

### 苛刻重载！

- 绝缘轴/轴套可选
- 苛刻重载设计
- 轴径  $\Phi 20-50\text{mm}$   
带键槽/V型锁/夹紧环
- 多种安装附件可选
- 防护等级 IP54/IP65 可选择
- 光信号衰减补偿
- 抗短路\反接\过流保护
- 双输出可选
- 组合超速开关/位置传感器可选

### HS65A系列

HS65A是一款为强烈振动/频繁冲击环境而设计的重载光电编码器。轴径设计为  $\Phi 20/25/25.4/28.575/50\text{mm}$ 带键槽可选, 方式安装可以选择夹紧环或者V型锁紧环来矫正产品与电机轴配合精度问题, HS65A拥有及其坚固的机械系统及优秀的电子数据扫描系统, 广泛应用于石油, 冶金, 造纸, 起重等行业。

HS65A转动系统采用加强深沟球轴承, 编码器承载力是其他类似产品的5-8倍, 经过优化的双端轴承结构使得编码器高速转动更可靠, 更稳定。可选择一体式/分体式的绝缘轴套, 保护编码器不受轴电流损害。当电机轴轴向窜动 $\leq 1\text{mm}$ 时, 我们建议使用弹簧片来固定编码器, 当窜动 $> 1\text{mm}$ 时, 我们建议使用力矩臂\*。

区别于其他公司常用的易碎玻璃码盘, 我们只使用不会碎裂的金属码盘及高温树脂码盘, 在保证精度的同时, 亦提高了编码器耐振动耐冲击的性能。HS65A数据扫描系统及电子线路经过多重优化, 抗污染, 抗短路, 抗反接, 输出稳定, 传输距离更远\*\*, HS65A标准输出为2/4/6通道信号HTL或TTL, 可选电缆输出或连接器输出方式。

HS65A光电重载编码器采用了优质的传感器, 抗振动抗冲击的码盘, 加强的转动系统, 使得HS65A即使在恶劣环境下也有着优异的表现。根据客户的需求, HS65A还可以选择双输出, 超速开关(机械/电子), 位置传感器等多种组合形式。今天, 来升级使用HS65A重载编码器吧, 您将获得最耐久的最可靠的编码器体验!

\*力矩臂采用活结轴承连接, 具体配置请咨询我们

\*\*编码器传输距离跟其分辨率/ 转速/输出功率/数据协议/电缆质量以及现场环境有关

## 苛刻重载中空轴增量编码器

### 电气参数

最大分辨率	10000PPR(更高脉冲请咨询)
输出信号	6通道A/B/Z+ A-/B-/Z-
输出频率	120KHZ
输出形式	TTL:(5VDC/5VDC)(24VDC/5VDC) HTL:(24VDC/24VDC)
供电电压	TTL:5VDC±5%/10...30VDC HTL:10...30 VDC
空载电流	200mA每通道
工作电流	120mA最大/每通道过流保护
占空比	40...60%
AB相位差	90°±20

### 机械参数

轴径	通孔/盲孔Φ16/20/25/25.4/28.575/30/40/45/50
最大转速	2,500RPM(IP54) / 1,600RPM(IP65)
转动力矩	40Ncm(20°C)
轴承载	轴向<400N 径向<800N
外壳材质	铝,本色/防腐漆
法兰材质	铝,本色
轴套	不锈钢
重量	> 3.2Kg (根据版本不同)
振动	≤20g(20...2,000Hz)
冲击	≤50g(11ms)
工作温度	-25...+85°C
储存温度	-40...+100°C
环境湿度	< 90% RH, 无结露
防护等级	IP54/65(DIN40050/IEC529)
EMV	EN 61000-6-4,EN 61000-6-2

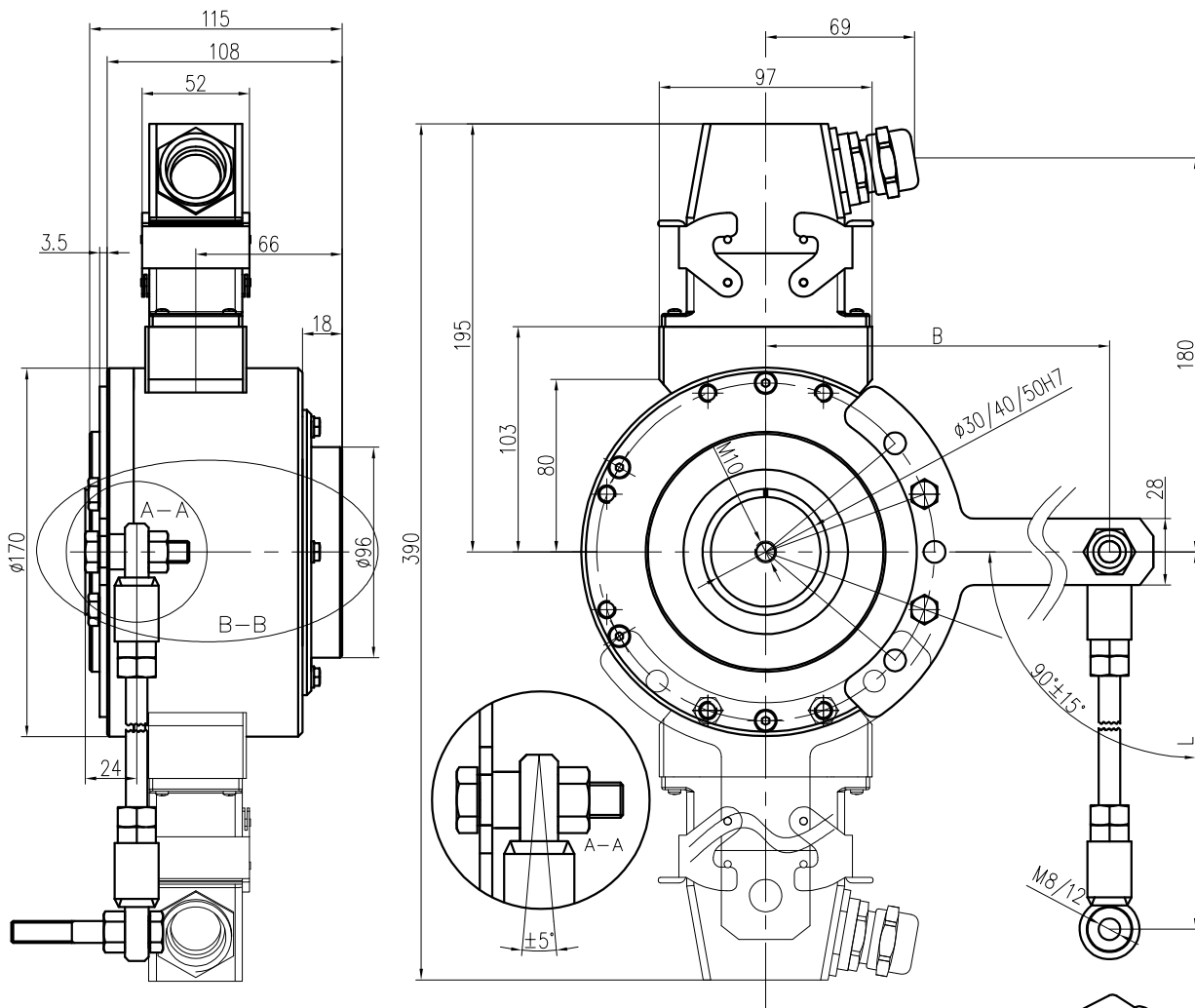
### 型号代码

HS65A PART NUMBERS AND AVAILABLE OPTIONS										
Model	Bore Size	Mounting Style	Line Driver	Left&Right Output Range		Tether Options	Channels	Connector	Modifications	Identification
<b>HS65A</b>	<b>S</b> -16mm <b>M</b> -17mm <b>W</b> -20mm <b>Y</b> -25mm <b>F</b> -25.4mm <b>I</b> -28.575 <b>E</b> -30mm <b>G</b> -40mm <b>H</b> -45mm <b>K</b> -50mm <b>Z</b> -特殊选项, 需咨询	<b>E</b> -End of Shaft Clamping Mount <b>T</b> -Thru shaft Clamping Mount <b>V</b> -End of Shaft Center bolt Mount+V <b>W</b> -Middle of Shaft bolt Mount+V <b>K</b> -End of Shaft Center bolt Mount+V+Key-way请咨询 <b>Z</b> -特殊选项, 需咨询	<b>1</b> -5 VDC TTL (RS422) <b>4</b> -5 to 24V in 5V TTL(RS422) out TTL/R <b>6</b> -10 to 30 VDC HTL <b>8</b> -Long Driver <b>Z</b> -特殊选项, 需咨询	<b>L</b> -1000 PPR <b>M</b> -1024 PPR <b>N</b> -1200 PPR <b>O</b> -2000 PPR <b>P</b> -2048 PPR <b>T</b> -2500 PPR <b>U</b> -4096 PPR <b>E</b> -5000 PPR <b>F</b> -8192 PR <b>G</b> -10000 PPR <b>Z</b> -特殊选项, 需咨询	<b>1</b> -single output <b>2</b> -dual output	<b>G</b> -万向力矩臂(M6标准 B=300,其他尺寸需要咨询) <b>Z</b> -特殊选项, 需咨询	<b>6</b> - All.6 Channels A,A\,B,B\,Z, Z\ <b>4</b> -A,A\,B,B\ <b>3</b> -A,B,Z <b>2</b> -A,B	<b>B</b> -10 pin 美式 MS 5015 Connector <b>D</b> -12 pin M23 Connector(逆时针插座) <b>P</b> -Hating plug <b>W</b> -Pigtail Cable <b>T</b> -Terminal Block <b>Z</b> -特殊选项, 需咨询	<b>000</b> -None <b>6xx</b> -电缆出线xx米带插头电缆出线长度xx=M, 最长15m <b>700</b> -带配套插头/电缆出线长度xx=M, 最长15m <b>9xx</b> -电缆出线长度xx=M, 最长15m <b>Z</b> -特殊选项, 需咨询	<b>N</b> -无特殊选项 <b>X</b> -绝缘套 <b>Y</b> -绝缘轴承 <b>M</b> -机械超速开关 <b>E</b> -电子超速开关 <b>Z</b> -特殊选项, 需咨询, 绝缘轴承请咨询

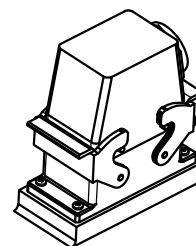
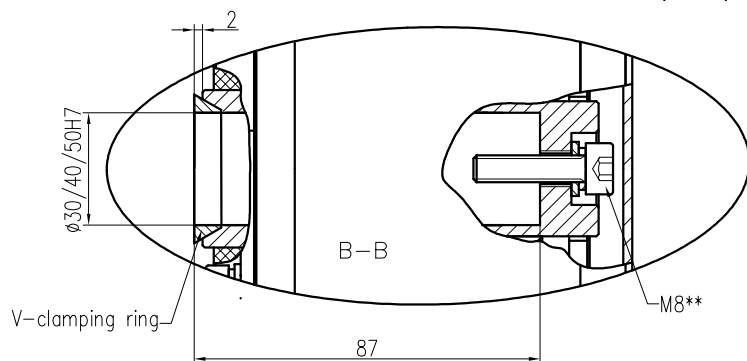
# 苛刻重载中空轴增量编码器

## HS65A 外形图

哈挺端子 (P) 单/双输出; 中紧V环 (W), 力矩臂 (G)



B: 75/150/250/400/500/600  
L: 150/200/300/400/500/600

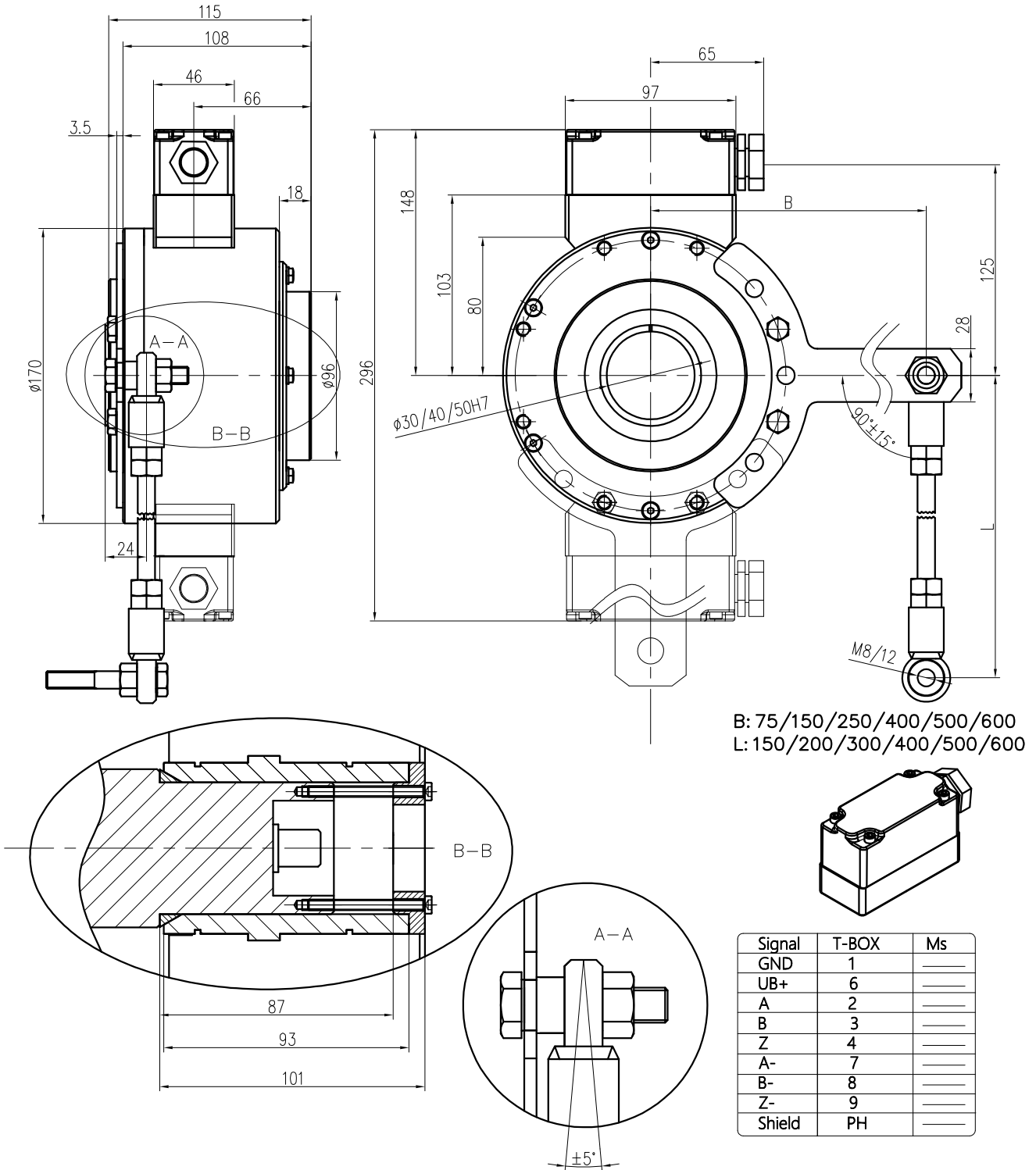


Signal	P options	Ms
GND	1	---
UB+	6	---
A	2	---
B	3	---
Z	4	---
A-	7	---
B-	8	---
Z-	9	---
Shield	PH	---

# 苛刻重载中空轴增量编码器

## HS65A 外形图

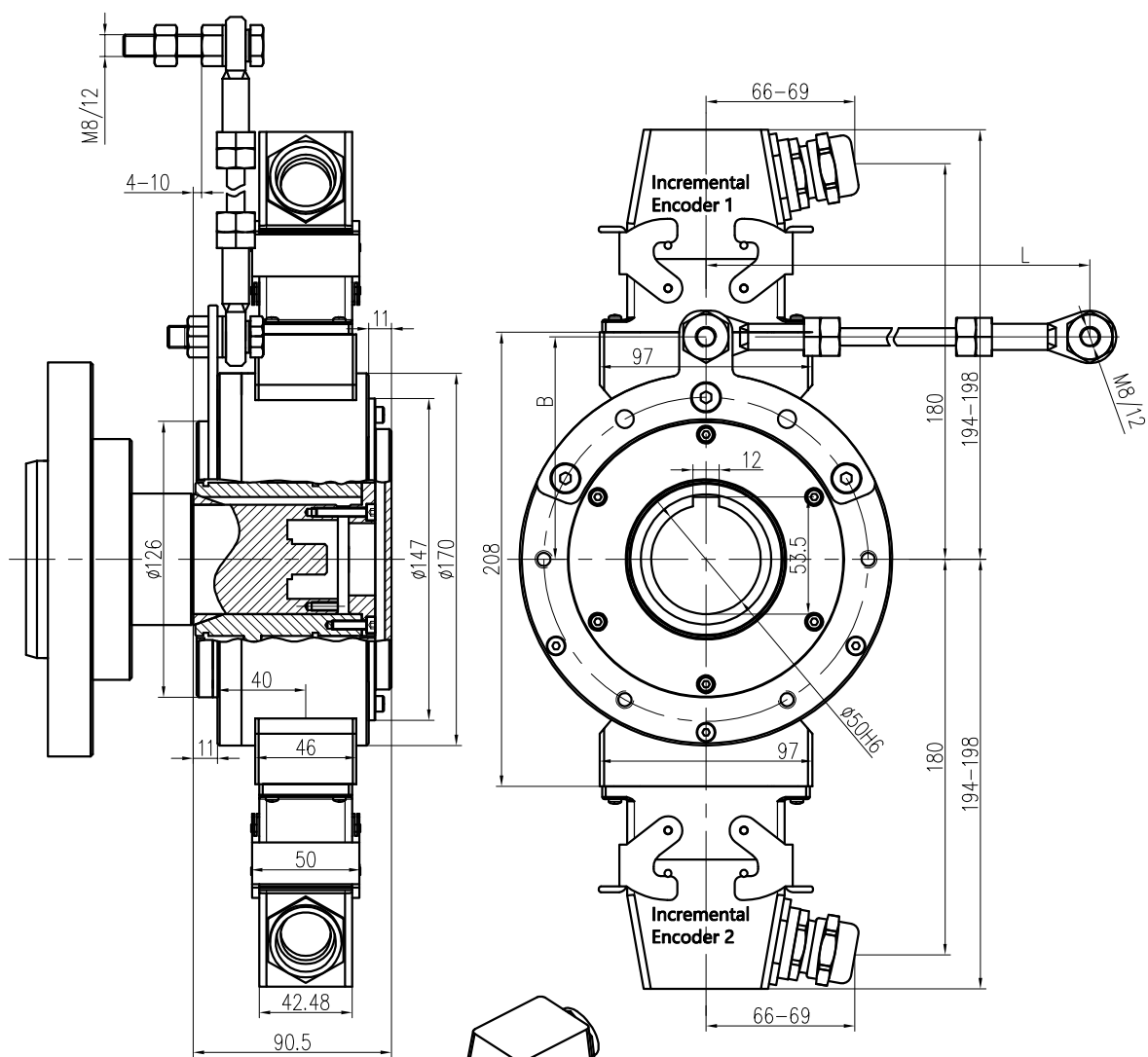
电缆 (W) M2323插头 (D) 单/双输出; C型锁紧环 (E/T), 力矩臂 (G)



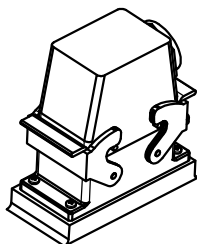
## 苛刻重载中空轴增量编码器

### HS65A 外形图

端子盒 (T) 单/双输出; 前紧V环 (V) 后单螺丝锁紧, 力矩臂 (G)



B: 75/150/250/400/500/600  
L: 150/200/300/400/500/600

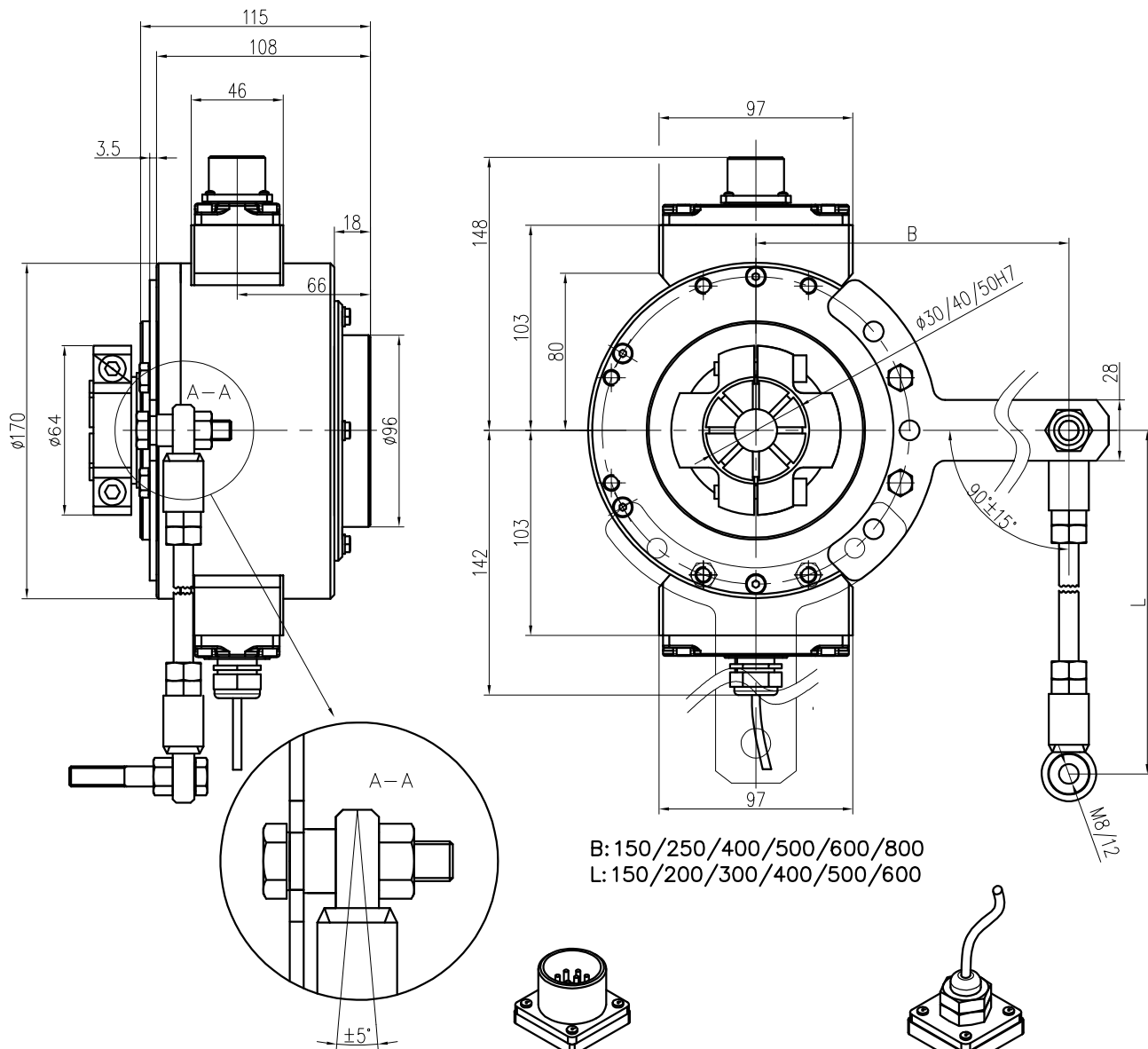


Signal	P options	Ms
GND	1	—
UB+	6	—
A	2	—
B	3	—
Z	4	—
A-	7	—
B-	8	—
Z-	9	—
Shield	PH	—

## 苛刻重载中空轴增量编码器

### HS65A 外形图

端子盒 (T) 单/双输出; 前紧V环 (K) 后4螺丝锁紧(FGH6);  
力矩臂 (G)



B: 150/250/400/500/600/800  
L: 150/200/300/400/500/600

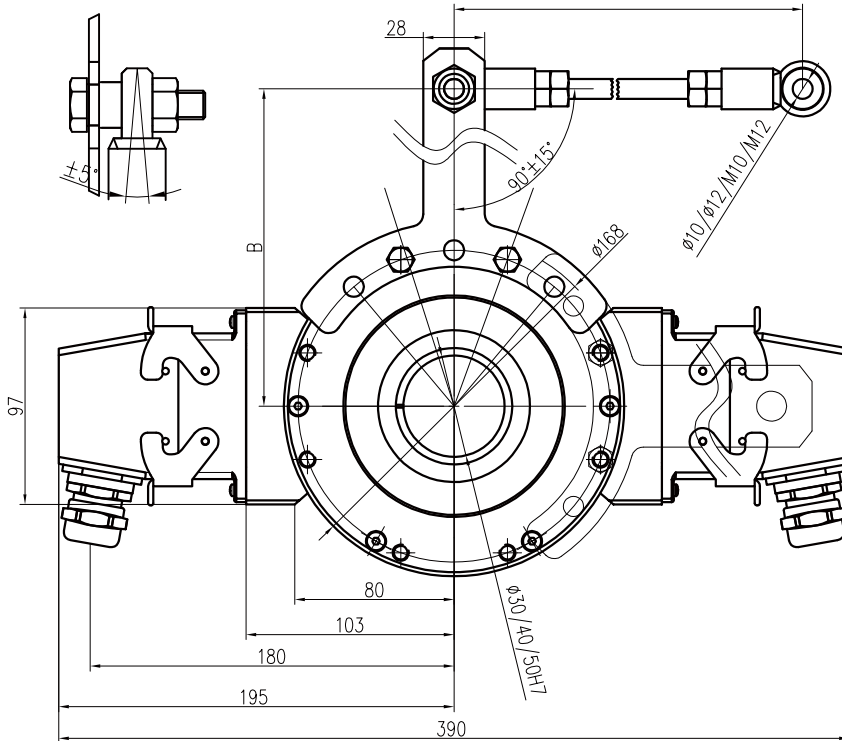
Signal	MS(10)	M23(12)
GND	F	10
UB+	D	12
A	A	6
B	B	8
Z	C	3
A-	H	5
B-	I	1
Z-	J	4
Shield	PH	PH

Signal	Cable	Ms
GND	White	——
UB+	Brown	——
A	Green	——
B	Gray	——
Z	Blue	——
A-	Yellow	——
B-	Pink	——
Z-	Red	——
Shield	PH	——

## 苛刻重载中空轴增量编码器

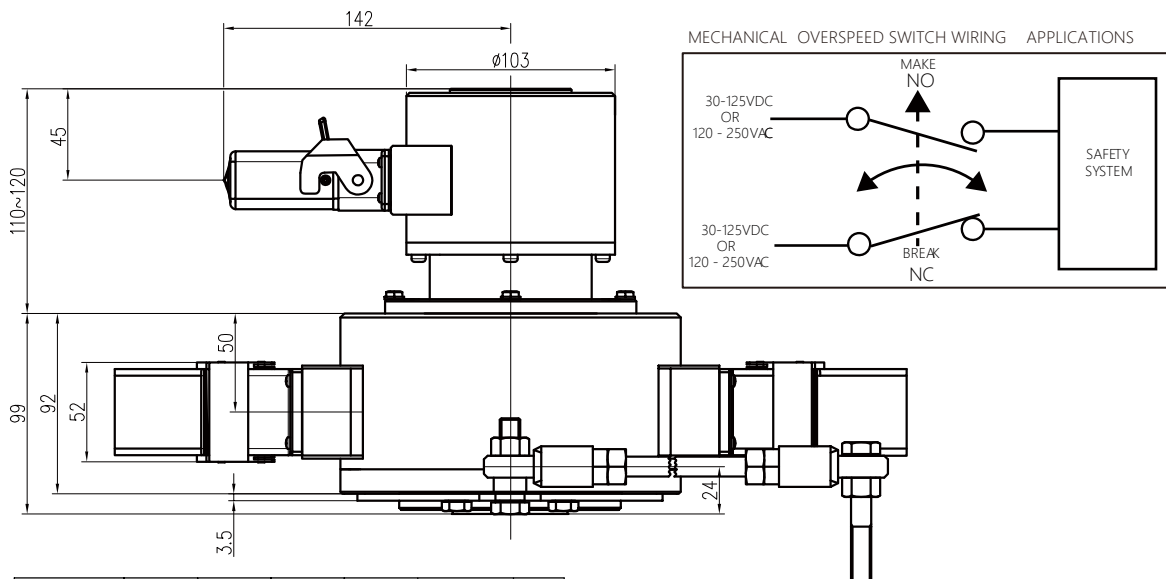
### HS65A +MOSP外形图

哈挺端子 (P) 单/双输出; 前紧V环 (K) 后4螺丝锁紧(FGH6);  
力矩臂 (G);机械超速开关/SSI绝对值编码器



Speed:  
1.25 x Overspeed set point Max  
Minimum trip speed:  
850 RPM  
Maximum trip speed:  
3800RPM  
Accur acy:  $\pm 4\%$  of trip point  
Hysteresis:  
40% of trip point

As part of the safety chain, we recommend the use of normally closed switches



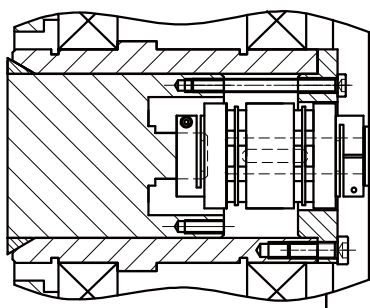
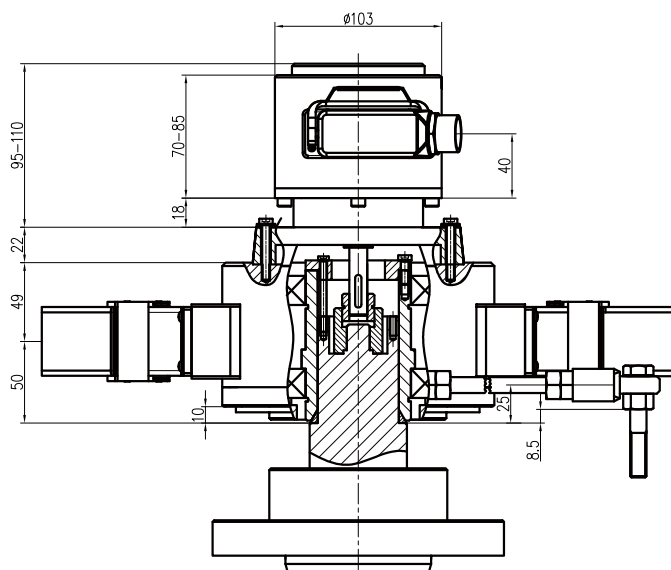
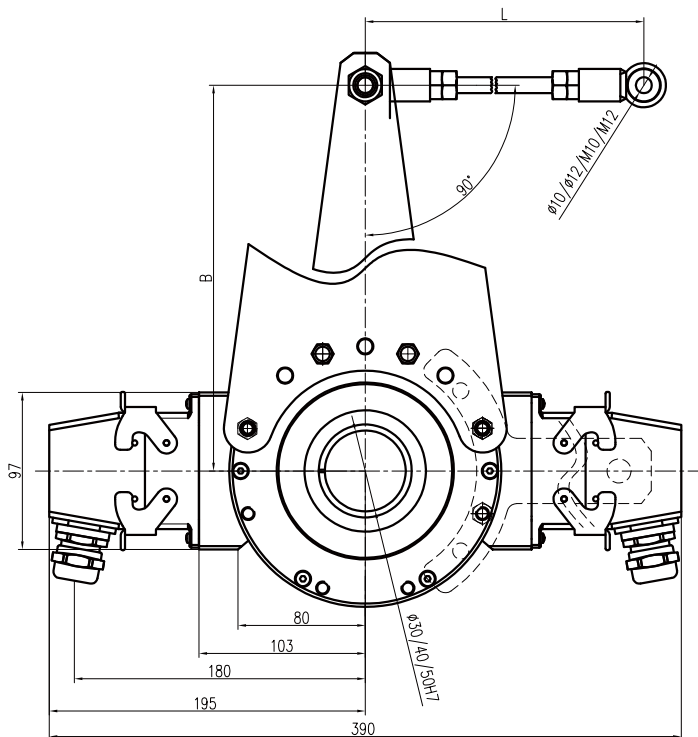
Signal	Cable	~ P	M23(12)	MS(10)	T, BOX
GND	Brown	1	12	F	1
UB+	White	6	11	D	2
Clock+	Green	2	2	B	3
Clock,	Yellow	3	1	I	4
Data+	Gray	4	3	A	5
Data,	Pink	7	4	H	6
Complement	Red	8	8	C	7
Preset	Blue	9	9	G	8
Shield	PH				9



## 苛刻重载中空轴增量编码器

### HS65A +EOSP外形图

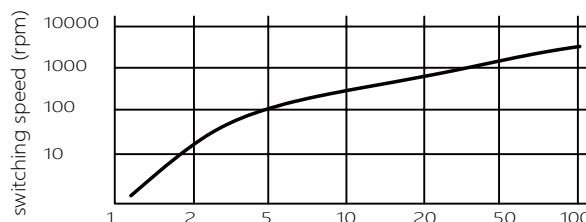
哈挺端子 (P) 单/双输出; 前紧V环 (K) 后4螺丝锁紧(FGH6);  
力矩臂 (G) ;独立电子超速开关



### Terminal assignment

2 switching A/B outputs that can be switched according to the speed. If the device is at standstill or the rotational speed  $n$  is less than the switching speed  $n_s$  then the corresponding switching output will be high  $n > n_s$  then it will be low. If an internal error occurs (for instance, dirt on the disk, so that the counted pulse rate is incorrect) then the outputs will switch to low.

High switching precision Unlike mechanical systems, the switching precision is to large extent independent of temperature, vibration and acceleration. Because of the fast switching response of the electronics there is only a small switching delay.



Angular degree from reaching of switching speed until contact opening

Type	EOSP 2400	EOSP 4800
Switching speed:	5 ... 2400	400 ... 4800
Supply voltage $\ddot{y}$	12V...30VDC/80 mA	
Maximum speed:	1.15- 1,25	
Switching accuracy:	see diagram	
Switching speed at acceleration:	+5 %	
Switching tolerance cw to ccw:	2 %	
Trip delay time:	200msec	
Speed hysteresis:	20 %	
Switch capacity:	10V...30V DC. max 100 mA	
Relay switching capacity:	30...250VAC/max 4A 30VDC/max 3A	
Moment of inertia:	0,3 ... 0,45 kgcm	
Protection class :	IP 55	
Temperature range:	20 ... +85 °C	

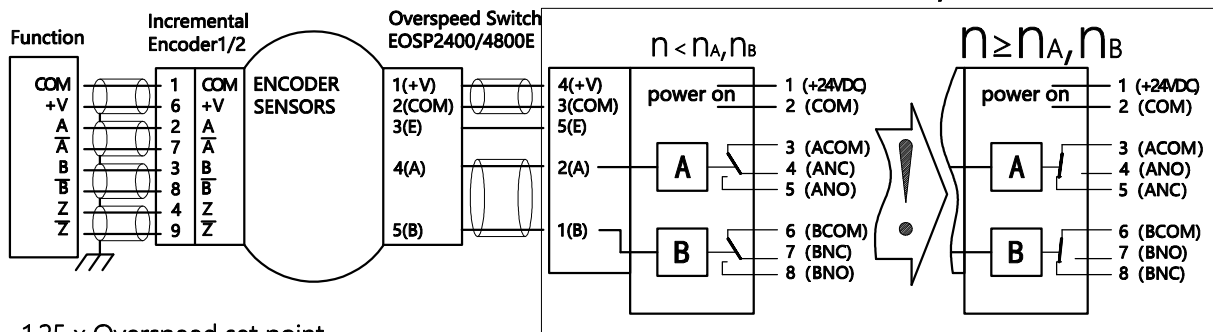
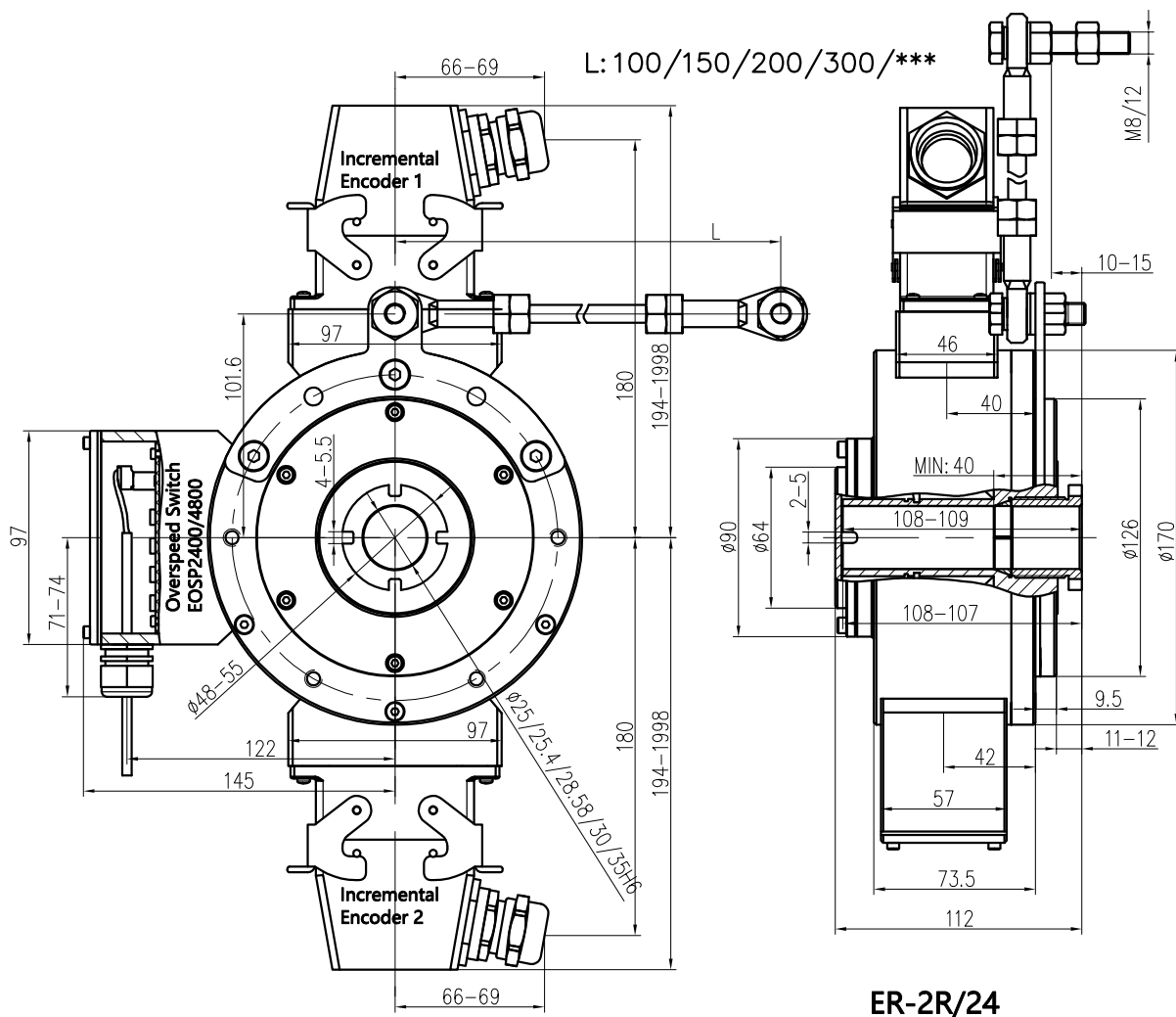




## 苛刻重载中空轴增量编码器

### HS65A + EOSP外形图

哈挺端子 (P) 双输出; 中紧V环 (W); 力矩臂 (G); 集成电子超速开关



1.25 x Overspeed set point

Max/Minimum trip speed: (EOSP2400)5 RPM, (EOSP4800)200RPM

Maximum trip speed: (EOSP2400)2400 RPM, (EOSP4800)4800RPM

Accuracy: +5% of trip point

Hysteresis: 20% of trip point

2 Relays:

4A / 250 VAC

3A / 30 VDC

Encoder Electrical connection			
signal	Cable	M23	P options
GND	WHI	10	1
UB+	BRN	12	6
A	GRN	5	2
B	GRY	8	3
Z	BLU	3	4
A-	YEL	6	7
B-	PNK	1	8
Z-	RED	4	9
SHIELD	PH	PH	PH