

## Features:

- Incremental length measuring system consisting of read head, magnetic scale
- Pole pitch of the scale 5mm, 2mm, 1mm
- Maximum air gap between read head and scale: 2.5mm, 1mm, 0.5mm
- Different resolutions available
- Different edge distances for adapting to several counters available
- RS422 output signals
- Error signal

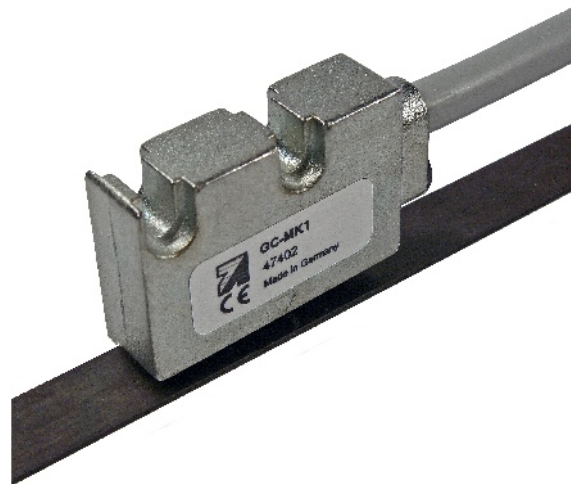


Figure 1: Read Head

## Technical Parameters Read Head:

General Parameters	
Power supply voltage	5VDC
Output signals	RS422
Connection	<b>Standard without connector</b> (Sub-D15-pin male optional)
Degree of protection	IP67
Temperature range	-20...+85°C
Housing	Metal
Cable length	1m
Signal Processing	
Resolution	
Type GC-MK5	<b>Standard 5µm</b>
Type GC-MK2	<b>Standard 2µm</b>
Type GC-MK1	<b>Standard 1µm</b>
Edge distance	<b>Standard 250ns</b>
System accuracy	± (Accuracy class of magnetic scale + 0.025)µm
Repeatability	± 1 Increment
Max. velocity	max. 25m/s**

## Technical Parameters Magnetic Scale:

General Parameters	
Pole pitch	5mm, 2mm, 1mm
Accuracy class magnetic tape	50µm/m
Magnetic tape width	10mm
Temperature coefficient	(11±1)*10 <sup>-6</sup> 1/K
Material	Synthetic , Steel
Cover tape*	Stainless steel

\* Optional

\*\* Depends on resolution

### Ordering Information Magnetic Tape:

Product type	Description	Item No.
GC-MB1	Magnetic scale with 1mm pole pitch	Z-00318-00
GC-MB2	Magnetic scale with 2mm pole pitch	Z-00319-00
GC-MB5	Magnetic scale with 5mm pole pitch	Z-00320-00
	Cover tape for GC-MB1, GC-MB2, GC-MB5	Z-00321-00

In case of an order please choose the scale length.

### Ordering Information Read Head:

Product type	Description	Item No.
GC-MK1	1mm magnetic read head, standard configuration, suitable for GC-MB1	PR-47010-00 # x*
GC-MK2	2mm magnetic read head, standard configuration, suitable for GC-MB2	PR-47020-00 # x*
GC-MK5	5mm magnetic read head, standard configuration, suitable for GC-MB5	PR-47050-00 # x*

\* Number from matrix

### Ordering matrix for choosing x

Sensor Type / Resolution			Edge Distance at the Output							
GC-MK1	GC-MK2	GC-MK5	250ns	500ns	1 $\mu$ s	2 $\mu$ s	4 $\mu$ s	8 $\mu$ s	16 $\mu$ s	32 $\mu$ s
10 $\mu$ m	20 $\mu$ m	50 $\mu$ m	1	2	3	4	5	6	7	8
8 $\mu$ m	16 $\mu$ m	40 $\mu$ m	9	10	11	12	13	14	15	16
5 $\mu$ m	10 $\mu$ m	25 $\mu$ m	17	18	19	20	21	22	23	24
4 $\mu$ m	8 $\mu$ m	20 $\mu$ m	25	26	27	28	29	30	31	32
2,5 $\mu$ m	5 $\mu$ m	12,5 $\mu$ m	33	34	35	36	37	38	39	40
2 $\mu$ m	4 $\mu$ m	10 $\mu$ m	41	42	43	44	45	46	47	48
1,25 $\mu$ m	2,5 $\mu$ m	6,25 $\mu$ m	49	50	51	52	53	54	55	56
1 $\mu$ m	2 $\mu$ m	5 $\mu$ m	57	58	59	60	61	62	63	64

Standard types

on request

#### Example for GC-MK2:

needed Resolution: 4 $\mu$ m

needed edge distance:: 1 $\mu$ s

→ **Order number PR-47020-00 # 43**