SPEC.
CONTROL
SYSTEMS
Electrical & Hydraulic Control Solutions & Services
• MINING & INDUSTRIAL •

SPEC R-1000 Remote Control System

SPEC/Cavotec R-1000 radio remote control systems are engineered and manufactured in close co-operation with our worldwide based customers. These radio remote control systems are engineered to ensure safe and efficient remote operations. Our systems have been designed based on the most advanced technology and components.

R-1000

- Digital functions up to 64 and analog functions up to 19
- Uses two Li-ion batteries with smart discharge and hot swap which is essential for battery optimization and continuous operation
- Perfect use for applications with many interconnected processes with guarantee of non-interrupted operation
- Suitable for harsh environment mining, industrial applications and maritime conditions
- High mechanical and chemical resistance due to the specific moulded housing

TYPICAL APPLICATIONS

- Mining: LHD Equipment, Blockholers, Jumbo's, Long Hole Drills, Rockbreakers, Shotcrete Sprayers
- Off Shore: Oil Skimmers, Drilling Rigs, Catwalks, Raiser Chutes, Roughnecks, BOP, ROV systems, Pipe Handlers, A-frames
- General Industry: Loaders, Forestry slashers, Dozers, Excavators, Recovery vehicles, Concrete pumps, Conveyance, Fire fighting systems, fueling systems
- Railway: Surface locomotives, Underground locomotives

FUNCTIONS

- The R-1000 can be fitted with analog or digital joysticks, pushbuttons, toggle switches and rotary switches to meet the exact customer requirement
- Safety features with E-stop, tilt switch, PTO deadman, on/off switch, horn, start warning
- Operator terminal layouts are configured according to the application and customer requirements
- Optional: LEDs and displays for feedback information
- Optional: Shoulder Harness or CAT 500Hz throttle available upon request

R-1000 PRODUCT OVERVIEW

TECHNICAL CHARACTERISTICS & OPTIONS

Operating Terminal R-1000

- Operations 100% under control with unique signal encoding preventing any unintended handling
- Activity check on start up to guarantee safe operations
- Stop relay activation in only 50 msecs
- Digital and analog feedback
- Redundant radio solution
- License free frequency with low power outputs; European ISM band width
- 458.5250 MHz - 459.1750 MHZ (other frequencies available on request)
- PLC functionality for interlocking, sequencing and timing functions programmed directly without additional hardware

Base Unit/Receiver Unit R-1000

- The R-1000 base unit is very flexible as it can have multiple digital and analogue inputs and outputs
- Easy use with direct connections to most available fieldbus systems: ProfiBus, ModBus RTU, CANopen, J1939, Device Net, Modbus Plus, Modbus TCP, ControlNet, Ethernet IP, HostLink
- Back up solution with cable connection for programming and control
- Twin battery connection (Hot Swap) for continuous operation

TECHNICAL DATA R-1000

GENERAL	DATA
Digital Functions:	Up to 64
Analogue Functions:	Up to 19
LED:	Red, Green, Yellow
Display:	Graphical or Character Display (optional)
Battery:	Rechargeable 7.2 V 1700 mAh Li-ion
Battery Charger:	12-24 VDC, 110-230 VAC
Operating Time:	Typical 20 hours, depending on configuration & temperature
Dimensions:	330 x 220 x 200 mm (12,99 x 8,66 x 7,87 inch)
Weight:	1.5 kg - 3.5 kg (depending on configuration)
IP:	Ip65 standard, IP66/67 optional
Temperature:	-25 to +50 Celsius, -13 to 122 Fahrenheit
Operating Distance:	Approx 200 m line of sight
Frequency:	458.5250 MHz - 459.1750 MHZ (other frequencies available on request)

R-1000 MC-IRX LITE

Supply Voltage Receiver
- 12 / 24 VDC

Receiver Size:
- IRX: 255 x 180 x 115 mm
- 10 x 7.1 x 4.5 in

Components:
- Safe Zone Base Unit to be mounted internally in customer's explosion proof enclosure.
- Standard I/O connections
- Base Unit to be supplied 12/24 VDC
- 20 Solid State Relay Outputs
- Proportional Control Module
- Duplicated Monitored Emergency Stop
- Pre-wired Connector to meet the needs of the machine
- BNC Magnet Mount Helical Antenna
- 12 onboard programs to accommodate various types of machines (joystick orientation, service brake type, engine type)