



Remotus Mercury Receivers

Åkerströms' Remotus Mercury receiver line is modular and flexible—so it can be customized for your specific needs. The line consists of three basic models that can be expanded using several specially designed expansion cards for various applications. The line also includes a receiver for controlling existing PLCs.

Among other applications, the Remotus Mercury line is used for cranes and overhead cranes and for other machine control. The system is adapted for tolerating tough conditions such as drastic temperature differences, dust, vibrations, oil, and dampness. Mercury receivers are delivered with different encasings depending on the operating environment. From flame-resistant plastic to stainless steel.

High security.

Remotus Mercury products have double security relays for controlling the main contactor. Transmitted radio messages are very secure because the system runs a cyclic 16 bits redundancy check. The receiver has double microprocessors that monitor each other. A message is checked before the relay function goes out into the receiver. Command errors

don't occur and security increases. Diagnostic testing is done during operation. The Remotus Mercury line complies with EN954-1, category 4.

Flexible frequency management.

The receivers work with all Remotus Mercury transmitters. Synthesis radios are used with several frequency bands—the general 433/434 MHz and 2.4 GHz bands and iseparate, 410-500 MHz bands. In the 433/434 MHz bands, the transmitter scans 30-channels for an available frequency and automatically connects to their respective receiver. In the 433/434 MHz band one of seven different hop sequences is automatically selected to enable several users to share the same frequency band. Several users or systems can share the same frequency system via time division multiplex access. They can maneuver several objects from the same transmitter (multi-crane operation) and can maneuver the same object from several transmitters (multi-operator operation). The duplex function enables data transmission back to the transmitter (operator). Using the sensor start function, the main contractor is first

MERCURY RECEIVERS

- Flexible modular design
- Three basic models plus a model for controlling PLCs
- Up to 50 functions provided via expansion cards
- New radio protocol for increased safety
- Flexible, secure frequency management

activated only when the operator is near the crane. PCs are used for testing and entering the settings.

Service and maintenance.

The Remotus Mercury receiver is easy to service and handle. During operation, users can read its comprehensive input-output command data logs. And data logging can be customized. Continuous statistics collection simplifies preventive maintenance.

Remotus RX-82.

Users can program the Remotus RX-82 with 8 functions that are adapted to their needs. The RX-82 is used to control machines for which speeds and the number of maneuvers are limited. Functionality is easily expanded. The receiver has 8 relay outputs as standard, 2 slots for expansion cards, and a serial COM port.

Remotus RX-182.

Users can program the Remotus RX-182 with 18 functions that are adapted to their needs. The RX-182 is used to control machines that must run at many speeds and perform many maneuvers. Functionality is easily expanded. The receiver has 18 relay outputs as standard, 2 slots for expansion cards, and two serial COM ports.

Remotus RX-131.

Users can program Remotus RX-131 with 13+1 functions that are adapted to their needs. The Remotus RX-131 is used to control machines. Functionality is easily expanded. The receiver has 13+1 relay outputs as standard, and can be expanded with 8 extra relay outputs.

Remotus RX-MS.

The Remotus RX-MS uses serial communication. Rather than outputs as relays and analog signals, functions are transmitted via a field bus to a programmable logic controller (PLC) that's installed in the machine (e.g., a crane). Normally, the Remotus RX-MS is used for radio control of larger machines in which a PLC is installed. It can be used for control of cranes, overhead cranes and other machines. The functions are preprogrammed into the machine's PLC, and users can easily install the Remotus Remotus RX-MS and immediately start up the system. The control command is transmitted to the PLC using serial communication. PROFIBUS DP, MODBUS and S3964R. Customizable protocol (RS232 or RS485) is optional.

Expansion cards

EX-82/182-R3	3 relays expansion board
EX-82/182/131-R8	8 relays expansion board
EX-182-R16	16 relays expansion board
EX-82/182-AO3CH	3 channels analog output expansion board
EX-82/182-AI3CH	3 channels analog input expansion board
EX-82/182-AH3CH	3 channels analog output for hydraulic valves
EX-82/182-DI3	digital 3 inputs expansion board
EX-82/182-DI8	digital 8 inputs expansion board

TECHNICAL FACTS

RX-82

No. outlets: 8 independent relays with switching contacts and main contractor stop with monitoring safety relay. 1 serial COM port
Rated voltage: 250 VAC
Rated current: 6 A
Minimum current: 20 mA (>12V)
Expansion slots: 2
Radio frequency: 405 – 470 MHz
Encasing: powder coated sheet metal
Operating temperature range: -25°C till +55°C; range can be extended
Size: 300 x 200 x 115 mm
Connection voltage: 24/48 or 115/230 +15 –20% VAC or 15-35 VDC

RX-182

No. outputs: 18 independent relays with switching contacts and main contractor start and stop with monitoring safety relays. 2 serial COM ports
Rated voltage: 250 VAC
Rated current: 6 A
Minimum current: 20 mA (>12V).
Expansion slots: 2
Radio frequency: 405 – 470 MHz
Encasing: powder coated sheet metal
Operating temperature range: -25°C till +55°C; range can be extended
Size: 335 x 250 x 145 mm
Connection voltage: 24/48 or 115/230 +15 –20% VAC or 15-35 VDC

RX-131

No. outputs: 13 outputs with switching relays
Radio frequency: 405 – 470 MHz
Max loading: 2 A/250 VAC resistive load
Power consumption: maximum 12 VA
Expansion slots: 1
Operating temperature: -25°C till +55°C; range can be extended
Size: 285 x 180 x 75 mm
Connection voltage: 115/230 V AC or 12-35 V DC or 24/48 V AC or 12-35 V DC

RX-MS

No. of outputs/inputs: 8x16; main contactor hold
Rated voltage: 250 VAC
Rated current: 6 A
PROFIBUS DP slave: 16 bytes out and 16 bytes in (consistent data)
MODBUS3964R: configurable number of bytes; up to 16 bytes out and 16 bytes in
Radio frequency: 405-470 MHz
Casing: aluminum profile for fast mounting on a symmetrical rail, to comply with EN 50 022 (DIN rail)
Operating temperature range: -25°C to +55°C; the range can be extended
Size: 125 x 135 x 135 mm
Connection voltage: 11-35 VDC analog inputs/card