



Model Code / Additional Spec. Code (No entry if additional spec. code is not specified.)

FK-202F - - / EX / GEO

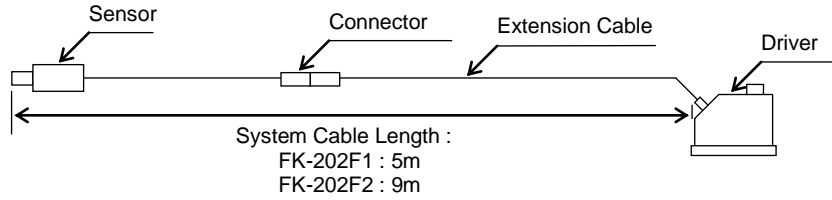
System cable length		Mounting plate		Terminal block		Intrinsically safe		Geothermal spec.
1	5m	1	DIN Rail(35mm) Mount	1	Screw type terminal block (M4)	1	TIIS (Ex ia IIC T4)	
2	9m	2	Screw mount (50.8x50.8mm)	2	Spring lock terminal	4	CSA C/US (Ex ia IIC T4)	
		3	Screw mount (92x31mm : For VK replacement)			5	ATEX (Ex ia IIC T4 Ga)	
		4	Screw mount Multi-pitch (50.8x50.8mm and 92x31mm)			7	NEPSI (Ex ia IIC T4)	
						8	KTL (Ex ia IIC T4)	
						B	TS (Ex ia IIC T4 Ga)	

*1 Above code shows model number of driver only. Refer to outline drawings for model number of sensor and extension cable.

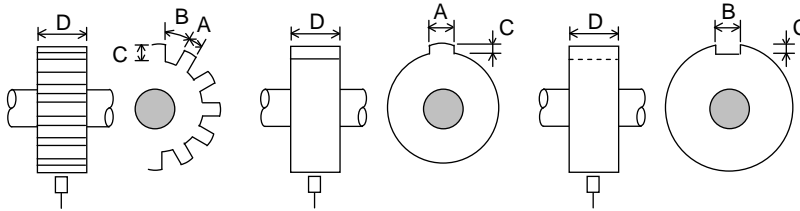
SPECIFICATIONS		NOTICE
CALIBRATION MATERIAL	JIS SCM440 flat surface	<p>1. CALIBRATION MATERIAL MODEL FK-202F Transducers are calibrated for JIS SCM440 flat surface (more than 15mm dia.). If the measured target is other than JIS SCM440 flat surface, it will present a different characteristics. In such a case, calibration by the connected equipment (e.g. monitor) side should be required for system operation.</p> <p>2. SHIELD WIRE CONNECTION Connect shield wire of signal cable (3-wire shielded cable between driver and monitor) to driver's "COM" terminal (Spring lock terminal: "Shield" terminal) and monitor's "COM" terminal. If this is not adhered to, noise may be caused.</p> <p>3. CONNECTOR ISOLATION, etc. The connector connecting the sensor cable and the extension cable shall be insulated with the attached insulation sleeve (transparent shrink tube) or fluoro resin insulation tape. The vinyl-insulating tape shall not be used, which may cause the wiring trouble in the case of temperature more than 80°C. The connector shall not be located in the oil environment. The oil penetration to cable through the connector may cause the sensitivity change, due to the change of the cable capacitance.</p> <p>4. MEGGER TEST OF SIGNAL CABLE If megger test is made on the signal cable (3-wire shielded cable), be sure to discharge the charged electric load before connecting the cable to driver. If this caution is not adhered the driver could be damaged.</p> <p>5. SENSOR INSTALLATION Not available for rain water at out door use. It may cause the sensitivity change and insulation down.</p> <p>6. SCALE FACTOR ERROR The scale factor error margin provides for examination result in our factory. This regulated value is not applied to the examination result in the site.</p> <p>7. SAFETY BARRIER In case of the intrinsically safe specification, the approved following safety barrier is recommended. • MTL 796- Linear range reduces when intrinsic safety system with barrier. (to approx. 95%)</p> <p>8. OPERATING TEMPERATURE RANGE OF CONNECTOR The operating temperature (upper limit) for connectors of the sensors and the extension cables shipped on July 31, 2011 or earlier is 125 °C. If you are unsure of the operating temperature of your connector please contact us.</p>
MEASURING RANGE	0.25mm to 2.25mm from sensor tip	
SCALE FACTOR	7.87V/mm	
SCALE FACTOR ERROR*2 (including interchangeability errors)	Within ±5% of 7.87V/mm (for 5m system) Within ±6.5% of 7.87V/mm (for 9m system) Step : 0.25mm, Linear range : 2mm	
LINEARITY*2 (including interchangeability errors)	Within ±25 μ m of 7.87V/mm straight line : (for 5m system) Within ±38 μ m of 7.87V/mm straight line : (for 9m system) Linear range : 2mm	
FREQUENCY RESPONSE*2	DC to 10kHz (-3dB)	
MAX. OUTPUT VOLTAGE*2	Approx. -23VDC	
SENSOR ABNORMAL OUTPUT VOLTAGE*2	Approx. -0.6VDC (Sensor OPEN/Sensor SHORT)	
OUTPUT IMPEDANCE*2	50 Ω Current 5mA(max.)	
CURRENT CONSUMPTION (10k Ω load)	Max. -15mA	
OUTPUT NOISE*2	Approx. 15mVpk-pk + power supply noise	
SENSOR TIP DIAMETER	Approx. 5mm or 8mm dia.	
CABLE DIAMETER	Approx. 2.7mm or 3.6mm dia.	
CONNECTOR DIAMETER	Approx. 7.1mm dia.	
SYSTEM CABLE LENGTH	5m or 9m	
OPERATING TEMPERATURE RANGE (Refer to NOTICE 8)	Sensor : -40 to +177°C Extension Cable : -40 to +177°C Driver : -40 to +80°C	
RANGE OF TEMPERATURE AT EXPLOSION PROOF CONSTRUCTION	EX1,7 : -20 to +60°C(Sensor, Extension Cable & Driver) EX4 : -20 to +85°C(Sensor, Extension Cable & Driver) EX5,B : -38 to +80°C(Sensor, Extension Cable & Driver) EX8 : -35 to +80°C(Sensor, Extension Cable & Driver) EXC : -30 to +80°C(Sensor, Extension Cable & Driver)	
TEMPERATURE CHARACTERISTIC	Sensor : Less than ±3% of F.S. Extension Cable : Less than ±4% of F.S. Condition : Gap=2mm, Target : JIS SCM440 0 to 80°C (at 20°C standard) Driver : Less than ±3% of F.S. Loop : Less than ±6% of F.S. Condition : Gap=2mm, Target : JIS SCM440 0 to 60°C (at 20°C standard)	
OPERATING HUMIDITY RANGE	30 to 95% RH (non-condensing, non-submerged) (Sensor body : 100%RH)	
POWER SUPPLY	-24VDC ± 10%	
DIELECTRIC STRENGTH OF DRIVER	Between each terminals and mounting plate : 1mA or less at 500VAC for one minute	
INSULATION RESISTANCE OF DRIVER	Between each terminals and mounting plate : 100M Ω or more at 500VDC	
APPLICABLE WIRE SIZE	Screw type terminal block (M4) : 0.75 to 2mm ² Spring lock terminal : 0.2 to 1.5mm ²	
DRIVER MASS	Approx. 200g	

*2 The above specification apply at 25°C with -24VDC power supply and load resistance 10k Ω and JIS SCM440 target (thickness≥5mm).

CONFIGURATION



- Dimension of target [recommended for rotational speed measurement]



Dimension of Target [recommended] (mm)	$A \geq 6$
	$B \geq 7$
	$C \geq 2.5$
	$D \geq 16$
Set gap [recommended] (mm)	1.0 to 1.5