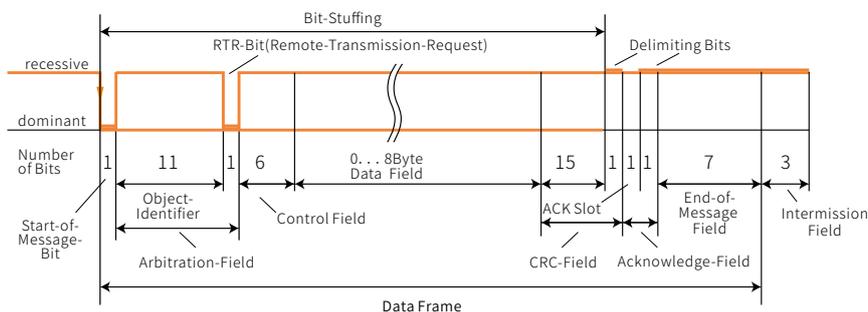# GUC2500(A)-CANopen

GUC2500(A)-Mine intrinsic safety type

+ High vibration and shock resistance performance.

+ Compact design: suitable for applications with strict space requirements for the installation of electronics housing, extensive applications in construction machinery.

+ Robust and durable, fully enclosed design, highest IP68 protection level

+ Linear measurement, absolute value output without zeroing

+ Easy to use, standard singal output, maintenance -free

+ Maximum durability, continuous non-contact

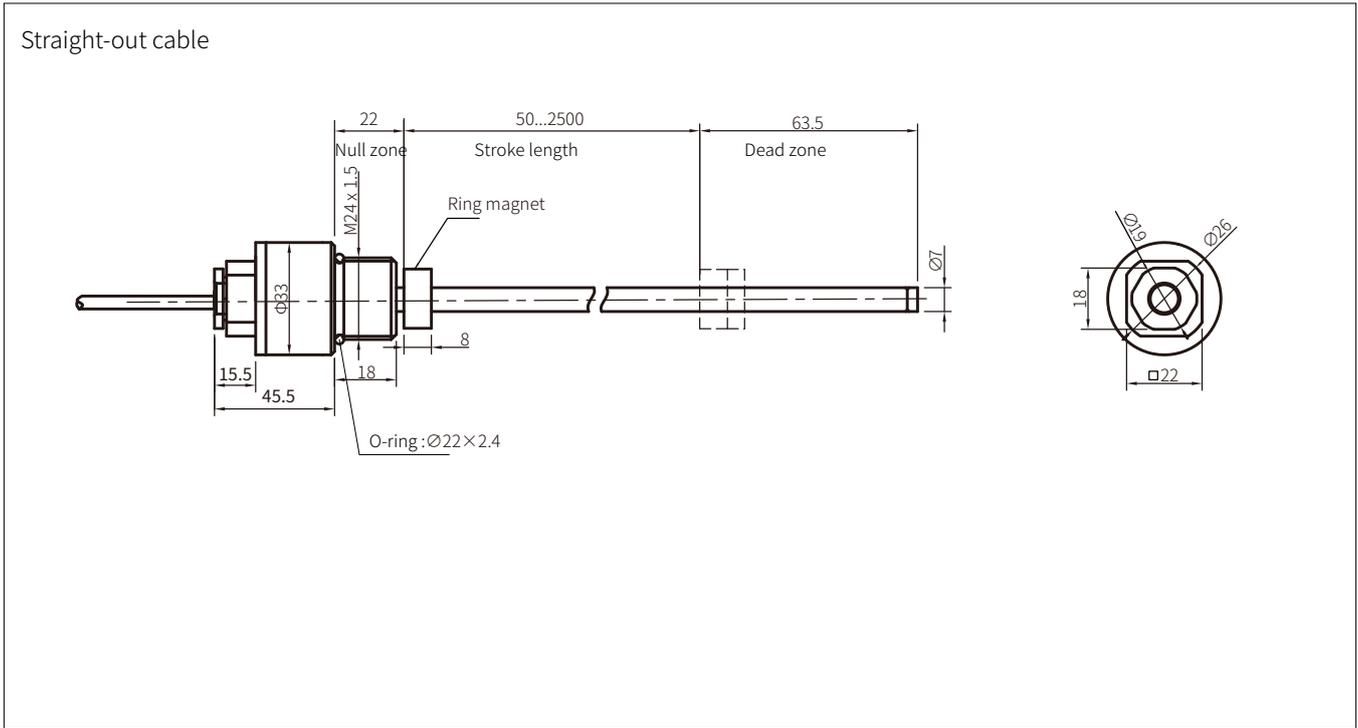+ Full scale adjustable, 100% adjustable zero and full scale

TECHNICAL PARAMETER

Input	
Measured data	Position
Measurement range	50...2500mm

Output	
Communication protocols	CAN bus system protocol, ISO11898 CANopen CIA standard DS-301 V3.0 encoder profile DS-406 V3.1
Transmission rate	Rate(kbit/s): 1000 / 500 / 250 / 125 Cable length(meter): < 25 / < 100 / < 250 / < 500

Transmission rate detail:

Rate(kbit/s)	1000	500	250	125
Cable length(meter)	< 25	< 100	< 250	< 500

Resolution	
Resolution	100μm
None-Linearity	< ±0.05%F.S.
Repeatability	< ±0.05%F.S.
Update time	(see below)
Temperature coefficien	< 30ppm/°C

Stroke length	≤ 1200mm	≤ 2500mm
Update time	0.5ms	1ms

Mounting	
Mounting position	Any
Mounting form	M24x1.5, M24x1

Design/Material	
Electronics housing	Stainless steel 304
Measuring rod	Stainless steel 304/316L
Magnet	Standard magnet
Operating pressure	35MPa (continuous), 70MPa (peak)

Electrical connection	
Wiring connection	Straight out cable
Operating voltage	+12VDC （-15/+20%)
Polarity protection	Up to -36VDC
Overvoltage protection	Up to +36VDC
Power consumption	< 70mA
Dielectric strength	500 VDC (DC ground to machine ground)

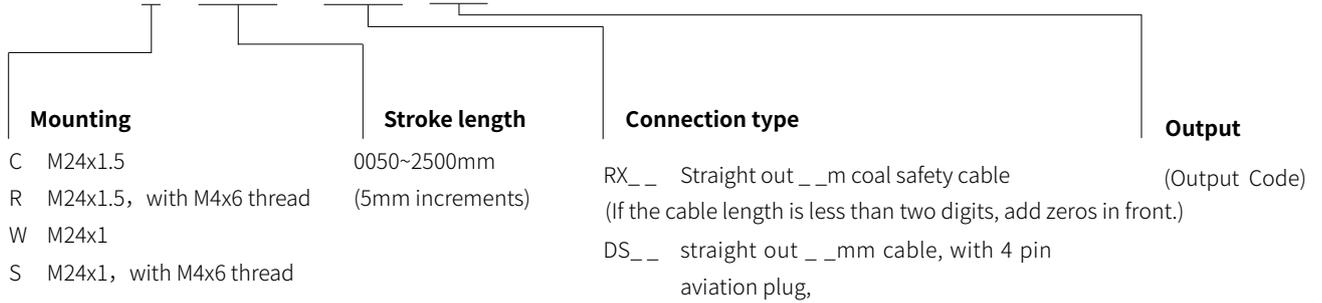| Operating conditions	
Magnet velocity	Any
Operating temperature	0...40°C ,-30...80°C（Customizable)
Humidity	90 % relative humidity, no condensation
Ingress protection	IP68
Explosion-proof type	Mine intrinsic safety type
Explosion-proof mark	Ex ib I Mb
Shock	100 g/11 ms,IEC standard 60068-2-27
Vibration	15 g/10...2000 Hz, IEC standard 60068-2-6 (resonant frequencies excluded)
EMC	Electromagnetic emission according to EN 61000-6-3 Electromagnetic immunity according to EN 61000-6-2

TECHNICAL DRAWING

Straight-out cable

Wiring

Straight out cable	Color	Function
	Red	+12VDC （-15/+20%）
	White	0 VDC(GND)
	Blue	CAN H
	Green	CAN L

ORDER CODE

GUC2500(A) - _ - _ _ _ _M - _ _ _ _ - _ _ _

Mounting

C M24x1.5
R M24x1.5，with M4x6 thread
W M24x1
S M24x1，with M4x6 thread

Stroke length

0050~2500mm
(5mm increments)

Connection type

RX_ _ Straight out _ _m coal safety cable
(If the cable length is less than two digits, add zeros in front.)

DS_ _ straight out _ _mm cable, with 4 pin
aviation plug,

Output

(Output Code)

CANopen Output Code	C[1][2][3][4][5]	Note: "*" as default	
[1] Resolution ratio	**[2] Baud rate**	**[3] PDO cycle**	**[4][5]Node-ID**
5 100μm	**0** 1000kBit/s **5** 100kBit/s	1 1ms	**01** Hexadecimal 01...7F
	1 800kBit/s **6** 50kBit/s	2 10ms*	.
	2 500kBit/s **7** 20kBit/s	3 100ms	.
	3 250kBit/s **8** 10kBit/s	4 Customizable (1-65535ms)	.
	4 125kBit/s		**7F**

Note: Forward, data grows larger when the magnet is distant from the electronics housing;
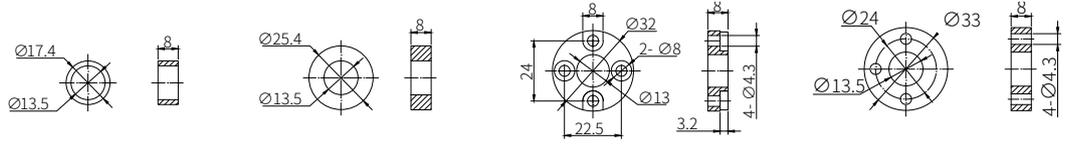Reverse, data grows larger when the magnet approaches the electronics housing.

Model selection

Model: GUC2500(A)-C-0100M-RX05-C5017F
Explanation: GUC2500(A) mine intrinsically safe displacement sensor，mounting thread metric M24x1.5，range 100mm, straight out 5m coal safety cable, CANopen protocol, resolution 100μm, baud rate 1000kBit, PDO cycle 1ms，node ID 7F.
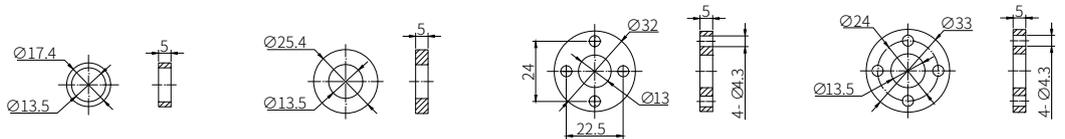
*This product is a mining product, the model must be GUC2500（A），please refer to the selection code when ordering.

PARTS SELECTION

Name	Ring magnet	Ring magnet	Ring magnet	Ring magnet
Operating temperature	-40...125°C			
Order code	**12-1032**	**12-1019**	**12-1024**	**12-1001**

Fitting non-permeable gasket				
Name	Non-permeable gasket	Non-permeable gasket	Non-permeable gasket	Non-permeable gasket
Operating temperature	-40...125°C			
Order code	**12-1037**	**12-1021**	**12-1025**	**12-1008**