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Infra-Red & Radio
Remote Control
Crane Systems

COMMANDER™
COMMANDER

Horizontal & Vertical
Collision Avoidance
Crane Systems

Sales Specification for **IRCDS-HSD-II™** Horizontal Crane Detection System with **BatBak™** (Battery Back Up System)



CDS™



Duplex-400E™



BatBak™



IRCDS-HSD-II™ Horizontal Crane Detection System



The **COMMANDER™ IRCDS-HSD-II™** Horizontal Crane Detection System for collision avoidance is designed for continuous bi-directional communications to create a high integrity closed safety loop. Each **IRCDS-HSD-II™** system requires a partner device (on the opposing crane & direction). The system **cannot** be used in a retro-reflective stand alone mode. The **IRCDS-HSD-II™** system 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' **Duplex-400E™** transceiver device enables communication with partner **IRCDS-HSD-II™** system (s). This system will operate in two directions by adding a plug-in 'daughter' PCB and a second **Duplex-400E™** transceiver device thus to detect and control both forward and reverse directions and speed zones, importantly the **IRCDS-HSD-II™** system is compatible with the previous **IRCDS-HSD™** system. This system configuration is more cost effective and simplistic method of expansion and future changes to client user working practice. A **BatBak™** (battery back up unit) will provide standby power for both directions of communication. The **IRCDS-HSD-II™** system is programmed during installation using the **CDS™** programmer unit which connects to the mother and daughter PCB. The input settings are stored in memory, this prevents any tampering by unauthorised persons after installation set up.

Specialist Designers & Manufacturers of Industrial **Infra-Red & Radio** Remote Control; **Infra-Red, Ultrasonic & Microwave** Crane Detection Systems for Horizontal & Vertical (multi-level) applications; Simplex & Duplex Data Communicators; High Integrity Control Systems, Eddy Current Brakes & Closed Loop Controllers for High Integrity Heavy Lift Cranes & other Material Handling Applications: **U.K. Designed & Manufactured.**

TP TechPoint™

Technical Details for IRCDS-HSD-II™ Horizontal Crane Detection System with BatBak™ (Battery Back Up 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	BatBak™ & Forward/Reverse Duplex-400E™ 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.

Duplex-400E™ Transceiver Device Specification

Enclosure	All aluminium construction with fixing holes for mounting.
Finish	Anodised Red & Black.
Dimensions	200W x 140H x 158D (mm).
Weight	1.3 kg.
Operating Range	400M aligned horizontally & vertically (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 & Duplex-400E™ req'd.	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 (given period)

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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