





General Features

- Incremental magnetic scale with pole pitch 2+2 mm.
- Particularly suitable for synchronized press brakes.
- Reader head guided by a self-aligned and self-cleaning sliding carriage with spring system.
- Resolutions up to 1 μm .
- Repeatability ± 1 increment.
- Reading without contact.
- Adjustable cable output.
- Selectable reference indexes, every 10 mm along the entire measuring length, with device for generating the reference indexes.
- The adjustable cable output and the selectable zero references make the scale symmetric and applicable, in the same version, to both columns of the press brake.
- Various possibilities of application, with double-effect joint or steel wire.
- Option: safety limit switches, positionable at both ends.



Technical Characteristics

Measuring method	plastoferrite on stainless steel tape / incremental	
Pole pitch	2+2 mm	
Linear thermal expansion coefficient	$10.6 \times 10^{-6} \text{ } ^\circ\text{C}^{-1}$	
Reference indexes (I_0)	E = selectable (every 10 mm)	
Resolution	50 - 25 - 10 - 5 - 1 μm	
Repeatability	± 1 increment	
Accuracy grade	$\pm 15 \mu\text{m}$	
Measuring length ML in mm	170, 220, 270, 320, 370, 420, 470, 520, 570, 620, 720, ... mm	
Max. traversing speed	120 m/min *	
Max. acceleration	30 m/s ²	
Required moving force	$\leq 1.5 \text{ N}$	
Vibration resistance (EN 60068-2-6)	100 m/ s ² [55 ÷ 2000 Hz]	
Shock resistance (EN 60068-2-27)	150 m/s ² [11 ms]	
Protection class (EN 60529)	IP 64 standard IP 67 on request	
Operating temperature	0 $^\circ\text{C}$ ÷ 50 $^\circ\text{C}$	
Storage temperature	-20 $^\circ\text{C}$ ÷ 70 $^\circ\text{C}$	
Relative humidity	20% ÷ 80% (not condensed)	
Carriage sliding	without contact	
Power supply	5 VDC $\pm 5\%$ or 10 ÷ 28 VDC $\pm 5\%$	
Current consumption	140 mA _{MAX} (with R = 120 Ω) 5 VDC 100 mA _{MAX} (with R = 120 Ω) 10 ÷ 28 VDC	
A, B and I_0 output signals	Line Driver (incl. inverted signals) Push-Pull 	
Max. cable length	25 m **	
Electrical connections	see related table	
Electrical protections	inversion of polarity and short circuits	
Weight	900 g + 1850 g/m (per m measuring length)	

* With a 1 μm resolution, the maximum traversing speed becomes 60 m/min.

** Ensuring a minimum power supply voltage of to the transducer, the maximum cable length can be extended to 100 m.

Mechanical Characteristics

- Rugged and heavy enclosure PROFILE made of anodized aluminum.
- Dimensions 55 x 28 mm.
- Elastic COUPLING for misalignment compensation and self-correction of mechanical hysteresis.
- SEALING LIPS for the protection of the magnetic scale, made of special elastomer resistant to oil and wearing. Special self-blocking profile.
- CARRIAGE guided by ball bearings with gothic arch profile sliding on tempered and grinded guides, to guarantee the system accuracy and the absence of wearing.
- Die-cast TIE ROD, with nickel-plating surface treatment.
- MAGNETIC SCALE placed in the enclosure profile.
- Elastomeric GASKETS which allow to reproduce the full protection in mechanical joints (in case of disassembling).
- Adjustable CABLE output.
- Various possibilities of application, with double-effect joint or steel wire.
- GV-PB adapter guarantees the compatibility with scale mod. PBS-HR.
- Pressurization enclosure profile on request.
- Full possibility to disassemble and reassemble it.
- Possibility of direct service.

Electrical Characteristics

- Reading device with positioning sensor based on magneto resistance, with AMR effect (Magnetic Anisotropy)
- A and B output signals with phase displacement of 90° (electrical)
- Reference index can be selected every 10 mm with the device for creating the reference indexes.

8-wire cable

GVS 215 incremental magnetic scale is supplied with an 8-wire shielded cable, $\varnothing = 6.1$ mm, PUR external sheath.

Conductors section:

- power supply: 0.35 mm²
- signals: 0.14 mm²

Notice

The cable's bending radius should not be lower than 80 mm.
 The cable is suitable for continuous movements.

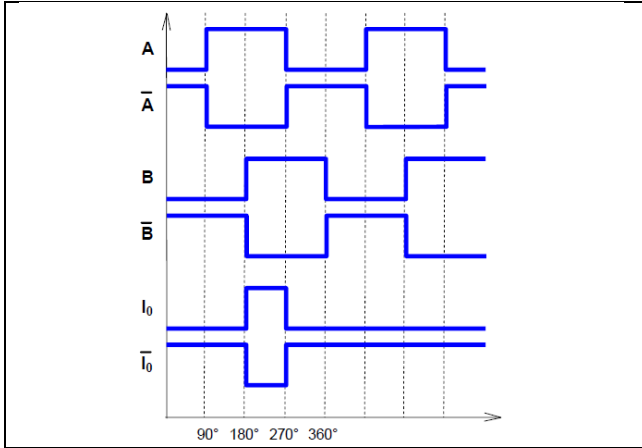
The following output signals are available:

Line Driver	Push-Pull	Conductor Color
V+	V+	red
V-	V-	blue
A	B	green
\bar{A}	NC	orange
B	A	white
\bar{B}	NC	light-blue
I ₀	I ₀	brown
\bar{I}_0	NC	yellow
SCH	SCH	shield

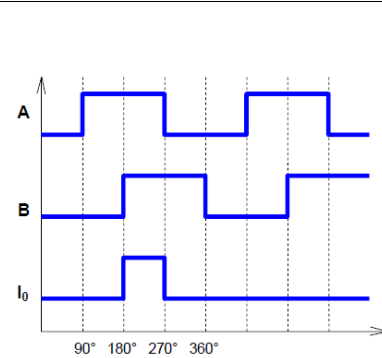
Datasheet

Output Signals

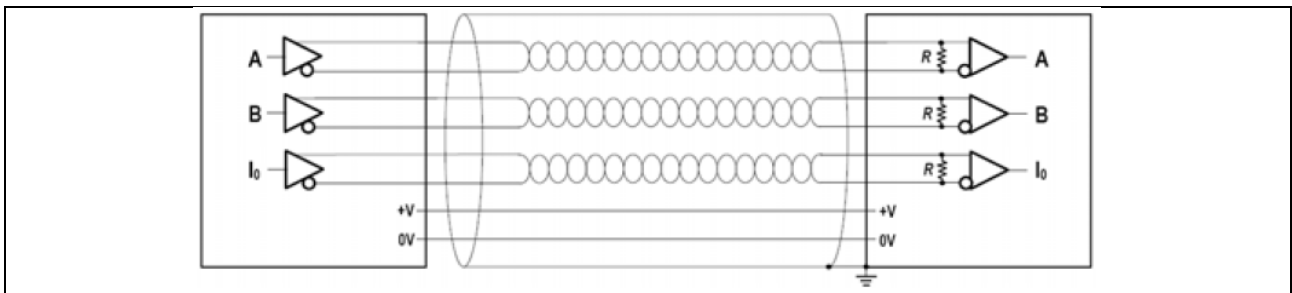
Line Driver version:



Push-Pull version:



Cable

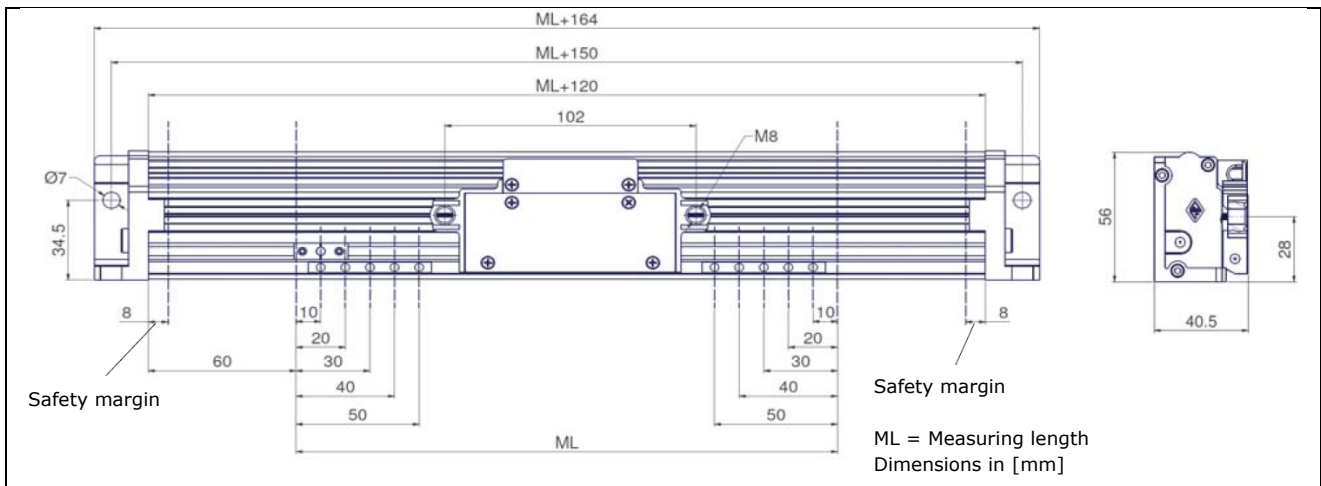


Notice

In case of cable extension, it is necessary to guarantee:

- the electrical connection between the body of the connectors and the cables shield
- a minimum power supply voltage to the transducer

Dimensions



GV-PB adapter provided for the interchangeability with scale mod. PBS-HR.

Datasheet

Ordering Code

Type **GVS 215** - **T 5 E** - **0270** - **05V L** - **M0,5/S** - **CG1** - **A** - **PR**

Scale Type

T = TTL

Resolution

50 = 50 µm

25 = 25 µm

10 = 10 µm

5 = 5 µm

1 = 1 µm

Index

E = selectable indexes

Measuring length [mm]

0270 = 270 mm

Power supply

05V = 5 VDC

1028V = 10 ÷ 28 VDC

Output signal

L = Line Driver

Q = Push-Pull

Cable length

Mxx = length in m

M0,5 = 0.5 m (standard)

100 = 100 m

Cable type

S = PUR cable for continuous movements

Connector

Cxx = progressive

SC = without connector, open cable end

Limit switch (option)

X = no specifications (standard)

A = OC NPN NC

B = OC NPN NO

E = TTL active low

F = TTL active high

Option

X = no specifications (standard)

SPxx = special version (on request)

PR = pressurized enclosure profile

Manufacturer:



Without prior notice, the products may be subject to modifications that the Manufacturer reserves to introduce as deemed necessary for their improvement. Mistakes excepted.