PRECISION FARMING SOLUTIONS

MC ELECTRONICS

HIGH-TECH COMPONENTS

FOR AIR DRILLS

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MC ELECTRONICS
Precision Farming Solutions

COUNTING SEEDS...NOW POSSIBLE

The latest generation sensors by MC Elettronica, capable of counting any type of seed at almost any speed. The new technology applied is based on the latest generation of infrared optical sensors coupled with a 8 bit microprocessor.

After more than 3 years development we have finally tuned the counter up to a limit never achieved before. In fact, this sensor is able to compensate dust, detect the type of seed in transit and count seeds of less than 1 mm diameter at an incredible speed rate (650 seed/sec).

PRO-VALVE
2-ways row shut-off valve and seed counter

Precision Farming Solutions

AVALABLE ADAPTORS: ø 26 mm / ø 30 mm / ø 32 mm

The new PRO-VALVE is the latest generation shut-off valve with the possibility of integrating an optical sensor to detect and count the passing seeds. The advantage is to have a single component with two functions, reducing the overall dimensions and costs.

This valve is the ultimate development of shut-off valve from MC Elettronica: incorporating more than 25 years of experience in sensors and shut-off valves technology, surpassing the most stringent standards in terms of cycles, resistance to dust and water aggression.
This valve can be integrated in any control system and be driven by prescription maps with CAN-BUS protocol.

PRO-VALVE is available in:
- 2-way CAN-BUS version with blockage sensor integrated (for "Daisy chain" configuration).
- 2-way analogue version (two-wire with polarity reversal)

ADVANTAGES

- **Dual Function**: the version with integrated photocell allows monitoring and seed counting with flow blockage via flap valve: TWO IN ONE!
- **Versatile**: easy installation and quick cleaning thanks to the mounting clip "U" shaped which allows a rapid from pipe.
- **Modular**: PRO-VALVE is compatible with MC Electronic systems or other systems present on the market.
- **Extreme reliability:** more than 100K cicles tested on mechanical devices and sealed electronic area for a prolonged reliability over time.

BLOCKAGE SENSORS
seed/fertiliser flow monitoring

MC ELECTRONICS
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ANALOGIC VERSION

CAN-BUS VERSION

AVALABLE ADAPTORS: ø 25 mm / ø 30 mm / ø 32 mm / 38 mm

The BLOCKAGE sensor to be installed on pneumatic or mechanical seed drills, allow the operator to check the ON/OFF flow or clogging of granular fertiliser or seeds, also in condition of high dust, thanks to the system ADC (Automatic Dust Compensation) provided that the pipe is the same diameter of the photocell. It's available in analogue and CAN-BUS version. *On the photocell body 1 or 2 leds indicate(s) when it is powered, the output signal and the cleanings status.*

For photocell cleaning, a rapid U-shaped clip allows the release of the photocell from the pipe. To install, simply insert the photocell directly on the plastic/rubber pipe with fittings corresponding to the diameter of the pipe.

ADVANTAGES

- Granular fertiliser or sowing **flow monitoring.**
- **Monitoring of seed or granular fertiliser clogging**, even in high dust conditions.
- **Automatic Dust Offset** thanks to the ADC system (Automatic dust compensation).
- The seed sensor in the CAN-BUS version can:

- support up to **100 sensors connected in Daisy Chain** with a GATEWAY ECU.

- **Interface with other CAN-BUS systems** on the market.

BLOCKAGE SENSOR is able to check all types of seeds from 5mm to 1mm diameter. Some examples of seed types detected:

Oats

Spelt

Wheat

Lentils

Canola

PRO-SEEDER 2
seed counter sensor

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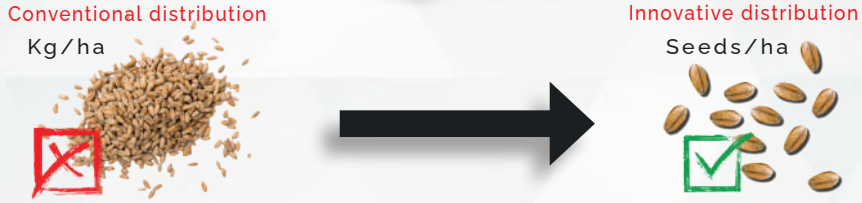
PRO-SEEDER 2



AVALABLE ADAPTORS:: ø 25 mm / ø 30 mm / ø 32 mm / ø 38 mm

Precise, modular and versatile photocell, allows COUNTING and testing the seeds passage for each single row for seed drills, with automatic dust compensation.

For correct work of seed counter sensor, the PRO-SEEDER photocells are connected to the respective electronic control unit, before starting to work they execute self-test of correct functionality.

ADVANTAGES

The seed sensor connected to the GATEWAY ECU allows you to:

- **ELIMINATE THE SEED DRILL CALIBRATION**, by setting the number of seeds/ha and no longer the Kg/ha.
- **Establish the quantity of seeds in every single row**, with up to 95% accuracy.
- **Locate sowing anomalies.**
- **Have dynamic dust compensation**, with ADC (Automatic dust compensation) technology.
- Support up to **100 + 100** sensors connected in Daisy Chain.
- **Interface with other CAN-BUS systems** on the market.

PRO-SEEDER is able to count all types of seeds from 5mm to 1mm diameter. Some examples of seed types detected:

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SEED SENSORS COMPARISON

	PRO-SEEDER 2	BLOCKAGE SENSOR
Microprocessor	YES	YES
BUS Management	CAN-BUS	CAN-BUS, OR digital output
Seed Counting	YES, >95% precision	NO
Canola Seed Detection	YES, >95% counting precision	YES, Blockage only
Automatic Dust Compensation	YES	YES
Extended hose fitting range: D25, D30, D32, D38	YES	YES

TECHNICAL CHARACTERISTICS OF PRO-VALVE

	PRO-VALVE
Microprocessor	YES
Input Command	±12V OR digital in
Phacelia & Small seeds compatible	YES
# of ways	2
Internal Passage	Square, 32x32mm
Extended hose fitting range:	D26, D30 , D32

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