

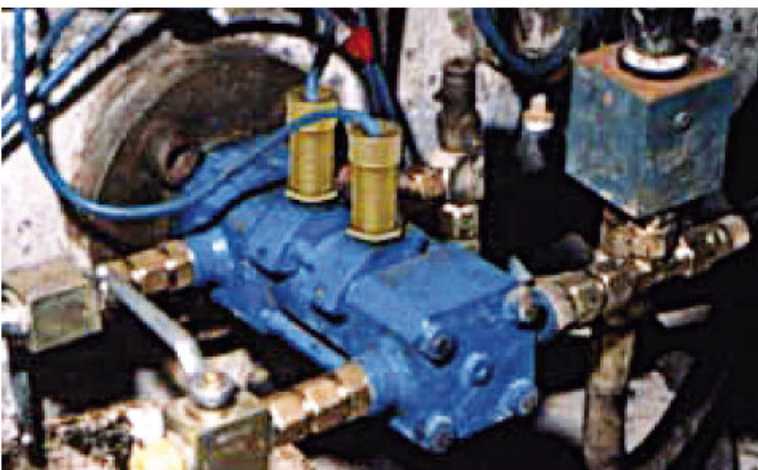
Magnet switch

iKA232

iKA234

for position measurement and end position monitoring by means of magnetically operated contacts

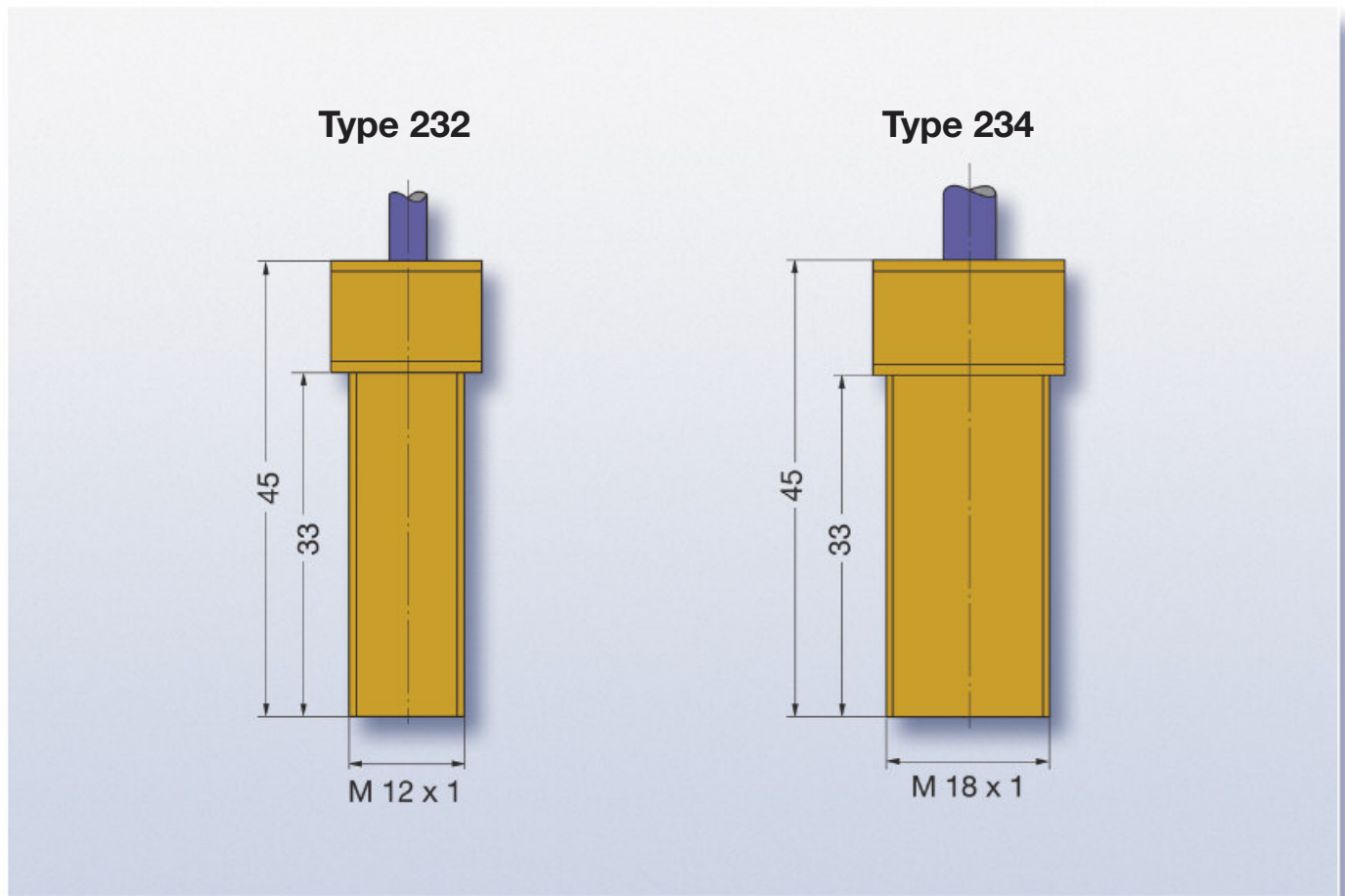
- Small and rugged design
- Connection via cable
- Any fitting position
- Almost inertia-free due to use of reed contacts
- Negligible wear and maintenance free as contacts are operated by magnets
- Type of protection: IP 65 according to EN 60529/IEC 529
- Ex-approval: I M2 EEx ia I intrinsically safe according to Directive 94/9/EC (ATEX)



Position indication in a valve



iKA232/234



Switching distance	Magnet switch on non-ferritic base, magnet on iron	
Switching magnet	M10	M10/S
Pulse contact	30 mm	40 mm

Switch equipment	Contact connection	Without connection, no code numbers or letters	Code numbers for option 5 $\hat{=}$ NAMUR	Code letters for diode option			
				A	D	E	G
1 one reed contact							

Extract of our connection list. Further connections upon request.



iKA232/234

FUNCTION AND DESIGN

The two magnet switches iKA232 and iKA234 are of similar design and only vary in their dimensions. They are equipped with reed contacts. These can be designed as normally open or change-over contacts. The contacts are activated by a permanent magnet passing by.

The physical connection between the air gap of the contact blades getting smaller when the contact closes and the quadratic rise of the magnetic field results in a sudden activation. Both switches with their extremely small dimensions can only be designed as pulse switches:

The reed contact change-over action is analogous with the influence by the magnetic field. After the permanent magnet has been removed the respective contact will return to its original position. One normally open or change-over contact can be installed.

To permit line monitoring for equipment integrated in control or monitoring circuits relevant to safety the contacts of the magnet switch can be connected with diode or resistor combinations. This allows for monitoring lines to detect broken conductors and short circuits according to the half-wave or full-wave principle as well as according to NAMUR.

The cast-resin encapsulated reed contact is located in a rugged brass tube which is also used for installing the magnet switch. This arrangement ensures adequate safety with respect to explosion protection and mechanical damage. The cable leading out of the potting is heat-resistant and largely resists acids and alkaline solutions.

Application

- The magnet switch can be used for all applications where intermediate position measurement or end position monitoring is required. Thanks to its small overall dimensions it can be also used in confined spaces.
- A typical application would be monitoring the position of points or switches in insulant supply plants.
- The magnet switch can also be placed on ferritic material, same as the switching magnet. In this connection it should be noted that when installing the magnet switch on iron the magnetic field will be weakened as the switching magnet approaches which will reduce the switching distance. If, on the other hand, the permanent magnet is mounted on iron, the magnetic field will be strengthened.
- **The largest possible switching distance can be achieved by installing the magnet switch on a non-ferritic base and mounting the permanent magnet on iron.**



iKA232/234

TECHNICAL DATA

Switching distance	depending on the magnet used (see table page 2)
Type of contact	reed contact
Switching behaviour	monostable (pulse switch)
Contact equipment	1 normally open or change-over contact
Contact connection	diode and resistor combinations for line monitoring
Contact capacity	for intrinsically safe circuits
Response time (close)	≤ 2 ms
Releasing time (open)	≤ 0.2 ms
Operating life	> 10 ⁹ switching operations
Type of connection	up to 10 m long cable
Temperature range	- 20 °C to 85 °C
Fitting position	any
Type of protection	IP 65 according to EN 60529/IEC 529
Ex-approval	I M2 EEx ia I acc. to Directive 94/9/EC (ATEX)
Certificate number	BVS 03 ATEX E167

TYPENSCHLÜSSEL UND BESTELLANGABEN

* K A *** L *** *	Contact connection acc. to table (see page 2) Without connection the last place will be omitted
	Contact type code: 7 ► NO 9 ► change-over contact
	Number of reed contacts
	Switching behaviour: 1 ► pulse switch 2 ► latching-type switch
	Type of connection: cable
	Series: 232 ► screw-in thread M12x1 234 ► screw-in thread M18x1
	Design acc. to ATEX
	Magnet switch
	i ► intrinsically safe w ► non-explosionproofed version

AUSFÜHRUNGSBEISPIEL

iKA232L117GL=10m	<ul style="list-style-type: none"> ■ Intrinsically safe magnet switch, acc. to ATEX ■ Housing with screw-in thread M12x1 ■ Connection via cable 	<ul style="list-style-type: none"> ■ Pulse switch ■ 1 NO contact ■ Connection with 2 antiparallel diodes ■ 10m cable length
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Subject to technical alterations · Version 08/12