

PRODUCT OVERVIEW

PRESSURE MEASUREMENT

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PF60 Sputtered Thin Film

Pressure Sensor for Mining Industry

Characteristics

 ☆ Easy to install by quick installation pressure port
☆ Sputtered film core offers high accuracy, good long-term stability & overload capability, anti-vibration, anti-impact
☆ High temperature resistance, small temperature drift
☆ All-welded corrosion resistant stainless steel structure
☆ Stable and mature ASIC integrated circuit adopted, designed for 4~20mA pressure transmitters
☆ Fast response time

Applications

☆Underground coal scrapers ☆Roadheaders ☆Coal mining machines ☆Hydraulic support systems ☆Pump Station Systems ☆Mining equipment ☆Other hydraulic systems

Profiles

PF60 is a pressure sensor dedicated for mining industry and heavy mining equipment. Its core is a metal-based pressure-sensitive chip. The product is manufactured according to *Coal Mine Safety Regulations* and *GB3836.4-2000 Electrical Equipment for Explosive Gas Environment Part 4: Intrinsically Safe Type "i"* standards, and conforms to *Q/3201 GHK 006-2010 Product Standard*.

The product features reasonable fully-weld structure design, accurate detection, stable performance, easy installation and less maintenance, and strong anti-interference ability. It is suitable for use in underground coal mines with coal dust and gas explosion hazards. All ensure the sensor meets the requirements of moisture-proof, explosion-proof, anti-corrosion, dust-proof and can work in high vibration environments and other harsh working conditions.

Specifications

Parameter	PF60					
Measuring range(MPa)	4-10	16-40	60-80	100-180		
Overload pressure	300%	300%	200%	150%		
Burst pressure	4000%	1000% and ≤400MPa	≤400MPa			
Accuracy	±0.3%F.S					
Long-term stability	±0.2%F.S/year					
Output	4-20mA,0.5-4.5V(non-ratiometric),0.5-4.5V(ratiometric),CAN bus					
Power Supply	12-36VDC					
Supply current	≤30mA					
Zero point temperature drift	±0.1%F.S/10°C					
Full range temperature drift	±0.3%F.S/10°C					
Response time	≤1ms					
Durability	10 ⁷ pressure circles					
Insulation resistance	≥1000MΩ/500VDC					
Sensitive component material	17-4PH					
Housing material	316 Stainless steel					
IP rating	IP65, IP67 optional					
Explosion-proof class	Ex ia IIC T6 Ga					
Medium temperature range	-40~+95°C					
Ambient temperature range	-40~+95℃					
Storage temperature range	-40~+95°C					
Random vibration	20g, GB/T2423.56-2006					
Sinusoidal vibration	14.1g, GB/T2423.10-2008					
Shock	50g,11ma GB/T2423.5-1995					
EMC-electromagnetic field radiation immunity	GB/T 17626.3-2016					
EMC-electrostatic discharge immunity	GB/T 17626.2-	2018				

Wiring



Pressure Connections



Electrical Connections

Code	11	02			
Port form	PF connector	Direct cable outlet			
Pin	Current	Current			
definition	1:Power +	Red:Power			
	2:Loop	Black:Loop			
	3:/				
	4:/				

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Order Information

PF60 (Mode Item		11		S37	G6	046	
Electrical Connection	11=PF60 conne 02=Direct cable (with explosio	11=PF60 connector 02=Direct cable outlet (with explosion-proof cable)					
Output	A= 4-20mA B=0.5-4.5V non C=0.5-4.5V ratio J=CAN Bus	A= 4-20mA B=0.5-4.5V non-ratiometric C=0.5-4.5V ratiometric J=CAN Bus					
Power Supply	S37=12~36Vdc						
Pressure connection	G6=Dedicated c G2= G1/4 -19 M6=M20X1.5	G6=Dedicated connector for PF60 G2= G1/4 -19 M6=M20X1.5					
Pressure Measurement	046=4 MPa 106=10 MPa 356=35 MPa 606=60 MPa 107=100 MPa	046=4 MPa 056=5 MPa 0 106=10 MPa 166=16 MPa 2 356=35 MPa 406=40 MPa 5 606=60 MPa 706=70 MPa 8 107=100 MPa 157=150 MPa 1					

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