

STOP

A black, hexagonal-shaped device with a white circular logo in the center containing the text 'i-BOR22'. It has a dark, textured fabric strap attached to the top and bottom. The device is positioned in the center of a yellow diagonal banner that reads 'STOP' in large, bold, black letters.

i-BOR 22
Contact-free personal
security system

APSS

Advanced Personal
Security System

Type-tested
according to DIN EN
ISO 13849-1

BMPB No. E7148/1

Performance level "D"

Standard: Industry 4.0

i-bor.ch

0,23
seconds:
 Press automatically
 stopped!

i-BOR 22 is an emergency stop assistant that can save lives. It stops rollers, presses, shredders immediately: automatically and without contact. Then, when people can no longer do it themselves.



- i-BOR 22 is the most modern and most reliable personal security system
- Europe-wide type approval according to DIN EN 61496-1 and DIN EN ISO 13849-1, Performance level „D“
- Simple plug & play installation, also in existing systems
- Voice guidance in over 20 languages
- Transponder wearable as a watch, on ELTEN shoes or as a safety chain

✓
Type examination
certificate
BMPB No.
E7148/1

✓
DIN EN
ISO 13849-1

✓
Performance
level
D

✓
APSS
Advanced
Personal Security
System

✓
Standard:
Industry
4.0

Watch, shoe, chain

Three practical ways to protect your employees

i-BOR 22 breaks new ground, not only in technology. We also have a practical solution for the most important requirement in personal protection – the wearing of transponders. Or rather three:



Like a clock

Practical and accustomed as a wristwatch. Thanks to the resistant wristband with Velcro fastener, the “watch” can be perfectly adapted to every forearm and wrist. This way, the P-TAG is not disturbing at work.



Integrated into the ELTEN safety shoe

Double safety thanks to the ELTEN safety shoe. Its hard cap protects the toes from heavy objects and at the same time the wearer thanks to the practical fastening device for the P-TAG. This is attached to the outside of the ankle protector.



To be worn on a safety chain or on a carabiner

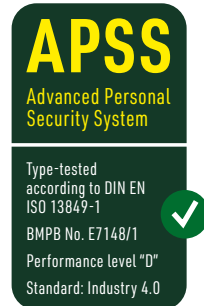
The P-TAG can also be worn around the neck like a necklace. We have developed a special safety strap that has strangulation protection and opens if the strap gets caught. Or you can wear the P-TAG as a practical pendant on a carabiner.

i-BOR 22 – the leading personal security system

Machines and systems are there to make work easier – especially in the age of Industry 4.0. For BOREMA, the focus is on optimising the interaction between man and machine. Occupational safety is of paramount importance. Personal protection systems protect people from accidents at work that can, in the worst case, end in death. These accidents must be prevented at all costs.

Since 2012, we have specialised in the development of personal security systems. i-BOR 22 is already the 3rd generation and it represents a further milestone in non-contact personal protection systems.

i-BOR 22 is the world's first Advanced Personal Security System. APSS in short. i-BOR 22 is innovative, intelligent, contact-free and fast. And intervenes when people can no longer do it themselves. We therefore also call i-BOR "emergency stop assistant". This can be compared with the intelligent systems in modern passenger cars. Here, a wide range of driver and safety assistants help to ensure that nothing bad happens in an emergency. These assistants are something like the 6th sense that steps in when we are in danger and our other five senses can no longer help us. It is the same with i-BOR 22.



The advantages of i-BOR 22 at a glance

	Borema i-BOR 22 APSS system	Conventional PSS systems
Type approval	Yes ✓	Yes ✓
Performance level	D ✓	C
Can be integrated into existing plants	Yes ✓	Yes ✓
Feed systems can be integrated	5 ✓	1
Authorisation system	Yes ✓	(Yes)
Transponder types/carrier types	1 / 4 ✓	2
Automatic P-TAG control	Yes ✓	No
Personalised P-TAG	Yes ✓	No
System with voice guidance	Yes ✓	No
Cloud/PLC integration	Yes ✓	No

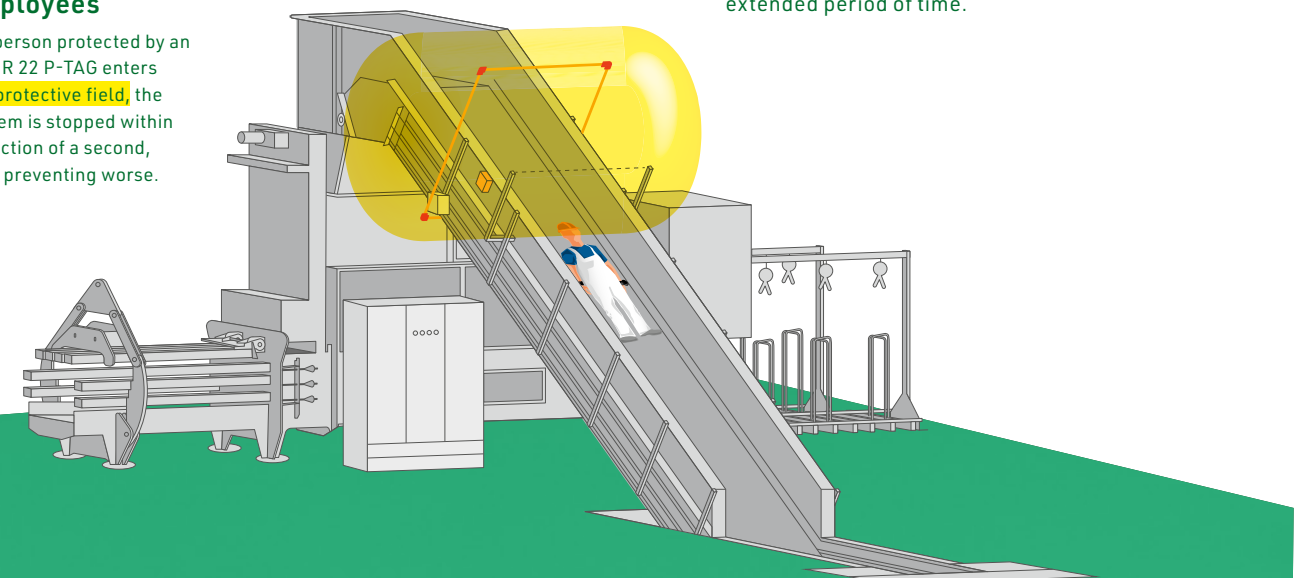
Five components

Often, machinery and equipment such as balers, shredding and recycling plants are only secured with the minimum measures required by law, such as emergency stop switches and ripcords. However, this minimum level of safety can become a trap for people working alone on the system: if a person has an accident and becomes incapacitated, he or she can neither press the emergency stop switch nor pull the rip cord. We have developed the i-BOR 22 emergency stop assistant especially for such life-threatening situations. Its five intelligently networked components prevent accidents in an innovative, contactless and fast way to prevent accidents with consequences.

- 1 RFID-Technologie**
 RFID (Radio Frequency Identification) technology was developed for the automatic and contactless identification and localisation of objects and living beings using radio waves. In i-BOR 22, the RFID system consists of an active personal transponder (P-TAG) with a personal ID code and a reader for reading the ID code. A logic device is coupled to the reader, which initiates an action if necessary.
- 2 Personnel transponder (P-TAG)**
 The i-BOR 22 personnel transponders (P-TAG) are battery-supported "active RFID transponders" that are provided with individual codes and transmit and receive on two different frequencies. Possible faults are immediately displayed in the logic module (ALM). The system automatically logs all incidents and is almost maintenance-free.
- 3 Activation module (ATM)**
 ATM activation modules are mounted on the supply systems in front of the source of danger – and create a protective space. If a person with a P-TAG enters the protective field, the system is stopped immediately. At the same time, visual and acoustic signals are activated.
- 4 Logic module (ALM)**
 The logic module (ALM) is the central monitoring unit and is integrated into the emergency stop circuit of the system. It regulates and logs all functions of the security system. One ALM logic module can monitor up to 5 feed systems.
- 5 Authorisation module (AUM)**
 The authorisation module (AUM) prevents that unauthorised persons can operate the system. Only persons whose P-TAG has been specially authorised may start the system. The authorisation module (AUM) also allows the system to be switched off automatically if the authorised person is outside the radius of the logic module (ALM) for an extended period of time.

How i-BOR 22 protects your employees

If a person protected by an i-BOR 22 P-TAG enters the protective field, the system is stopped within a fraction of a second, thus preventing worse.



Why you should choose i-BOR 22

i-BOR 22 is the innovative emergency stop assistant, which has been developed according to highest technical standards. It redefines occupational safety and thus ensures optimum safety in the working environment for your employees and customers. The most important advantages at a glance:

- i-BOR 22 is the most modern and most reliable personal security system according to standard "Industry 4.0".
- Europe-wide type approval according to DIN EN 61496-1 and DIN EN ISO 13849-1, performance level "D".
- Simple plug & play installation, also in existing systems.
- One ALM logic module can monitor up to 5 feed systems.
- Self-explanatory interactive operator guidance in 20 languages via touch-screen display with incident log.
- High quality standard due to proven SIEMENS safety PLC.
- Only system with integrated incident list that logs all incidents.
- Selection of 3 different P-TAG transponders.
- Automatic registration of persons in the danger zone.
- Automatic regular self-diagnosis of the P-TAG transponders, no manual tests.
- Up to 3 years battery life of the P-TAG transponders.
- Largely maintenance-free due to 2-circuit system monitoring.
- Online function according to "Industry 4.0" standard.
- Easy cloud/PLC integration.
- Data gateway for the transfer of data to an external process control system.
- Maximum protection for employees/customers.
- Maximum enforcement security for security contractors/companies.



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