anti-Collision Device
- Human Sensor
- Auto Cut Off System
- LED Board

Value Clients Can Expect

			
Enhanced Safety Advanced crane safety devices designed to prevent accidents and protect people, equipment, and projects.	Tailored Solutions Customized safety systems to meet the unique requirements of every crane and worksite.	Reliable Performance ISO-certified products manufactured with precision, ensuring durability and consistent accuracy.	Long-Term Partnership Dedicated after-sales support, regular maintenance, and upgrade options for lasting value.

MEET OUR CLIENTS



Our Exports Customer



GOT QUESTIONS?

Answers to Common Inquiries

Are your devices suitable for all cranes?

Yes, we provide universal and customized solutions.

Do your products meet standards?

Yes, we are ISO-certified and follow global safety norms.

How reliable are your monitoring systems?

Each device is tested & calibrated to ensure real-time, highly accurate data.

Do you provide installation & training?

Yes, by our expert engineers with on-site support.

Do your products meet international standards?

Yes. All our products are ISO-certified and undergo strict quality checks.

Do you offer after-sales service?

Yes, we provide dedicated support, maintenance, and upgrades.

LET'S GET STARTED

Connect With Us Today



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