

Double protection by metal separators and OPC-UA

Imagine ...

... a company manufactures closures for the cosmetics industry and uses several injection molding machines in its production hall. To increase the **plant availability**, the company uses Sesotec metal separators. The metal separator **PROTECTOR** is located between the dosing and mixing unit for the granulate and the material feed of the machine.

To ensure a smooth production process, the communication between all involved devices is the Alpha and Omega. Due to **intelligent connection** of the constituent components and peripherals via the **communication standard OPC-UA**, a secure and reliable communication across all devices is guaranteed.

Contamination — the problem

Now the worst case arises: the granulate contains a small, metallic contamination which is transported to the mixing and dosing unit and right to the machine. The **PROTECTOR** averts the approaching catastrophe: it recognizes the foreign object and expels it safely. Due to separation of the contamination a small amount of the good material is separated as well which leads to a mismatch between the calculated and metered amount and the actual amount of granulate that arrives at the injection molding machine.

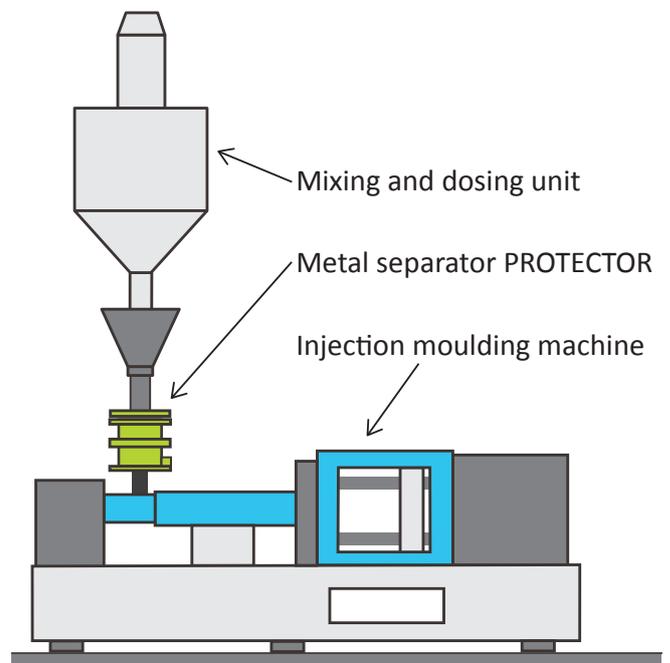
Communication — the key

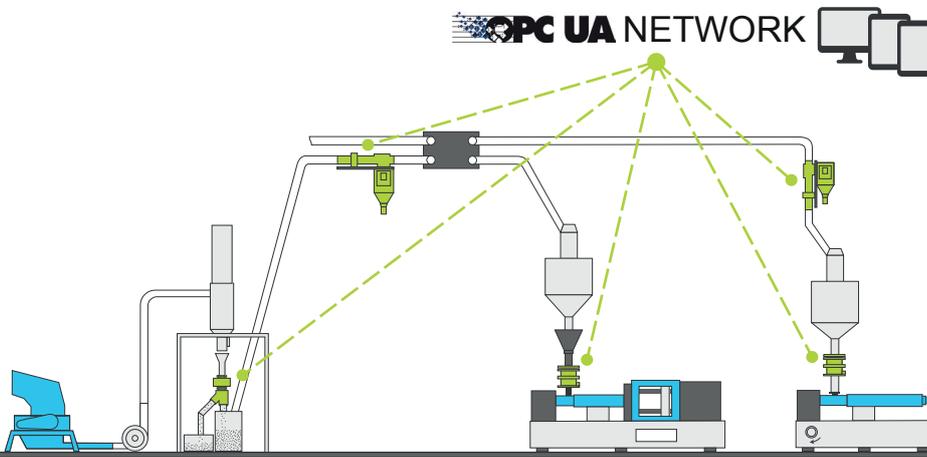
Now it is the **PROTECTOR's** duty to inform the mixing and dosing unit about the fact that material has been discharged and in addition which amount has to be added, so that the material calculation will work again. Thanks to **OPC-UA**, this part is done without any problems and the parts produced by the injection molding machine are flawless.

Without the standardized communication via **OPC-UA**, even smallest deviations in the supply of granulate could have led to the production of faulty parts, such as under-injected closures. These defective productions often remain unnoticed at first: without further examination they get filled into a box which is sealed and is sent to the customer.

Combination — the solution

The **PROTECTOR** protects your processing machine. **OPC-UA** ensures impeccable communication through the intelligent connection of all components involved. Together, they make a valuable contribution to the improvement of product quality and protection against complaints.





What is OPC-UA?

Open Platform Communications Unified Architecture – or OPC-UA for short – is a **data exchange standard** for secure, reliable, vendor- and platform-independent industrial communication. As an **machine-to-machine communication protocol**, OPC-UA enables cross-system

data exchange between machines and systems from different manufacturers. As an **IEC standard** and with the broad approval of representatives from research, industry and associations, OPC-UA is predestined for the cooperation with other organizations.

OPC-UA's scope

Safe and reliable information exchange

OPC-UA provides **continuous and secure data delivery and communication**: every type of information is available at any time and in any location for each authorized application and person. OPC-UA also provides protection against **unauthorized access, sabotage and modification of process data as well as careless operation**.

Platform and manufacturer independence

OPC-UA offers a Plug & Play solution. This **open standard** is independent of the supplier or manufacturer of the particular application, because OPC-UA works **independently of the programming language** in which the respective software was programmed, **and independently of the operating system** on which the application operates.

Service-oriented architecture

The complete architecture of OPC-UA is **flexible, sustainable and expandable**. OPC-UA offers a cloud-based solution and additional functions, such as remote maintenance and traceability of batches.

Standardized communication via Internet & Firewalls

OPC-UA includes important features such as **platform independence, scalability and Internet capability** – and thus simplifies adaptation.

Benefits from OPC-UA

- ✓ Improvement of plant availability and productivity
- ✓ Avoidance of reworking
- ✓ Improvement of product quality
- ✓ Prevention of complaints and damage to reputation
- ✓ Traceability of batches

Intelligent metal separators from Sesotec

We are one of the first suppliers (of) and competent partner for **intelligent metal separators for the plastics industry** because we detect trends and are actively working on the development of the OPC-UA standard for our devices. Sesotec devices can thus communicate with each other and, above all, with other machines, exchange data and optimize themselves.

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Sesotec - an overview

The Sesotec group is one of the leading manufacturers of machines and systems for contaminant detection and material sorting. Product sales primarily focus on the food, plastics, and recycling industries.

www.sesotec.com



Metal detection systems



X-ray inspection systems



Sorting systems



Magnet systems