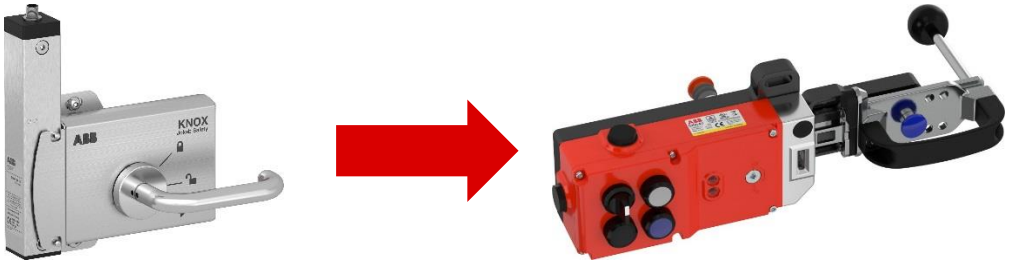
ABB JOKAB SAFETY

Replacing Knox with GKey



Main differences

- Knox was made of Stainless steel. GKey has an aluminum die-cast housing.
- Knox was constituted of a frame part, Knox 2, and a door part, Knox 1. Front handle and rear handle were included in Knox 1.
  GKey is a power to unlock switch with one order code. Handles are ordered separately. See the following pages for more information.
- The same model of GKey can be mounted on hinged doors and sliding doors, on the left or on the right. Therefore, only one model replaces all models of Knox.
  Note that door and frame must be aligned when the door is closed, which is not the case for a Quick-Guard sliding door.
- GKey is a power to unlock safety switch: +24VDC signal to unlock, locked when no voltage supply.
  For Knox, an inversion of +24VDC was necessary to lock and unlock.
- Knox had an integrated local reset. GKey allows the integration of a reset button that will have to be connected to the safety control device.

- GKey web page (see tab “Documents”)
- GKey product sheet
- GKey manual

	Knox	GKey
Conformity	• EN ISO 12100-1:2003+A1:2009, • EN ISO 12100-2:2003+A1:2009, • EN ISO 13849-1:2008, • EN 1088+A2:2008, • EN 60204-1:2006+A1:2009, • EN 61000-6-2:2005, EN 61000-6-4:2007	• EN 60947-5-3 • EN ISO 14119 • EN ISO 13849-1 • EN 62061 • UL508 (cULus)
Safety level interlocking	• Up to PL e / Cat.4, SIL3	• Up to PL e/cat 4, SIL3 The RFID actuator must be in place for the contacts to close, enabling the hazardous function. This means that a broken mechanical actuator (key) will be detected.
Locking/unlocking	• Power to lock and to unlock, Inversion of a 24VDC signal	• Power to unlock, +24 VDC signal
Operating voltage	• +24VDC	• +24VDC
Sensor interface	• DynLINK only • AS-i connection with Urax and Knox 2X	• Potential free contacts • DynLINK possibility with Tina unit. • AS-i connection with Tina unit and URAX-B1R.
Temperature	• +5°C to +55°C	• -25°C to +40°C
IP-class	• IP65	• IP65
Connection	• M12 8-pole	• M20 (x3)
Material	• Stainless steel	• Aluminum die-cast painted red
Holding strength	• 5000N	• 3000N
Other features	• Emergency release and manual unlock • Up to 2 padlocks • Reset with handle • Process lock	• Emergency release and manual unlock • Up to 4 padlocks • 4 positions for pilot devices, e.g. emergency stop, reset, start and stop buttons.

All models of Knox
Knox 1 + Knox 2

Replaced by

2TLA050304R0002	GKey4 RU	Safety switch with actuators
2TLA050310R0032	FHS GKey4	Front handle & mounting plate
2TLA050040R0510	RHS GKey MKey	Rear handle
2TLA020054R1100	Tina 2B	Adapter 2 contacts to DYNlink
Push button blue	CP1-11L-10	Reset button
3 blanking plugs 1SFA611920R8130	MA1-8130	Blanking plug

Limitations when replacing Knox

- GKey is as robust as Knox but is not in stainless-steel, which can be required sometimes.
- When Knox was mounted on a Quick-Guard sliding door. GKey can only be mounted on sliding doors with aligned door and frame, which is not the case of a Quick-Guard sliding door.
- When Knox was mounted on a door with a 44 x 88 profile, it might be difficult to reach the GKey escape release button from the inside
- If the rear handle is used, a larger opening is necessary in the panel for the movement of the rear handle.

Composition of GKey

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Switch with escape release button, delivered with mechanical and RFID actuators.

2TLA050304R0002 GKey4 RU

Mounting plate and front handle

2TLA050310R0032 FHS GKey4

Rear handle to open the door from the inside

2TLA050040R0510 RHS GKey MKey

Not always needed

Blanking plugs for unused positions[1]

1SFA611920R8130 MA1-8130

Adapter 2 contacts to DYNlink[2]

2TLA020054R1100 Tina 2B

Spring loaded catch preventing from closing the door by mistake.

2TLA050040R0511 SCS GKey MKey

[1] For pilot devices, see https://new.abb.com/low-voltage/products/safety-products/pilot-devices. The total quantity of pilot devices and blanking plugs should be 4.

[2] Knox used the DYNlink signal. GKey has 2 potential free contacts that can be adapted to the DYNlink signal with a Tina 2B.

Main differences when replacing a Knox with a GKey

Mounting

Necessary screws for Gkey:

- M5 screws for mounting the GKey switch on the mounting plate*. Not supplied.
- 2 x M8 for the mounting plate* - M8x30 with JSM M8B for Quick-Guard
- 2 x M6 for FHS GKey - M6 x16 with JSM M6B for Quick-Guard

* The mounting plate is included in FHS GKey.

Distance between mounting holes

Knox		GKey
Door:	134 or 135 mm (2 x M8)	Door: 44 mm (2 x M6)
Frame:	191 or 197 mm (2 x M8)	Frame: 126 mm (2 x M8)

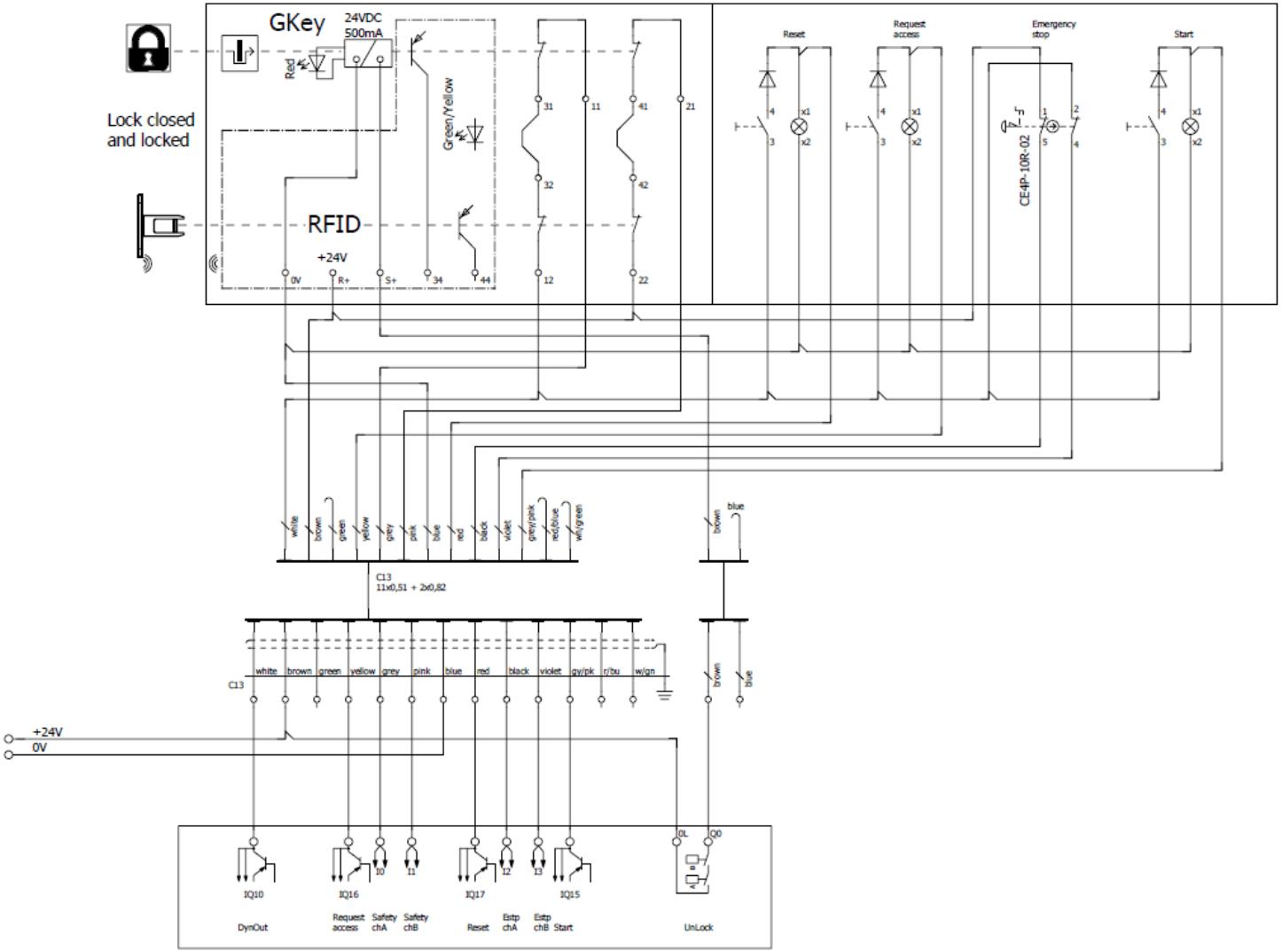
Programming

- GKey has no local reset and it might be necessary to add a reset button to the safety function performed by the lock.
- GKey is a power to unlock device: a +24 VDC signal is necessary to unlock it.
  There is no more need for the extra relays used to invert the power to Knox, and the -24VDC Pluto safety outputs (Q2 & Q3) cannot be used for the locking/unlocking anymore.

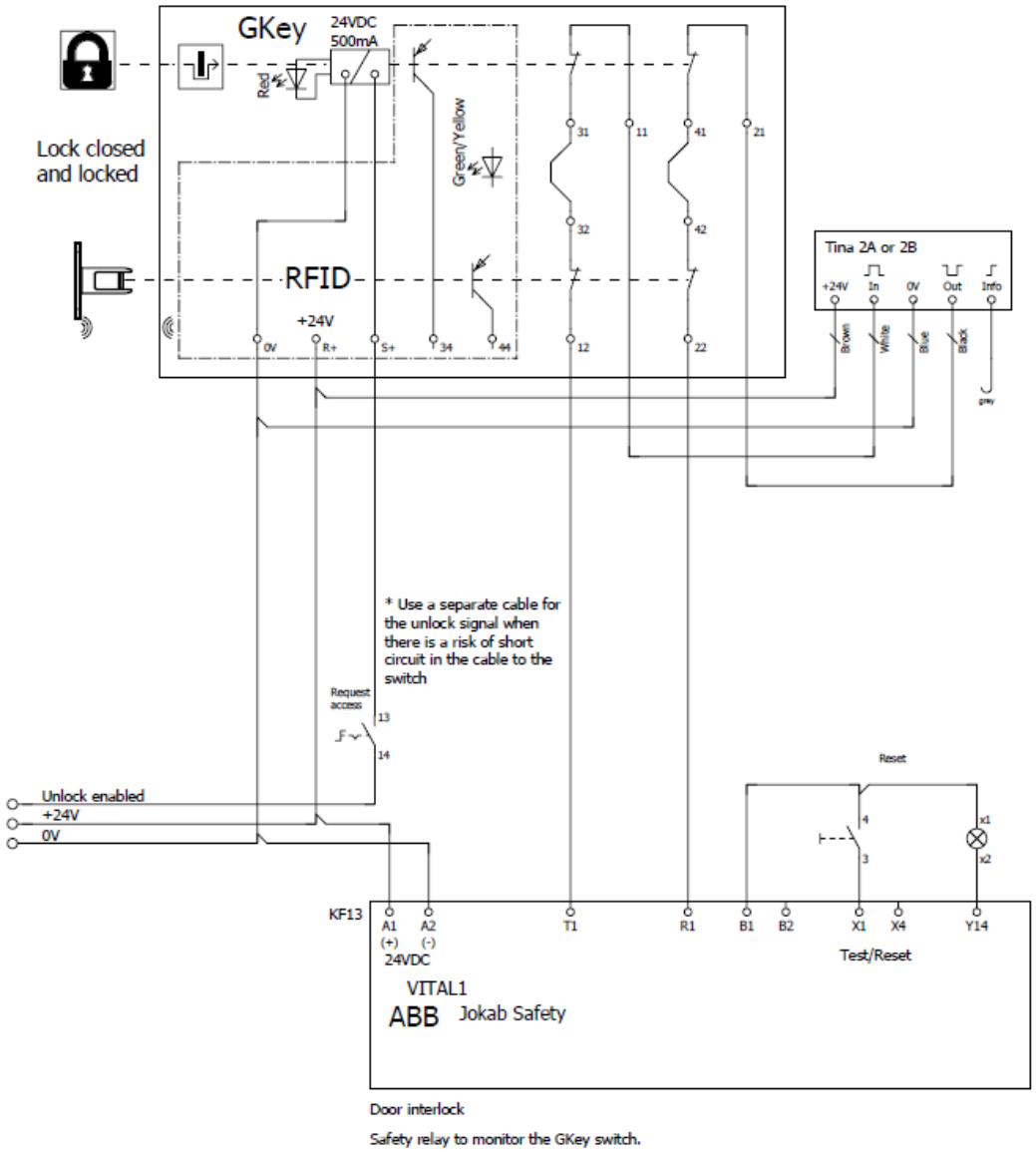
Connection – General

- GKey is a power to unlock device: a +24 VDC signal is necessary to unlock it.
  There is no more need for the extra relays used to invert the power to Knox, and the -24VDC Pluto safety outputs (Q2 & Q3) cannot be used for the locking/unlocking anymore.
- If a PL e is necessary for the unlocking function, see 2TLC010004I0201 “Guard locking with GKey and MKey models power to unlock”.

GKey to Pluto – General



GKey to Vital



GKey to Urax B1R

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