Installation instructions

Loop detector

Two-channel with UBS connection

Item No.: 40017122

Model: 51171649

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Contents

Symbols

Warning – Injury or danger to life possible!

Warning - Danger to life due to electrical current!

Note - Contains important information!

1 Technical data

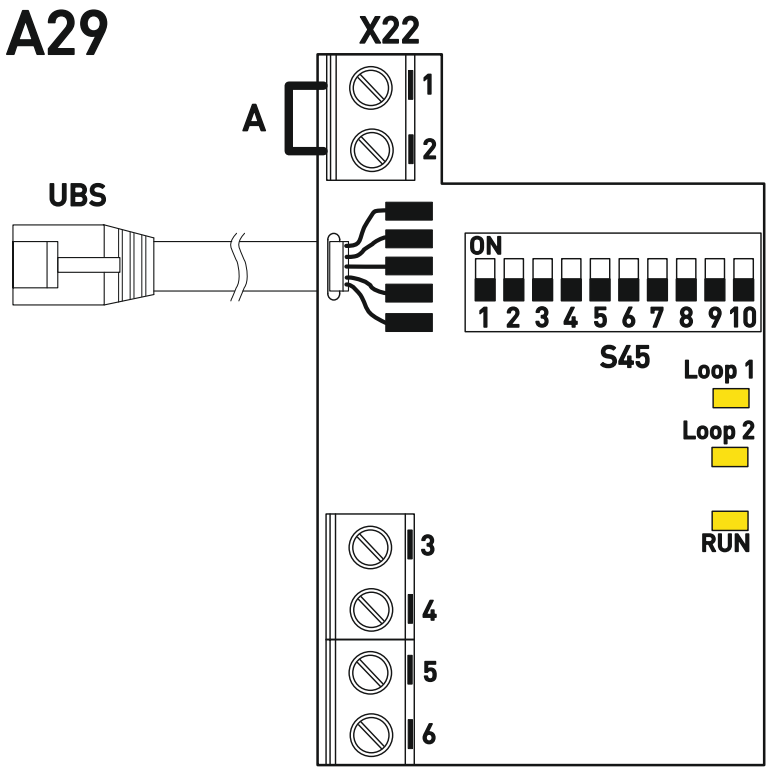
Device type	**Two-channel loop detector with UBS connection**	
Dimensions W x H x D	65 x 49 x 31	mm
Cable length with UBS	230	mm
Power supply through UBS interface	24	V DC
Current consumption	20	mA
Current consumption during loop approach	40	mA
Installation	Snap in place	
Connection	UBS plug	
Loop 1 function	OPEN command can be switched off	
Loop 2 function	CLOSE or OPEN command adjustable	
Temperature range	-5 / +40	°C

2 Use

An induction loop installed in the carriageway allows detection of metallic vehicles. The inductive loop detector evaluates loop signals and reports them to the gate controller.

The loop consists of several wire turns.

To ensure a reliable system, careful planning and installation of the loop is important.



A29	Loop detector
Loop 1 / 2	LED loop approached
RUN	LED ready
S45	DIP switches
UBS	Connecting cable to gate controller
X22 / 1 - 2	Input for switching off the loop 1 (break contact)
X22 / 3 - 4	Loop 1 connection = OPEN command
X22 / 5 - 6	Loop 2 connection = OPEN / CLOSE command

3 Settings

The LED "**RUN**" light up after switching on, while the LED's of "**Loop 1**" and "**Loop 2**" are flashing. Flashing indicates the initialisation of loops.

Loop 1 always generates an **OPEN command** that may be switched off with an external break contact, for example with a time switch (remove bridge **A**).

DIP switches 1 and 2 allow adjustment of loop 2. Only one may be set to **ON**. For direction detection, both DIP switches must be set to **OFF**.

DIP switches

1	ON	**Loop 2** generates an OPEN command (2 = OFF)				
2	ON	**Loop 2** generates a CLOSE command (1 = OFF)				
3	ON	**Frequency change** To prevent interference between adjacent loops and other systems				
	Sensitivity settings					
4 - 7	**Loop 1**			**Loop 2**		
	4	**5**		**6**	**7**	
	ON	ON	HIGH	ON	ON	HIGH
	ON	OFF	MED	ON	OFF	MED
	OFF	ON	LOW	OFF	ON	LOW
	OFF	OFF	OFF	OFF	OFF	OFF
8	ON	**Function Boost** For better detection of vehicles with high ground clearance (lorries).				
9	ON	**Function of direction detection** (1, 2, 10 = OFF + OFF) An OPEN command is generated immediately when crossing loop 1 without crossing loop 2 first. In reverse order, no command is generated.				
10	ON	**Function of direction detection** (1, 2, 9 = OFF + OFF) An OPEN command is generated only if loop 1 is crossed first and then loop 2. In reverse order, no command is generated.				

4 Installation

Warning – Danger to life due to electrical current!

- Disconnect the cables (mains OFF) and check that the supply is off
- Observe the applicable regulations and standards
- Ensure proper electrical connection
- Use suitable tools

Number of turns

The loop's number of turns depends on the loop circumference.

Number of turns calculation:

Circumference = 2 x a + 2 x b

min.: 2 m x 1 m

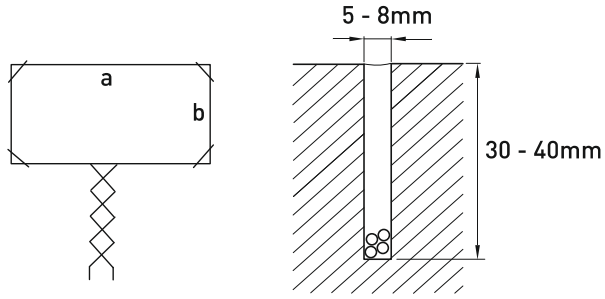
max.: 5 m x 3 m

Loop circumference (Meters)	Number of turns (Turns)
2 – 4	6
4 – 7	5
8 – 12	4
13 – 25	3

Installation

For the loop, cut a groove of 5 to 8 mm and a depth 30 to 40 mm into the ground. The groove must be neat and should not have sharp edges (cut corners 45°).

After laying the loop, the groove must be sealed with epoxy resin or bitumen. Make sure that the insulation of the loop wire is suitably temperature resistant.



Recommended loop wire: H05 V-K, 0.75 mm². At a cross-section of 1.5 mm², the loop feed may be up to 100 m long. The loop feed must be well-twisted (min. 20 times / m) and should not be laid parallel to power lines.

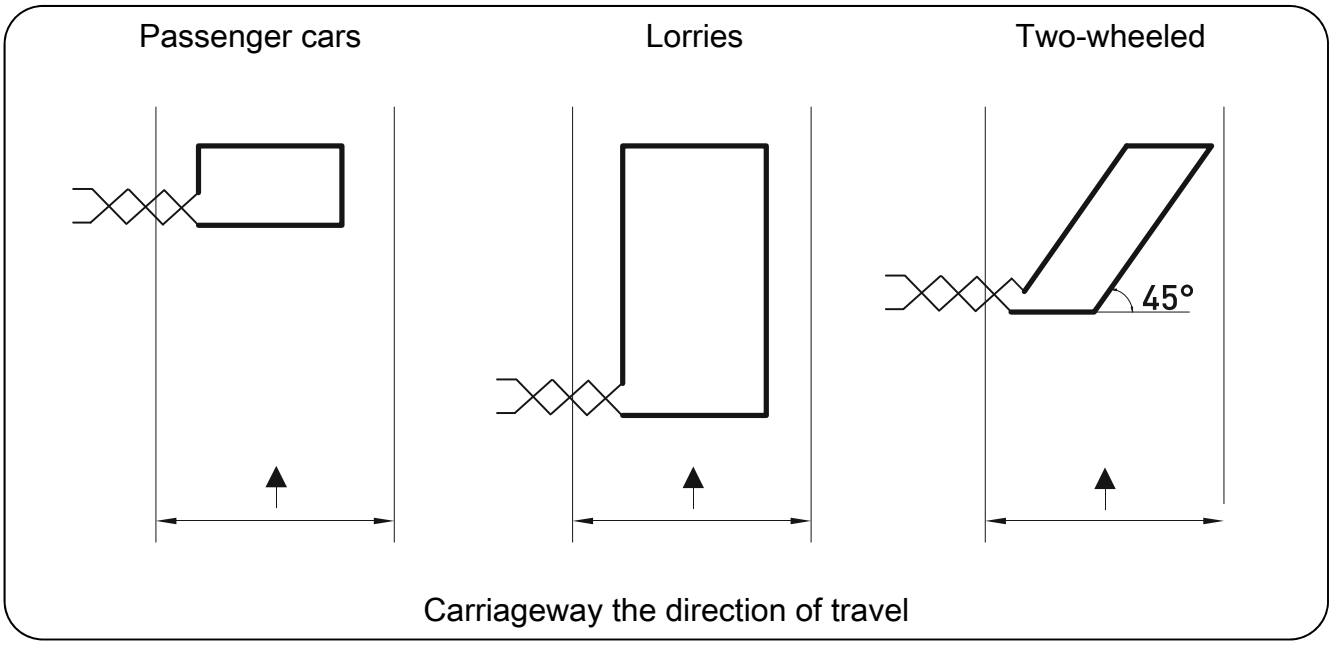
Proposed loop installation

A direct installation of loops in cobbled pavement or other movable floor panels should be avoided. Any shape of loop may be used; rectangular dimensions are standard.

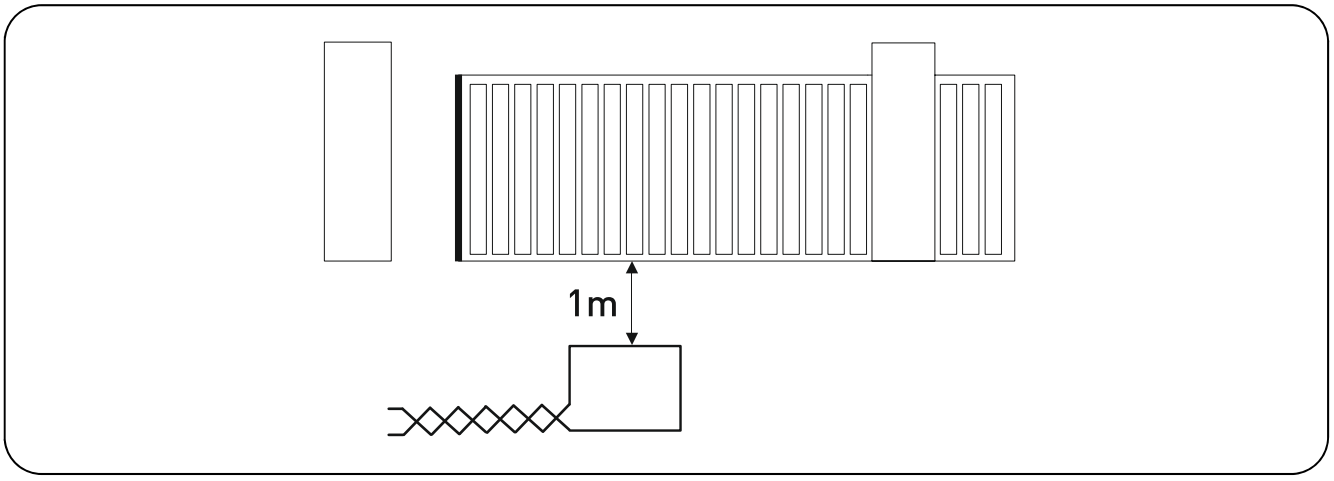
The induction loop detects moving metal parts. This may also include metal parts in the ground near the loop (gully covers, metal rails, gates).

Stationary metal parts on the loop are detected during calibration. This reduces the sensitivity significantly!

Installation examples



Keep a minimum distance of 1 m from moving metal parts.



Declaration of conformity

within the meaning of EMC Directive 2014/30/EU
within the meaning of RoHS Directive 2011/65/EU

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Germany

We,
GfA ELEKTROMATEN GmbH & Co. KG
declare under our sole responsibility that the following product complies with the above directives and is only intended for installation in a door system.

Loop detector
Two-channel with UBS connection
Part no.: 40017122

Authorised representative to compile the technical documents is the undersigned.

Düsseldorf, 10.08.2018

Stephan Kleine
CEO

Signature

Standards applied:
EN 60335-1:2012
Household and similar electrical appliances - Safety - Part 1: General requirements

EN 61000-6-2:2005
Electromagnetic compatibility (EMC) Part 6-2 Generic standards – Immunity standard for industrial environments

EN 61000-6-3:2007
Electromagnetic compatibility (EMC) Part 6-3 Generic standards – Emission standard for residential, commercial and light-industrial environments