Baumer
Passion for Sensors

Cable transducers

Linear travel measurements made easy.



Easy installation. Reliable results.

Whether as OEM or retrofit – Baumer cable transducers are ideal for easy and precise linear measurements. Extremely compact and yet long measuring length. Unrivalled easy to install compared to other methods. With all robust and long-life components, cable transducers are designed for safe and low-maintenance operation in harsh environments.
Different measuring tasks require the optimal product. Within our broad portfolio you will always encounter the perfect match for your cable transducer application:

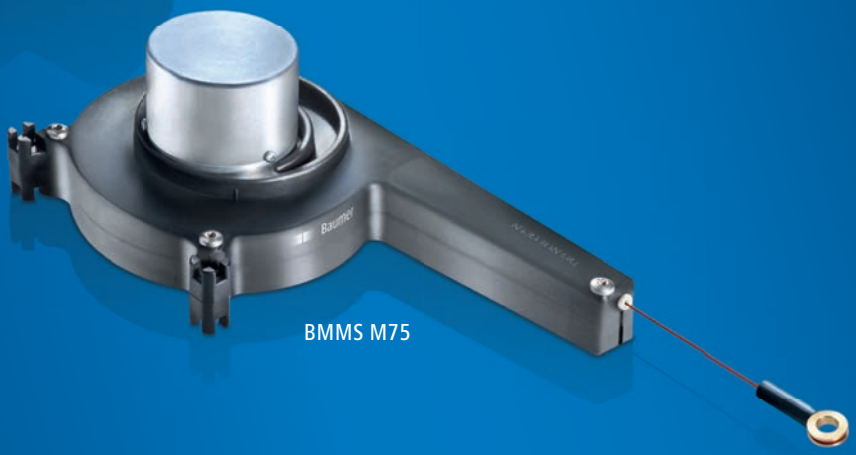
- Compact design or configuration flexibility
- Measuring length up to 50 m
- Precise optical or robust magnetic sensing technology
- Absolute or incremental interfaces
- Comprehensive range of accessories for optimum installation

Cable transducers.

Baumer cable transducers are the most convenient, reliable and cost-efficient solution for linear positioning and travel measuring operations.



GCA4



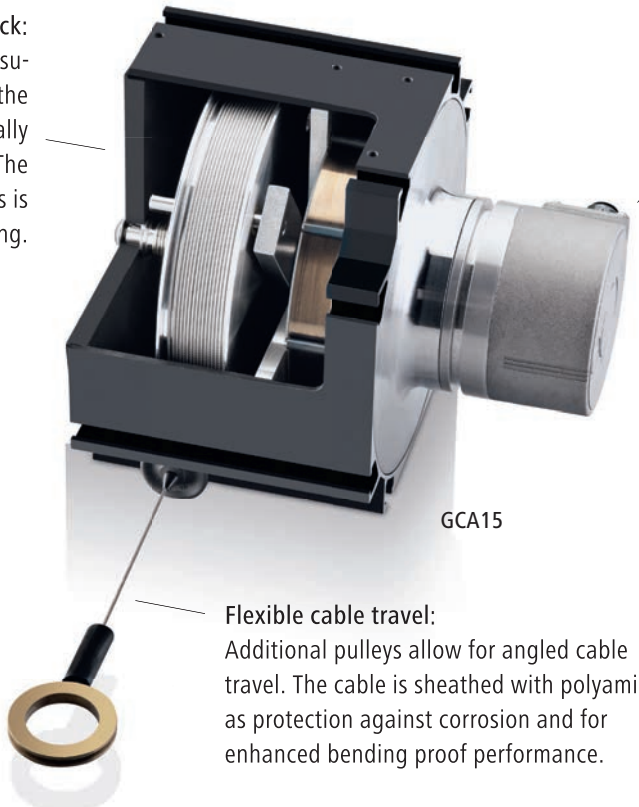
BMMS M75



Ultimate application versatility.

Baumer cable transducers feature any common interface. Hence, they allow for quick integration in any control environment. They are extremely robust and cost-efficient compared to other measuring principles. They enable easy installation without any adjustment aids. They master virtually any task in linear travel measurement – even where space is a constraint and under rough conditions.

Never off the track:
One reason for the high measuring precision is for example the precise and partially mechanically led winding of the steel cable. The robust, sophisticated mechanics is durable and long-lasting.



GCA15

Perfect interaction:
Encoder and cable-pull mechanics perfectly match each other. Linearity in the measuring operation is up to ±0.01 % of the measuring range.

Flexible cable travel:
Additional pulleys allow for angled cable travel. The cable is sheathed with polyamide as protection against corrosion and for enhanced bending proof performance.

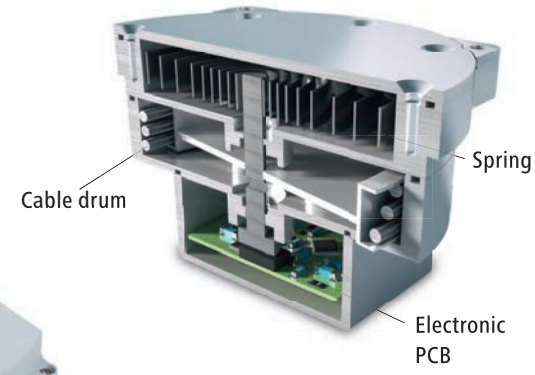




Compact cable transducers for outdoor use.

The compact cable transducers *MAGRES* BMMS and GCA5 with plastic housing are ideal for outdoor applications where space is limited, for example at utility vehicles.

- Linearity max. 0.3 % of the measuring range
- Measuring range up to 7.8 m
- For outdoor applications IP 67



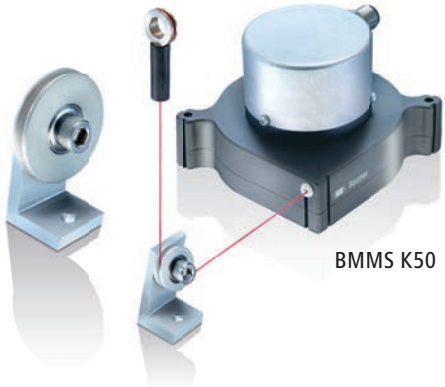


Three-chamber principle
The cable transducer features three separate chambers for optimum protection of electronics and spring mechanism against ingressing moisture or other harmful ambient impacts (series GCA5).

High-end components
Corrosion-proof stainless steel cable with nylon-/polyamide coating and shock-proof plastic housing.

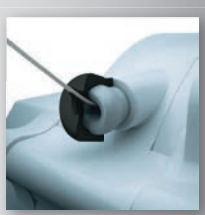
Compact design
Flat, light housing

Broad product portfolio
Absolute cable transducer with robust magnetic sensing. SSI, CANopen® or analog interfaces optional with redundant sensing and signal output.



Integrated skimmer

Durable and efficient dirt skimming by flexible ball head with resilient rubber coating to protect the mechanics of the cable drum against ingress of humidity, dust or dirt (series GCA5).



Versatile accessories

- Pulleys max. angle 180°: for areas difficult to access, as protection against moisture and ice formation.
- Cable extensions allow for attachment even outside the measuring range.
- Mounting angle for easy, durable and safe installation.





Flexible cable transducers with highest linearity.

Medical technology, logistics and similar industries pose high requirements on cable transducers in terms of linearity. The new product platform GCA with metal housings and optical position sensing meet the most demanding requirements in terms of measuring accuracy and service life.

- Linearity ±0.01 % of the measuring range
- Measuring range up to 50 m
- For indoor applications IP 65

Extremely high accuracy
Precise mechanics with guided winding of the cable, combined with precise optical sensing.

Versatile program
Cable-pull mechanics combined with a versatile selection of encoders to master any measuring task.

Robust and durable
Aluminum housing ensures minimum wearing and high life span.



GCA50



GCA2

High configuration flexibility – any conventional absolute interfaces

CANopen · DeviceNet · PROFIBUS · SAE J1939 · SSI

EtherCAT · PROFINET · EtherNet/IP · Power over EtherCAT · ETHERNET POWERLINK

Typical applications.



Utility vehicles

Analog output, CANopen® or SAEJ1939 interface capabilities make the cable transducers predestined for deployment in utility vehicles. Redundant product variants are available where more diagnostic functions are required. Temperature stability down to –40 °C and pulleys ensure your reliable measuring operations where other methods would fail.

Application examples:

- Outrigger positioning
- Extended boom positioning



GCA5



Logistics

High-dynamic measurements by cable transducers support speed-optimized processes. Despite the limited installation space prevailing at industrial trucks, they are very easy to integrate and yet provide up to 50 m measuring length.

Application examples:

- Height measurement of the forklift and AGVs such as automatically guided forklift trucks
- Position acquisition at stacker cranes



BMMS K50

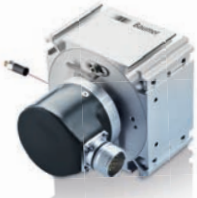


Working and lifting platforms

Cable transducers to acquire positions at working platforms, lifting tables and hydraulic lifts are particularly convenient and cost-efficient.

Application examples:

- Position acquisition at assembly and scissor lifts in the automotive industry
- Position acquisition at working platforms



GCA4



Medical technology

In medical technology, the compact cable transducers impress by their easy installation capabilities in limited space and high efficiency.

Application examples:

- Positioning of patient bed in computer tomography
- Horizontal and vertical alignment of camera and X-ray unit in automated X-ray systems



GCA2

Optimal Design-In.

Optimum integration in your application will ensure consistently precise measured results and extend the cable transducers service life to the maximum.

Incorrect

Correct

Installation is preferred with the cable outlet pointing downward to prevent ingress of water and liquids. A pulley may be used to remove any ice formation from the cable to prevent transport inside the drum mechanism. The optional dirt skimmer will additionally remove any dust or dirt deposits.





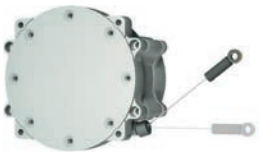
MAGRES BMMS and GCA5 cable transducers for outdoor applications, e.g. utility vehicles, provide holes for water outlet all around to drain any liquid adhering to the cable or condensation.

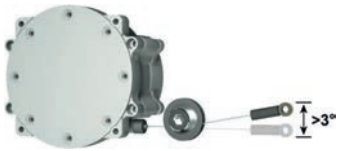


Just remove the protective caps during installation.



Cable travel axial to the outlet will extend the cable service life. A pulley is recommended in the event of the misalignment exceeding 3° to protect the material and to prevent excessive cable wear. A pulley also enables optimum cable travel around objects without bending.





Appropriate cable assembly ensures reliable measured results and a firm hold. It prevents cable rewind without control and the entailed damage of encoder.





Appropriate mounting on an even surface ensures precise results and prevents the drum from blocking. Optimal attachment is achieved by using the robust, accurately fitting mounting angles.



Product overview


BMMS


GCA4


GCA5

	Compact			
Measuring length	Up to 4.7 m	Up to 5 m	Up to 7.5 m	Up to 7.8 m
Product family	BMMS K34	BMMS K50	BMMS M75	GCA5
Sensing method	Magnetic			
Voltage supply	8 ... 30 VDC, 10 ... 30 VDC			
Interfaces	Analog, analog redundant, CANopen®, CANopen® redundant, SSI			Analog, CANopen® redundant
Output circuit	–			
Connection	M12, cable			
Resolution	0.1 mm / step (SSI, CANopen®), 12 bit (analog)			
Linearity	±0.6 %	±0.6 %	±0.2 %	1 %
Operating temperature	–40 ... +85 °C			
Protection	IP 65 (encoder)			GCA5 IP 67 (cable inlet IP 54)
Accessories	Pulleys, eyelets, hooks, extension cables, mounting angles			

	Flexible			
Measuring length	Up to 2.4 m	Up to 3 m	5 ... 15 m	30 ... 50 m
Product family	GCA2	GCA4	GCA15	GCA50
Sensing method	Optical			
Voltage supply	10 ... 30 VDC			
Interfaces	Analog, CANopen®, DeviceNet, EtherCAT, SSI, EtherNet/IP, Profibus, Profinet, SAE J1939			
Connection	M23, M12, cable or bus cover			
Linearity	±0.01 %	±0.02 %	±0.01 %	±0.01 %
Operating temperature	–20 ... +85 °C (–40 ... +85 °C optional)			
Protection	IP 65 (cable transducer)			
Accessories	Pulleys, eyelets, hooks, extension cables, mounting angles			

Learn more about our cable transducers at:
www.baumer.com/cabletransducer

Find your partner on site: www.baumer.com/worldwide

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