



更紧凑！更坚固！

- 绝缘轴/轴套设计
- 紧凑的安装尺寸
- 准重载设计
- 防护等级IP67/IP68+69K
可选
- 光电和磁式扫描方式可选
- 接口包括Profibus-DP
SSI CANopen, 以及其他
- 力矩臂/弹簧片安装可选择

HS6A/M系列

HS6A/M是为较强振动冲击的工作环境而设计的中空轴磁、光电编码器。轴径设计为8/10/12/15mm可选, HS6A/M拥有坚固的机械系统及优秀的电子数据扫描系统, 广泛应用于冶金, 造纸, 起重等行业。

HS6A/M转动系统采用深沟球轴承, 编码器承载力是其他类似产品的2-3倍, 经过优化的轴承结构使编码器的高速转动更稳定。可选分体式的绝缘轴套, 保护编码器不受轴电流损害。与电机端连接方式为长/短美式弹簧片, 双飞翼弹簧片, 万向力矩臂等, 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*。

HS6A/M采用不会碎裂的高温树脂码盘或磁性码盘, 在保证精度的同时, 亦提高了编码器耐振动耐冲击的性能。HS6A/M单圈分辨率最大可选16位, 多圈可选14位, 提供并口/SSI 串口以及CANopen/DeviceNet/ModbusEthernet/Profinet/Profibus-DP/Ethernet-IP等众多总线接口, 可选电缆输出或连接器输出。

HS6A/M有不锈钢材质及IP68+69K(M)的选项, 可以抵抗腐蚀液体/气体的侵蚀。保证编码器在二类场合能正常运行。

HS6A/M编码器采用了优质的传感器以及抗振动抗冲击的码盘等, 使得HS6A/M即使在恶劣环境下也有着优异的表现。今天, 来升级HS6A/M编码器吧, 您将获得最耐久的体验!

*力矩臂采用活结轴承连接, 具体配置请咨询我们

A. 运行功率

模拟量V输出	12-30VDC;15mA@24V
模拟量I输出	15-30VDC;40mA@24V
CANOpen	10-30VDC;100mA@10V,50mA@24V
DeviceNet	10-30VDC;100mA@10V,50mA@24V
J1939	10-30VDC;100mA@10V,50mA@24V
SSI	5-30VDC;125mA@5V,30mA@24V

2.总电流 取决于总线形式以及电缆长度

1.模拟量

V 输出 0.5-4.5V;0-5V;0.5-9.5V;0-10V

I 输出 0-20mA or 4-20mA

2.SSI 0-2MHz,由模块设定

3.CANOpen,J1939 20K to 1M Baud,node0-127/Default 25K,node32

4.DeviceNet 125K to 500K Baud

C. 计数方向 从编码器背面看, CCW旋转时递增(默认)

D. 每圈分辨率 4096 or 8192(12or13bits)其他分辨率请咨询

E. 最大圈数 4096-32768(12-15bits)

F. 驱动规格 见下表

G. 连接器 参考选型表格连接选项

H. 精度 $\pm 1/2\text{LSB}(12\text{Bit}), \pm 2\text{LSB}(16\text{Bit})$

 $\pm 0.35 \text{ deg} (\pm 21 \text{ arc-min})$

Analog Output:0.15%

BUS OPTIONS								
Electrical Specifications		Analog	CANOpen	DeviceNet	J1939	Profibus	SSI	Units
Input Voltage		12-30V	10-30V	TBD	10-30V	TBD	10-30V	VDC
Cable Drive Capacity		NA	TBD	TBD	TBD	TBD	4000' [1200m]*	feet
Protection	Reverse Voltage	yes	yes	TBD	TBD	TBD	yes	
	Short Circuit	yes	yes	TBD	TBD	TBD	yes	
	Transient	yes	yes	TBD	TBD	TBD	yes	

* @90k Baud w/24 AWG, 52.5 pF/meter (16 pF/foot)

中空轴绝对值编码器

机械参数

A.转动力矩	20N.cm (20℃)
B.加速度	5000转/分/秒。最大*
C.转速	最大5000转/分*
D.重量	8-10磅[3.5-4.5千克]
E.振动	20 Gs,5-2000 Hz(任何方向)
F.冲击	100 Gs,任何方向
G.轴尺寸	Φ6/8/10/11/12/14(带键4/5)
H.轴承载	轴向80N 径向100N
I.外壳材质	钢外壳/铝合金
J.轴材质	不锈钢
K.工作温度	-25...+85℃
L.储存温度	-40...+100℃
M.环境湿度	< 90% RH, 无结露
N.防护等级	IP66/67(DIN40050/IEC 529) IP68+69K (M)可选
O.EMC	EN 61000-6-4,EN 61000-6-2

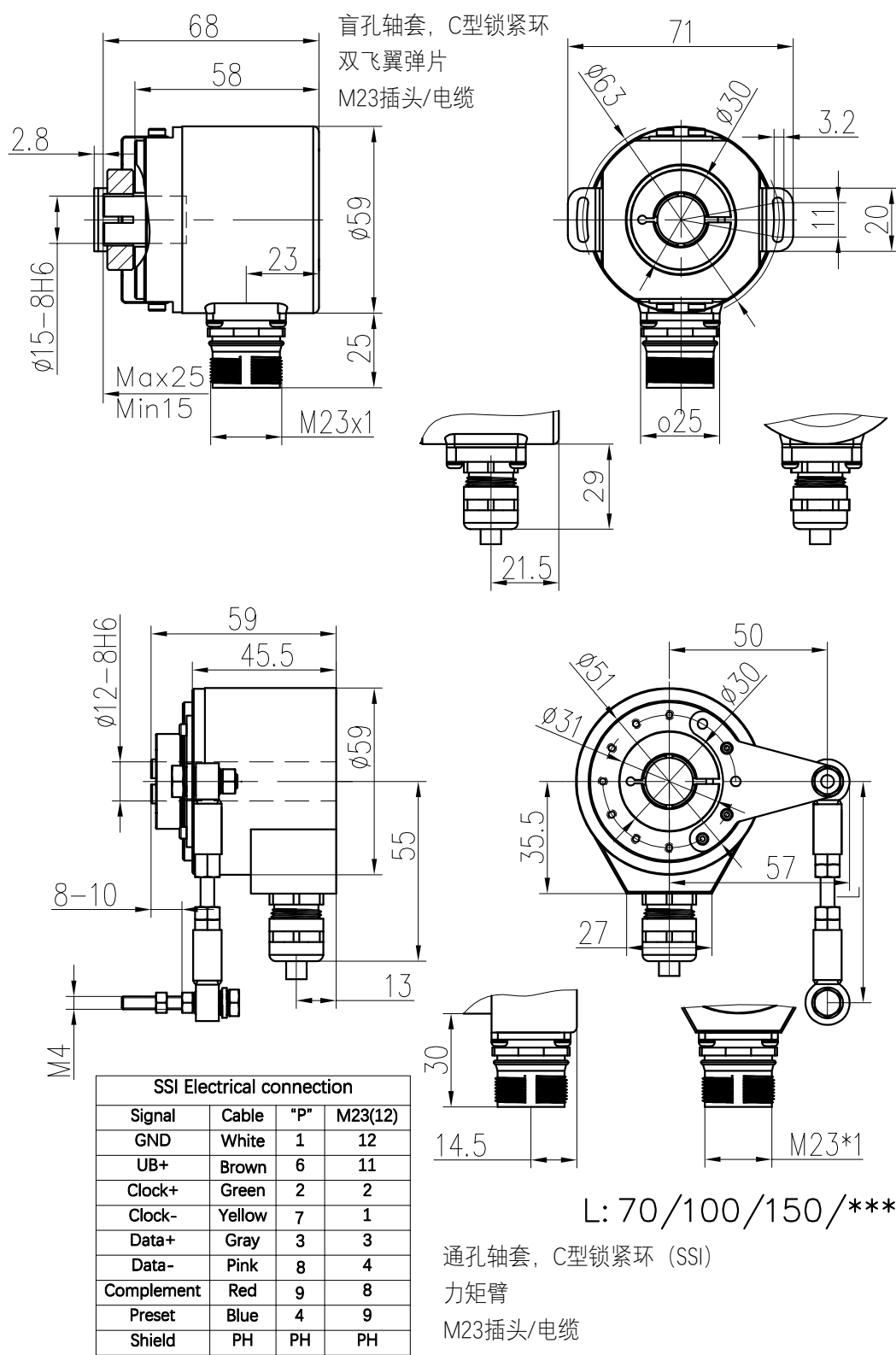
型号代码

HS6A/M PART NUMBERS AND AVAILABLE OPTIONS										
										
Model	Bore Size	Mounting Style	Bus Driver	Turns/PPR(per turn)	Tether Options	Coding	Connector	Modifications	Identification	
HS6A	B -6mm	E -End of Shaft	C -CANOpen	X -	2 -4096/12	A -短弹片	X -00	A -1xM12/5 pin	000 -None	N -无特殊选项
HS6M	C -8mm	D -DeviceNet	D -DeviceNet	0/0 -single	3 -8192/13	B -长弹片	Depending	B -2xM12/5 pin	6xx -电缆出线xx米	Z -特殊选项，请咨
(只有盲孔)	D -10mm	T -Thru shaft	F -CANSafe	turn	6 -65536/16	B -双飞翼弹片	on the Bus	C -3xM12 4/5/5 pin	带插头 电缆出线长度xx=M, 最长15m	
	P -12mm	C -Clamping Mount	K -Powerlink	A -16/4		F -长+短弹片	Code	D -2xM12/4 pin	700 -带配套插头	
	R -15mm(只有盲孔)	J -Just HS6A	L -Parallel	E -256/8	A -16/4 (only HS*M)	G -万向力矩臂(M4标准 B=70,其他尺寸需要咨询)	1 -Binary	E -M12/8 pin	7xx -带配套插头/电缆出线长度xx=M, 最长15m	
	Z -特殊选项，需咨询	Z -特殊选项，需咨询	M -Modbus Ethernet	2 -4096/12	E -256/8 (only HS*M)	Z -特殊选项，需咨询	2 -Gray	F -M23/12 pin	9xx -电缆出线长度xx=M, 最长15m	
			N -Profinet	3 -8192/13				G -26pin	Z -特殊选项，需咨询	
			P -Profibus DP	4 -16384/14				J -2x cable entry		
			R -Ethernet/IP	5 -32768/15				K -3x cable entry		
			S -SSI	Z -特殊选项，需咨询				M -M23/8pin		
			Z -特殊选项，需咨询					W -Cable, 1m		
								Z -特殊选项，需咨询		

*profinet/profibus C选项插头类型不同，以总线形式为准，公司配置标准插头。

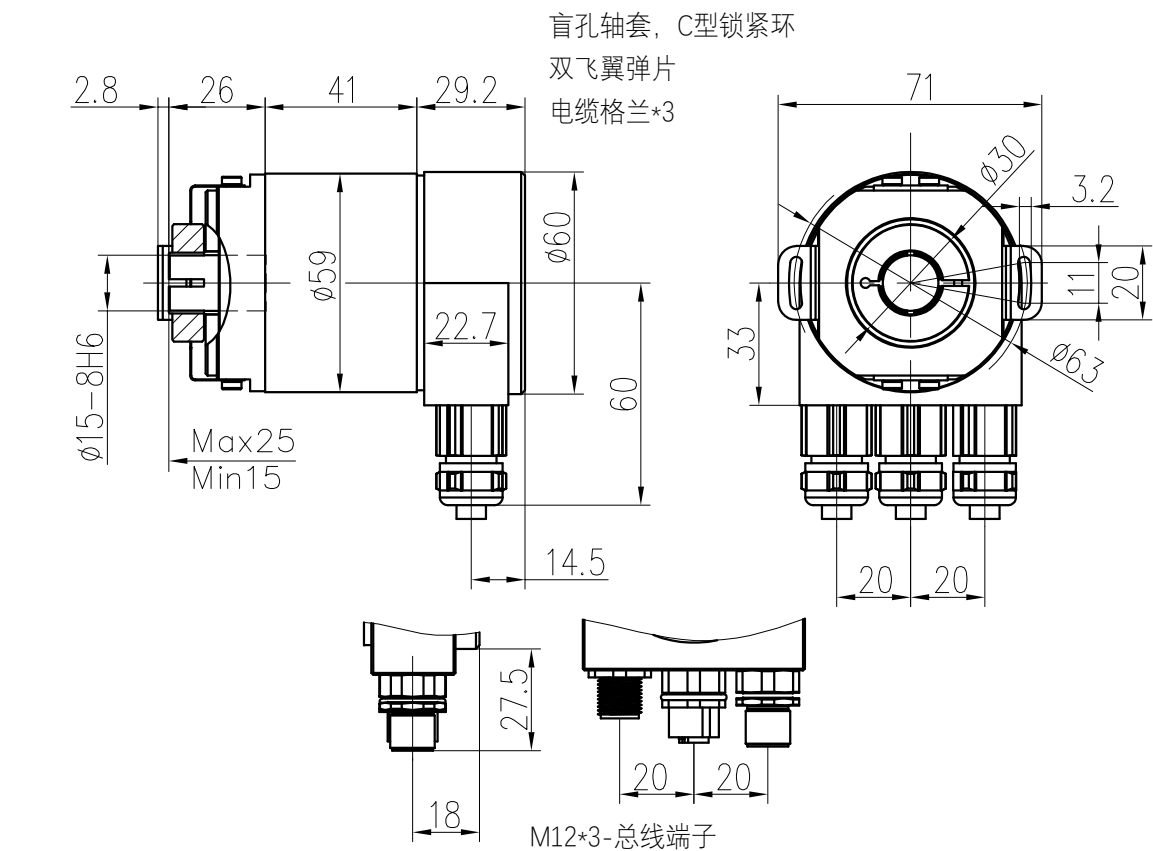
中空轴绝对值编码器

HS6A 外形图

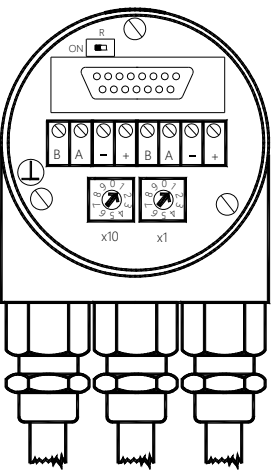


中空轴绝对值编码器

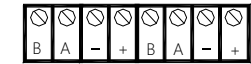
HS6A 外形图



接线: 3x 电缆格兰-Profibus-DP

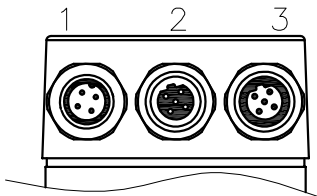


Connecting the data line and the power supply



Clamp	Description
B (Left)	Bus Line B (Bus In)
A (Left)	Bus Line A (Bus In)
-	0 V
+	10 – 30 V
B (Right)	Bus Line B (Bus Out)
A (Right)	Bus Line A (Bus Out)
-	0 V
+	10 – 30 V

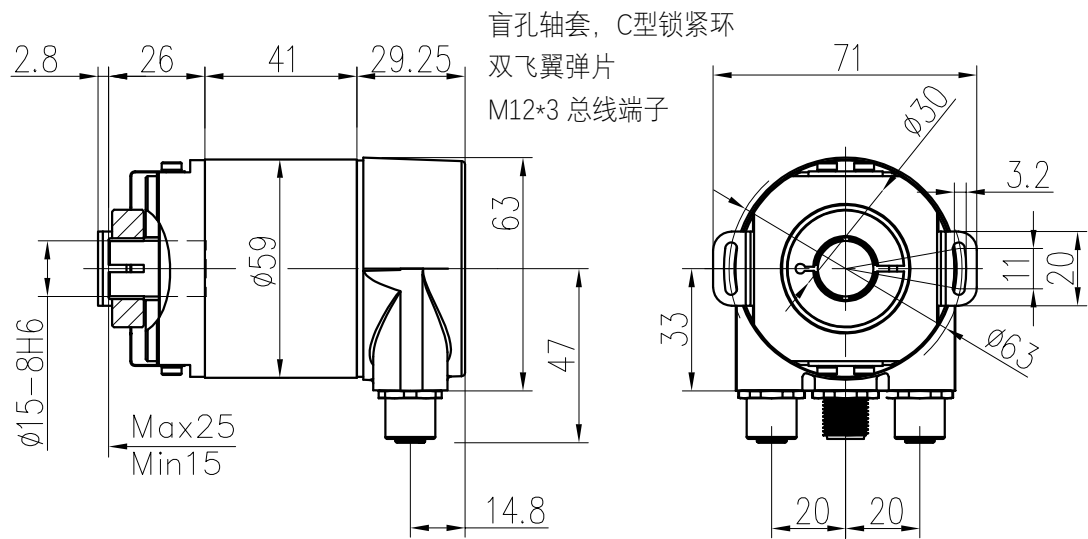
接线: 3x M12-Profibus-DP



Power Supply	Connector 1
Not Connected	Connector 1
GND	Connector 1
Not Connected	Connector 1
Not Connected	Connector 2
Busline A out	Connector 2
Not Connected	Connector 2
Bus line B out	Connector 2
Not Connected	Connector 2
Not Connected	Connector 3
Bus line A in	Connector 3
Not Connected	Connector 3
Bus line B in	Connector 3
Not Connected	Connector 3
Connector-View on Encoder	

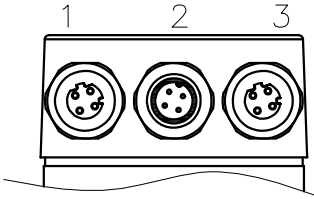
中空轴绝对值编码器

HS6A 外形图

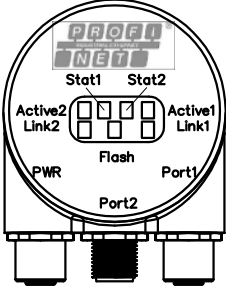


接线： 3x M12-Profibnet

Connector 1 M12, Female, 4 pin, d coded
Connector 2 M12, Male, 4 pin, a coded
Connector 3 M12, Female, 4 pin, d coded



Connection Plan		
SIGNAL	CONNECTOR	PIN NUMBER
Tx+	Connector 1	1
Rx+	Connector 1	2
Tx-	Connector 1	3
Rx-	Connector 1	4
Power	Connector 2	1
Not Connected	Connector 2	2
GND	Connector 2	3
Not Connected	Connector 2	4
Tx+	Connector 3	1
Rx+	Connector 3	2
Tx-	Connector 3	3
Rx-	Connector 3	4

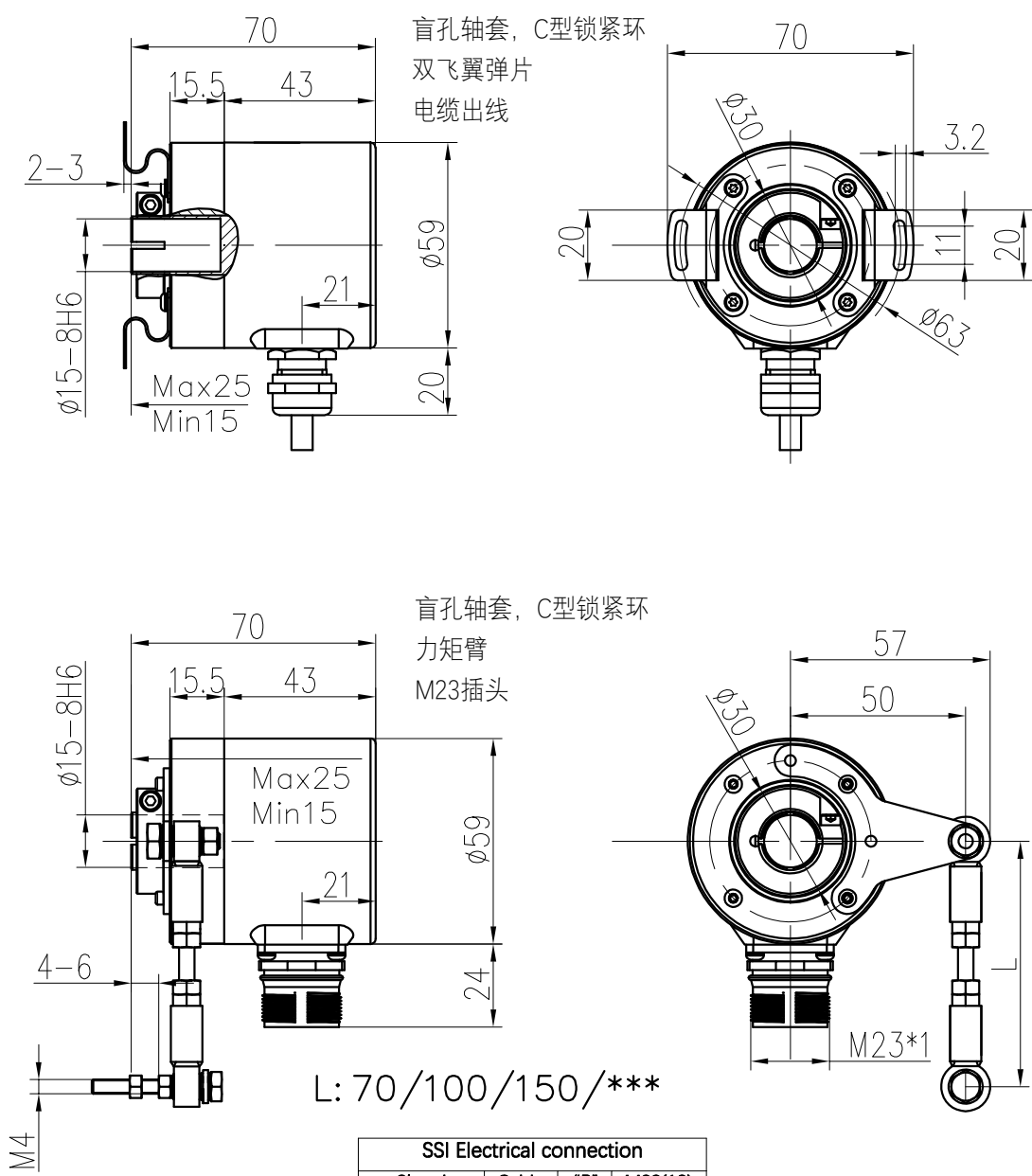


Diagnostic		
LED	Color	Description for LED = on
Active1	Yellow	Incoming and outgoing traffic for port 1
Link1*	Green	Link to another Ethernet component for port 1
Active2	Yellow	Incoming and outgoing traffic for port 2
Link2*	Green	Link to another Ethernet component for port 2
Stat1	Green	Status 1, details in the user manual
Stat2	Red	Status 2, details in the user manual

* Flashes with 2Hz if engineering identification call is activated and link connection is available

中空轴绝对值编码器

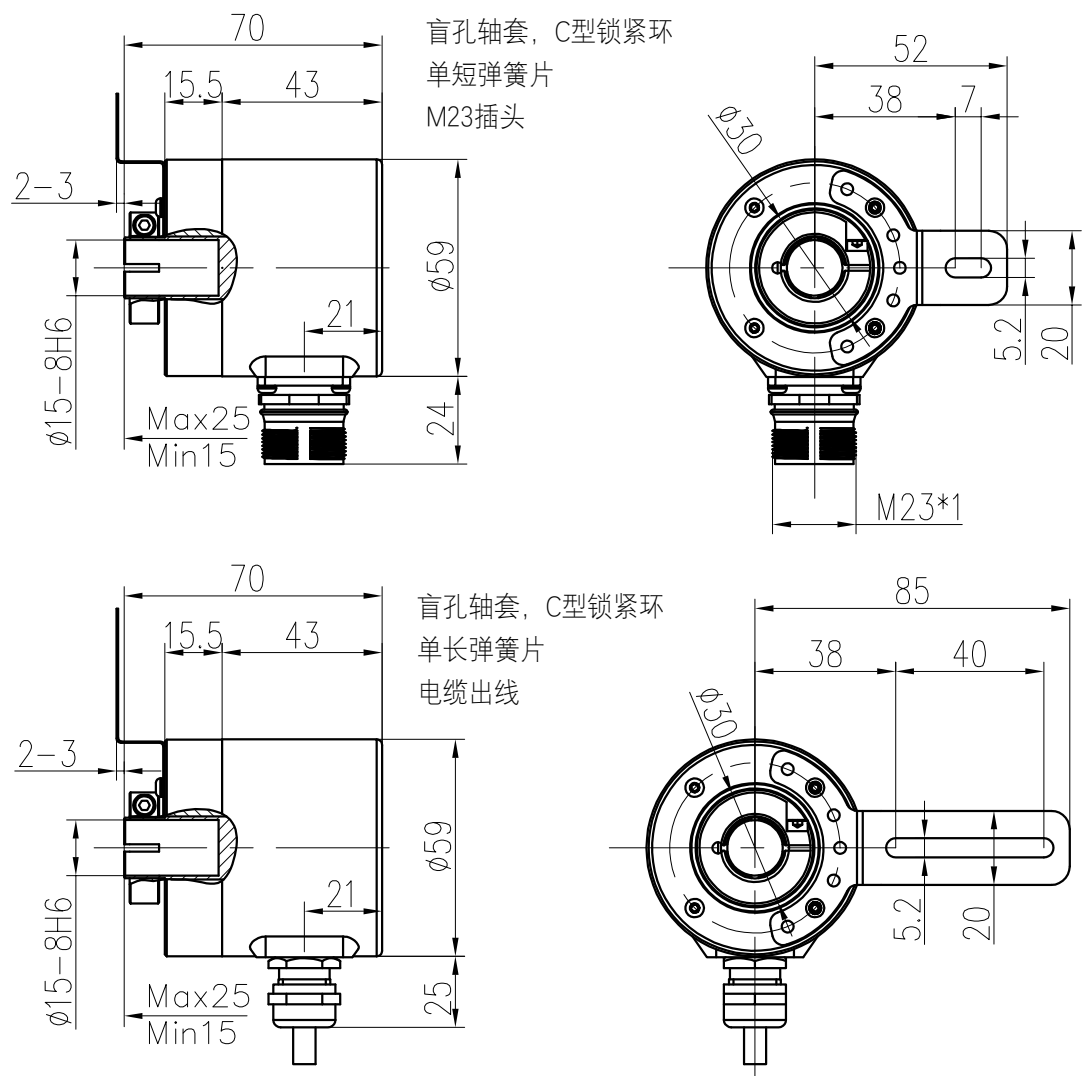
HS6M 外形图



SSI Electrical connection			
Signal	Cable	"P"	M23(12)
GND	White	1	12
UB+	Brown	6	11
Clock+	Green	2	2
Clock-	Yellow	7	1
Data+	Gray	3	3
Data-	Pink	8	4
Complement	Red	9	8
Preset	Blue	4	9
Shield	PH	PH	PH

中空轴绝对值编码器

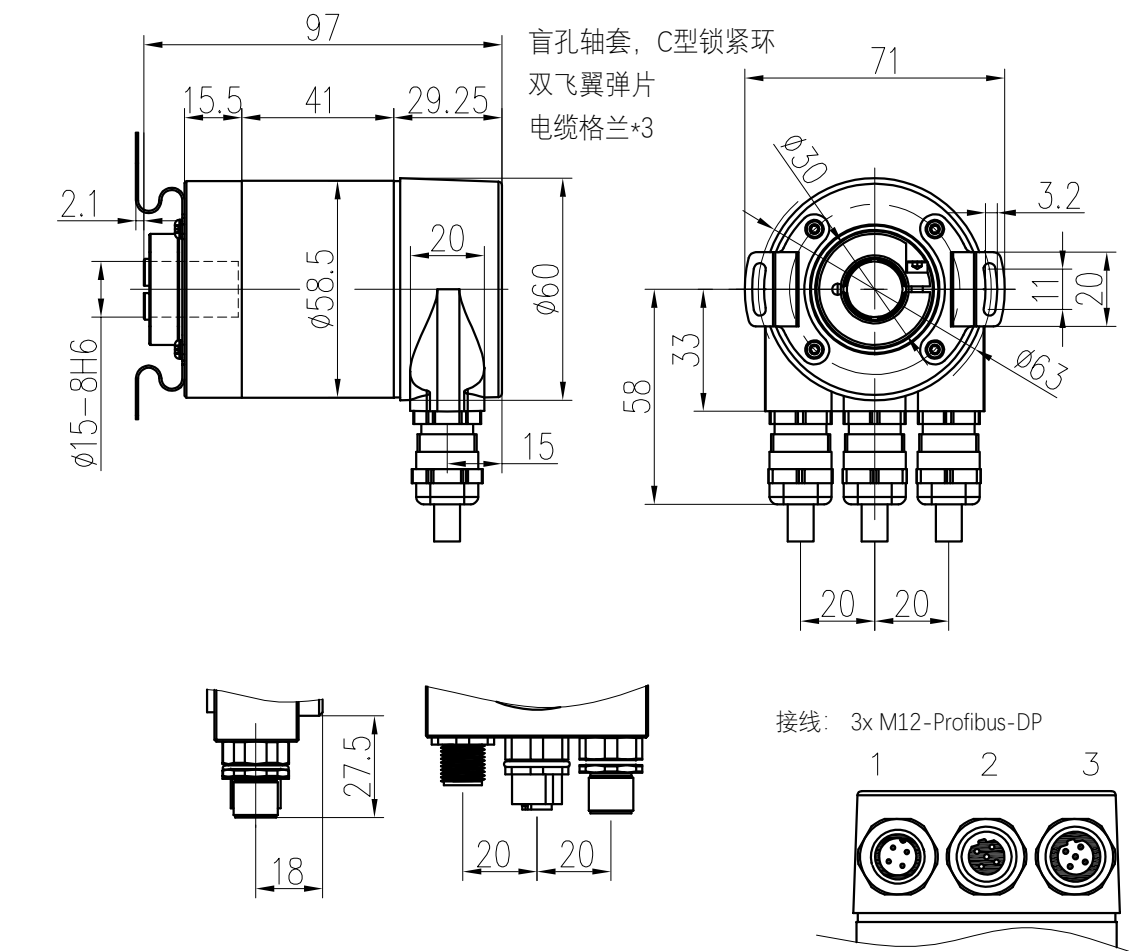
HS6M 外形图



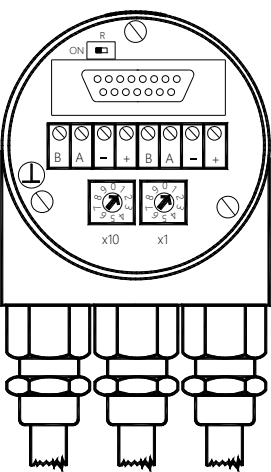
SSI Electrical connection			
Signal	Cable	"P"	M23(12)
GND	White	1	12
UB+	Brown	6	11
Clock+	Green	2	2
Clock-	Yellow	7	1
Data+	Gray	3	3
Data-	Pink	8	4
Complement	Red	9	8
Preset	Blue	4	9
Shield	PH	PH	PH

中空轴绝对值编码器

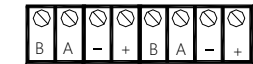
HS6M 外形图



接线: 3x 电缆格兰-Profibus-DP

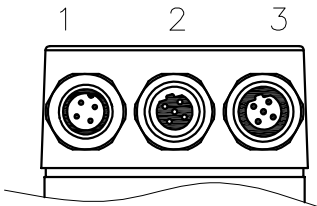


Connecting the data line and the power supply



Clamp	Description
B (Left)	Bus Line B (Bus In)
A (Left)	Bus Line A (Bus In)
-	0 V
+	10 - 30 V
B (Right)	Bus Line B (Bus Out)
A (Right)	Bus Line A (Bus Out)
-	0 V
+	10 - 30 V

接线: 3x M12-Profibus-DP



Power Supply	Connector 1
Not Connected	Connector 1
GND	Connector 1
Not Connected	Connector 1
Not Connected	Connector 2
Busline A out	Connector 2
Not Connected	Connector 2
Bus line B out	Connector 2
Not Connected	Connector 2
Not Connected	Connector 3
Bus line A in	Connector 3
Not Connected	Connector 3
Bus line B in	Connector 3
Not Connected	Connector 3
Connector-View on Encoder	

