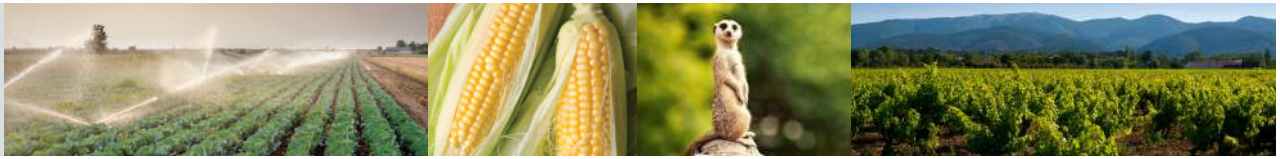# MEERKAT FIELD MODULE
Solar Powered Wireless Remote I/O Module

Jabeco's complete management system to optimise the use of water resources

- 443MHz ISM band radio communication:
  - Adjustable power output up to10dBm.
  - Low noise receiver narrowband filter.
  - Repeater capability.
- Bi-directional communication.
- Controls latching outputs to actuate hydraulic valves.
- Digital and analogue inputs.
- RS485 interface.
- Status monitoring e.g. battery and solar voltage levels and radio.
- Remote setup of device parameters.
- Solar powered with more than 100 hrs battery backup.
- Extend I/O's RS485 interface modules.
- Up to 12 VDC (definable) auxiliary output power.

PRODUCT INFORMATION

The Meerkat Field Module (FM) is a basic building block of any Jabeco system, providing a communication and actuation channel between control units and remote devices. It can control digital outputs, such as valves, receive analogue and digital inputs from measurement devices in the field, and wirelessly communicate over a range of more than three kilometres. An interconnected network of the Meerkat FM's can be used to provide full wireless control over a distributed water management system.

SPECIFICATIONS

POWER
- **Battery:** 3.6V, 4.5Ah, over 5 days charge life.
- **Solar:** 6.5Vnom, 1.2W.
- **Life expectancy** is >3y battery, >5y solar panel.

COMMUNICATION
- **Frequency:** 433MHz or 868MHz, on factory order.
- **RF Power:** 10mW max.
- **RF Connector:** SMA Jack Female.
- **Antenna:** • Dipole, standard ex-factory.
  • Optional: Single element Yagi.
- **Reach:** Dipole: + 3Km with good LOS.
  Yagi: up to 10Km with good LOS.

LOCAL COMMS INTERFACE
- **Hardware:** RS485, RS232, TTL.
- **Protocol:** SDI-12, Modbus.

INPUTS
- **Digital:** • High impedance, resistive load.
  • On/Off or Counter, >100ms pulse.
- **Analogue:** 5VDC max, switched at 100ms live period.
- Auxiliary output power.

OUTPUTS
- **Number:** 4.
- **Type:** Pulse, for latching load (e.g. solenoid).
- **Magnitude:** <23V @ 30ms max Width.
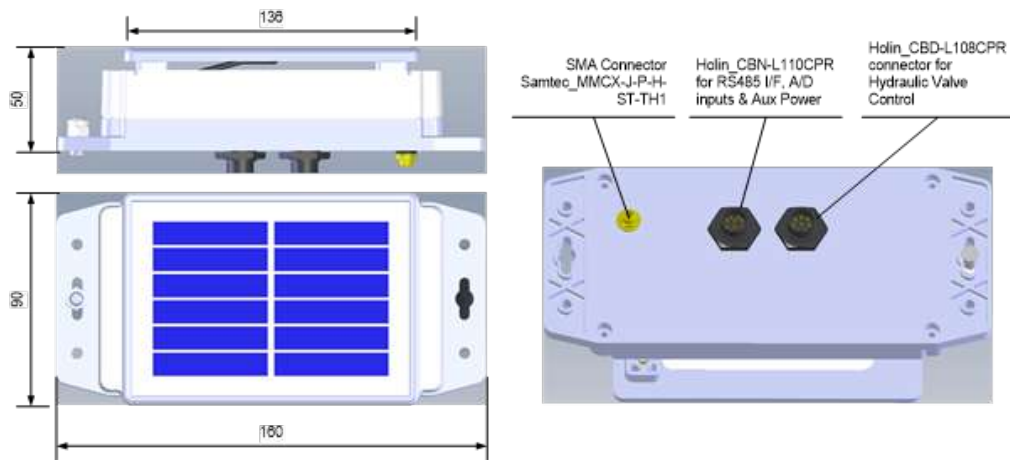- **Source:** 2200mF capacitive.

PROGRAMMING
- System firmware via TTL (OEM suite).
- User parameters via TTL or wireless (JCOM radio management software).

PHYSICAL
- **Weight:** approx. 1kg.
- **Dimensions:** 160mm x 90mm x 50mm.

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ENVIRONMENTAL

- **Operating ambient:** -20°C to 50°C.
- IP65.

ORDER INFORMATION

Part No	Description	Packing list
JB-FX-11	Meerkat Valve Control only	All models come with a Meerkat Module, mounting bracket, antenna and cable harness.
JB-FX-12	Meerkat Input Module only	
JB-FX-13	Meerkat Multifunction	

APPLICATION NOTES