AREL

YOUR SAFETY PARTNER

SAFETY INTERLOCKS

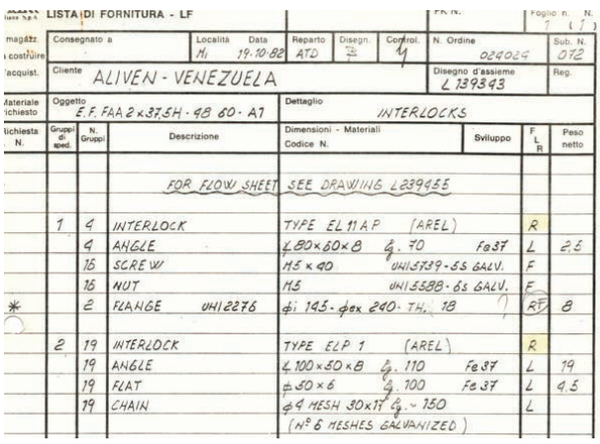
PRODUCT CATALOGUE 2019

***"Quality** means doing it right when no one is looking."*

Henry Ford

THE COMPANY

The company, born in 1965, has over 50 years of experience in the market of handles, locks and mechanical interlocking systems production for MT/AT electric implants. The lock brand **AREL®** is largely recognized as the setting reference of mechanical and electromechanical interlocks. Quality and flexibility in the production of personalized solutions are strength points that gave us the opportunity to occupy a significant, and constantly growing, place in the market.



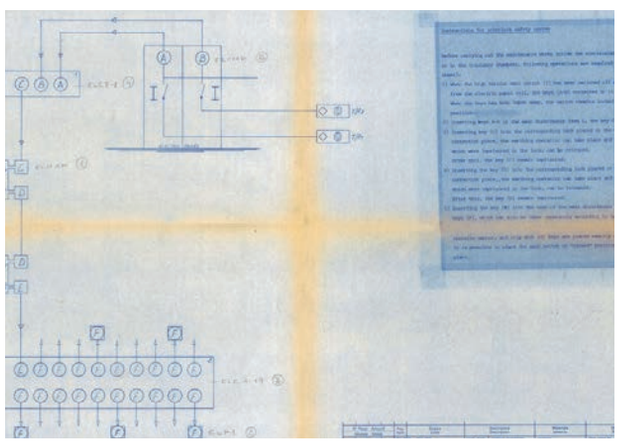
LISTA DI FORNITURA - LF

Consegnato a	Località	Data	Reparto	Disegn.	Control.	N. Ordine	Sub. N.
	Mi	19-10-82	ATD			024026	072

Cliente: ALIVEN - VENEZUELA — Disegno d'assieme: L 139343 — Reg.

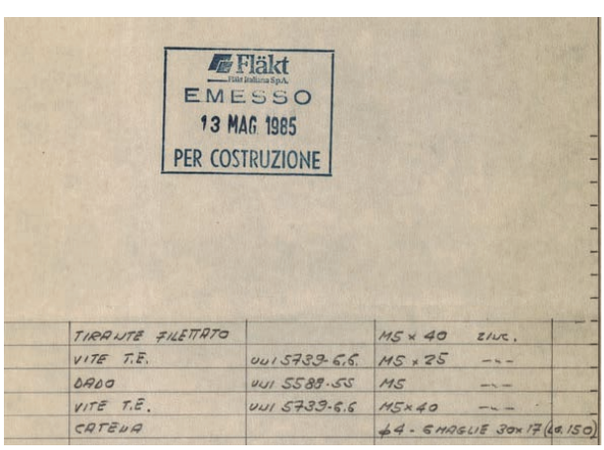
Oggetto: E.F. FAA 2 x 37,5 H - 98 60 - A1 — Dettaglio: INTERLOCKS

Gruppi di sped.	N. Gruppi	Descrizione	Dimensioni - Materiali / Codice N.	Sviluppo	F L R	Peso netto
		FOR FLOW SHEET SEE DRAWING L239455				
1	4	INTERLOCK	TYPE EL 11 A P (AREL)		R	
	4	ANGLE	L 80×60×8 q. 70 Fe 37		L	2.5
	16	SCREW	M5 x 40 UNI 5739-65 GALV.		F	
	16	NUT	M5 UNI 5588-65 GALV.		F	
*	2	FLANGE UNI 2276	ϕi 145 - ϕex 240 - TH. 18		RF	8
	2	19	INTERLOCK	TYPE ELP 1 (AREL)		R	
	19	ANGLE	L 100×50×8 q. 110 Fe 37		L	19
	19	FLAT	⏤ 50×6 q. 100 Fe 37		L	4.5
	19	CHAIN	ϕ4 MESH 30×17 q. ~ 150 (N° 6 MESHES GALVANIZED)		L	

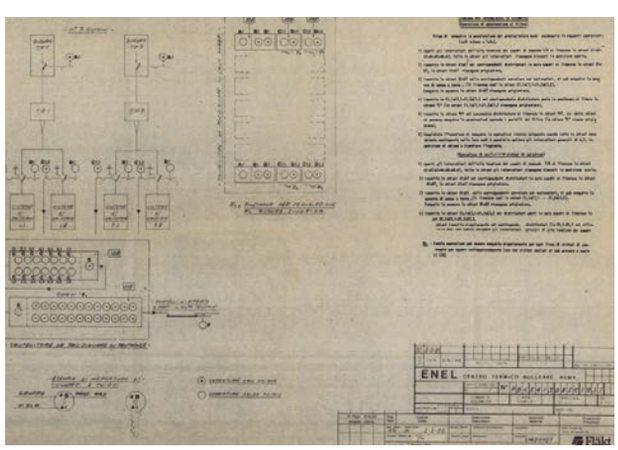


Project of 1982, made in Venezuela. Arel interlocks are included in the design specification.

Frigo Tullio has founded **NEW AREL Srl** in April 2013 as a natural evolution of a multiannial leadership. Such leadership was already established by the **AREL®** brand, reference point in the design of interlock systems. **New Arel**, following the know-how mastered during the course of years, today can count on the professionalism of its highly qualified collaborators. From designers to technicians, from testers to operators, the company operates with competence and expertise with the objective to guarantee systems capable of preventing accidents caused by human errors. We are qualified as suppliers of the main producers of plants for the production and the distribution of electric energy and of the rail sector.

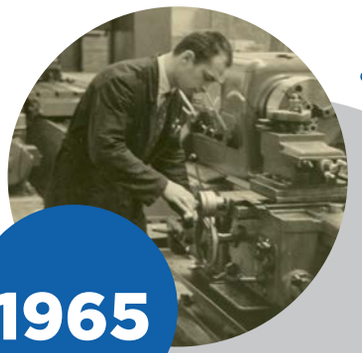


TIRANTE FILETTATO		M5 x 40 ZINC.	
VITE T.E.	UNI 5739-65	M5 x 25	-"-
DADO	UNI 5588-65	M5	-"-
VITE T.E.	UNI 5739-65	M5 x 40	-"-
CATENA		ϕ4 - 6 MAGLIE 30 x 17 (ca. 150)	



Project of 1985, made for Enel. Arel is again specifically requested in the safety specification.

BRIEF HISTORY



1965

Tullio Frigo founded **Arel**, a family business of which he is still President.

'70s

Arel in the early 1970s introduced the first modern interlocking systems for people and plant safety in Italy.

'80s

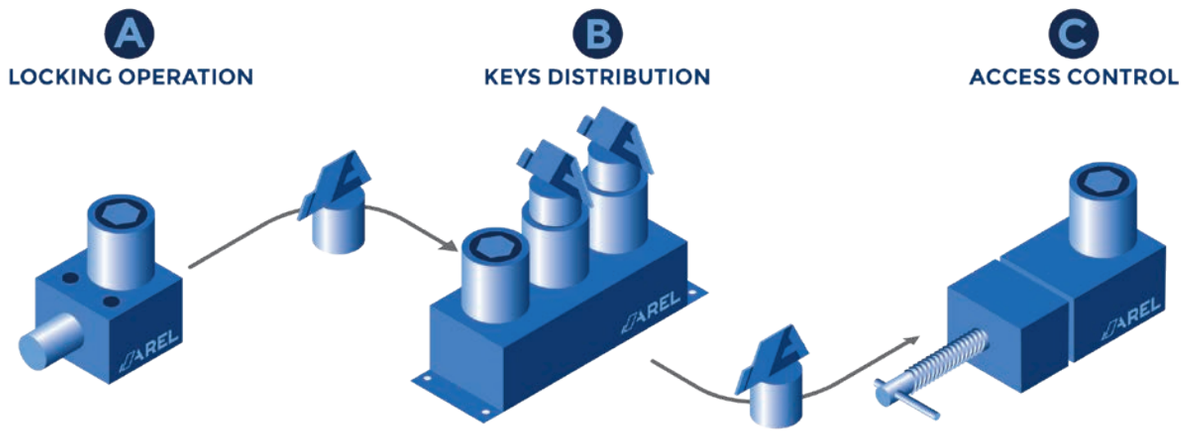
The range of products has expanded, including "**quarter turn**", **handles** and **hinges** for the electrical industry.
Thanks to the skills gained in Process Safety Design and its technical know-how in product customization, **AREL®** has become the reference interlocks manufacturer for the entire Italian industry.

In recent years, with Eng. **Gianpaolo Frigo** joining the company, Arel has embarked on a growth path through process management, expansion of product ranges and international development.

2004

SAFETY INTERLOCKS

An interlock is a closed and interconnected system of locks and elements for the sequential distribution of keys.



DESCRIPTION

The fundamental element of the word “interlock” is the prefix “inter”, through which the idea of interconnection of elements and sequentiality of the key distribution is conveyed. Without interconnection and sequentiality, we lose the systemic dimension which differentiates interlocks from simple locks.

Through interconnections and sequentiality of key distribution it is possible to design infinite mandatory sequences of actions. These sequences constitute the physical expression of safety procedures for the blockage of the equipment/machinery in the occasion of inspections and maintenance.

Companies have only two options: leave the application of safety procedures to the conscientiousness of the operators, or, thanks to interlocking, integrate them into the technical system and the working environment. Interconnecting creates rigid sequences of activity and access which reduce the discretional actions of workers to zero, generating the maximum safety for both workers and equipments during blockage procedures for inspections and/or maintenance.

Maintenance is the most frequent application context for interlocks, which contribute in significantly reducing the number of injuries and deaths on the job.
Arel interlocks are exclusively mechanic or electromechanic. This choice is strictly related to their safety functions, this way reducing the error rate to the minimum, lower than electric or electronic locks, and not generating false positives. In other words they may break but, differently from electric or electronic blocks, they never allow the starting of incorrect and potentially dangerous procedures.

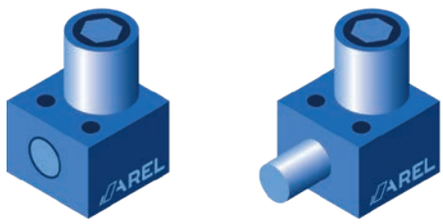
HOW INTERLOCKS FUNCTION

In order to fully comprehend the great applicative potential of interlocks it is necessary to further explore the functioning mechanisms, that is the way in which the interconnection between the elements of the system and its unequivocal dimension is generated.

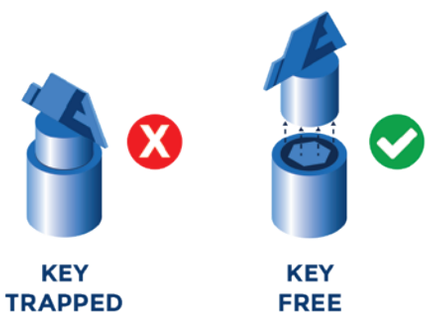
Starting point of the system, which is composed by at least two elements, is the functioning mechanism of the single lock and its correct installation. Overlooking the aspects related to the installation, which are important but represent an exogenous variable, we will focus on the lock functioning and we will analytically describe the dimensions of singularity and interconnection between locks which create the uniqueness of the system.

The first dimension of uniqueness lies in the fact that every lock has its own key, expression of a variant among thousands possible combinations. For this reason each key can be considered unique as it is the only one (together with its copies, if requested by the customer) containing the sequence required to open the lock. This dimension guarantees that, during the passage from one element to the other, the “witness” is unequivocally linked to this element of the system.

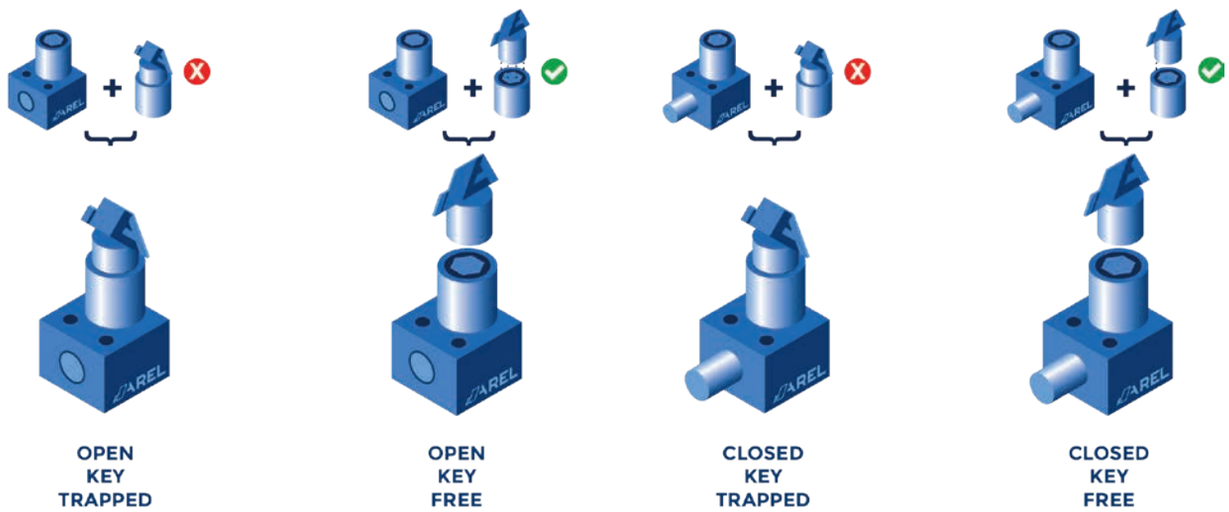
The second dimension through which uniqueness and interconnection are created is constituted by the functioning mechanism of each single element of the system (the tumbler) which has two possible positions:



These two positions represent the founding elements of the interlocking language, to which are associated two states:



Through the combination of the first two positions (**Open – Closed**) it is possible to unequivocally define the position of the single element, and through the combination of the two states (**Key trapped – Key free**) it is possible to activate the interconnection with the other elements of the system.



The single elements of the interlocking system are classified in three macro-families of products, differing in their function:

The **LOCKING OPERATION** is the element allowing the isolation of the danger for the worker, being it electrical or mechanic. Through this isolating action the non-dangerous condition of the system is guaranteed.

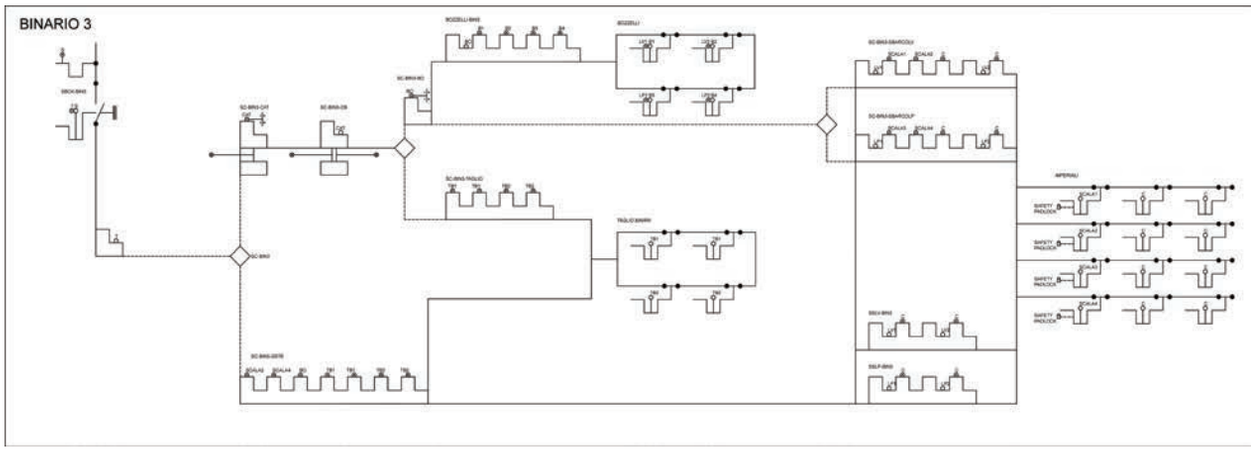
The **KEYS DISTRIBUTION** is the element allowing to physically and logically interconnect the elements of the system, building connections and multiplying them between the bolt block and the door block.

The **ACCESS CONTROL** is the element regulating the access to the potentially dangerous equipment/machinery on which to operate the inspection or maintenance procedure.

THE LANGUAGE

During the course of its 50 years of history, **AREL®** has developed it's own language for interlocking, allowing the integration of safety procedures into the design of the systems.

The first design schemes were created towards the end of the Fifties and were born from the design tradition of French security.



An application example

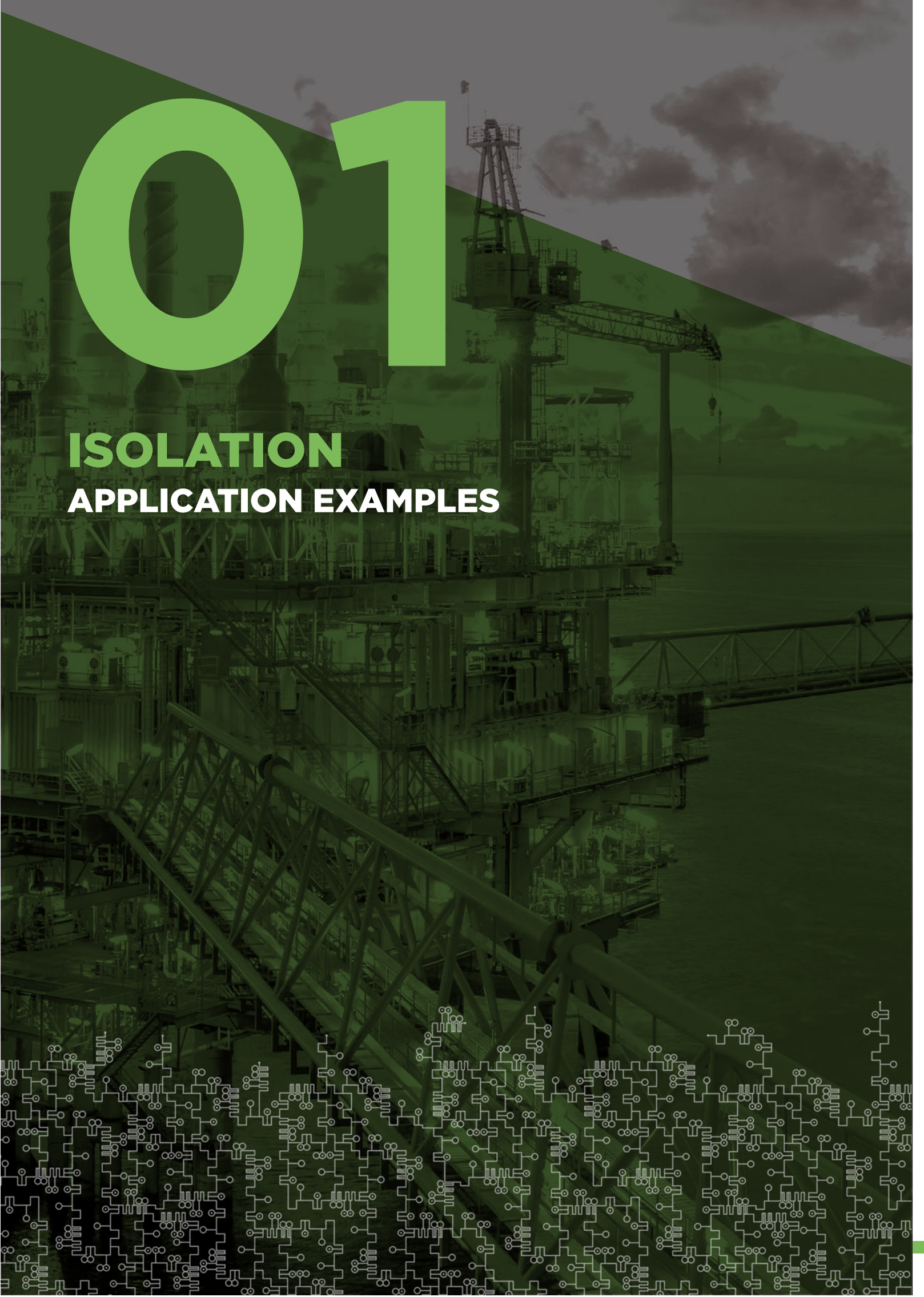
The experiences of design developed during the course of years in different sectors have brought an evolution of design schemes with the development of its own alphabet in which ad hoc developed symbols represent the two sets of positions (**Open – Closed; Key trapped – Key free**) and their combinations with the three families of elements (**Locking operation – Keys distribution – Access control**).

A correct and effective design of the maintenance safety with the application of such a language requires the integrated analysis of the following elements:

- **Schemes of the technical design of systems**
- **Layout of production**
- **Maintenance safety procedures**

On these schemes the safety design is developed with the integration of the AREL® language on the customer 's technical system.

INDEX

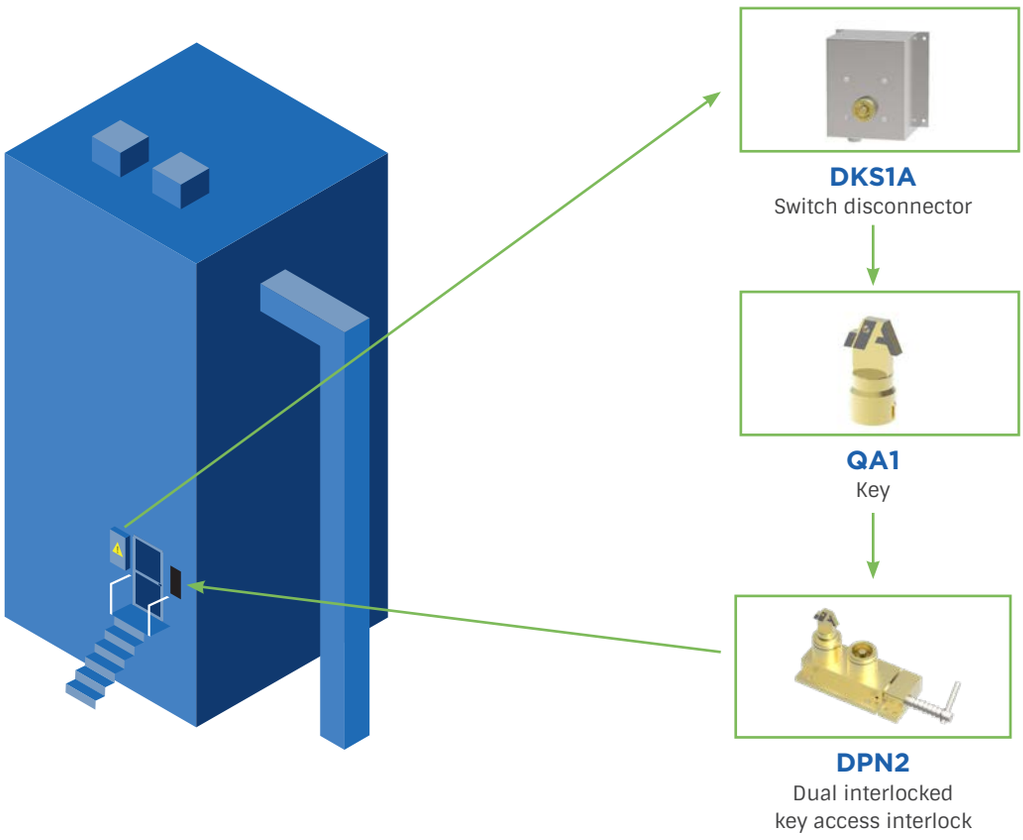


01

ISOLATION
APPLICATION EXAMPLES

ISOLATION

INTEGRATED SECURITY SYSTEM FOR ACCESS CONTROL TO HAZARDOUS AREAS



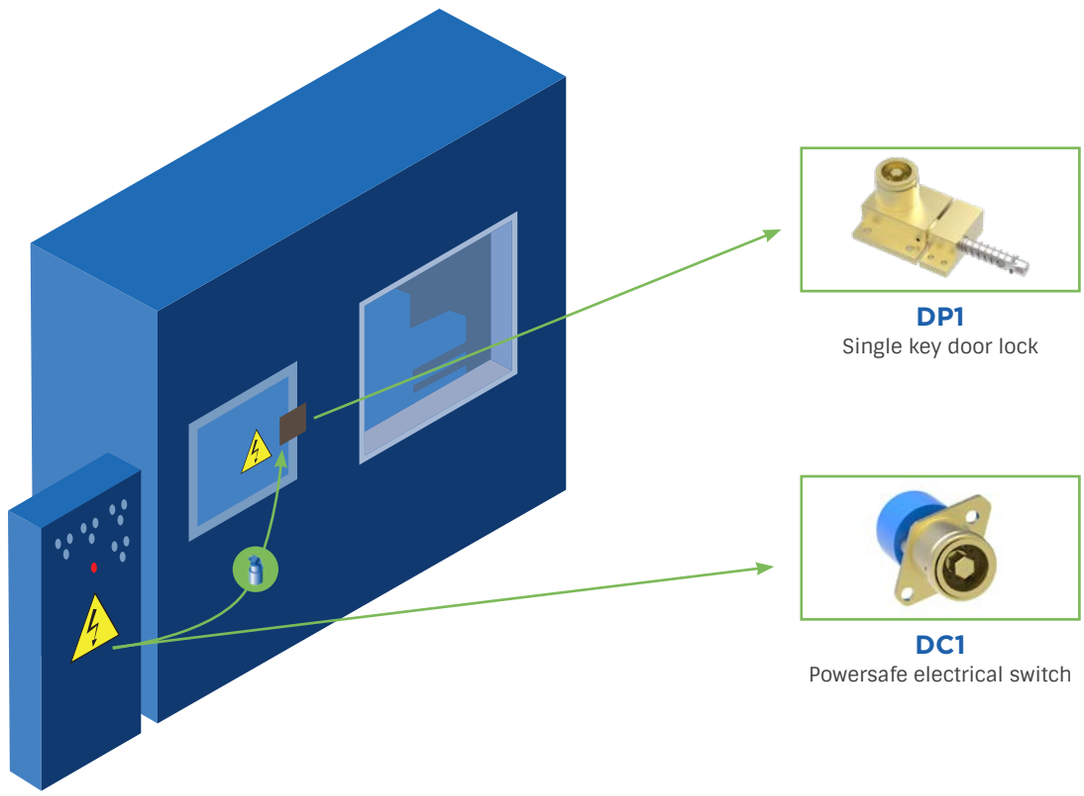
APPLICATION DESCRIPTION

The key switch for circuit breakers has been designed to function as part of an integrated safety system combined with access control to hazardous areas. Typical machines that use the key switch on disconnector and switchgears are those at a high risk where, complete power isolation is required before access is allowed. The removal of the key from the operated switch (bolt lock) of the disconnector, changes the conditions of the power supply to the machine, putting it in a safe condition. This key can be removed then and used to unlock access via the door release lock. In this way, the access door can only be opened when the power supply has been cut or otherwise switched to safe conditions. The machine cannot therefore be restarted until the door is closed and the key removed to be inserted in the operating lock (key switch of the disconnector).

APPLICATION EXAMPLES

ISOLATION

MACHINE GUARDING



DP1
Single key door lock

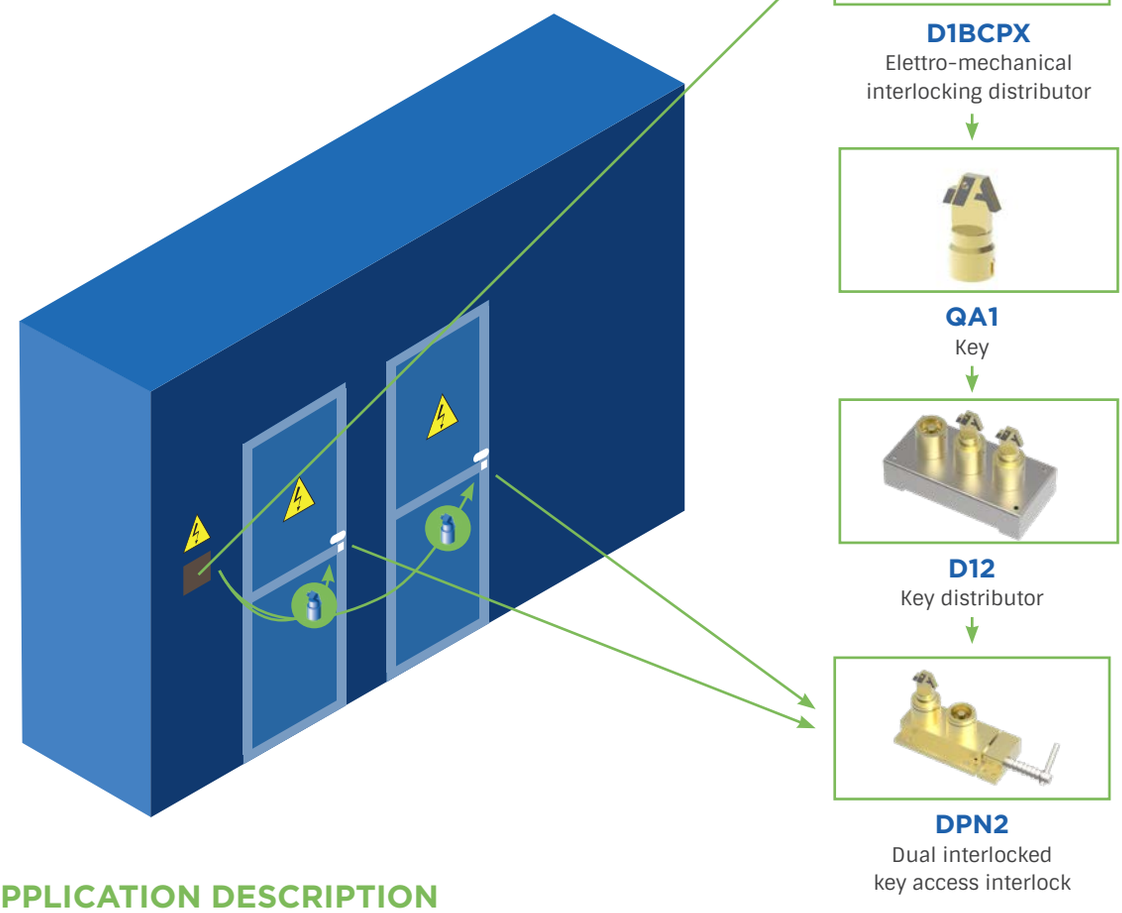
DC1
Powersafe electrical switch

APPLICATION DESCRIPTION

A typical application for the protection of environments and machinery with multiple access points, provides for the use of an electrical switch with single key operation. It is usually used in conjunction with a single-key access unlocking device. The key-operated electrical switch interrupts the machine's safety circuit, ensuring that the machine is locked when the key is turned and removed. The key can then be inserted in the access unlocking lock to open the door or trapdoor. The machine can not be restarted until the door is locked again, which is then removed and brought into the electric lock switch.

ISOLATION

PROTECTION OF MACHINERY WITH MULTIPLE ACCESS TO HAZARDOUS AREAS



APPLICATION DESCRIPTION

A typical application for the protection of environments and machinery with multiple access points, provides for the use of an electric switch with multiple operating keys. It is usually used in combination with a double and interlocked keys device for access with the whole body.

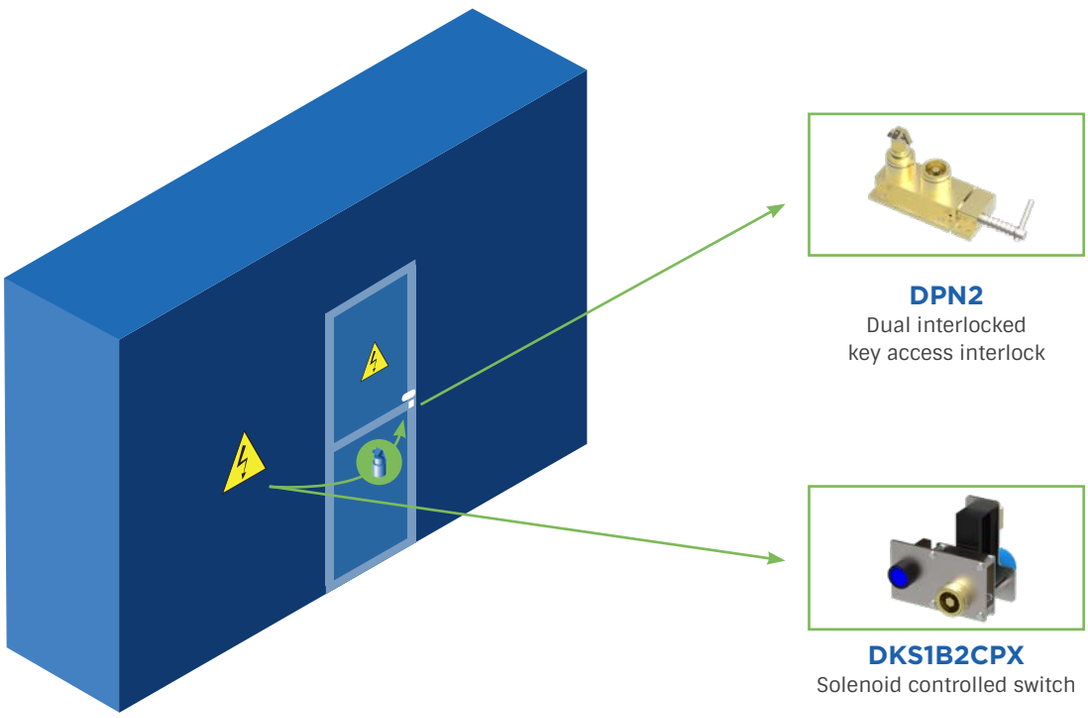
The typical interlocking system operates by isolating the machinery and controlling access to dangerous areas. The removal of the power isolation key from the interlock changes the condition of the power supply to the machinery, putting it in safe conditions and enabling the release of the keys to the personnel. These keys can then be used to unlock the double key access locks.

The protections can only be opened when the power supply has been put in a safe condition and only when all the keys have been re-inserted into the electric key-operated lock switch can the machine restart.

APPLICATION EXAMPLES

ISOLATION

ACCESS CONTROL TO UNINTERRUPTIBLE POWER SUPPLIES (UPS)



DPN2
Dual interlocked
key access interlock

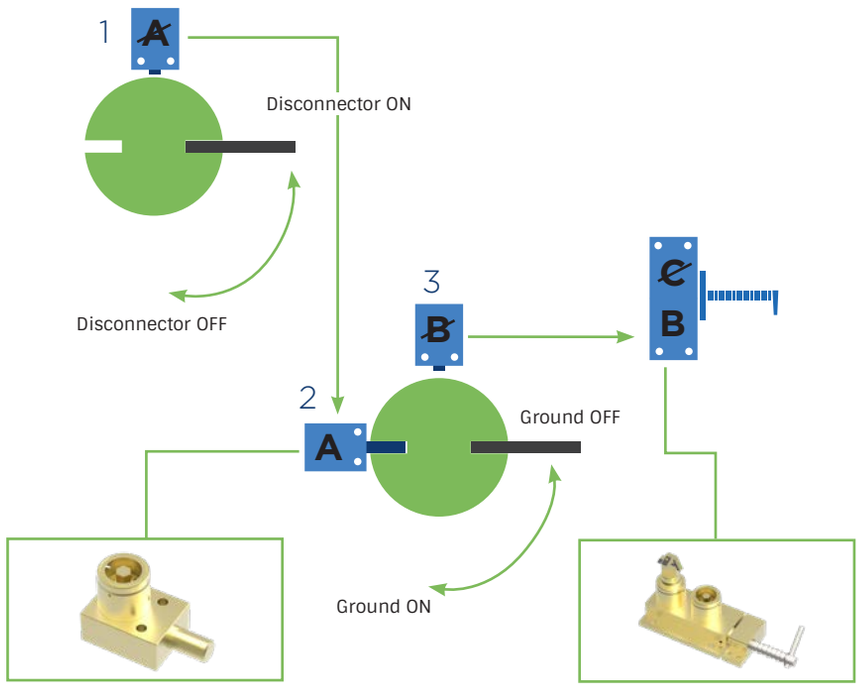
DKS1B2CPX
Solenoid controlled switch

APPLICATION DESCRIPTION

A typical application for controlling access to uninterruptible power supplies (UPS) is the use of a solenoid-controlled key switch.
When the machinery is in a safe state to allow access; the UPS system sends a signal to the lock to energize the solenoid, thus allowing the rotation and extraction of the key. Interrupting the UPS power supply.
The key can then be taken to access the protected area. The UPS can not start until the key is removed and taken to the key switch.

ISOLATION

SECURITY SYSTEMS
FOR SAFE CONTROL OF SWITCHES OR VALVES THAT PREVENT ACCESS TO DANGEROUS AREAS

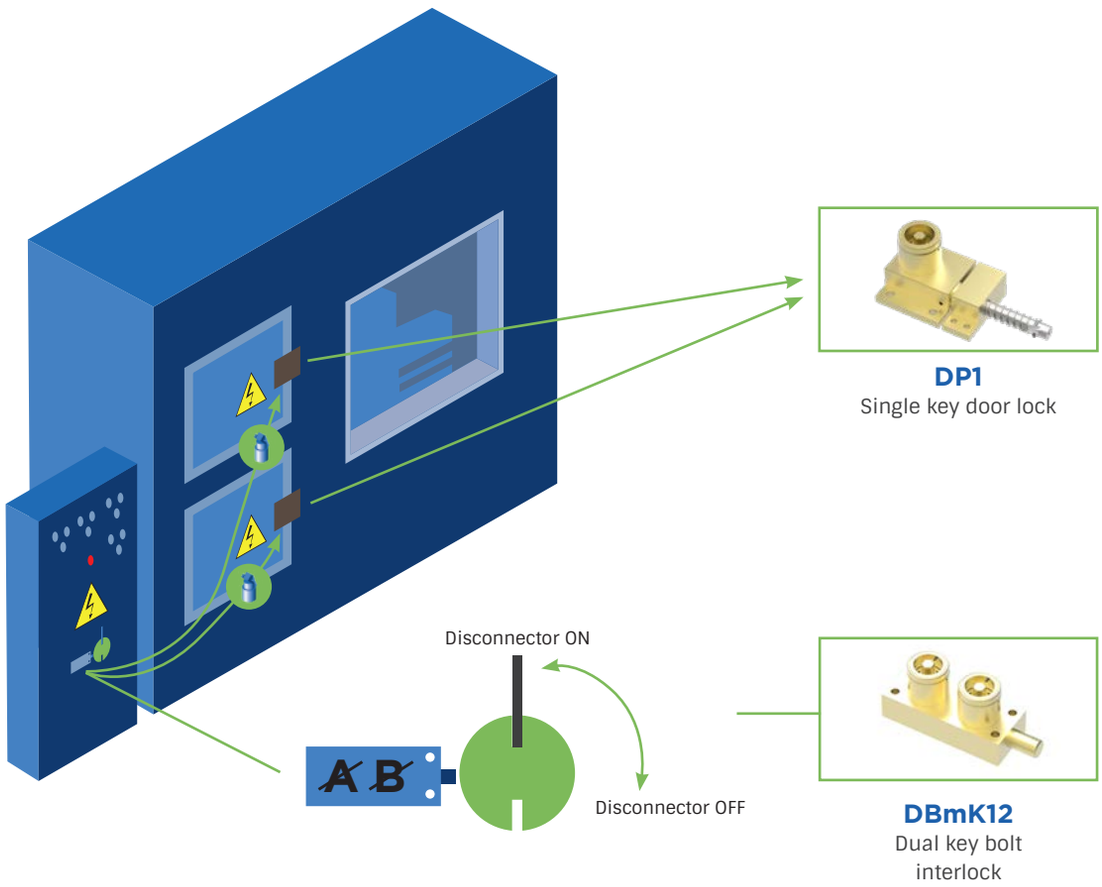


APPLICATION DESCRIPTION

These are security systems that use mechanical key interlocks. While power to the system is activated, the access doors to the hazardous area remain locked. The key A remains locked in the lock (1) while the process is actived and the line is powered. To access the hazardous area, the disconnector is moved to the OFF position and the bolt A is advanced, locking the disconnector in the open position (OFF). Key A is then picked up and taken to the grounding switch. By inserting and turning the key A in the second lock (2), the operation of the grounding lever is released. Once rotated, the slot on the lever aligns with the next lock lock (3), whose key B is trapped in the lock. Now the key B can be removed from the lock (3), thus locking the lever in the closed position, ensuring that the earth connection can not be interrupted. The system is now disconnected and connected to earth, the B key can be used to operate the access unlocking lock on the dangerous area door to access it.

ISOLATION

BLOCK ACCESS DOORS
TO HAZARDOUS AREAS WHEN USING ELECTRIC OR PNEUMATIC MACHINERY



DP1
Single key door lock

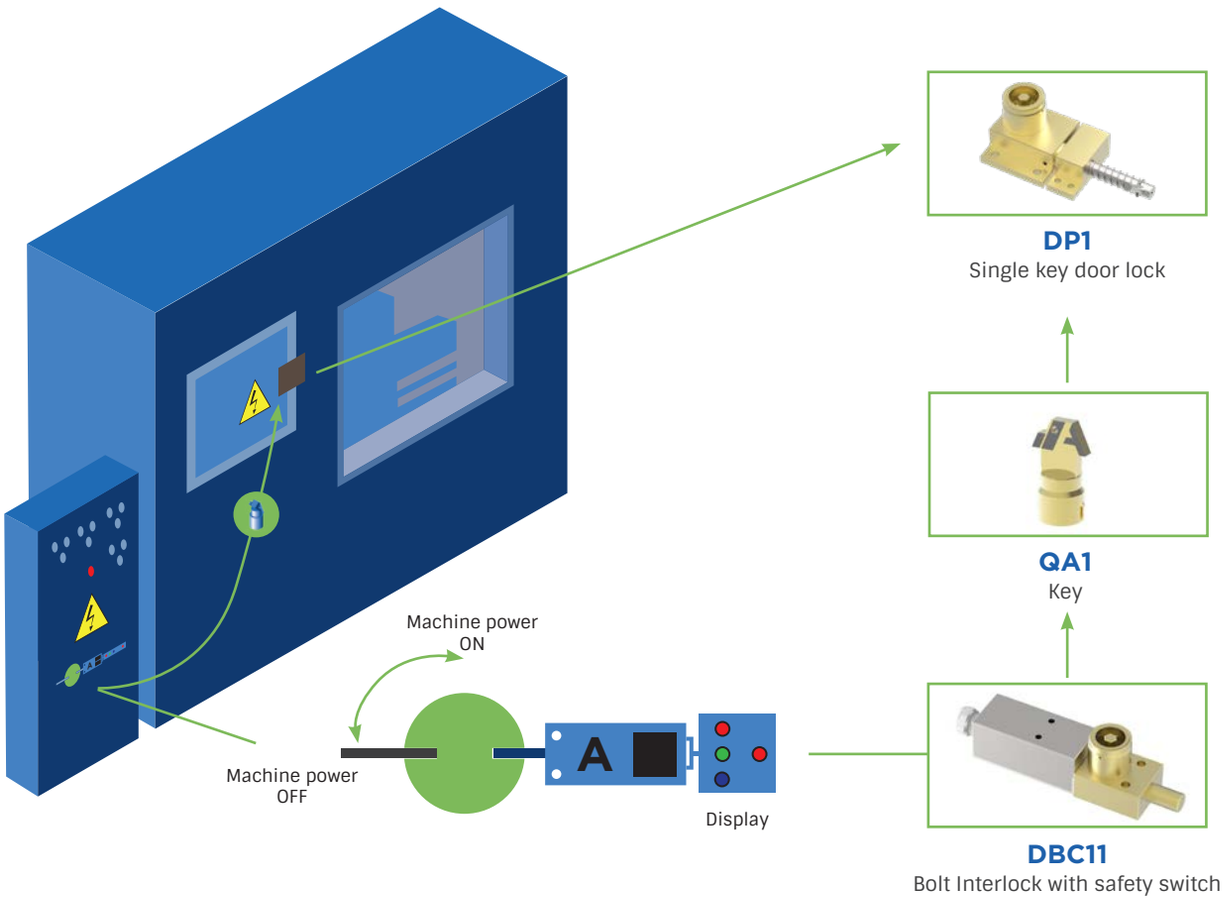
DBmK12
Dual key bolt interlock

APPLICATION DESCRIPTION

An application in the field of electrical and pneumatic equipment supplies is to create a safety system in which the double key operation blocks are used to block the access doors to the hazardous area while the machinery is switched on. The keys A and B are locked in the bolt lock, preventing access to the machine area. To enter the area, the pneumatic supply must be switched off. Turning the keys in the double-handle bolt block will extend its bolt. The release of the keys ensures that the bolt remains in the extended position by blocking the disconnector. The released keys can now be transferred to the machine area to gain access through the access interlocks. The disconnector can not be switched on until both access doors are locked and both keys are inserted in the double key operated lock.

ISOLATION

BLOCK THE ACCESS DOOR
TO A DANGEROUS AREA WITH LIGHT SIGNALING WHEN USING ELECTRIC OR PNEUMATIC MACHINES



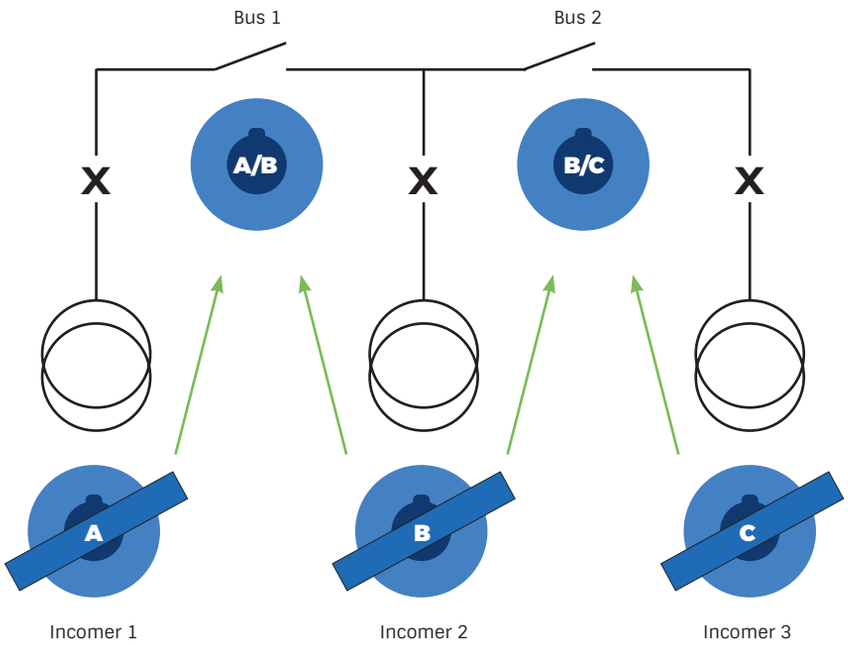
APPLICATION DESCRIPTION

The bolt locks with safety switches are used as part of a safety system, typically in electrical cabinet applications. The power supply to the machine is switched on and the protective door of the hazardous area is blocked. The key is trapped in the interlock. Before entering the machine area, the isolator lever must be turned to isolate the machine. To lock the isolator lever in the safety position, it is necessary to rotate the key in the interlock by extending the bolt. The removal of the key traps the bolt in the extended position. The interlock operation also changes the contacts in the switch. This is connected to a traffic light or to another display, so indicating that it is possible to gain access to the machinery area. The removed key is brought to the access lock to allow it to be opened. The power supply can not be reactivated until the key is trapped in the door lock.

APPLICATION EXAMPLES

ISOLATION

NEED TO ENSURE THAT MORE ARRIVALS ARE NOT PUT IN PARALLEL



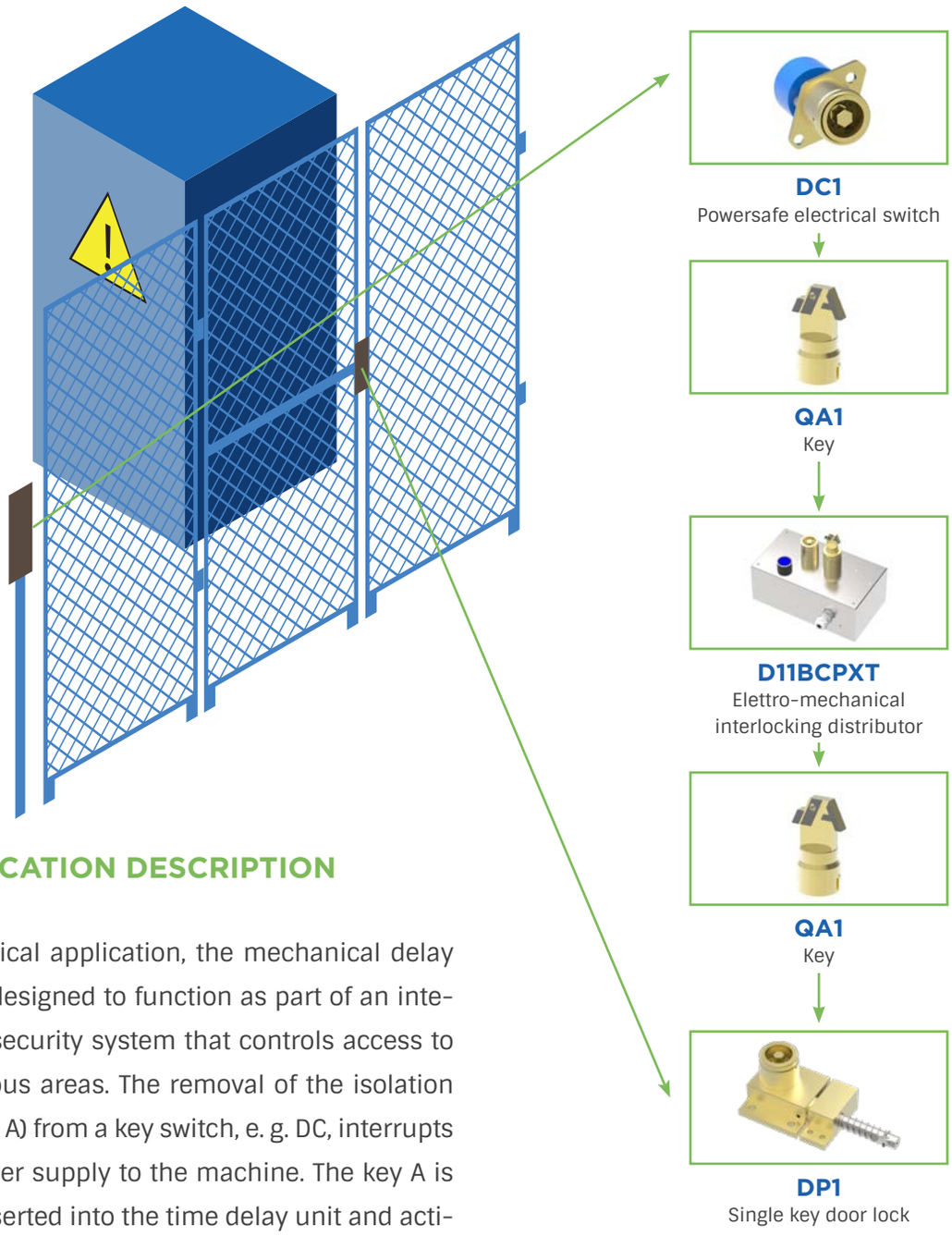
MC3533
Switchgear Interlock

APPLICATION DESCRIPTION

The MC interlocks are used to ensure that multiple arrivals are not put in parallel. When all the incomers are closed, the busbars are open. In the example, to close Bus 1, the arrival A or B must be opened. The key is removed from the A or B lock and inserted into the bus switch A/B. To close Bus 2, B or C must be open and the B or C key transferred to the B/C switch.

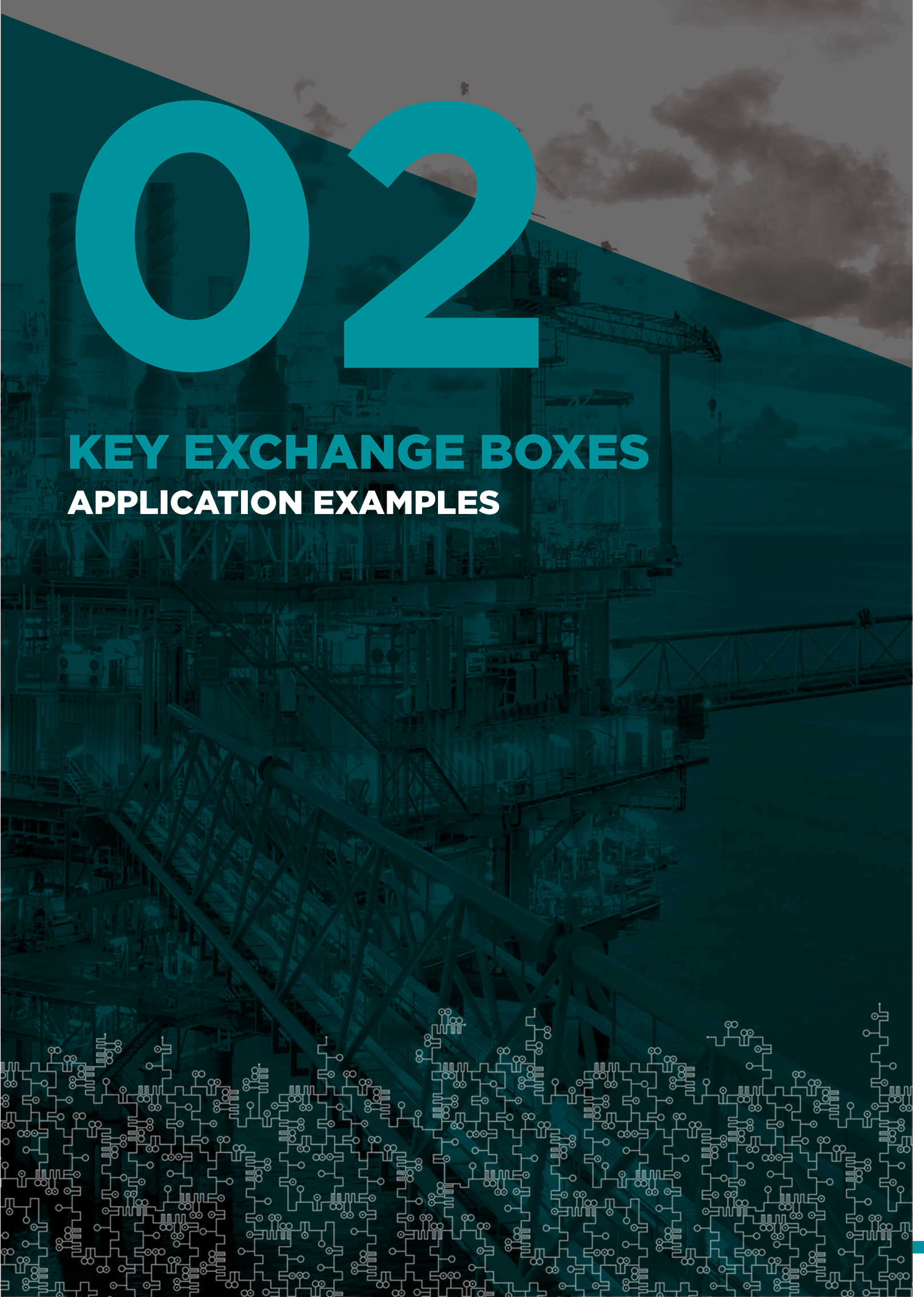
ISOLATION

INTEGRATED SECURITY SYSTEM THAT CONTROLS ACCESS TO HAZARDOUS AREAS WITH TIME DELAY



APPLICATION DESCRIPTION

In a typical application, the mechanical delay unit is designed to function as part of an integrated security system that controls access to hazardous areas. The removal of the isolation key (key A) from a key switch, e. g. DC, interrupts the power supply to the machine. The key A is then inserted into the time delay unit and activated, starting the timer. After the timeout period has been completed, another key can be released (key B) (the delay must be greater than the machine stop time). The key B can then be brought to the access lock DP1 and the machine room door can be opened. The machine can not be restarted until the door is closed and the key is returned to the time delay unit.



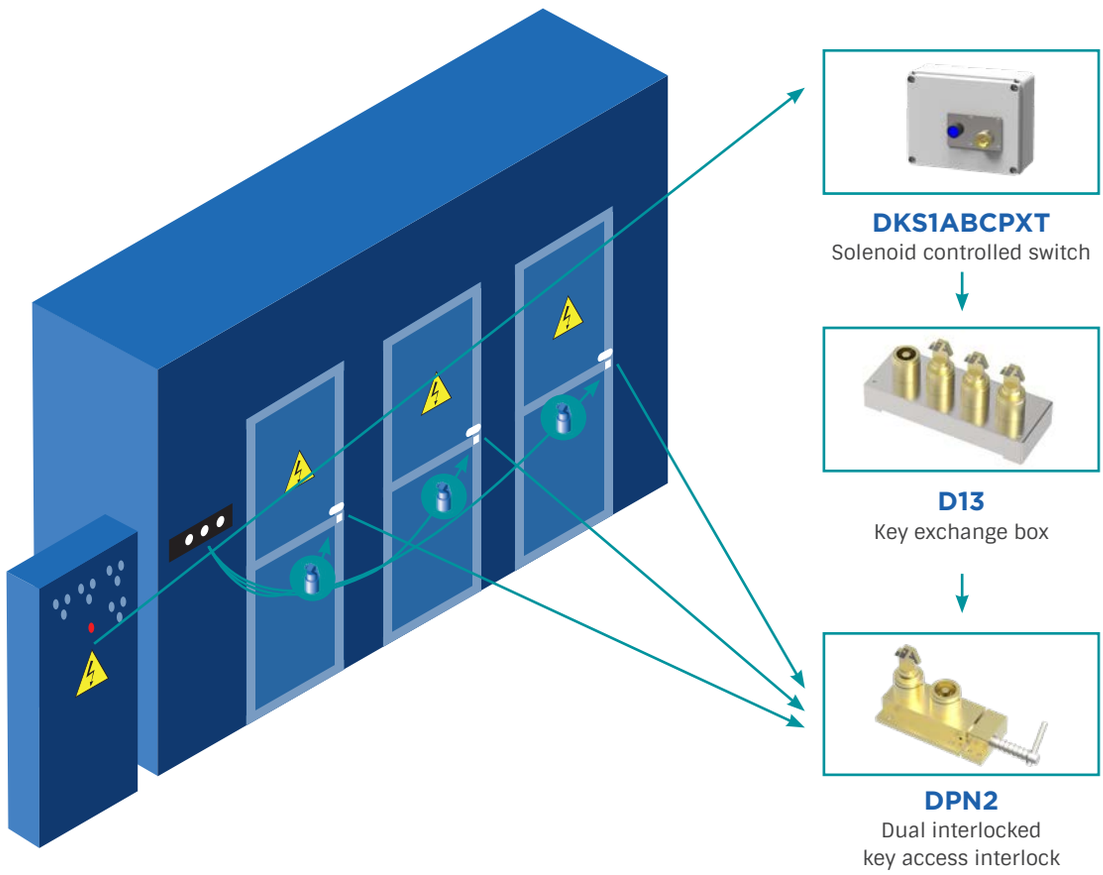
02

KEY EXCHANGE BOXES

APPLICATION EXAMPLES

KEY EXCHANGE BOXESES

PROTECTION OF MACHINERY WITH ONE OR MORE ACCESS POINTS TO THE HAZARDOUS AREA



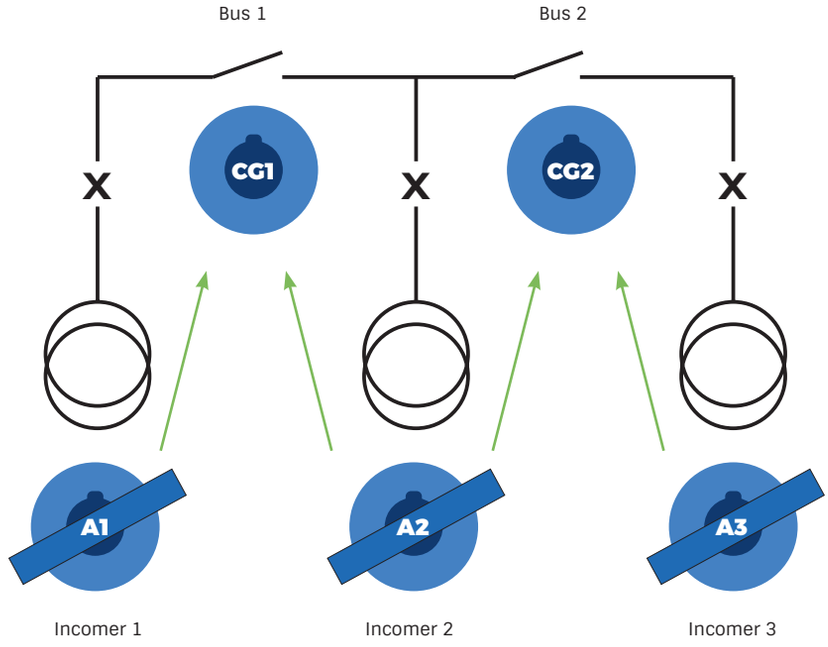
APPLICATION DESCRIPTION

A typical application for the protection of machinery with one or more access points to the hazardous area involves the use of key distributors. The key distributor is used as part of a security system, which ensures the shutdown of a machine, before access to the hazardous area is allowed. The system includes a key switch for power supply and typically more than one door lock for complete operator access. The removal of the isolation key from the key switch isolates the power supply to the machine. This key is brought to the key distributor to release the trapped keys. The released keys are used to access through the door interlocks. It is not possible to restart the machine until all the keys are inserted back into the key distributor in order to release the lock key and then remove the insulation.

APPLICATION EXAMPLES

KEY EXCHANGE BOXESES

ENSURE THAT THERE ARE NO MORE POWER SUPPLIES TO THE BUS BARS IN THE ELECTRICAL CABINET



APPLICATION DESCRIPTION

In the application shown in picture, key A1 will work for arrival 1, key A2 will work for arrival 2 and key A3 for arrival 3. key CG1 operates the bus tie 1, while key CG2 operates the bus tie 2. To an inserted key, the corresponding switch is closed.

The system shown is in position 1 (see table) and has closed arrivals and open junctions. To change the system to condition 2, key A1 is inserted into the distributor and the selector knob is moved to condition 2. In this position, the key CG1 can be removed and busbar switch CG1 closed.

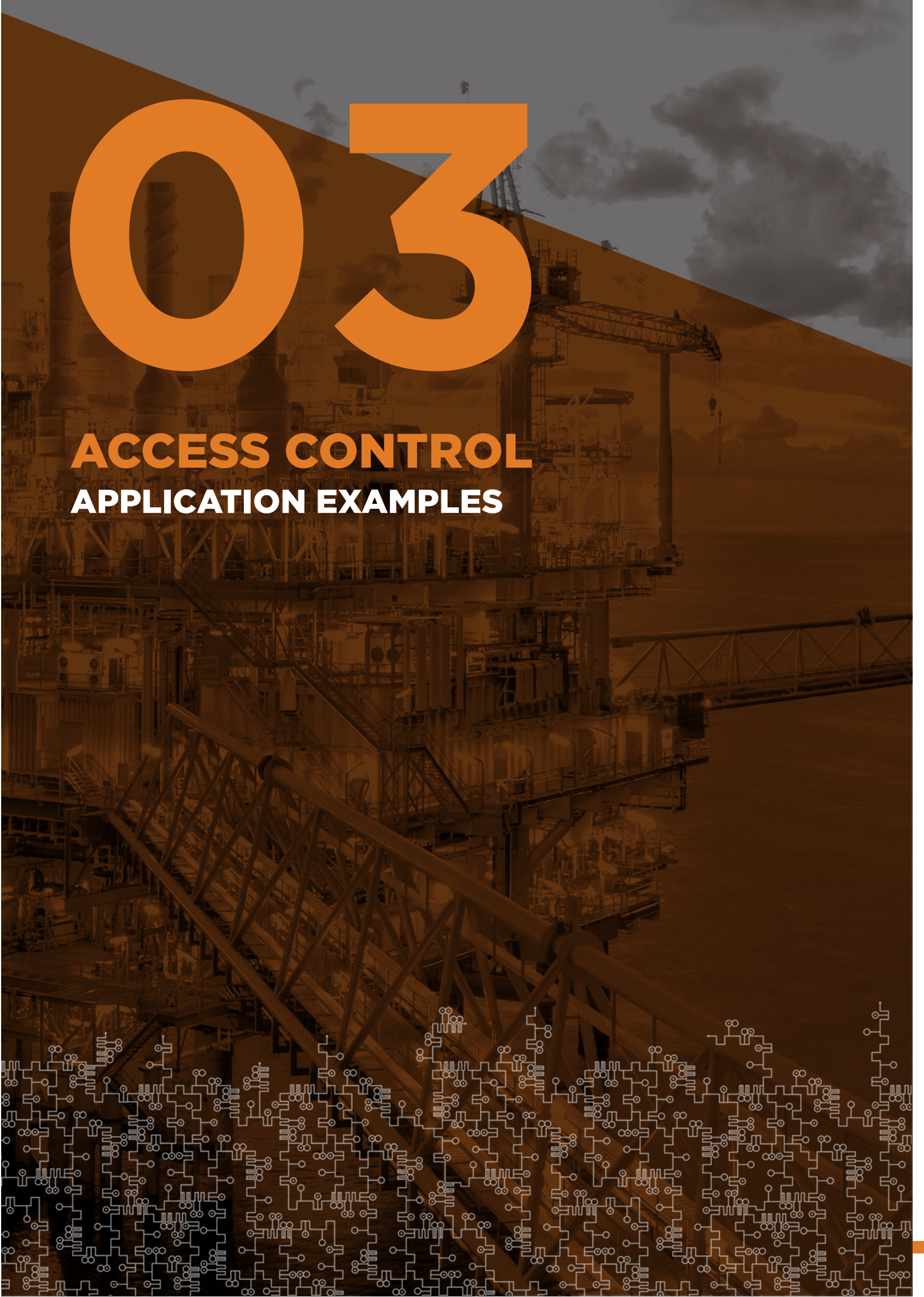
	A1	A2	A3	CG1	CG2
Pos 1	F	F	F	T	T
Pos 2	T	F*	F*	F	T
Pos 3	F	T	F*	F	T
Pos 4	F*	T	F*	T	F
Pos 5	F*	F	T	T	F

F= Free Key

T= Trapped Key

*= the key is not returned between two adjacent selections


6



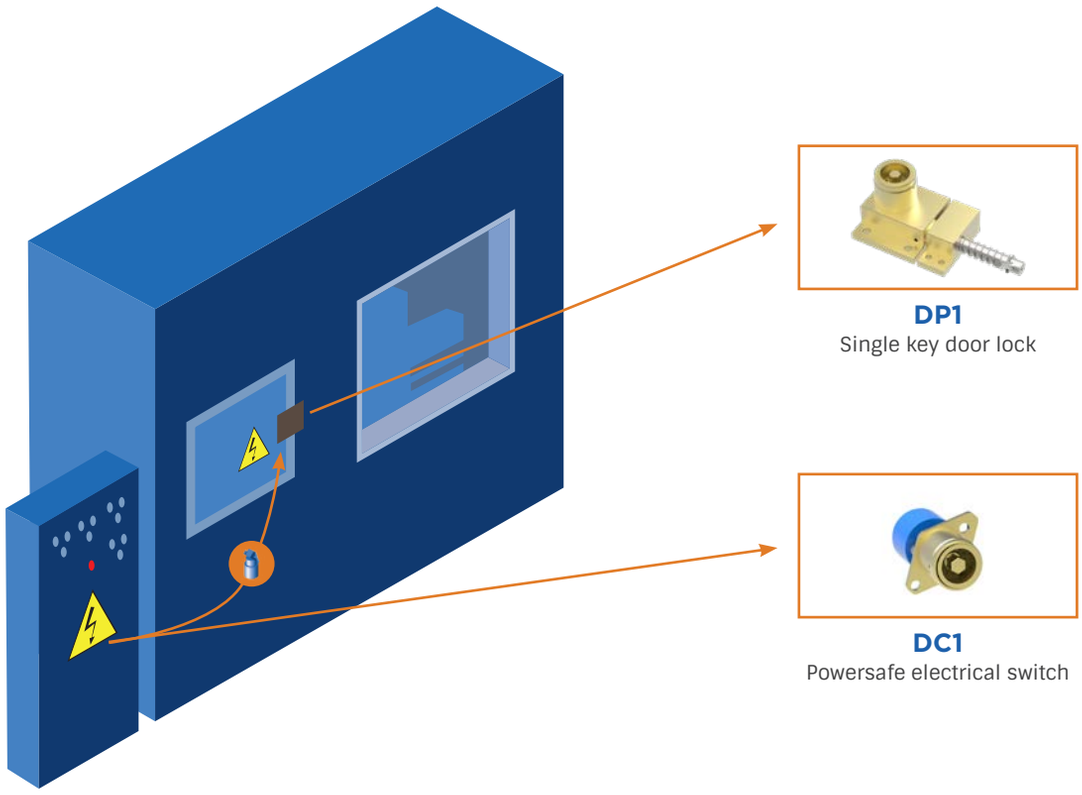
03

ACCESS CONTROL

APPLICATION EXAMPLES

ACCESS CONTROL

MACHINERY PROTECTION WITH PARTIAL ACCESS TO THE RISK ZONE
(VISIBLE OPERATOR)



DP1
Single key door lock

DC1
Powersafe electrical switch

APPLICATION DESCRIPTION

A typical application of the single key access interface is the protection of machinery with partial access to the risk zone; this means that the operator keep visible.

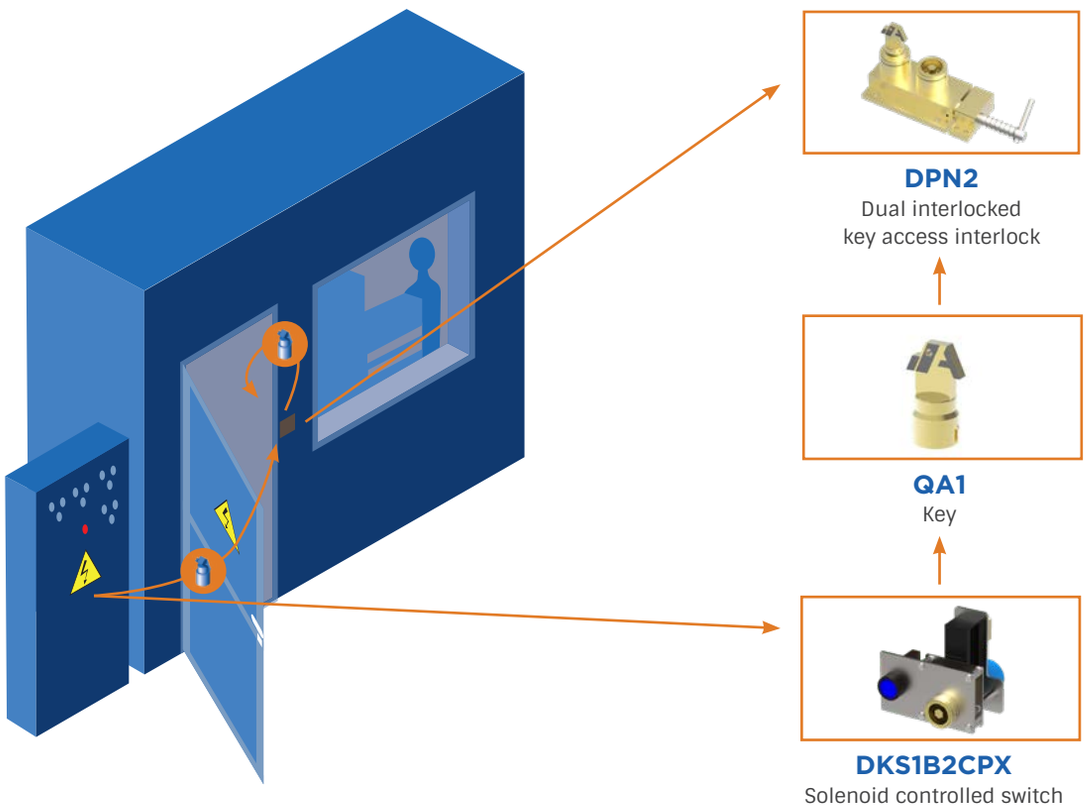
The system has a key switch that cuts the safety circuit of the machine when the key is removed. The key can then be inserted into the single-key door lock to enable access to the machine.

The machine can not be restarted until the door is completely closed and locked by the lock; only in this way will it be possible to re-cover the key to restart the machine via the safety switch.

ACCESS CONTROL

FULL BODY ACCESS

MACHINERY PROTECTION WITH FULL ACCESS TO THE HAZARDOUS ZONE
(NOT VISIBLE OPERATOR)



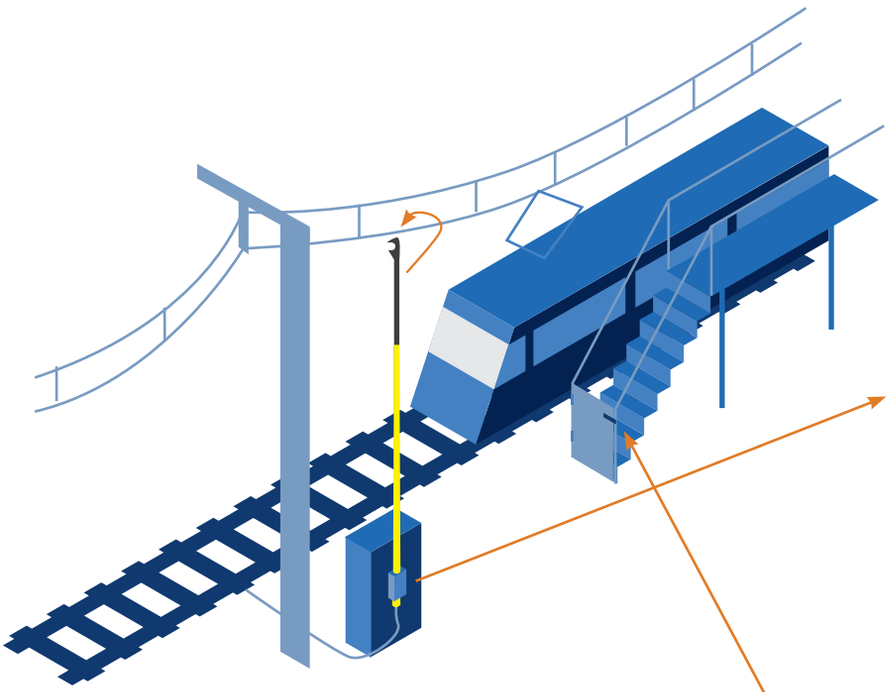
APPLICATION DESCRIPTION

A typical application in the control activity of machinery with full body access, involves the use of the interlock with a double interlocked key for the protection of personnel from the possibility of access before the machinery is deactivated and subsequently that the operator may be inadvertently closed in the dangerous area. The dual-key access interlock is used as part of a security system, which ensures that a machine is stopped before access to the hazardous area. The system provides a key switch for power supply. Removing the isolation key from the key switch isolates the power supply to the machine. This key is transferred to the interlock with a double access key and inserted into the lock. This allows the door opening and the release of the personal key and slides the side bolt, which traps the isolation key. The personal key is then brought to the hazardous area by the operator to protect himself against accidental starting.

The machine can not be restarted until the personal key is returned, the bolt is reinserted in the dual key interlock and the isolation key is removed and returned to the key switch.

ACCESS CONTROL

MAINTENANCE PROTECTION RAILWAY WITH FULL BODY ACCESS TO HAZARDOUS AREA
(NOT VISIBLE OPERATOR)



QA1
Key

DBOX
Railway grounding blocking device (Patented)

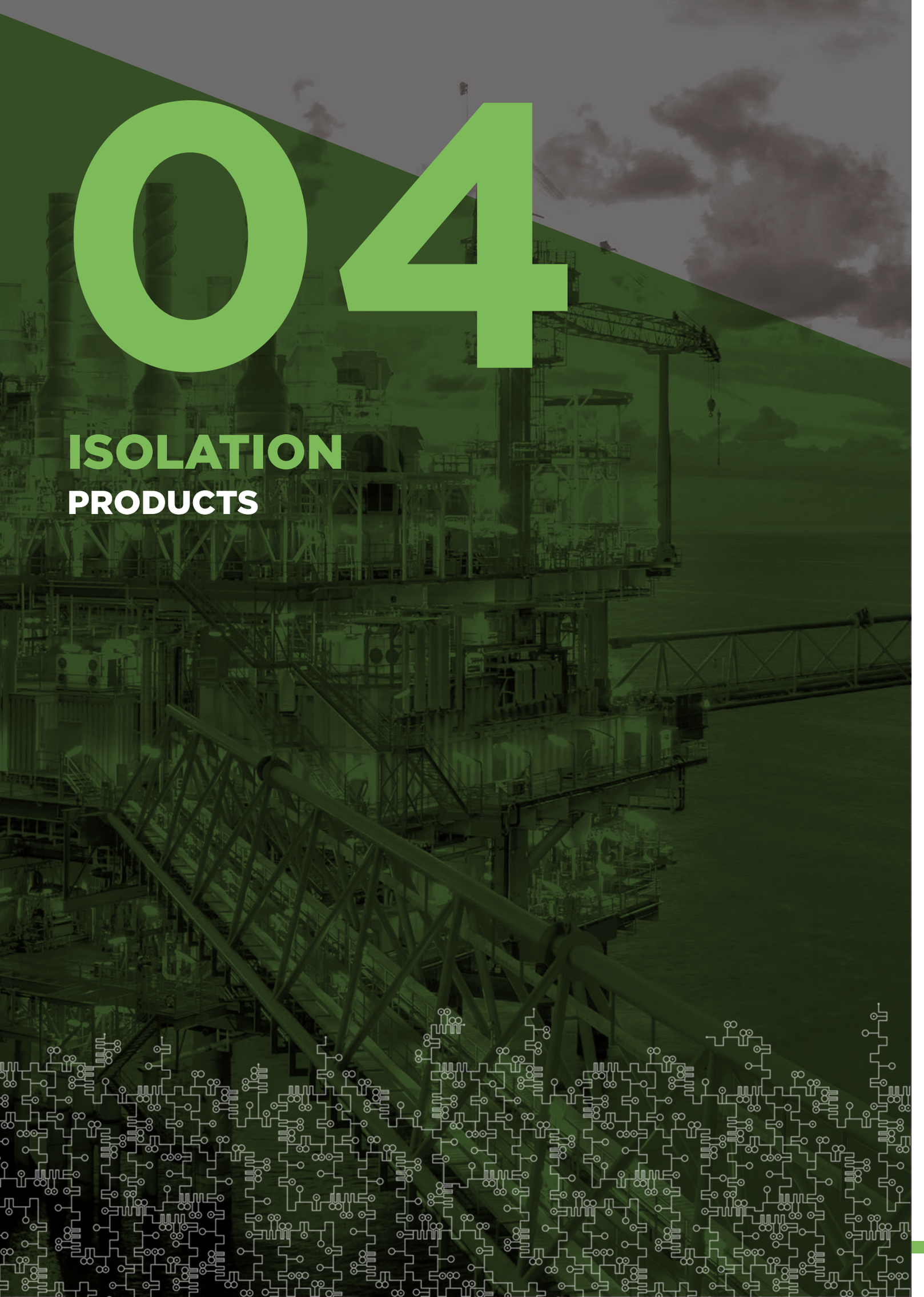
QA1
Key

DPN2
Dual interlocked key access interlock

APPLICATION DESCRIPTION

A typical application in railway maintenance activities, with full body access, provides the use of the interlock with a double access key for the protection of personnel from the possibility to access before the electric traction drive is deactivated and subsequently that the operator may be inadvertently closed in the risk zone. The interlock double key access is used as part of a security system, which guarantees arrest and grounding the electric drive first access to the hazardous area. The system has a key switch (often with 3 keys) for feeding electric traction. Removal of the isolation key from the switch cuts power electricity. This key is transferred in the interlock with a double key (block railway earthing maneuver - SecureBox) and inserted in the lock. This allows the release of the grounding insulating rod and of the opening key of the double-key access lock to the maintenance area and source of danger (e.g roof).

This must be entered in the access lock, which releases the personal key and traps the key to isolation. The personal key comes then brought to the area dangerous by the operator to protect against accidental starting. Electric traction can not be restarted until it is returned the personal key, the bolt is reinserted into the double interlock key and the key to isolation is removed and reported in the SecureBox lock along with the insultaing rod.



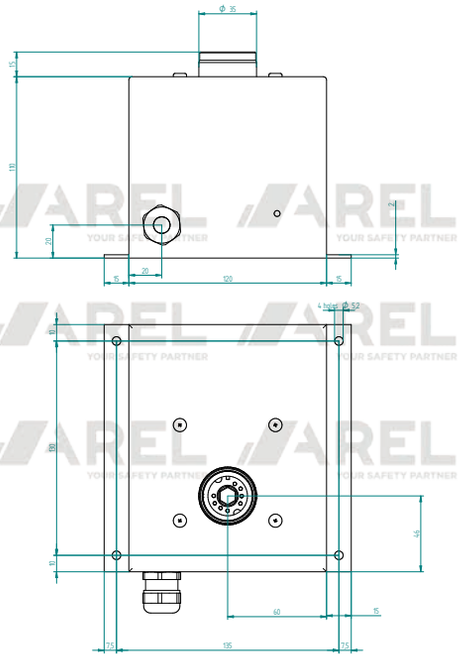
04

ISOLATION
PRODUCTS

ISOLATION

DKSA/IP
Switch disconnector

H190.01A32/DKSA1-3C/IP



PRODUCT FEATURES

» Key switch for disconnectors. Used for current and motor isolation;

» Complete with 6 main pole (NO) switch;

» Material: brass and/or stainless steel;

» Suitable for use in corrosive and non-corrosive environments;

» Panel mounting;

» Stainless steel housing;

» Available with key series QA1;

» 32A standard version.

OPTIONS

Standard

32A switch with 3-elements
(6NO) to 2 positions (0-1)
IP65 stainless steel box

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 1-element switch (2NO)
H190.01A32/DKSA/IP
With 2-component switch (4NO)
H190.01A32/DKSA2C/IP
With 63A switch
H190.01A63/DKSA1-2C/IP
With 125A switch
H190.01A125/DKSA1-2C/IP

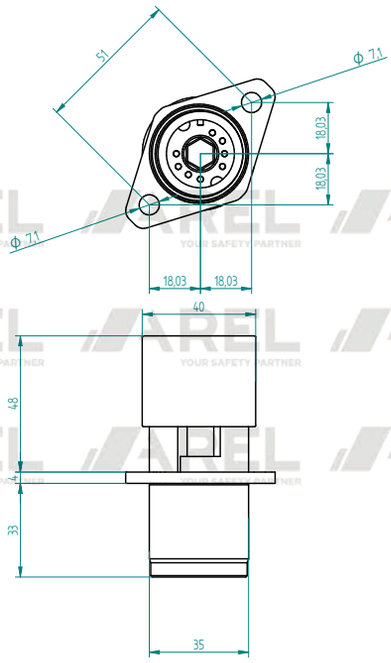
You can request versions with one combination of these variations; for example:

With 1-element and 125A switch
H190.01A125/DKSA/IP

ISOLATION

DC
Powersafe electrical switch

H180.01A20/DC1-2C



PRODUCT FEATURES

» Electric key switch;

» Designed for machines control circuits;

» Intended for the use of short-term insulation;

» Available with key series QA1;

» Material: brass or stainless steel;

» Ideal for use in non-aggressive, corrosive and heavy-duty environments;

» To be mounted on panel or back panel;

» Available with standard 20 A and 25 A on request.

OPTIONS

Standard

20A switch with 2-elements (4NO)
at 2 positions (0-1)

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 1-element switch (2NO)
H180.01A20/DC1
With 3-component switch (6NO)
H180.01A20/DC1-3C
With 25A switch
H180.01A25/DC1-2C
In Junction box
H185.01A20/DCA1-2C
Boxed in IP65 metal box
H190.01A20/DCA1-2C/IP

You can request versions with one combination of these variations; for example:

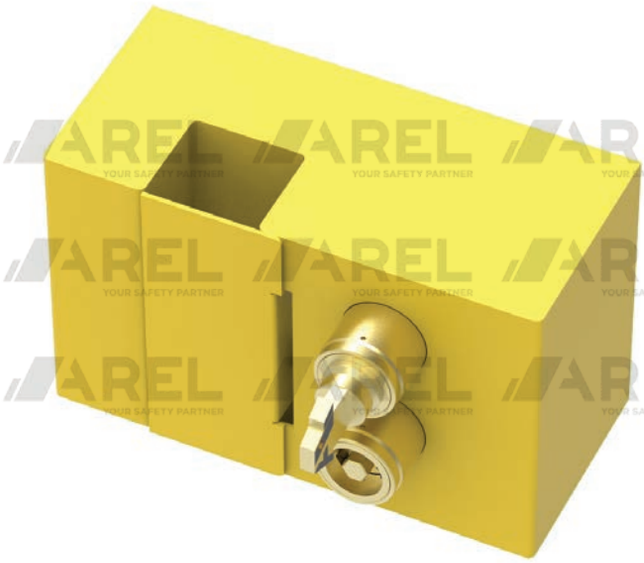
With 3-elements and 25A
H180.01A25/DC1-3C

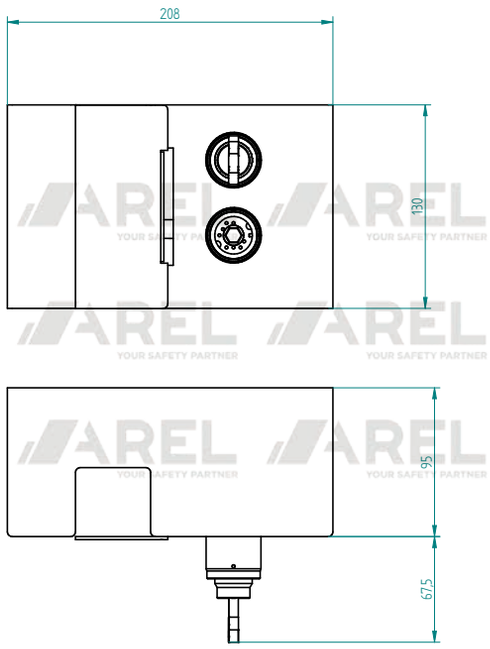
ISOLATION

DBOX

Railway grounding blocking device (Patented)

H68.DBOX12





PRODUCT FEATURES

» Secure box is a patented, innovative product safety device for maintenance works on rail traction power lines and specific on power lines railways inside maintenance workshop;

» Interlock with 2 keys for interconnection between the ground blade selector and the insulating rod and interconnection between the insulating rod and the Key Exchange Boxes;

» Staff to the shelter of the foil in rest position;

» Toll for pole attachment of interlocking device;

» Bracket and ring for flag fixing.

OPTIONS

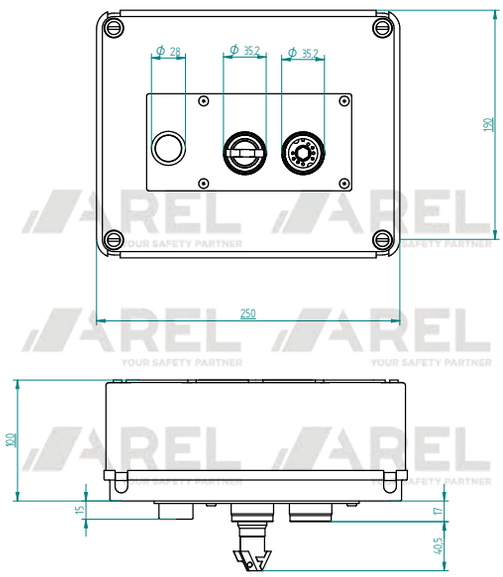
Standard

Box in epoxy painted yellow stell
Brass cylinders

ISOLATION

DKS-B
Solenoid controlled switch

H185.02A20/DKS11B2CPX



PRODUCT FEATURES

» Heavy-duty solenoid controlled key switch interlock;

» Intended to be used for controlled isolation or low current switching;

» Used when a process can send a signal to release a key, e. g. a robot must end a cycle before isolation;

» It should be used for short-term insulation, out of load;

» Available with key series QA1;

» Mounting in an existing panel or for surface mounting;

» Housing in junction box with IP65 degree of protection (surface mounted version);

» Material: brass or stainless steel;

» Suitable for use in standard or corrosive environments;

» Available voltages: 24, 48, 110 and 230 Vac or Vdc.

OPTIONS

Standard

20A switch with 2-elements (4NO) and 2 positions (0-1)
One solenoid (B)
A blue light button-NO contact (PX)
Solenoid voltage: 110Vdc

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 1-element switch (2NO)
H185.02A20/DKS11BPX
With 3-component switch (6NO)
H185.02A20/DKS11B3CPX
Without button
H185.02A20/DKS11B2C
With key lock on insertion
H185.02A20/DKS11B2CPX/I
With key lock in both positions
H185.02A20/DKS11B2CPX/IE
With non-luminous button
H185.02A20/DKS11B2CP
With 25A switch
H185.02A25/DKS11B2CPX
With two contacts on the button (2NO)
H185.02A20/DKS11B2CPXD
Without polyester junction box
H180.02A20/DKS11B2CPX
Boxed in IP65 stainless steel box
H190.02A20/DKS11B2CPX/IP
Other available voltages: 24-48-230Vac / 24-48Vdc

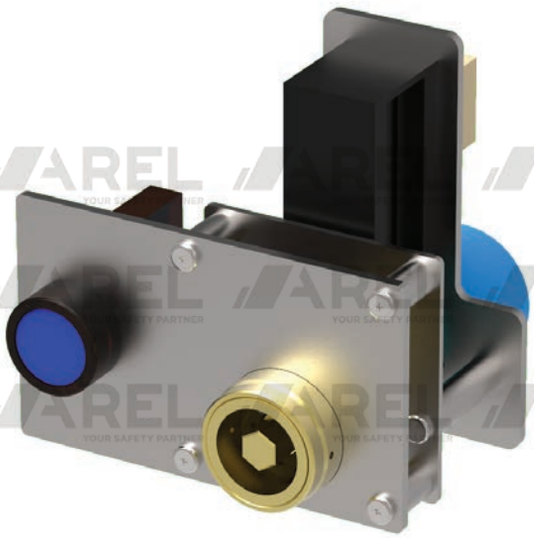
You can request versions with one combination of these variations; for example:

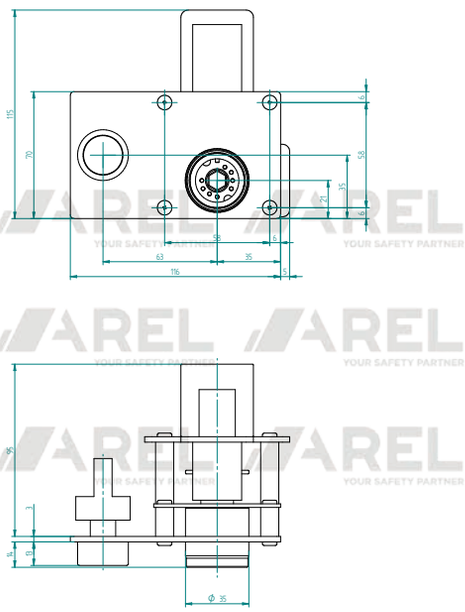
With 3-elements and push-button (no light)
H185.02A20/SKS11B-3CP

ISOLATION

DKS-B
Solenoid controlled switch

H180.01A20/DKS1B2CPX





PRODUCT FEATURES

» Heavy-duty solenoid controlled key switch interlock;

» Mainly used in UPS systems (Uninterruptable power supply);

» Ensures that access can only be acquired when the UPS is in safe condition;

» Material: brass or stainless steel;

» Ideal for use in corrosive and non-corrosive environments;

» Supplied ready for backpanel mounting;

» Available voltages: 24, 48, 110 and 230 Vac or Vdc;

» Available with key series QA1.

OPTIONS

Standard

20A switch with 2-elements (4NO) and 2 positions (0-1)
One solenoid (B)
A blue light button to a NO contact (PX)
Solenoid voltage: 110Vdc

Variants, compared to standard model shown in this page, differ by conditions indicated below:

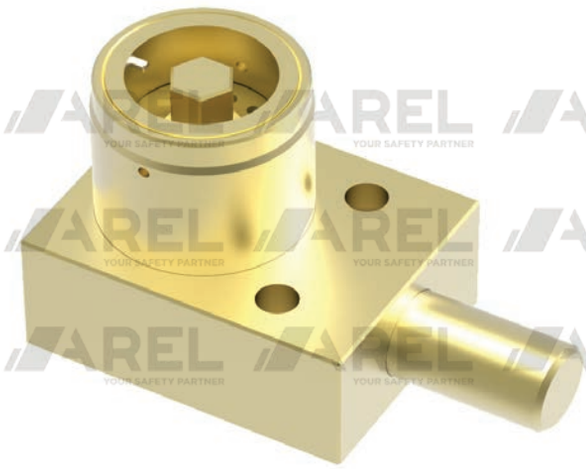
With 1-element switch (2NO)
H180.01A20/DKS1BCPX
With 3-component switch (6NO)
H180.01A20/DKS1B3CPX
Without button
H180.01A20/DKS1B2C
With key lock on insertion
H180.01A20/DKS1B2CPX/I
With key lock in both positions
H180.01A20/DKS1B2CPX/IE
With non-luminous button
H180.01A20/DKS1B2CP
With 25A switch
H180.01A25/DKS1B2CPX
With two contacts on the button (2NO)
H180.01A20/DKS1B2CPXd
Boxed in junction box
H185.01A20/DKSA1B2CPX
Boxed in IP65 metal box
H190.01A20/DKSA1B2CPX/IP
Other available voltages: 24-48-230Vac / 24-48Vdc

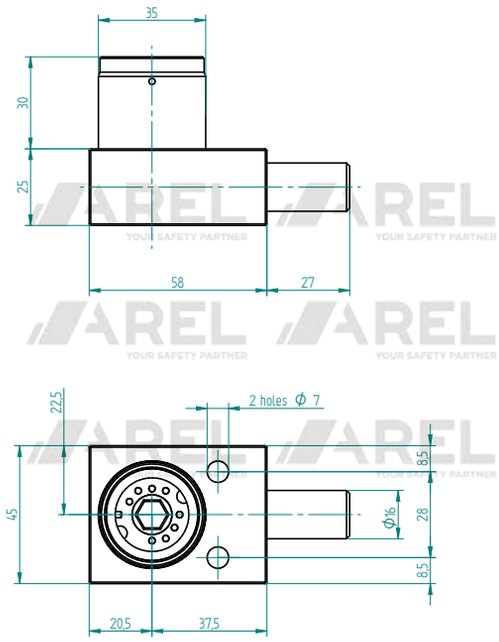
You can request versions with one combination of these variations; for example:
With 3-elements and push-button (no light)
H180.01A20/SKS1B-3CP

ISOLATION

DB
Bolt lock

H55.DB11





PRODUCT FEATURES

» Key mechanical interlocking;

» Designed for the control of electrical panels, valves and operations in general;

» Comes with a 15.92mm (16-) diameter; bolt available in various lengths;

» Material: brass or stainless steel;

» Ideal for use in corrosive, non-corrosive or aggressive environments;

» Bolt cutting force: 30KN (stainless steel) and 19KN (brass).

OPTIONS

Standard

Bolt stroke 19.5mm
Diameter of the bolt 16mm
Brass

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With bolt that flush with the lock
H55.DB11/020
With bolt with minimum protrusion 23mm
H55.DB11/2343
With bolt with minimum protrusion “x” mm
H55.DB11/xy
With bolt variable length up to
H55.DB11/Lx
With nickel-chromium treatment
H55.DB11/L9100
With body in stainless steel sheet
H58.DB11X
In stainless steel
H59.DB11SS

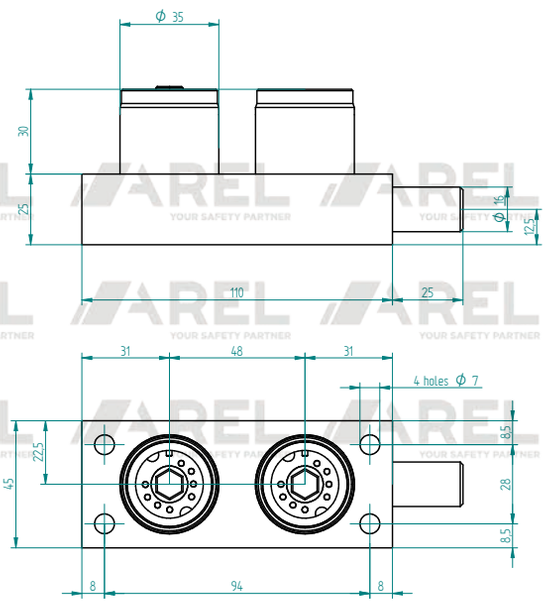
You can request versions with one combination of these variations; for example:

With nickel-chromium treatment and bolt flush with lock
H55.DB11/020/L9100

ISOLATION

DB
Dual key bolt

H55.DBmK12



PRODUCT FEATURES

» The double-key locking lock is a key-operated mechanical interlock;

» Designed for the control of electrical panels, valves and operations in general;

» Comes with a 12mm diameter bolt available in various lengths;

» Available with key series QA1;

» Material: brass and / or stainless steel;

» Ideal for use in corrosive, non-corrosive or aggressive environments;

» Version with double control key.

OPTIONS

Standard

Bolt stroke 19.5mm
Diameter of the bolt 16mm
Brass

Variants, compared to standard model shown in this page, differ by conditions indicated below:

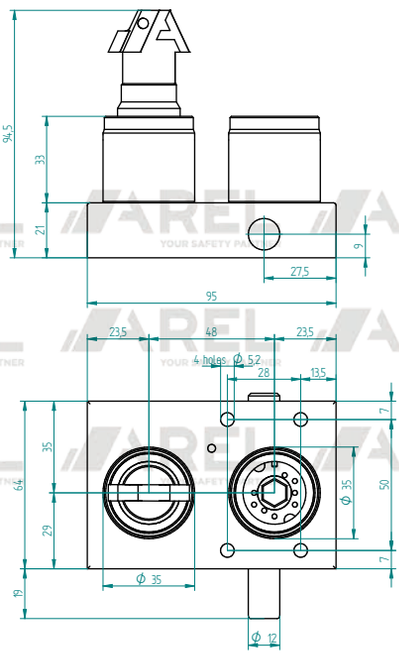
With bolt that flush with the lock
H55.DBmK12/020
With bolt with minimum protrusion 23mm
H55.DBmK1/2343
With bolt with minimum protrusion “x” mm
H55.DBmK12/xy
With bolt variable length up to
H55.DBmK12/Lx
With nickel-chromium treatment
H55.DBmK12/L9100
With body in stainless steel sheet
H58.DBmK12X
In stainless steel
H59.DBmK12SS

You can request versions with one combination of these variations; for example:

With 20mm stroke and 61mm high cylinder
H55.DBmK12/020/L9100

DB
Dual key bolt interlock

H55.DB12



PRODUCT FEATURES

» The double-key locking lock is a key-operated mechanical interlock:

» Designed for the control of electrical panels, valves and operations in general;

» Comes with a 12mm diameter bolt available in various lengths;

» Available with key series QA1;

» Material: brass and/or stainless steel;

» Ideal for use in corrosive, non-corrosive or aggressive environments;

» Version with interlocked keys.

VARIANTS

Standard

Bolt stroke 13mm
Diameter of the bolt 12mm
Brass cylinder
Stainless steel body

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With bolt with minimum protrusion “x” mm
H55.DB12/xy
With bolt variable length up to
H55.DB12/Lx
With nickel-chromium treatment
H55.DB12/L9100
Cylinder in stainless steel
H59.DB12SS

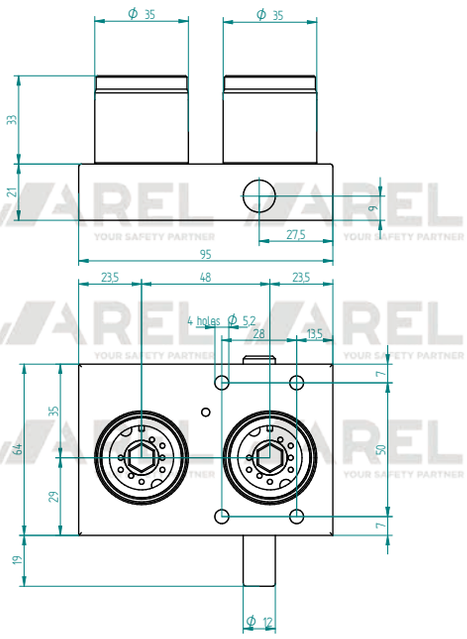
You can request versions with one combination of these variations; for example:

With nickel-chromium treatment and bolt a variable length
H55.DB12/Lx/L9100

ISOLATION

DB
Dual key bolt

H55.DBK12



PRODUCT FEATURES

» The double-key locking lock is a key-operated mechanical interlock;

» Designed for the control of electrical panels, valves and operations in general;

» Comes with a 12mm diameter bolt available in various lengths;

» Available with key series QA1;

» Material: brass and / or stainless steel;

» Ideal for use in corrosive, non-corrosive or aggressive environments.

VARIANTS

Standard

Bolt stroke 13mm
Diameter of the bolt 12mm
Brass cylinder
Stainless steel body

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With bolt with minimum protrusion “x” mm
H55.DBK12/xy
With bolt variable length up to
H55.DBK12/Lx
With nickel-chromium treatment
H55.DBK12/L9100
Cylinder in stainless steel
H59.DBK12SS

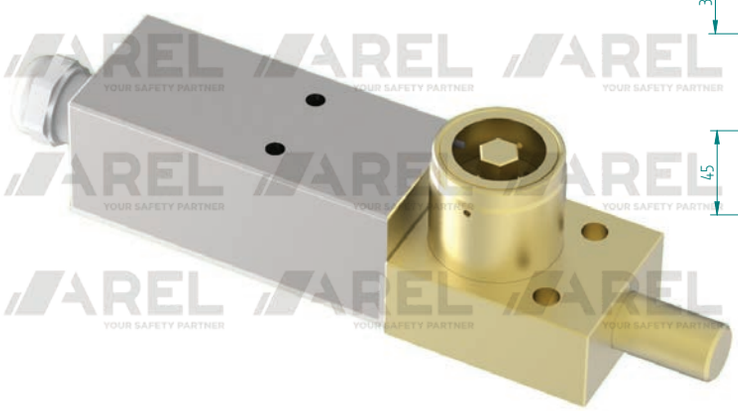
You can request versions with one combination of these variations; for example:

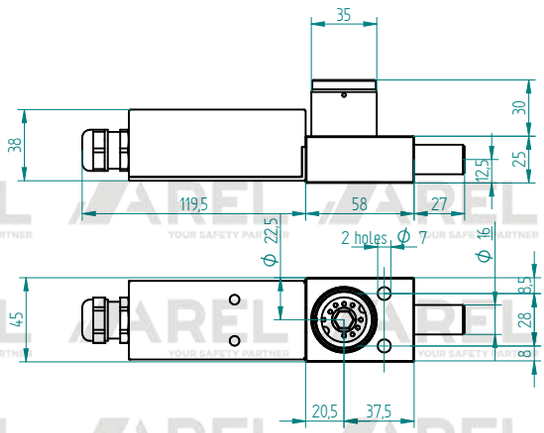
With nickel-chromium treatment and bolt a variable length
H55.DBK12/Lx/L9100

DBC

Bolt interlock with safety switch

H56.DBC11





PRODUCT FEATURES

» Key mechanical interlock;

» Complete with monitoring and signaling electrical contacts;

» Designed for controlling electrical panels or valves;

» Comes with a 15.92 (16-)mm diameter bolt available in various lengths;

» It is supplied with NO + NC contacts; IP67 degree of protection;

» Available with key series QA1;

» Material: brass and/or stainless steel;

» Ideal for use in corrosive, non-corrosive or aggressive environments;

» Bolt cutting force: 30KN (stainless steel) and 19KN (brass).

VARIANTS

Standard

Bolt stroke 19.5mm
Diameter of the bolt 16-mm
Brass
NO-NC limit switch contacts
Contact box in stainless steel

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With bolt that flush with the lock
H56.DBC11/020
With bolt with minimum protrusion 23mm
H56.DBC11/2343
With bolt with minimum protrusion “x” mm
H56.DBC11/xy
With bolt variable length up to
H56.DBC11/Lx
With nickel-chromium treatment
H56.DBC11/L9100
With body in stainless steel sheet
H58.DBC11X
In stainless steel
H59.DBC11SS

You can request versions with one combination of these variations; for example:

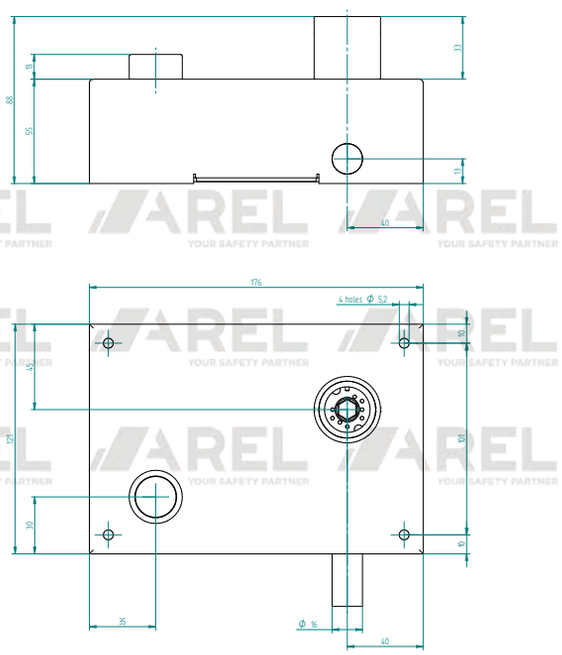
With nickel-chromium treatment and bolt flush with lock
H56.DBC11/020/L9100

ISOLATION

DBB

Solenoid controlled bolt lock with safety switch

H56.DB11BCPX



PRODUCT FEATURES

» Complete with electrical monitoring and signaling contacts;

» Designed for controlling electrical panels or valves;

» Comes with a 15.92 (16-)mm diameter bolt available in various lengths;

» It is supplied with NO + NC contacts; IP67 degree of protection;

» Available with key series QA1;

» Ideal for use in corrosive, non-corrosive or aggressive environments;

» Bolt cutting force: 30KN (stainless steel).

VARIANTS

Standard

Bolt stroke 19.5mm
Diameter of the bolt (stainless) 16-mm
Brass Cylinder
NO-NC limit switch contacts
Stainless steel box

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 2 signal contacts (2NO-2NC)
H56.DB11B2CPX
With non-luminous button
H56.DB11BCP
With two contacts on the button (2NO)
H56.DB11BCPXd
With bolt variable length up to
H56.DB11BCPX/Lx
With nickel-chromium treatment
H56.DB11BCPX/L9100
stainless steel cylinder
H59.DB11BCPX/SS

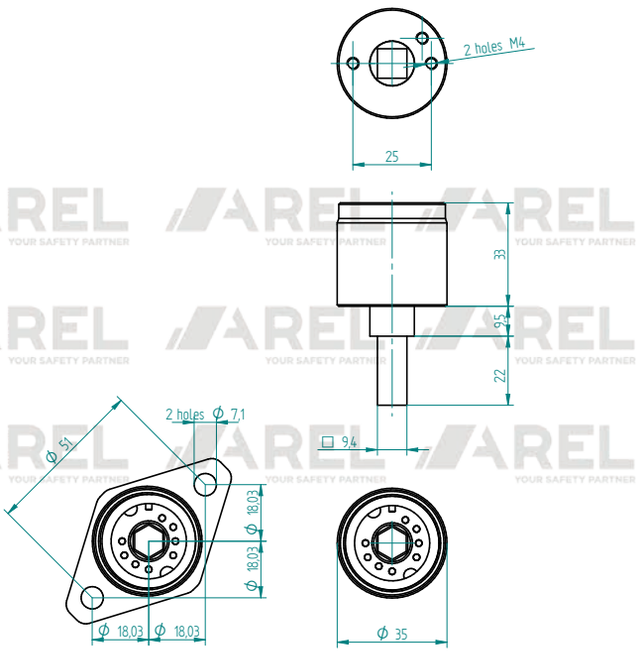
You can request versions with one combination of these variations; for example:

With 2 signal contacts (2NO-2NC) and not luminous button
H56.DB11B2CP

ISOLATION

MC
Switchgear interlock

H50.MC3533



PRODUCT FEATURES

» Switchgear interlock;

» Designed for use as a mechanical interlock for electrical panels through a mechanical connection to the isolation lever/maneuver;

» Equipped with a squared 9.5mm and 22mm long pin that can be used to drive an insulator;

» The movement of the shaft work on the operation control system;

» Material: brass or stainless steel;

» Ideal for use in corrosive, non-corrosive or aggressive environments.

VARIANTS

Standard

Brass

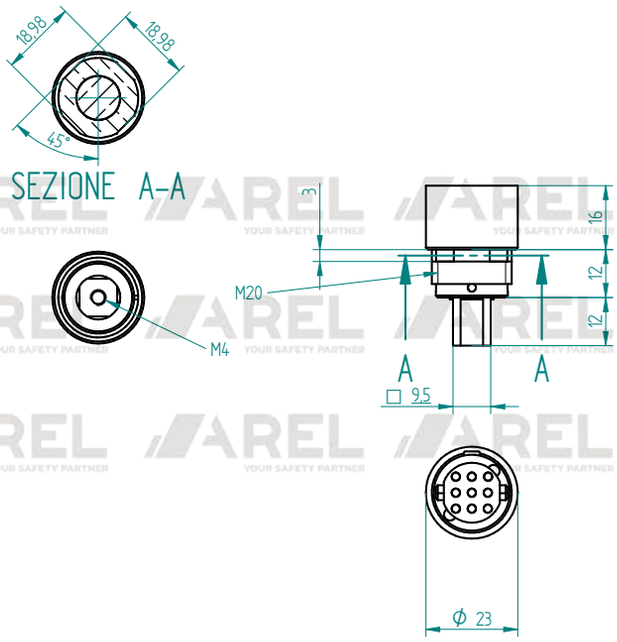
Variants, compared to standard model shown in this page, differ by conditions indicated below:

Front panel mounting
H50.MC2328mPA

ISOLATION

MC
Switchgear interlock

H50.MC2328m



PRODUCT FEATURES

» MINI LOCK - Switchgear interlock;

» Designed for use as a mechanical interlock for electrical panels through a mechanical connection to the isolation lever/maneuver;

» The movement of the shaft work on the operation control system;

» Material: brass;

» Ideal for use in corrosive, non-corrosive or aggressive environments;

» Mini lock.

VARIANTS

Standard

Brass

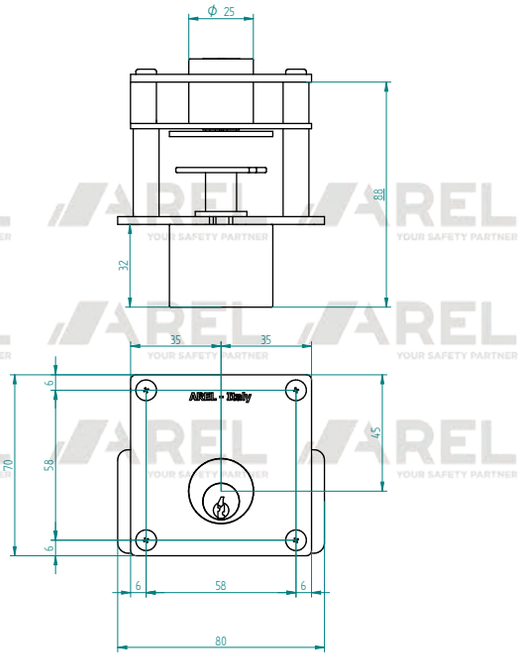
Variants, compared to standard model shown in this page, differ by conditions indicated below:

Front panel mounting
H50.MC2328mPA

ISOLATION

SKS
Electric key switch

V180.01A20/SKS1-2C



PRODUCT FEATURES

» Key-operated electric switch;

» Designed for machines control circuits;

» Intended for the use of short-term insulation;

» Available with key series QL1;

» Material: brass and stainless steel;

» Ideal for use in non-aggressive environments and corrosive;

» Supplied ready for backpanel assembly;

» IP65 protection (version with mounting a panel);

» Available with 20 A standard and 25 A on request.

VARIANTS

Standard

20A switch with 2-elements (4NO) and 2 positions (0-1)

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 1-element switch (2NO)
V180.01A20/SKS1
With 3-component switch (6NO)
V180.01A20/SKS1-3C
With 25A switch
V180.01A25/SKS1-2C
Boxed in junction box

You can request versions with one combination of these variations; for example:

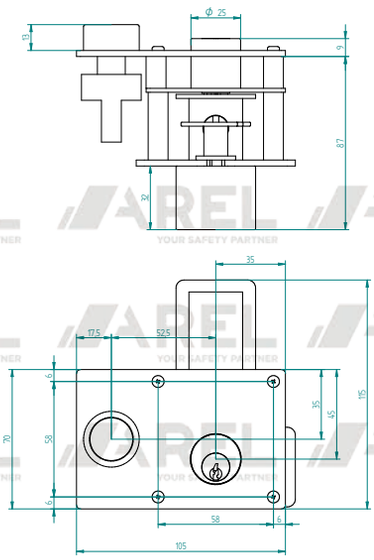
With 3-elements and 25A
V180.01A25/SKS1-3C

ISOLATION

SKSB

Key switch controlled by solenoid

V180.01A20/SKS1B2CPX



PRODUCT FEATURES

» Interlock with locked key controlled by solenoid;

» Mainly used in UPS systems (Uninterruptable power supply);

» Ensures that access can be acquired only when the UPS is in a condition of safety;

» Material: brass and stainless steel;

» Ideal for use in corrosive and non-corrosive environments corrosive;

» Supplied ready for backpanel assembly;

» Available voltages: 24, 48, 110 and 230 Vac or Vdc;

» Available with key series QL1.

VARIANTS

Standard

20A switch with 2-elements (2NO-2NC) and 2 positions (0-1)
A key extraction block electromagnet (B)
A blue light button to a NO contact (PX)
Electromagnet voltage: 110Vdc

Variants, compared to standard model shown in this page, differ by conditions indicated below:

Without button
V180.01A20/SKS1B2C
With 1-element switch (2NO)
V180.01A20/SKS1BCPX
With 3-component switch (6NO)
V180.01A20/SKS1B3CPX
With key lock on insertion
V180.01A20 SKS1B2CPX / I
With key lock in both positions
V180.01A20/SKS1B2CPX / IE
With non-luminous button
V180.01A20/SKS1B2CP
With 25A switch
V180.01A25/SKS1B2CPX
With two contacts on the button (2NO)
V180.01A20/SKS1B2CPXd
Boxed in junction box
V190.01A20/SKSA1B2CPX
Boxed in IP65 metal box
V190.01A20/SKSA1B2CPX
Other available voltages: 24-48-230Vac / 24-48Vdc

You can request versions with one combination of these variations; for example:

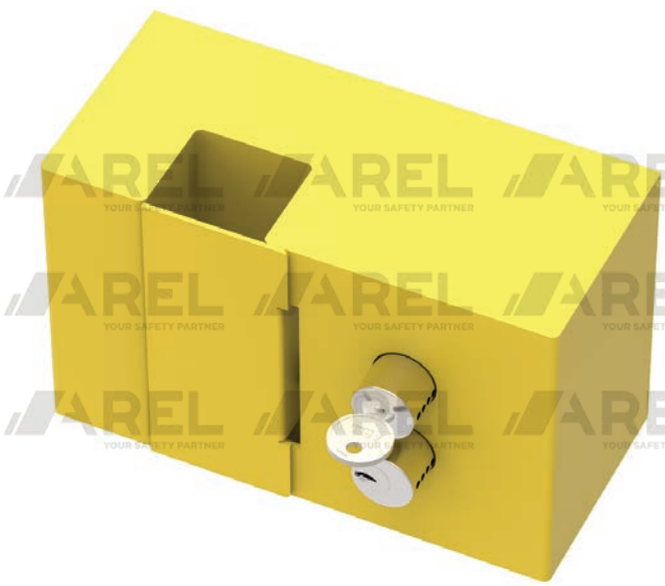
With 3-elements and non-luminous button
V180.01A20/SKS1B-3CP

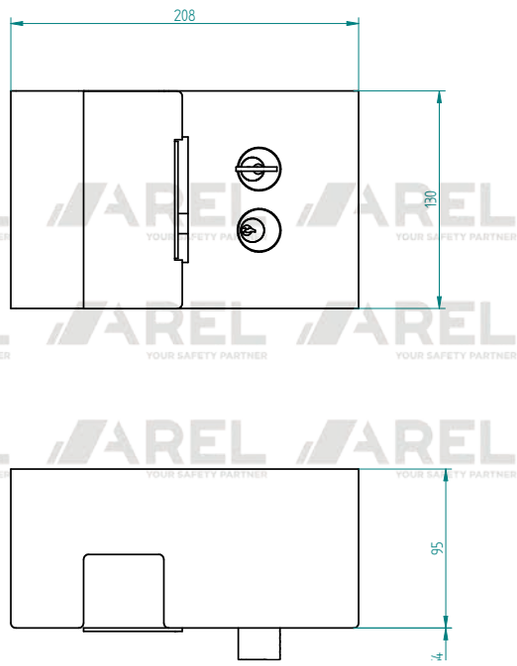
ISOLATION

SBOX

Railway grounding blocking device (patented)

V68.SBOX12





PRODUCT FEATURES

» Secure box is a patented, innovative product safety device for maintenance works on rail traction power lines and specific on power lines railways inside maintenance workshop;

» Interlock with 2 keys for interconnection between the ground blade selector and the insulating rod and interconnection between the insulating rod and the Key Exchange Boxes;

» Staff to the shelter of the foil in rest position;

» Toll for pole attachment of interlocking device;

» Bracket and ring for flag fixing.

VARIANTS

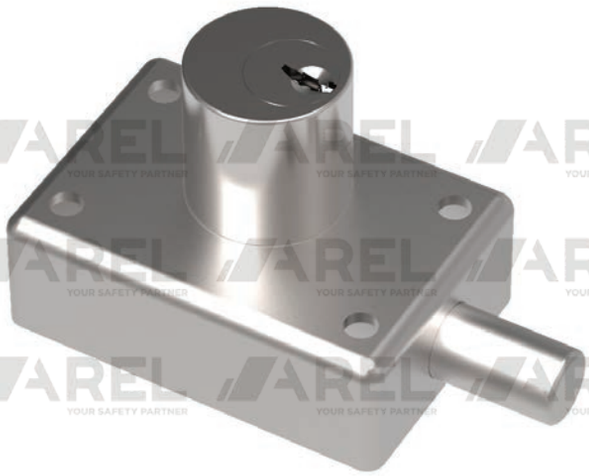
Standard

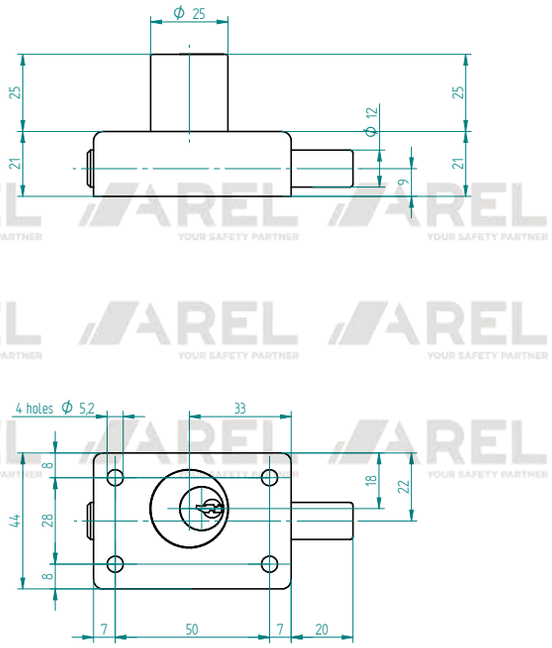
Box in epoxy painted yellow stell
Chromed Brass cylinders

ISOLATION

SB
Bolt lock

V55.SB11





PRODUCT FEATURES

» The Bolt locks are used to control the operations of sectioning, engaging or disengaging the command organs;

» Designed for controlling electrical panels, valves and leverages in general;

» Comes with a diameter bolt 12mm available in various lengths;

» Available with QL1 series key;

» Material: chromed brass and stainless steel;

» Ideal for use in corrosive, not corrosive or aggressive environments;

» Cutting force of the bolt: 25KN.

VARIANTS

Standard

Bolt stroke 15mm
Diameter of the bolt 12mm
Cylinder height 25mm

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 20mm stroke
V55.SB11/CS.A20
With 10mm diameter bolt
V55.SB11/D10
With 6mm diameter bolt
V55.SB11/D6-L21
With bolt variable length up to
V55.SB11/Lx
With 61mm high cylinder
V55.SBL11
With 75mm high cylinder
V55.SBXL11
With inverse function (key removed – bolt in)
V55.SBN11

You can request versions with one combination of these variations; for example:

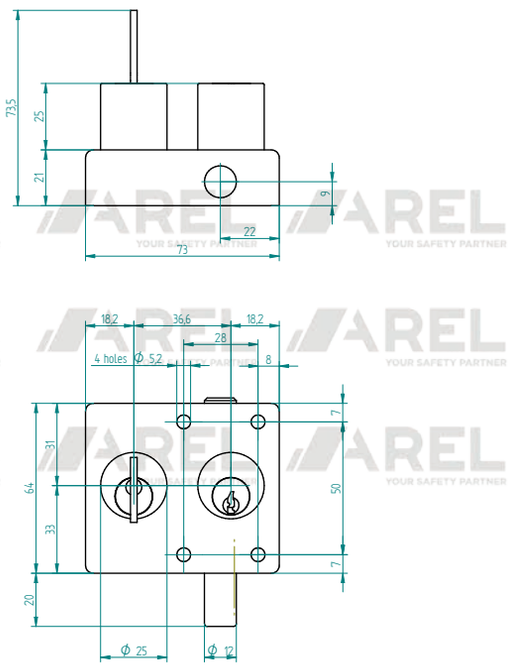
With 20mm stroke and 61mm high cylinder
V55.SBL11/CS.A20

ISOLATION

SB

Bolt lock interlocked double key

V55.SB12



PRODUCT FEATURES

» The bolt locks are used to control the operations of sectioning, engaging or disengaging the command organs;

» Designed for controlling electrical panels, valves and leverages in general;

» Comes with a diameter bolt 12mm available in various lengths;

» Available with QL1 series key;

» Material: chromed brass and stainless steel;

» Ideal for use in corrosive, not corrosive or aggressive environments;

» Cutting force of the bolt: 25KN.

VARIANTS

Standard

Bolt stroke 15mm
Diameter of the bolt 12mm
Cylinder height 25mm

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 20mm stroke
V55.SB12/CS.A20
With 10mm diameter bolt
V55.SB12/D10
With 6mm diameter bolt
V55.SB12/D6-L21
With bolt variable length up to
V55.SB12/Lx
With 61mm high cylinder
V55.SBL12
With 75mm high cylinder
V55.SBXL12
With IP67 boxed rear limit switch
V56.SBC12
With side limit switch (DX or SX)
V56.SBCF12/SX

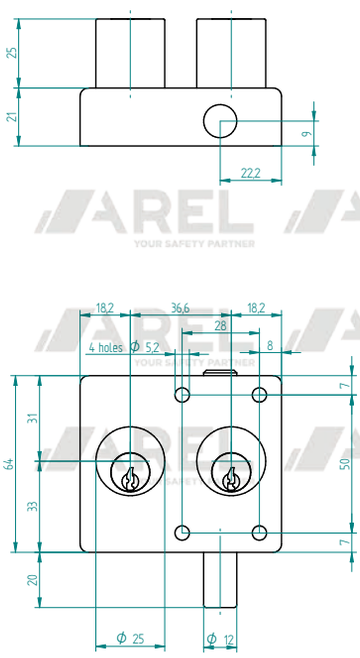
You can request versions with one combination of these variations; for example:

With 20mm stroke and 61mm high cylinder
V55.SBL12/CS.A20

ISOLATION

SB
Bolt lock double key

V55.SBK12



PRODUCT FEATURES

» The bolt locks are used to control the operations of sectioning, engaging or disengaging the command organs;

» Designed for controlling electrical panels, valves and leverages in general;

» Comes with a diameter bolt 12mm available in various lengths;

» Available with QL1 series key;

» Material: chromed brass and stainless steel;

» Ideal for use in corrosive, not corrosive or aggressive environments;

» Cutting force of the bolt: 25KN.

VARIANTS

Standard

Bolt stroke 15mm
Diameter of the bolt 12mm
Cylinder height 25mm

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 20mm stroke
V55.SBK12/CS.A20
With 10mm diameter bolt
V55.SBK12/D10
With 6mm diameter bolt
V55.SBK12/D6-L21
With bolt variable length up to
V55.SBK12/Lx
With 61mm high cylinder
V55.SBKL12
With 75mm high cylinder
V55.SBKXL12
With IP67 boxed rear limit switch
V56.SBCK12
With side limit switch (DX or SX)
V56.SBCFK12/SX

You can request versions with one combination of these variations; for example:

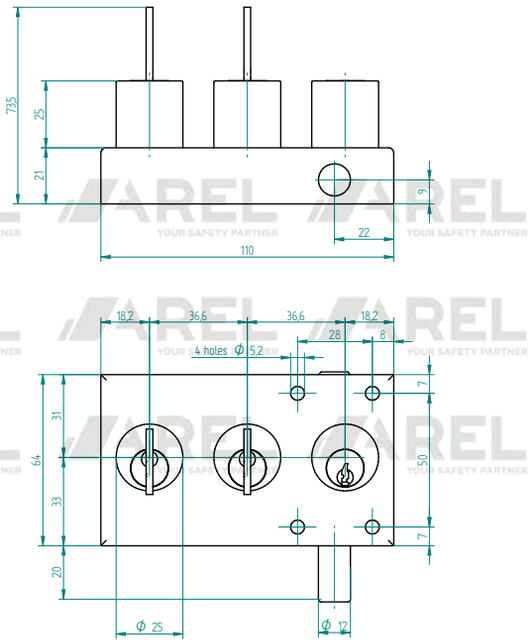
With 20mm stroke and 61mm high cylinder
V55.SBKL12/CS.A20

ISOLATION

SB

Bolt lock interlocked triple key

V55.SB13



PRODUCT FEATURES

» The bolt locks are used to control the operations of sectioning, engaging or disengaging the command organs;

» Designed for controlling electrical panels, valves and leverages in general;

» Comes with a diameter bolt 12mm available in various lengths;

» Available with QL1 series key;

» Material: chromed brass and stainless steel;

» Ideal for use in corrosive, not corrosive or aggressive environments;

» Cutting force of the bolt: 25KN.

VARIANTS

Standard

Bolt stroke 15mm
Diameter of the bolt 12mm
Cylinder height 25mm

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 20mm stroke
V55.SB13/CS.A20
With 10mm diameter bolt
V55.SB13/D10
With 6mm diameter bolt
V55.SB13/D6-L21
With bolt variable length up to
V55.SB13/Lx
With 61mm high cylinder
V55.SBL13
With 75mm high cylinder
V55.SBXL13

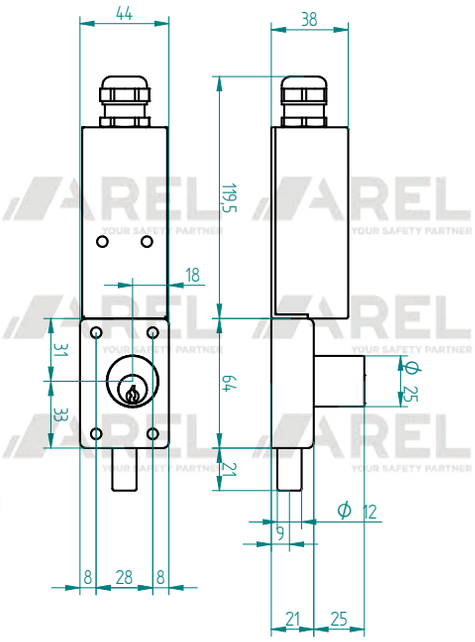
You can request versions with one combination of these variations; for example:

With 20mm stroke and 61mm high cylinder
V55.SBL13/CS.A20

ISOLATION

SBC
Bolt lock with safety switch

V56.SBC11



PRODUCT FEATURES

» The bolt locks are used to control the operations of sectioning, engaging or disengaging the command organs;

» Complete with electrical signaling and monitoring contacts;

» Designed for controlling electrical panels or valves;

» Comes with a diameter bolt 12mm available in various lengths;

» It is supplied with NO + NC contacts with degree of protection IP67;

» Available with QL1 series key;

» Material: chromed brass and stainless steel;

» Ideal for use in corrosive, not corrosive or aggressive environments;

» Cutting force of the bolt: 25KN.

VARIANTS

Standard

Bolt stroke 15mm
Diameter of the bolt 12mm
Cylinder height 25mm
NO-NC limit switch contacts

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 20mm stroke
V56.SBC11/CS.A20
With 10mm diameter bolt
V56.SBC11/D10
With 6mm diameter bolt
V56.SBC11/D6-L21
With bolt variable length up to
V56.SBC11/Lx
With 61mm high cylinder
V56.SBCL11
With 75mm high cylinder
V56.SBCXL11
With inverse function (key removed - bolt in)
V56.SBCN11

You can request versions with one combination of these variations; for example:

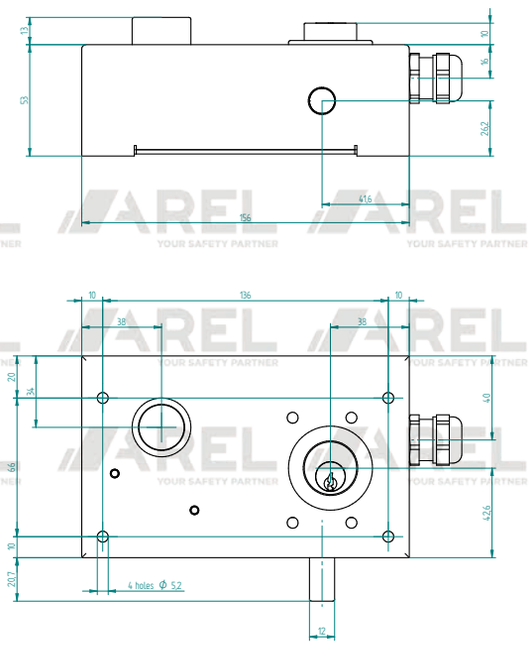
With 20mm stroke and 61mm high cylinder
V56.SBCL11/CS.A20

ISOLATION

SBB

Solenoid controlled bolt lock with safety switch

V56.SBCF11BPX



PRODUCT FEATURES

» The bolt locks are used to control the operations of sectioning, engaging or disengaging the command organs;

» Complete with electrical monitoring and signaling contacts;

» Designed for controlling electrical panels or valves;

» Comes with a diameter bolt 12mm available in various lengths;

» It is supplied with NO + NC contacts;

» Available with QL1 series key;

» Materiale: ottone e acciaio inossidabile;

» Material: chromed brass and stainless steel;

» Available voltages: 24, 48, 110 and 230 Vac or Vdc;

» Cutting force of the bolt: 25KN;

» Ideal for use in corrosive, not corrosive or aggressive environments.

VARIANTS

Standard

Bolt stroke 15mm
Diameter of the bolt 12mm
Cylinder height 10mm
Limit switch contact with common

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 20mm stroke
V56.SBCF11BPX/CS.A20
With 10mm diameter bolt
V56.SBCF11BPX/D10
With 6mm diameter bolt
V56.SBCF11BPX/D6-L21
With bolt variable length up to
V56.SBCF11BPX/Lx
With luminous button
V56.SBCF11BP

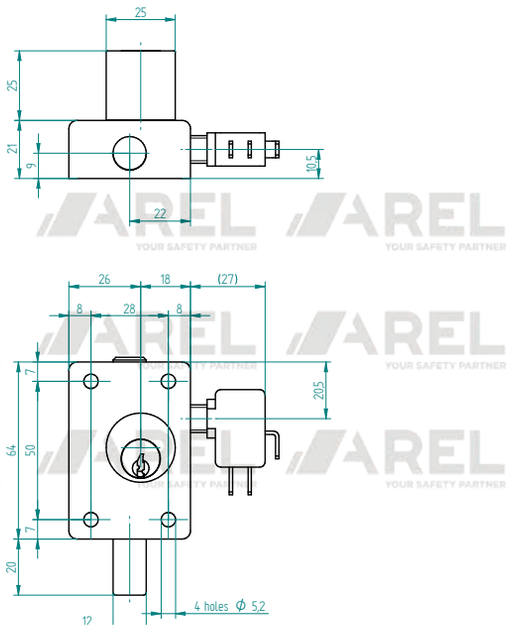
You can request versions with one combination of these variations; for example:

With 20mm stroke and non-luminous button
V56.SBCF11BP/CS.A20

ISOLATION

SBC
Bolt lock with safety switch

V56.SBCF11/DX



PRODUCT FEATURES

» The bolt locks are used to check the cutting operations, engaging or disengaging the organs of command. It differs from the standard model for the presence of a limit switch able to add a signaling and control function to the operation;

» Designed for control of electrical panels or valves;

» Comes with a diameter bolt 12mm available in various lengths;

» Supplied with NO + NC contacts (common line);

» Available with QL1 series key;

» Material: chromed brass and stainless steel;

» Ideal for use in corrosive, non-corrosive or aggressive environments;

» Cutting force of the bolt: 25KN.

VARIANTS

Standard

Bolt stroke 15mm
Diameter of the bolt 12mm
Cylinder height 25mm
Limit switch contact with common, on the right

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 20mm stroke
V56.SBCF11/DX/CS.A20
With 10mm diameter bolt
V56.SBCF11/DX/D10
With 6mm diameter bolt
V56.SBCF11/DX/D6-L21
With bolt variable length up to
V56.SBCF11/DX/LX
With 61mm high cylinder
V56.SBCFL11/DX
With 75mm high cylinder
V56.SBCFXL11/DX
With inverse function (key removed - round camout)
V56.SBCFN11/SDX
With contact on the left side
V56.SBCF11/SX

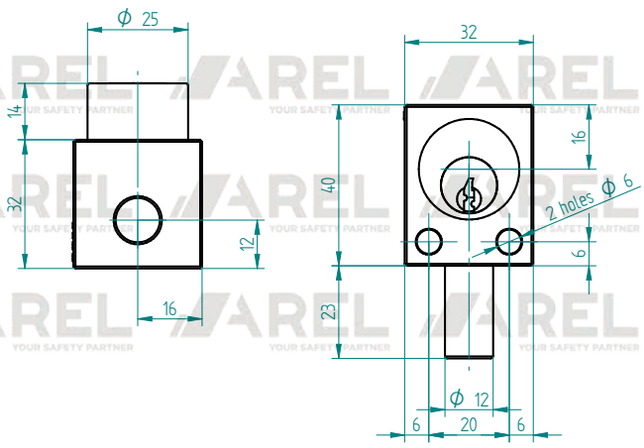
You can request versions with one combination of these variations; for example:

With 20mm stroke and 61mm high cylinder, left side
V56.SBCFL11/SX/CS.A20

ISOLATION

MB25K
Bolt lock

V53.MB25K



PRODUCT FEATURES

» The bolt locks are used to check the cutting operations, engaging or disengaging the organs of command;

» Compact Bolt Lock.

VARIANTS

Standard

Stroke of the bolt 8mm
Diameter of the bolt 12mm
Cylinder height 14mm

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With side limit switch (left)
V53.MB25KCF/SX
With 10mm diameter bolt
V53.MB25K/D10
With 6mm diameter bolt
V53.MB25K/D6
With bolt variable length up to
V53.MB25K/Lx

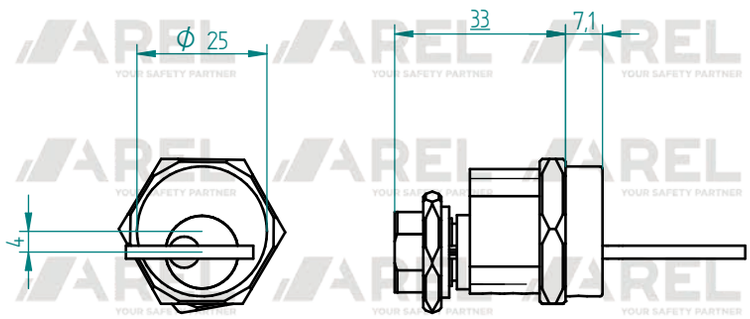
You can request versions with one combination of these variations; for example:

With 10mm bolt diameter and limit switch lateral
V53.MB25KCF/D10/SX

ISOLATION

SC
Camlock

V50.SC1361/DX



PRODUCT FEATURES

» Key lock for switches;

» Designed for use as an interlock mechanic for electrical panel through a mechanical connection with the isolation lever;

» Equipped with a holding pin with nut M17;

» The movement of the shaft closes the isolator;

» Available with QL1 series key;

» Material: chromed brass;

» Ideal for use in corrosive, not corrosive or aggressive environments.

VARIANTS

Standard

Chromed brass
DX rotation (clockwise to insert and lock the key)
Cam holder M17

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With M10 threaded male actuator
V50.SC1361F/DX
Left rotation
V50.SC1361/SX

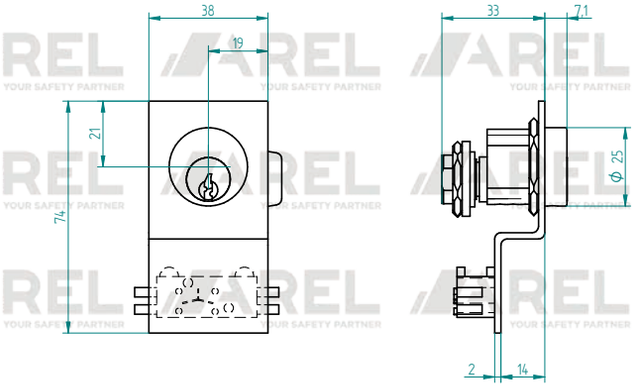
You can request versions with one combination of these variations; for example:

With male actuator and left rotation
V50.SC1361F/SX

ISOLATION

SCC
Key switch

V52.SC1361C/DX



PRODUCT FEATURES

» Interlock key;

» Complete with electrical signaling and monitoring contacts;

» It is supplied with NO + NC contacts;

» Available with QL1 series key;

» Material: chromed brass;

» Ideal for use in corrosive, not corrosive or aggressive environments.

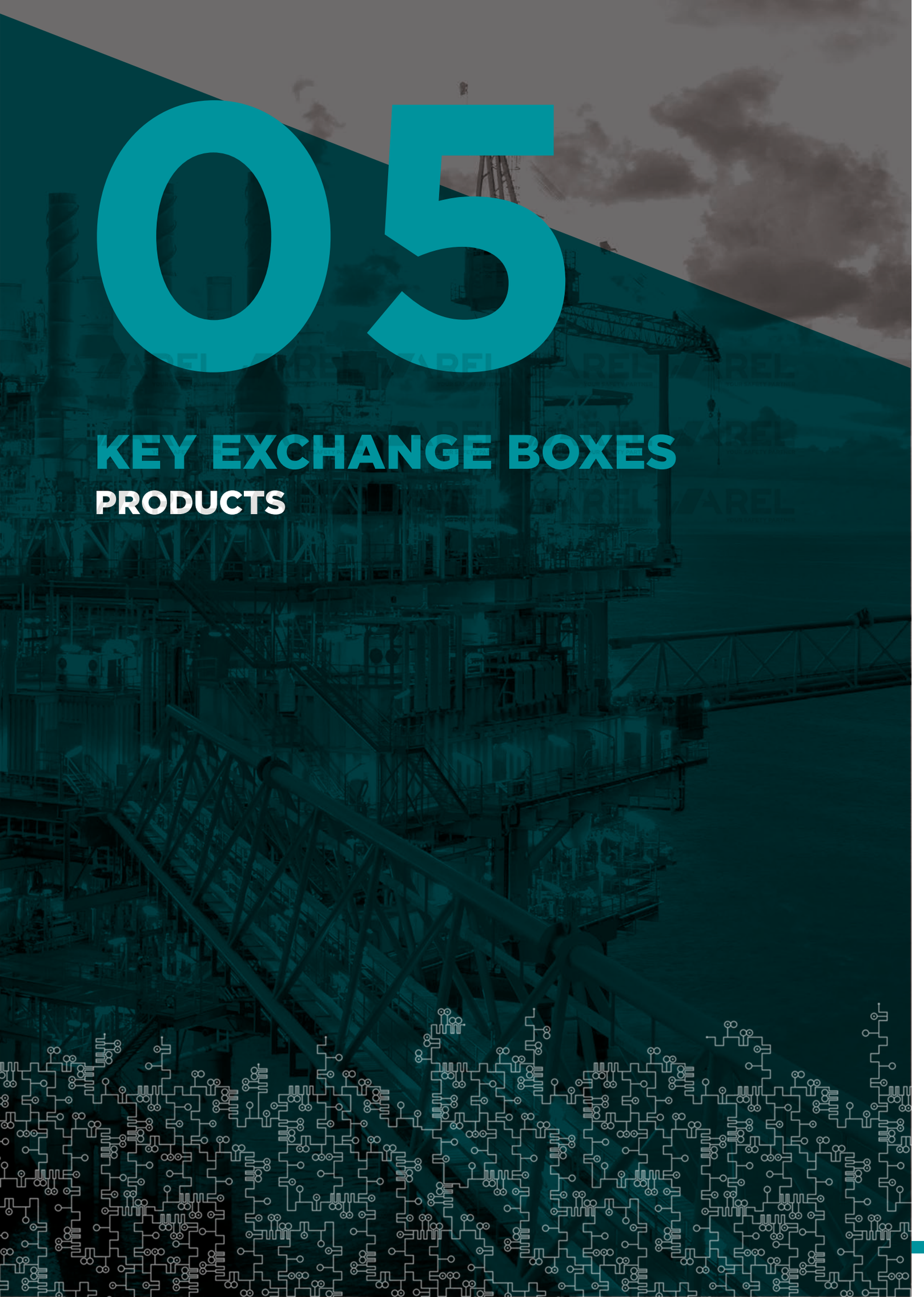
VARIANTS

Standard

Chrome plated brass
DX rotation (clockwise to insert and lock the key)

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 2 contacts (2NO - 2NC)
V52.SC1361-2C/DX



05

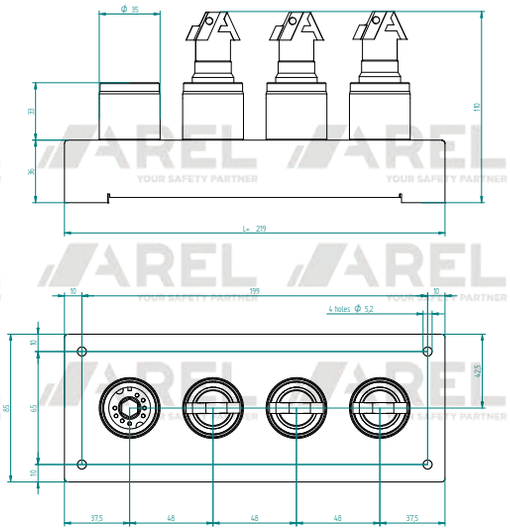
KEY EXCHANGE BOXES

PRODUCTS

KEY EXCHANGE BOXES

D
Key exchange box

H70.04/D13 (H70.aa/Dbbcc)



PRODUCT FEATURES

» Designed to enable a sequential key release by inserting an initial group of keys;

» The need for this type of product usually occurs when there are more points of access to the danger area;

» Designed to be the connection between the insulation bolt locks and access interlocks;

» Available in different configurations and number of blocks (b frees c);

» Supplied with box suitable for both, front and back-panel mounting;

» Available with key series QA1.

VARIANTS

Standard

Unpainted stainless steel box
aa = total number of cylinders
bb = number of cylinders that release (from left)
cc = number of cylinders that are released

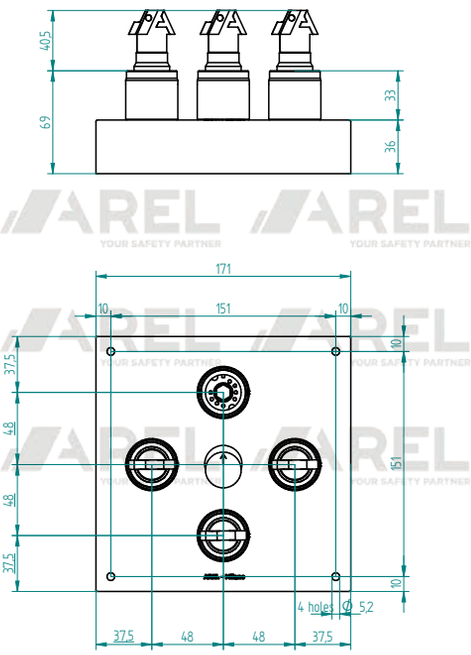
Variants, compared to standard model shown in this page, differ by conditions indicated below:

Potentially endless combinations
H70.aa/Dbbcc
Box on 3 rows if aa> 12
Box length on a row
L = 16 + (aa * 48)

KEY EXCHANGE BOXES

D-SC
Key selector box

H72.04/D1x4/SC1



PRODUCT FEATURES

» Selective key distributor;

» Designed for controlled release of keys by positioning the selector knob;

» Typically used in electrical switchboard applications where you want to ensure that there are no power supplies in parallel;

» 2 to 4 selector knob positions are available (more than 4 on request);

» Supplied with box suitable for both panel and back-panel mounting;

» Available with key series QA1.

VARIANTS

Standard

Unpainted stainless steel box
Selection of the key to be freed

Variants, compared to standard model shown in this page, differ by conditions indicated below:

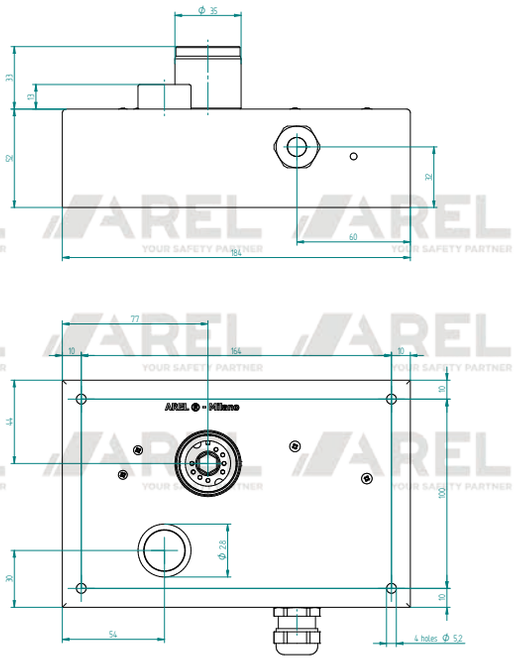
Selection of the key to be blocked
H72.04/D1x4/SC3
2-cylinder version with selection of the key from to free
H72.02/D1x2/SC
3-cylinder version with selection of the key from to free
H72.03/D1x3/SC1
3-cylinder version with selection of the key from to block
H72.03/D1x3/SC2

KEY EXCHANGE BOXES

DB

Elettro-mechanical interlocking distributor

H81.01/D1BCPX



PRODUCT FEATURES

» The electromechanical interlock distributors are designed to condition the keys extraction with the help of micro contacts, electromagnets, buttons and timers;

» Interlock with locked key controlled by solenoid;

» Material: brass and/or stainless steel;

» Ideal for use in corrosive, non-corrosive and corrosive environments;

» Supplied ready for front and back-panel assembly;

» Available voltages: 24, 48, 110 and 230 Vac or Vdc.

VARIANTS

Standard

Unpainted stainless steel box
One solenoid (B)
One NO-NC signaling contact on the key (C)
A blue light button with one NO contact (PX)
2 meters of multipolar cable (6/10)
Solenoid voltage: 110Vdc

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 2 signal contacts (2NO-2NC)
H81.01/D1B2CPX
With key lock on insertion
H81.01/D1B2CPX/V
With key lock in both positions
H81.01/D1B2CP/OV
With rear cable outlet
H81.01/D1BCPX/R
With terminal block on the side (no cables)
H81.01/D1mBCPX
With non-luminous button
H81.01/D1BCP
With two contacts on the button (2NO)
H81.01/D1BCPXd
Other available voltages: 24-48-230Vac / 24-48Vdc

You can request versions with one combination of these variations; for example:

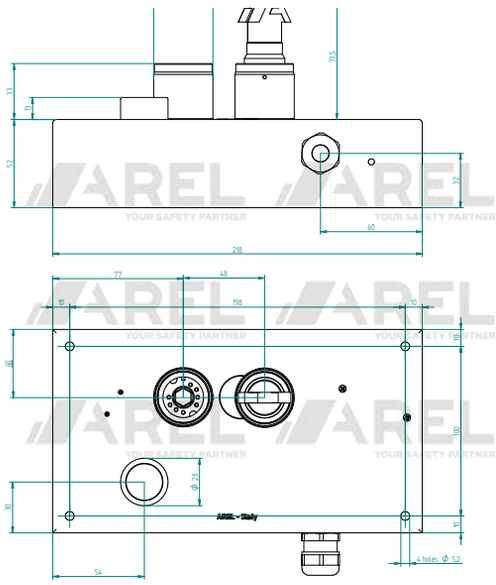
With 2 signal contacts (2NO-2NC) and terminal
H81.01/D1mB2CPX

KEY EXCHANGE BOXES

DB

Elettro-mechanical interlocking distributor

H81.02/D11BCPX



PRODUCT FEATURES

» The electromechanical interlock distributors are designed to condition the keys extraction with the help of micro contacts, electromagnets, buttons and timers;

» Interlock with locked key controlled by solenoid;

» Material: brass and/or stainless steel;

» Ideal for use in corrosive, non-corrosive and corrosive environments;

» Supplied ready for front and back-panel assembly;

» Available voltages: 24, 48, 110 and 230 Vac or Vdc.

VARIANTS

Standard

Unpainted stainless steel box
One solenoid (B)
One NO-NC signaling contact on the key (C)
A blue light button with one NO contact (PX)
2 meters of multipolar cable (6/10)
Solenoid voltage: 110Vdc

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With two non-interlocked cylinders (2 keys inside or outside)
H81.02/D2BCPX
With 2 signal contacts (2NO-2NC)
H81.02/D11B2CPX
With 2 block electromagnets
H81.02/D11-2BCPX
With rear cable outlet
H81.02/D11BCPX/R
With terminal block on the side (no cables)
H81.02/D11mBCPX
With non-luminous button
H81.02/D11BCP
With two contacts on the button (2NO)
H81.02/D11BCPXd

You can request versions with one combination of these variations; for example:

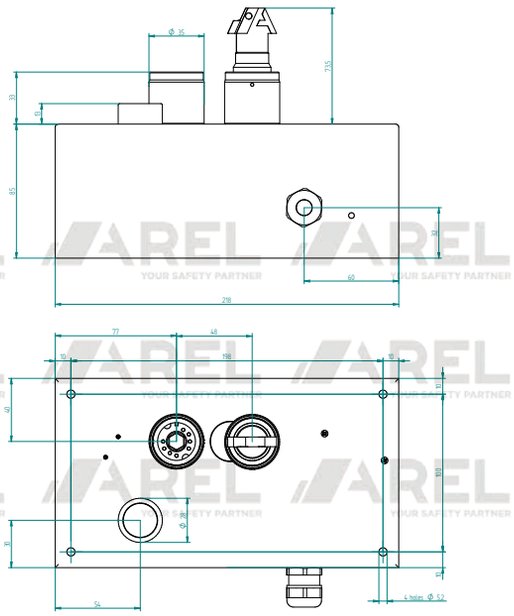
With 2 signal contacts (2NO-2NC) and pushbutton (no light)
H81.02/D11B2CP

KEY EXCHANGE BOXES

DBT

Key distribution with time delay unit

H83.02/D11BCPXT



PRODUCT FEATURES

» Electromechanical interlocking distributors are designed to condition the extraction keys with the help of micro-contacts,

electromagnets, buttons and timers. The timer manages the moment when it is possible to get the key because the area is now safe;

» Interlock with locked key controlled by solenoid;

» Material: brass and/or stainless steel;

» Ideal for use in corrosive, non-corrosive and corrosive environments;

» Supplied ready for front and back-panel assembly;

» Available voltages: 24, 48, 110 and 230 Vac or Vdc.

VARIANTS

Standard

Unpainted stainless steel box
One solenoid (B)
One NO-NC signal contact on the first key (C)
A blue light button with one NO contact (PX)
2m of multipolar cable (10)
Electromagnet voltage: 110Vdc
Relay-Timer set to 12 minutes

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With just one cylinder
H83.01/D1BCPXT
With two non-interlocked cylinders (2 keys inside or outside)
H83.02/D2BCPXT
With 2 signal contacts (2NO-2NC)
H83.02/D11B2CPXT
With 2 block electromagnets
H83.02/D11-2BCPXT
With rear cable outlet
H83.02/D11BCPXT / R
With terminal block on the side (no cables)
H83.02/D11MBCPXT
With non-luminous button
H83.02/D11BCPT
With two contacts on the button (2NO)
H83.02/D11BCPXDT

You can request versions with one combination of these variations; for example:

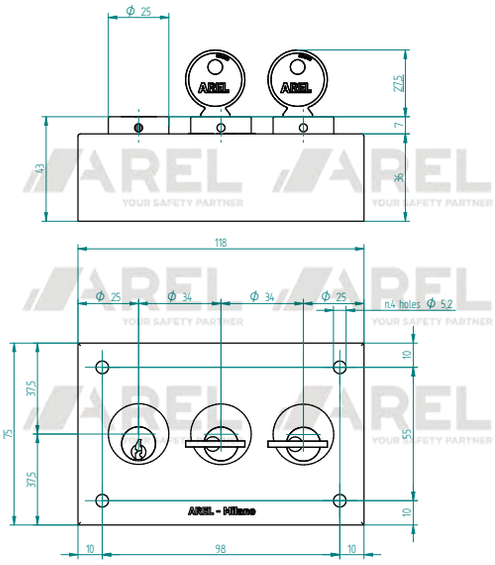
With 2 signal contacts (2NO-2NC) and pushbutton (no light)
H83.02/D11-2B2CPT

KEY EXCHANGE BOXES

SD

Key exchange box

V70.03/12 (V70.aa/bbcc)



PRODUCT FEATURES

» Designed to enable a sequential key release by inserting an initial group of keys;

» The need for this type of product usually occurs when there are more points of access to the danger area;

» Designed to be the connection between the insulation bolt locks and access interlocks;

» Available in different configurations and number of blocks (b frees c);

» Supplied with box suitable for both, front and back-panel mounting;

» Available with key series QL1.

VARIANTS

Standard

Black epoxy painted steel box
aa = total number of cylinders
bb = number of cylinders that release (from left)
cc = number of cylinders that are released

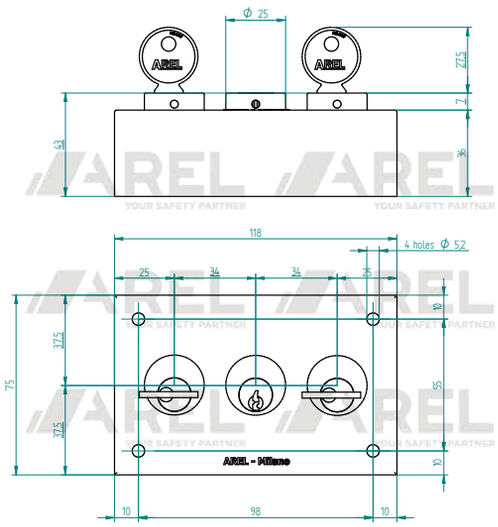
Variants, compared to standard model shown in this page, differ by conditions indicated below:

Unpainted stainless steel box
V71.Xaa / bbcc
Potentially endless combinations
V70.aa / bbcc
Box on 3 rows if aa> 12
Box length on a row
L = 16 + (aa x 34)

KEY EXCHANGE BOXES

SD-MC
Key selector box

V72.03/SD12/S111/MC



PRODUCT FEATURES

» Designed for a controlled release of the keys through the placement of the central selection key with “OR” type logic;

» 2 or 3 positions are available;

» Supplied with box suitable for assembly both front and back-panel.

VARIANTS

Standard

Black epoxy painted steel box

Variants, compared to standard model shown in this page, differ by conditions indicated below:

Unpainted stainless steel box
V71.X03/SD12/S111/MC
5-cylinder version
V72.05/SD14/S212/MC

You can request versions with one combination of these variations; for example:

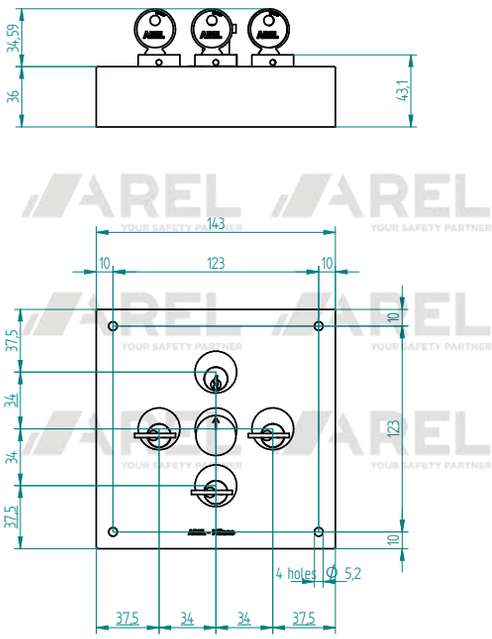
With stainless steel box and 5-cylinder version
V71.X05/SD14/S212/MC

KEY EXCHANGE BOXES

SD-SC

Key distributor with knob selector

V72.04/SD1x4/SC1



PRODUCT FEATURES

» Selective key distributor;

» Designed for controlled release of keys by positioning the selector knob;

» Release any number of keys in a predetermined sequence and by different combinations;

» Typically used in electrical switchboard applications where you want to ensure that there are no power supplies in parallel;

» 2 to 4 selector knob positions are available (more than 4 on request);

» Supplied with box suitable for both panel and back-panel mounting;

» Available with key series QL1.

VARIANTS

Standard

Black epoxy painted steel box
Selection of the key to be freed

Variants, compared to standard model shown in this page, differ by conditions indicated below:

Unpainted stainless steel box
V71.X04/SD1x4/SC1
Selection of the key to be blocked
V72.04/SD1x4/SC3
2-cylinder version with selection of the key from to free
V72.02/SD1x2/SC
3-cylinder version with selection of the key from to free
V72.03/SD1x3/SC1
3-cylinder version with selection of the key from to block
V72.03/SD1x3/SC2

You can request versions with one combination of these variations; for example:

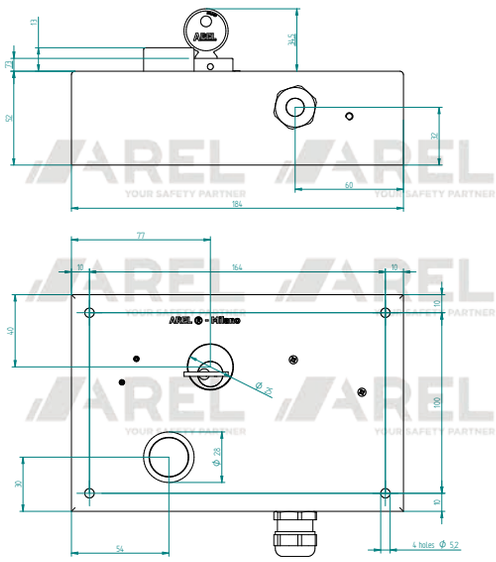
With stainless steel box and 3-cylinder version
V71.X03/SD1x3/SC2

KEY EXCHANGE BOXES

SDB

Electro-mechanical key distribution

V81.01/SD1BCPX



PRODUCT FEATURES

» The electromechanical interlock distributors are designed to condition the keys extraction with the help of micro contacts, electromagnets, buttons and timers;

» Interlock with locked key controlled by solenoid;

» Material: chromed brass and stainless steel;

» Ideal for use in corrosive, non-corrosive and corrosive environments;

» Supplied ready for front and back-panel assembly;

» Available voltages: 24, 48, 110 and 230 Vac or Vdc.

VARIANTS

Standard

RAL7035 painted stainless steel box
One key extraction block electromagnet (B)
One NO-NC signaling contact on the key (C)
A blue light button to a NO contact (PX)
2 meters of multipolar cable (10)
Solenoid voltage: 110Vdc

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With 2 signal contacts (2NO-2NC)
V81.01/SD1B2CPX
With key locked on insertion
V81.01/SD1BCPX/V
With key lock in both positions
V81.01/SD1BCPX/OV
With rear cable outlet
V81.01/SD1BCPX/R
With terminal block on the side (no cables)
V81.01/SD1mBCPX
With non-luminous button
V81.01/SD1BCP
With two contacts on the button (2NO)
V81.01/SD1BCPXd
Other available voltages: 24-48-230Vac / 24-48Vdc

You can request versions with one combination of these variations; for example:

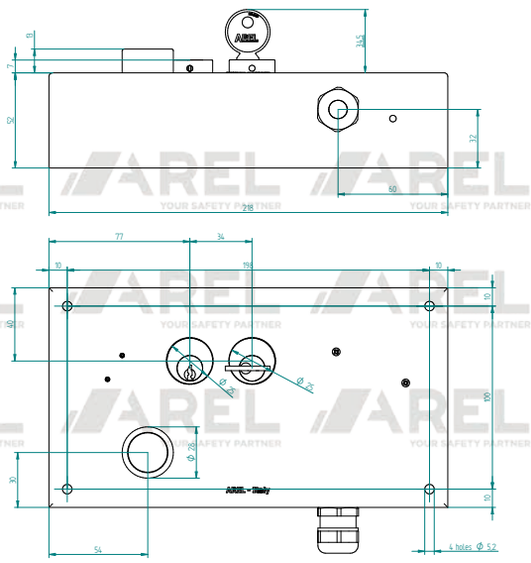
With 2 signal contacts (2NO-2NC) and terminal
V81.01/SD1mB2CPX

KEY EXCHANGE BOXES

SDB

Electro-mechanical key distribution

V81.02/SD11BCPX



PRODUCT FEATURES

» The electromechanical interlock distributors are designed to condition the keys extraction with the help of micro contacts, electromagnets, buttons and timers;

» Interlock with locked key controlled by solenoid;

» Material: chromed brass and stainless steel;

» Ideal for use in corrosive, non-corrosive and corrosive environments;

» Supplied ready for front and back-panel assembly;

» Available voltages: 24, 48, 110 and 230 Vac or Vdc.

VARIANTS

Standard

RAL7035 painted stainless steel box
One key extraction block electromagnet (B)
One NO-NC signaling contact on the key (C)
A blue light button to a NO contact (PX)
2 meters of multipolar cable (10)
Solenoid voltage: 110Vdc

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With two non-interlocked cylinders (2 keys inside or outside)
V81.02/SD2BCPX

With 2 signal contacts (2NO-2NC)
V81.02/SD11B2CPX

With 2 block electromagnets
V81.02/SD11-2BCPX

With rear cable outlet
V81.02/SD11BCPX/R

With terminal block on the side (no cables)
V81.02/SD11MBCPX

With non-luminous button
V81.02/SD11BCP

With two contacts on the button (2NO)
V81.02/SD11BCPXD

Other available voltages: 24-48-230Vac / 24-48Vdc

You can request versions with one combination of these variations; for example:

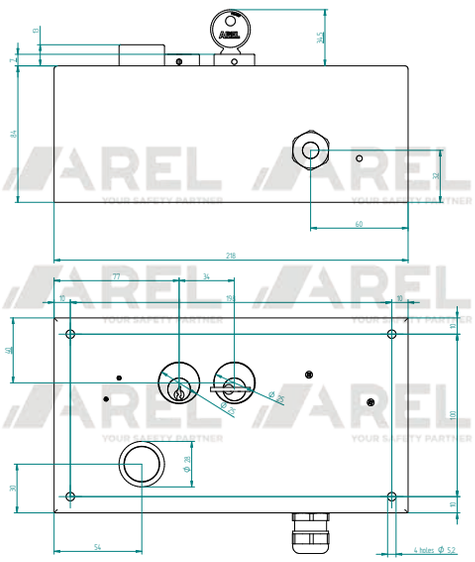
With 2 signal contacts (2NO-2NC) and pushbutton (no light)
V81.02/SD11B2CP

KEY EXCHANGE BOXES

SDBT

Key distribution with delay unit

V83.02/SD11BCPXT



PRODUCT FEATURES

» The electromechanical interlock distributors are designed to condition the keys extraction with the help of micro contacts, electromagnets, buttons and timers;

» The timer manages the moment when it is possible to get the key because the area is now safe;

» Interlock with locked key controlled by solenoid;

» Material: chromed brass and stainless steel;

» Ideal for use in corrosive, non-corrosive and corrosive environments;

» Supplied ready for front and back-panel assembly;

» Available voltages: 24, 48, 110 and 230 Vac or Vdc.

VARIANTS

Standard

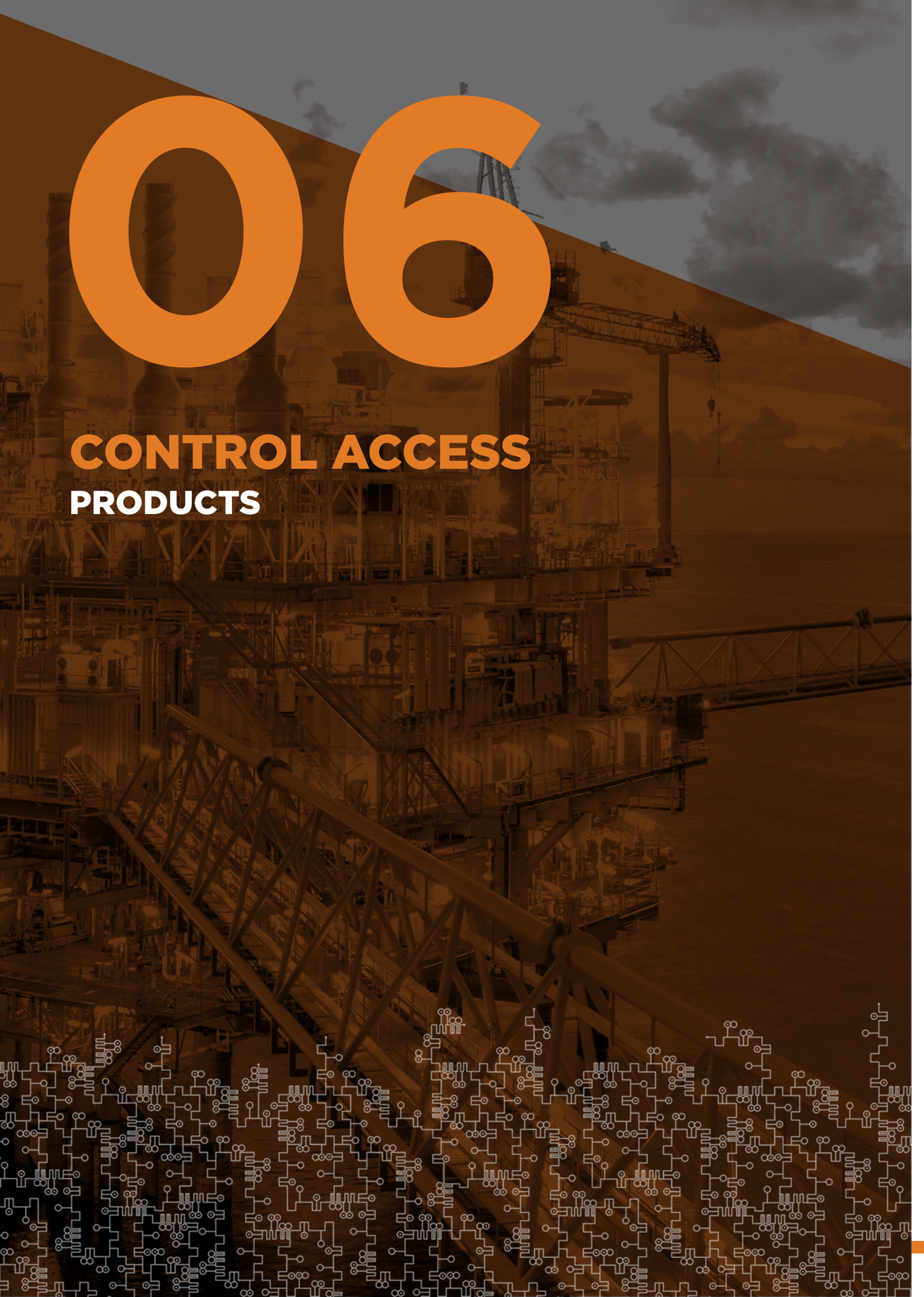
RAL7035 painted stainless steel box
One key extraction block electromagnet (B)
One NO-NC signaling contact on the key (C)
A blue light button to a NO contact (PX)
2 meters of multipolar cable (10)
Solenoid voltage: 110Vdc
Relay-Timer set to 12 minutes

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With just one cylinder
V83.01/SD1BCPXT
With two non-interlocked cylinders (2 keys inside or outside)
V83.02/SD2BCPXT
With 2 signal contacts (2NO-2NC)
V83.02/SD11B2CPXT
With 2 block electromagnets
V83.02/SD11-2BCPXT
With rear cable outlet
V83.02/SD11BCPXT/R
With terminal block on the side (no cables)
V83.02/SD11MBCPXT
With non-luminous button
V83.02/SD11BCPT
With two contacts on the button (2NO)
V83.02/SD11BCPXDT
Other available voltages: 24-48-230Vac / 24-48Vdc

You can request versions with one combination of these variations; for example:

With 2 signal contacts (2NO-2NC) and terminal
V83.02/SD11-2B2CPXT



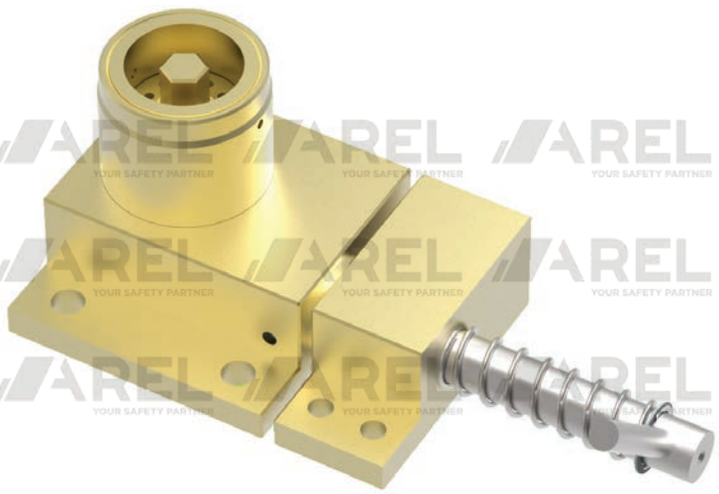
06

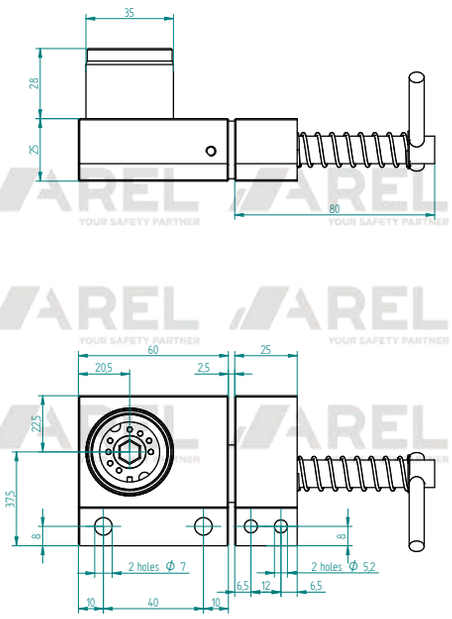
CONTROL ACCESS
PRODUCTS

ACCESS CONTROL

DP
Single key door lock

H65.DP1





PRODUCT FEATURES

» Single key door lock for partial access (visible operator);

» Ideal for use on swing doors or sliding;

» Material: brass or stainless steel;

» This lock has been designed to be easily installed when standard installation is not possible or unsuitable. For example: sliding doors, containers or inspection hatches;

» Ideal for use in standard, corrosive and heavy-duty environments;

» Supplied for front panel mounting;

» Bolt cutting force: 24KN.

VARIANTS

Standard

Door hinged on the left
Brass
Stainless steel handle and spring

Variants, compared to standard model shown in this page, differ by conditions indicated below:

Without bracket and handle with chain (15cm)
H65.DP1ck
Door hinged on the right
H65.DP1/180
In stainless steel
H69.DP1/SS

You can request versions with one combination of these variations; for example:

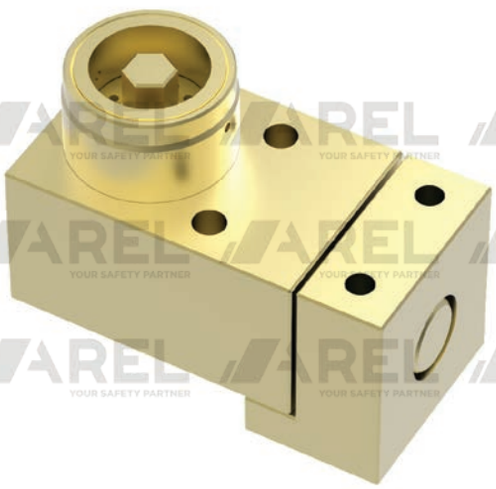
Without bracket and hinged door on the right
H65.DP1ck/180

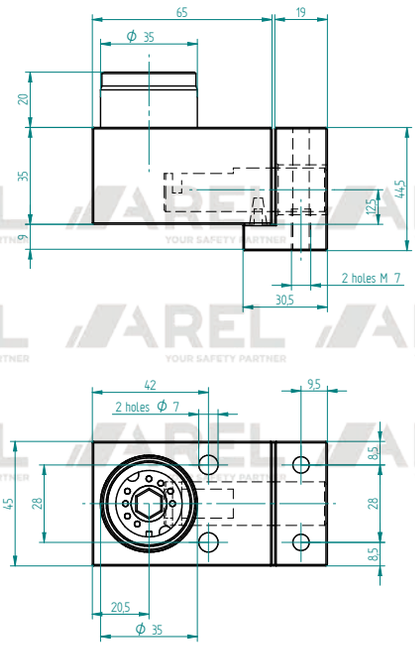
ACCESS CONTROL

DP

Single key swing door lock

H65.DP1Us





PRODUCT FEATURES

- Single key door lock for partial access (visible operator);
- Ideal for use on swing doors;
- Includes a lock body and a latch mounted on the jamb;
- Material: brass or stainless steel;
- Ideal for use in standard, corrosive and heavy-duty environments;
- Supplied for front and back panel mounting
- Bolt cutting force: 24KN.

VARIANTS

Standard

Door hinged on the left
Brass

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With stainless steel bolt
H65.DP1Us/OS
Door hinged on the right
H65.DP1Us/180
In stainless steel AISI
H69.DP1Us/SS

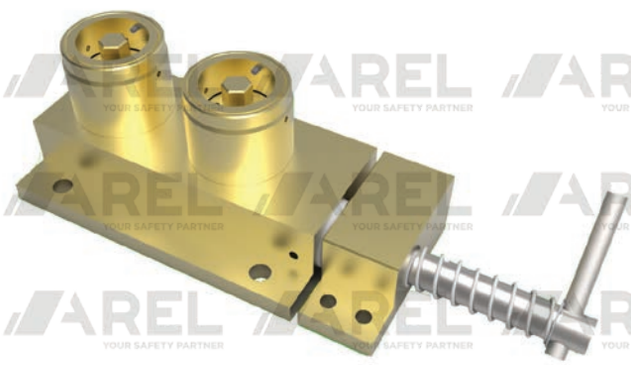
You can request versions with one combination of these variations; for example:

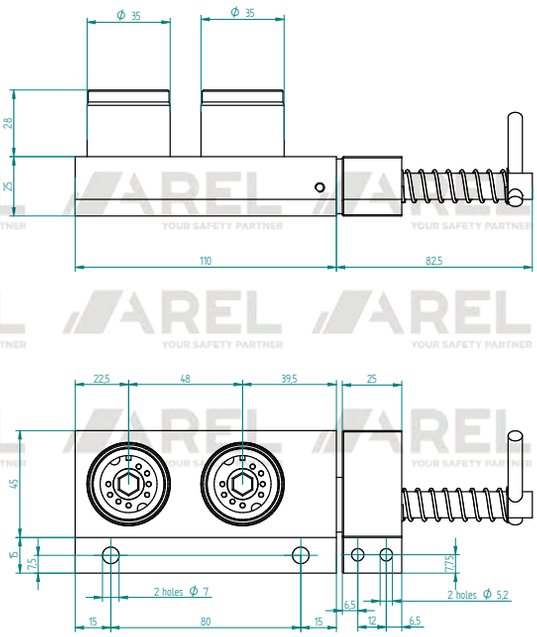
With stainless steel bolt and hinged door on the right
H65.DP1Us/OS/180

ACCESS CONTROL

DP
Dual key access interlock

H65.DP2





PRODUCT FEATURES

» Dual key door lock for partial access (visible operator);

» Ideal for use on swing or sliding doors;

» Material: brass or stainless steel;

» This lock has been designed to be easily installed when standard installation is not possible or unsuitable. For example: sliding doors, containers or inspection hatches;

» Ideal for use in standard, corrosive and heavy-duty environments;

» Supplied for front panel mounting;

» Bolt cutting force: 24K.

VARIANTS

Standard

Door hinged on the left
Brass
Stainless steel handle and spring

Variants, compared to standard model shown in this page, differ by conditions indicated below:

Without bracket and handle with chain (15cm)
H65.DP2ck
Door hinged on the right
H65.DP2/180
In stainless steel AISI
H65.DP2/SS

You can request versions with one combination of these variations; for example:

Without bracket and hinged door on the right
H65.DP2CK/180

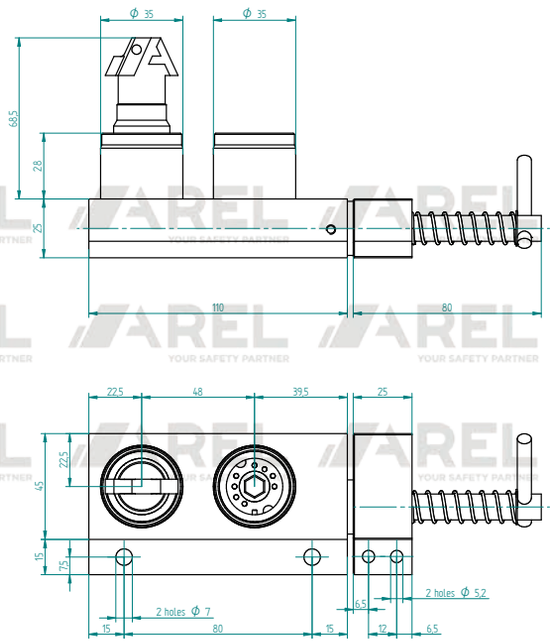
ACCESS CONTROL

DP

Dual interlocked key access interlock

FULL BODY ACCESS

H65.DPN2



PRODUCT FEATURES

» Dual key door lock for full body access (not visible operator);

» Ideal for use on swing or sliding doors;

» Material: brass or stainless steel;

» This lock has been designed to be easily installed when standard installation is not possible or unsuitable. For example: sliding doors, containers or inspection hatches;

» Ideal for use in standard, corrosive and heavy-duty environments;

» Supplied for front panel mounting;

» Bolt cutting force: 24K.

VARIANTS

Standard

Door hinged on the left
Brass
Stainless steel handle and spring

Variants, compared to standard model shown in this page, differ by conditions indicated below:

Without bracket and handle with chain (15cm)
H65.DPN2ck
Door hinged on the right
H65.DPN2/180
In stainless steel AISI
H65.DPN2/SS

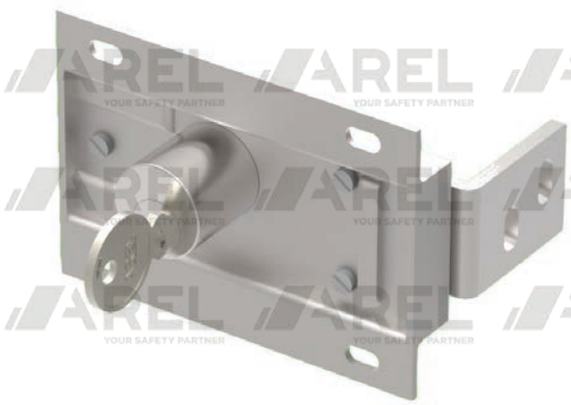
You can request versions with one combination of these variations; for example:

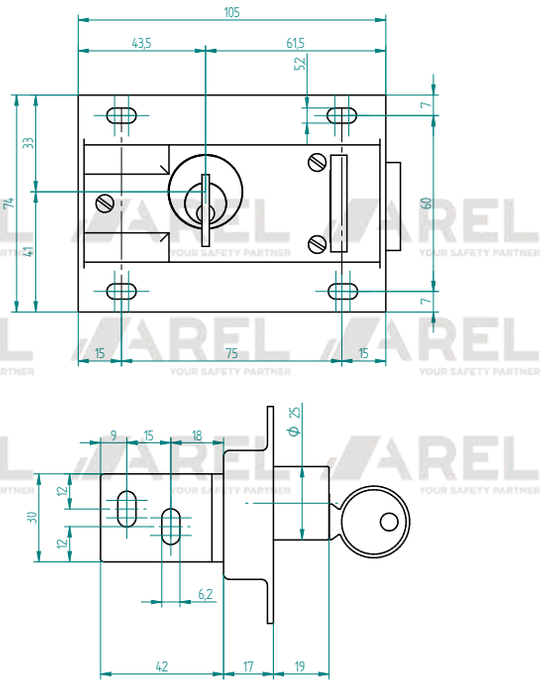
Without bracket and hinged door on the right
H65.DPN2ck/180

ACCESS CONTROL

SBP
Single key door lock

V65.SBP1





PRODUCT FEATURES

» The door locks are installed on the doors of the MV/HV transformer boxes and in all the places where maximum safety is required;

» Single-key door lock for partial access (visible operator);

» Ideal for use on swing doors;

» Material: chromed brass and stainless steel;

» Supplied ready for back panel mounting.

VARIANTS

Standard

"N" type bracket
Cylinder height 25mm
Door hinged on the left

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With "D" type bracket
V65.SBP1/STAF-D
With "L" type bracket
V65.SBP1/STAF-L
Door hinged on the right
V65.SBP1/180
56mm high cylinder
V65.SBPL1
70mm high cylinder
V65.SBPXL1

You can request versions with one combination of these variations; for example:

With "D" bracket and 70mm high cylinder
V65.SBPXL1 STAF-D

ACCESS CONTROL

SEP

Special erection plate

V90.SEP1-P36MW/BP

PRODUCT FEATURES

» The SEP has been designed to install door locks in cases where standard installation is not possible or unsuitable. For example: sliding doors, containers or inspection hatches. The SEP must necessarily be accompanied by a chain connected to the bracket; also the bracket is not the standard one, but the type «D».

VARIANTS

Standard

Stainless steel
Accessories: chain with plate to be welded e
“D” type bracket (V90.CATENAxSEP)

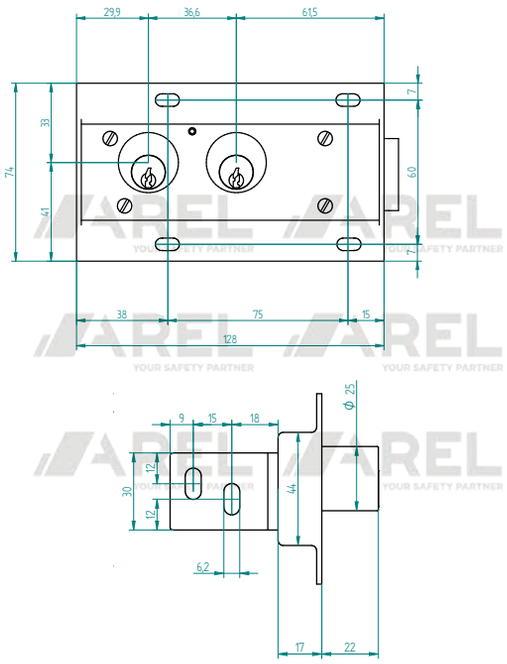
Variants, compared to standard model shown in this page, differ by conditions indicated below:

Chain with bolt and “D” type bracket
V90.CATENAxSEP_bd
SEP for double-key door lock
V90.SEP2-P36MW / BP

ACCESS CONTROL

SBP
Dual key access interlock

V70.SBP2



PRODUCT FEATURES

» The door locks are installed on the doors of the MV/HV transformer boxes and in all the places where maximum safety is required;

» Double-key door lock lock for partial access (visible operator);

» A double authorization is required for opening;

» Ideal for use on swing doors;

» Material: chromed brass and stainless steel;

» Supplied ready for back panel mounting.

VARIANTS

Standard

"N" type bracket
Cylinder height 25mm
Door hinged on the left

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With "D" type bracket
V65.SBP2/STAF-D
With "L" type bracket
V65.SBP2/STAF-L
Door hinged on the right
V65.SBP2/180
56mm high cylinder
V65.SBPL2
70mm high cylinder
V65.SBPXL2

You can request versions with one combination of these variations; for example:

With "D" bracket and 70mm high cylinder
V65.SBPXL2/STAF-D

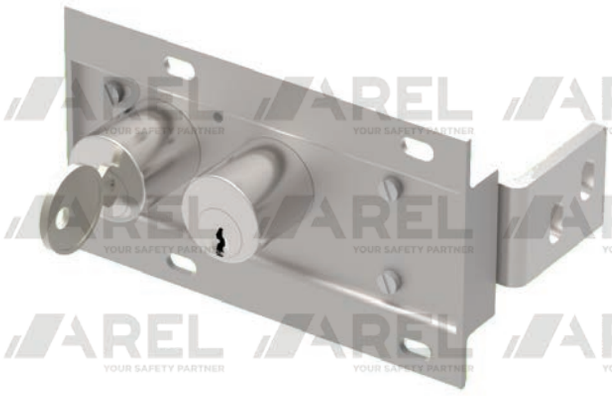
ACCESS CONTROL

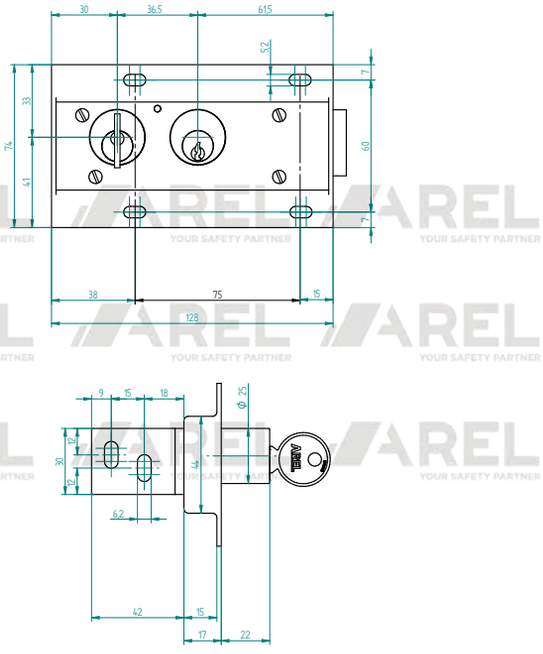
SBP

Dual interlocked key access interlock

FULL BODY ACCESS

V65.SBPN2





PRODUCT FEATURES

» The door locks are installed on the doors of the MV/HV transformer boxes and in all the places where maximum safety is required;

» Dual key door lock for full body access (not visible operator);

» Ideal for use on swing doors;

» Material: chromed brass and stainless steel;

» Supplied ready for back panel mounting.

VARIANTS

Standard

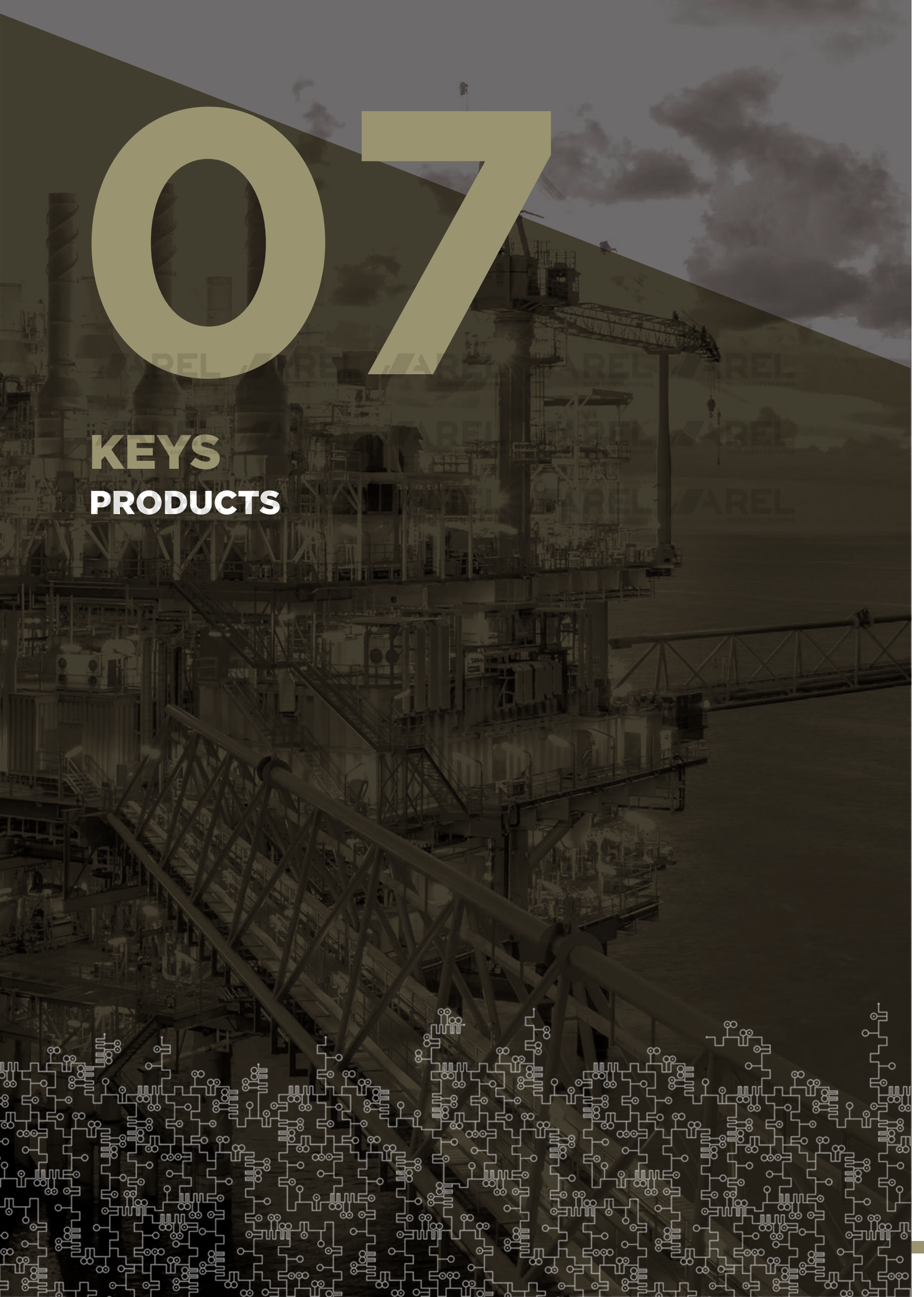
"N" type bracket
Cylinder height 25mm
Door hinged on the left

Variants, compared to standard model shown in this page, differ by conditions indicated below:

With "D" type bracket
V65.SBPN2/STAF-D
With "L" type bracket
V65.SBPN2/STAF-L
Door hinged on the right
V65.SBPN2/180
56mm high cylinder
V65.SBPNL2
70mm high cylinder
V65.SBPNXL2

You can request versions with one combination of these variations; for example:

With "D" bracket and 70mm high cylinder
V65.SBPNXL2/STAF-D



07

KEYS
PRODUCTS

KEYS

QA
Keys

H85

H85.QA1

H85.QA1m

PRODUCT FEATURES

» A selection of keys is available to suit a wide range of applications;

» Range of keys in stainless steel, brass and plated;

» Custom coding: SYMBOL (CODE) to request when ordering:

Select up to 15 characters:

» Any alphanumeric (A-Z) and (0-9) configuration;

» Master keys available.

KEYS

QL
Keys

V85

V85.QL1

PRODUCT FEATURES

» Silver Nickel;

» Master keys available (code V36);

» Custom coding: SYMBOL (CODE) to request when ordering:

DOT-PIN engraving:

Select up to 7 characters:

» Any alphanumeric (A-Z) and (0-9) configuration;

LASER engraving:

Select up to 15 characters:

» Any alphanumeric (A-Z) and (0-9) configuration.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