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Tamper-protection systems

Passion for Quality

Tamper-protection systems

Among the leading causes of workplace accidents are tampering with and bypassing safety switches and safety sensors. Chapter "Minimising defeat possibilities" of standard EN ISO 14119 is dedicated to this topic. There is little sense in making a device extremely resistant to tampering if it can easily be removed from the guards. Standard EN ISO 14119 therefore specifies that the fixing systems of safety devices cannot be easily removed from the guards themselves and suggests solutions such as one-way screws, rivets or other non-traditional fixing systems. This is not always easily accomplished by machine manufacturers.
As an alternative for its customers, Pizzato introduced some time ago the concept of "non-removable screw covers". Pizzato supplies plastic covers for its safety devices that are designed so that they cover the fixing screws and, after they have been attached to the safety device, can no longer be removed. This is possible only by physically destroying or otherwise damaging the protective cover, which then clearly shows signs of tampering. These protective covers are not available as spare parts.

Pizzato now presents a new version of this solution.

CODED SCREW COVERS FOR SWITCHES AND ACTUATORS

The new protective screw covers of the VF PC product family with coded alphanumeric marking are an innovative solution for increasing the tamper protection of existing standard screw covers. Each coded protective cover is marked with a different alphanumeric code. Two coded protective covers (for the two fixing screws), which are attached to the product, yield a different code every time. If a protective cover is removed and then replaced with a new one, the same code is no longer produced, thereby allowing tampering to be detected. By recording the data of the protective covers during final installation of the machine, e.g., by photographing the installed products, any replacements can be detected subsequently.
These new, coded protective covers can, therefore, also be used as a replacement for standard covers (should they be lost) without affecting the protection against tampering.

CODED MARKING

The coding that is applied to each protective cover consists of a sequence of three alphanumeric characters, whereby each character can have one of 32 different values, yielding a total of 32768 combinations per cover. If two protective covers are attached, the result is a code with more than a billion combinations.
To improve the readability of the codes, characters that are similar in appearance, such as the number zero and the letter "O", were removed.

LASER ENGRAVING

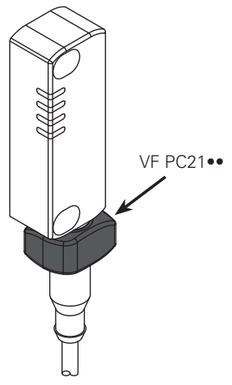
Laser engraving guarantees maximum durability and resistance.

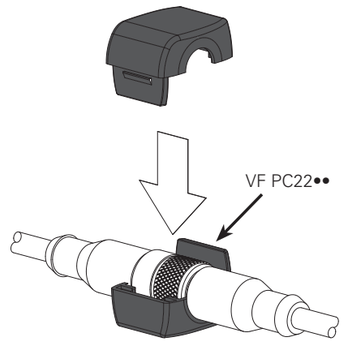
Article	Description	Packs of 10 pcs.
VF PC10A9	Coded protective screw covers for series SR - SM A - ST G - NX	
VF PC11A9	Coded protective screw covers for series ST D - ST H - SM G - SM H - SM D - SM L - SM E	
VF PC12A9	Coded protective screw covers for the NG series (actuator)	
VF PC13A9	Coded protective screw covers for the NS series (housing) - AN	
VF PC14A9	Coded protective screw covers for the NS series (actuator)	

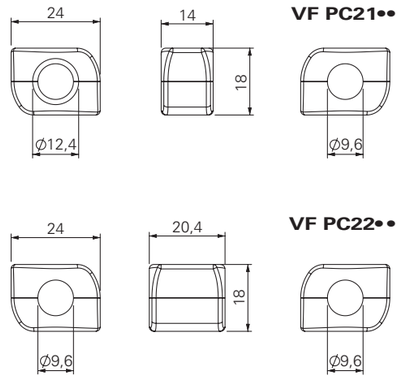
CODED COVERS FOR M12 CONNECTORS

These coded protective covers consists of two identical half shells that are snapped onto the M12 connectors of the safety devices and make it impossible to detach the connector. The shells can only be removed by breaking them. Thus, any attempt to tamper with them will be immediately evident. The coding has the same properties as the screw covers described above, thereby guaranteeing tens of thousands of different combinations.
The protective covers are suitable for all devices with an M12 connector (e.g., NX, NS, ST, SR series) but they can also be used for junctions between male and female M12 connectors.

A version made of blue detectable technopolymer is available for the food industry, and it can easily be detected during the process using common optical vision technologies, X-rays or metal detectors.







Article	Description	Packs of 10 pcs.	Colour / material
VF PC21A9	Coded protective covers for M12 connectors integrated in the device		Grey technopolymer
VF PC22A9	Coded protective covers for M12 extension cables		Grey technopolymer
VF PC21B6	Coded protective covers for M12 connectors integrated in the device		Blue detectable technopolymer
VF PC22B6	Coded protective covers for M12 extension cables		Blue detectable technopolymer

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