

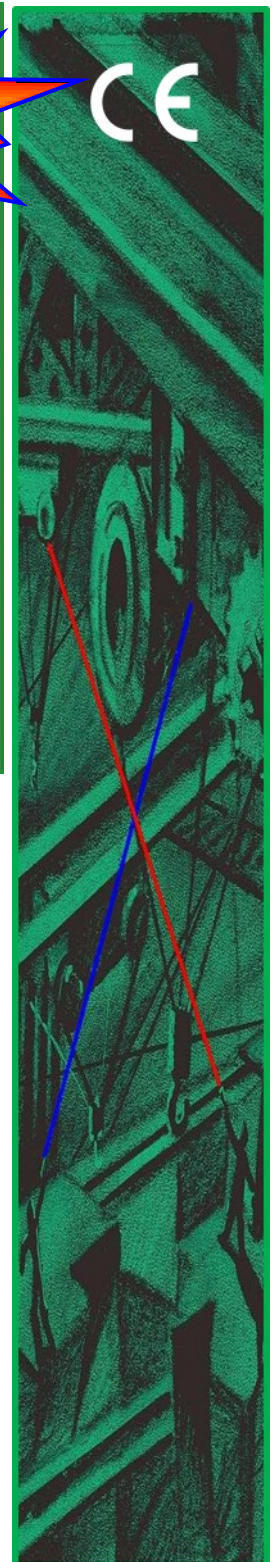
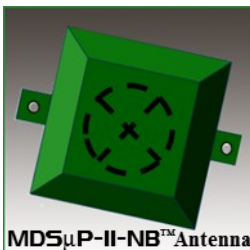
*the future is now - be there with us™*

Infra-Red & Radio  
Remote Control  
Crane Systems

**COMMANDER™**  
**COMMANDER™**

Horizontal & Vertical  
Collision Avoidance  
Crane Systems

## Sales Specification for **MDS $\mu$ P-II-NB™** Horizontal Crane Detection System



The **MDS $\mu$ P-II-NB™** Horizontal Crane Detection System for collision avoidance incorporates the very latest **COMMANDER™** development in low power microwave technology. The **MDS $\mu$ P-II-NB™** is designed for stand alone operation and can be used to detect stationary or moving targets. The **MDS $\mu$ P-II-NB™** is supplied as an easy to install product comprising a purpose designed and constructed sheet steel **CIU™** (Central Interface Unit) with fitted ports and houses a single high quality programmable microprocessor controlled printed circuit 'mother' board (PCB) with power supplies, MLC and 3 interface zone relays. A remote mount 'plug in' **MDS $\mu$ P-II-NB™** Antenna (transceiver) with ABS cover to IP65 enables detection of structural objects such as overhead cranes and building end walls. An optional **MDS-Tetrahedron™** reflector ensures a good return signal from small targets. This system will operate in two directions by adding a plug-in 'daughter' PCB and a second **MDS $\mu$ P-II-NB™** Antenna thus to detect and control forward and reverse directions and speed zones.

The **MDS $\mu$ P-II-NB™** system incorporates 3 zone relays (each direction) as standard which can be programmed during installation for the required detection distances and interfaced to warning devices, directional and speed control circuits as required. The **MDS $\mu$ P-II-NB™** system is programmed during installation using the **CDS™** programmer unit which connects to the mother PCB. The input settings are stored in memory, this prevents any tampering by unauthorised persons after installation set up.

# Technical Details for MDS $\mu$ P-II-NB™ Horizontal Crane Detection System



## CIU™ (Central Interface Unit)

Safety	MLC Interface & Directional Zones Relays open if failure.
Enclosure	Sheet steel with hinged door and slotted finger screw.
Finish	Powder coated in Verona (Green).
Dimensions	231W x 254H x 92D (inc. mounting brackets) (mm).
Weight	2.80 kg.
Cable ports provided	Qty 2 @ 20mm (for interface cable gland).
Cable connectors	Forward/Reverse <b>MDS<math>\mu</math>P-II-NB™</b> Antenna transceivers.
AC Voltage Version	24V-230V AC (3 formats) (24V DC to order).
Environmental	-10°C to +70°C IP55. For high humidity levels refer to supplier.
Volt Free Relays (N.O.)	Qty 1, for Safety relay (MC circuit) & Qty 3, for Zone Relays.
Power & Interface	Plug & socket I/O terminal connectors.
Programming connector	Mother PCB and Expansion PCB, settings retained in memory.
Diagnostics	7 Segment display & LED's.
Security Code	Code input from the programmer.

## MDS $\mu$ P-II-NB™ Antenna Transceiver Device Specification

Enclosure	ABS construction with fixing bracket for mounting.
Finish	Green.
Dimensions	150W x 150H x 100D (mm).
Weight	0.250 kg.
Operating Range	60-100M subject to configuration format (must have free airspace).
Environmental	-10°C to +55°C IP55.
Connection	Fitted 6.0M Data cable with connector (extender cable available).

## Expansion PCB for CIU™ (Central Interface Unit) (Direction 2) (not shown).

Single Expansion PCB and Antenna 2 required.	Includes all interface and operating features as the Mother PCB. Power is derived from the Mother PCB via a ribbon cable.
Weight	0.200 kg.

## BatBak™ Battery Back Up System

Enclosure	Folded & welded sheet steel for strength.
Finish	Powder coated in Verona (Green).
Dimensions	205W x 125H x 80D (mm).
Weight	3.135 kg.

## CDS™ Installer Programmer (Optional Installer Tool)

Enclosure	Extruded Aluminium.
Finish	Anodised in Black.
Dimensions	76W x 150H x 50D (mm).
Weight	0.685 kg.
Readout	LED's & double 7 segment display.
Environmental	-10°C to +55°C IP55.
Connection Cable	Plug-in @ 5.0M (extender available).
Program Selector	6 position Rotary Switch with 2 function select/set push buttons.

## EI™ / RD-05™ Infra-Red Over-ride System - Option

The EI™ / RD-05™ Infra-Red 'conditional' travel over-ride system is designed for use by a second person (supervisory/banksman) involved in a lifting operation to safely over-ride an automatic zone inhibit by a COMMANDER™ Crane Detection System (collision avoidance). The hand held transmitter features **AutoStart™** and operates using a specific common code periodic defined sector transmission system. The EI™ Infra-Red transmitter must be secured in a safe place when not in use and only accessible for use by authorised persons. This system is a safety tool designed to ensure a lifting operation is effectively controlled within a 'normally' inhibited area. See EI™ / RD-05™ brochure for full specification.



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