

Mechatronic system

The solution includes the following products:

- Mechatronic Cylinder
- Accessories



Specification:

The ISEO mechatronic solution, consisting of passive mechatronic cylinder and active mechatronic key, will operate with a data-based and energy-based transmission technology based on inductive technology, without physical contact between the two parts and, consequently, not subject to wear or abnormalities Due to external agents. The cylinder will have a European profile (EN 1303 - DIN 18252), therefore compatible with all devices designed for cylinder drive, it must be able to be installed replacing a mechanical cylinder without the need for wiring or connections of any type. The cylinder will be of a passive type; Therefore there must not be supply sources such as batteries or accumulators inside the cylinder. The user's mechatronic key will have 2 "CR1620" lithium batteries on board that can power the key for at least 2 years considering an ordinary usage frequency and, via the inductive system, transmit power and data to cylinder. The bi-directional data transmission will be through an encrypted proprietary protocol. The battery status display will be available in the key handle with variable color LEDs. Each single user key will have unique identification with indelible mark on the spear. The identifier will coincide with the document's document references. The mechatronic user key can be programmed with the self-learning function. It will therefore be able to act as a programmer and, as a result, transfer if authorized its credentials to the White List of a cylinder that had not previously been associated. The system programming must be carried out using a dedicated application software, provided with the system, capable of managing the opening permissions of each single user key for each single cylinder. These permissions must be able to manage at least 23 time slots, selectively the days of the week, and a default amount of openings. The system will have an electronic programming key able of transporting the data to the cylinders and acquiring the transit logs from the same. Upon request, an emergency electronic user key IP67 will be available, equipped with a double stack up to five years and a permanent authorization. The cylinder and user key will be able to keep the history of validated and unvalidated accesses in your memory unit. The stored events will be uniquely identified with the key, cylinder and time of the opening or forcing event (who, where, when, how). Transfer of data to the mechatronic keys must be done by means of a dedicated interfacing device,

provided with the kit, which can guarantee the validation of the keys in a selective and unambiguous way. The update operation will have to program the mechatronic key by ensuring that the last update of permissions issued by the manager is transposed. The interfacing device, if authorized by a programmer key, will be able to read and download the events in the key memory to the PC. The opening permission will be granted if the profile and the mechanical encryption of the key at the same time as the electronic credentials coincide with those of the cylinder. The reaction time of the system to the opening authorization shall not exceed 60 milliseconds. The opening permission will be signaled by a green LED flash on the key handle, while a red flash will signal a denied permission. Mechatronic cylinders must be able to be installed in a mastered system. The mechatronics key must be able to open mechanical cylinders according to the authorizations and hierarchies defined in the master plan. The system must be able to combine the robustness and mechanical precision of a multi-profile system to the flexibility of an inductive technology electronic system. The mechanical profile of the keys (whether mechanical or mechatronic) should have a multi-profile protected system and registered with Trademark. The Trademark will not have a timeline and will have to be detectable and present on any key profile. The raw keys can not be marketed, and duplicates or extensions of the plant can only be realized, if authorized by the plant owner, directly from the manufacturer. The authorization must be demonstrated by the presentation of the property card that will be provided by the manufacturer upon delivery of the plant. The card uniquely identifies the plant through a code that will bring back to the technical documentation and features