Flecto Sense
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Functional Specification Flecto 2 Channel Radio Switch

We provide an integrated smart water solution that focuses on providing clarity, connectivity and ease of use to all customers.

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Functional Specification

Flecto 2 Channel Radio Switch

- The system consists of Three Units:
  - Transmitter Unit
  - Receiver Unit
  - Repeater (if needed)

- The Transmitter Unit:
  - Two Inputs 1 & 2
    Both inputs is dry contacts only
  - Two Outputs 1 & 2
    Both outputs slave on the two inputs status respectively
  - Both outputs are relay contacts for N/O, Common and N/C
    Rated for 10A AC on the relay contacts. Loads higher than 2A not recommended.
  - Range: up to 5km line of site with standard antenna
  - No need for back-up battery, the Unit immediately transmits it's input status when powered
  - Multiple Receiver Units can be paired with one Transmitter Unit
  - Indicator LED's
    - Power LED
      Illuminates when power is "On"
    - Radio LED
      Fleshes in 1 sec intervals when transmitting
    - Relay 1 LED
      Illuminates when Input 1 is high
    - Relay 2 LED
      Illuminates when Input 2 is high

- The Receiver Unit:
  - Two Outputs 1& 2
    Both Outputs slave on the Transmitter Unit's Inputs status respectively
  - Both outputs are relay contacts for N/O, Common and N/C Rated for 10A AC on the relay contacts. Loads higher than 2A not recommended.
  - No need for back-up battery, the Unit immediately receives input status from the Transmitter Unit when powered
  - Fail safe function:
    If the Receiver Unit for some reason don't receive the radio message from the Transmitter Unit and the Outputs 1, 2 or both are energized, the outputs 1 & 2 will return to normal state were the output relays will be de-energized after 15 seconds
  - Indicator LED's
    - Power LED
      Illuminates when power is "ON"
    - Radio LED
      Fleshes in 1 sec intervals when radio signal is received from the transmitter Unit.
      This can also be utilized as a communication indicator for installation.
    - Relay 1 LED
      Illuminates when Input 1 from the Transmitter is high
    - Relay 2 LED
      Illuminates when Input 2 from the Transmitter is high

- The Repeater Unit:
  - The Repeater can be used as a range extender if needed
  - The Repeater only needs to be powered from a stable 230VAC supply
  - No need for back-up battery, the Unit immediately receives input status from the Transmitter Unit when powered and then transmits the input/s received
  - Fail safe function:
    If the Repeater Unit for some reason don't receive the radio message from the Transmitter Unit and the Outputs 1, 2 or both are energized, the repeated outputs 1 & 2 will return to normal state after 15 sec in order to transmit the normal state repeated to all Receivers
  - Indicator LED's
    - Power LED
      Illuminates when power is "ON"
    - Radio LED
      Fleshes in 1 sec intervals when radio signal is received from the transmitter Unit. This can also be utilized as a communication indicator for installation.
    - Relay 1 LED
      Illuminates when Input 1 from the Transmitter is high and will repeat the state as such
    - Relay 2 LED
      Illuminates when Input 2 from the Transmitter is high and will repeat the state as such

Typical Application

- **Generator Energy Management**
  - Ideal to use as a radio switching device on the Kamstrup Electrical meters as external trigger to select the tariff registers for certain conditions e.g. T1 register for grid energy and T2 for Generator energy.
    - This will be applicable for Kamstrup electricity meters that are equipped with one of the following modules:
      - 8i GSM 2G modem
      - RS485 Modules
      - 4 Tariff Module
      - KT-100 Module (South African Module, please refer to the KT-100 data sheet for more information on this module)
  - Can be used to exclude non-essential circuits when the generator is the source of energy.

- **Agricultural**
  - Automatic control on water reservoir levels and water pump control
  - Control of irrigation systems
  - Remote control of barn lights from the comfort of your house
  - Automation of lighting circuits with a timer devices as triggering device connected to the Transmitter Unit

- **Security**
  - Control and automation of security lighting
  - Control of electric fencing

- **Load control and energy management**
  - Control of HVAC systems and circuits
  - Control of Non-essential circuits under certain conditions such as battery back-up power in case of grid failure

- **General**
  The Flecto 2 Channel Radio Switch system is basically designed for any device that needs to be turned “ON or “OFF” over a distance of up to 5 km in range (line of sight with standard antenna) given a certain condition.
- The Transmitter Unit’s inputs can be connected to other devices such as:
  - Timer devices
  - Temperature sensors
  - Smoke detectors
  - Proximity sensors
  - Magnetic door switches
  - Alarm systems
  - etc.

  As long as the output of these devices have a dry output connected to the inputs of the Transmitter Unit

- **Technical specifications**
  - Power connection : 230VAC 50Hz
  - Frequency 868MHz
  - Dust proof, not for outside installation, not water resistant, except when installed in a secondary enclosure with the correct IP Rating (if the secondary enclosure is of steel construction then an external antenna should be connected to the unit)
  - Dimensions
    - Width = 160mm
    - Height = 90mm
    - Depth = 160mm
  - Mounting holes on the corners inside the enclosure for a maximum of 4mm screws. Mounting screws are not supplied as this depends on the surface to which the unit must be mounted to.
  - Material : Composite plastics
  - External SMA Antenna connector.
  - Standard antenna (included) can be removed and a long range antenna (not included) can be fitted instead. The long range antenna can be ordered additionally if needed.
  - 1.5M two core power cable included and pre connected to the unit
  - Input and output wiring not included.
    Please note: Normal electrical wiring is not to be used on any connection terminal on the Control PCB terminals, they are not designed for it and a multi strand not more than 1mm should be used. We recommend to use a multi strand 0.5 to 1mm twisted pair screened cable for the triggering inputs as well as the relay outputs.
  - We strongly recommend not to control loads higher than 2A DC or AC on the on-board relay outputs of the control PCB but to rather use an external contactor or relay to carry the desired load.
  - **NOTE: The inputs to the Transmitter Unit must be "Dry" inputs such as the contacts of a normal switch or a relay output, no external voltage must be connected to the Input terminals, this will cause permanent damage to the unit.**

For more Information and technical support on this product please contact us:

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