



Owner's Manual

FM and ATEX Approved Sensor Kit

Use with G2 Turbine Meters



FM Approved sensor shown

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ENGLISH

GENERAL INFORMATION

The FLOMEC® FM and ATEX Approved Sensors are designed for use with any G2 Turbine Meter when rotor pulse data is required and the meter is located within a hazardous location. The sensors are ideal for indoor or outdoor applications, and the output signal is compatible with existing FLOMEC remote electronics.

Use caution when handling hazardous substances or working in potentially dangerous environments. Follow appropriate safety practices and manufacturer's recommendations.

INSTALLATION

⚠ WARNING

This sensor must be used with an approved barrier to maintain the Intrinsically Safe Rating. (Reference FMRC Engineering Control Drawing 85047)

Use the following procedures to install the FLOMEC FM and ATEX Approved Sensors.

1. Install the coverplate using the four screws provided.
2. Screw the Hex Jam Nut all the way onto sensor.
3. Insert the sensor into the center hole of the coverplate. Hand tighten the sensor until snug.
4. Tighten the Hex Jam Nut against the coverplate.

SPECIFICATIONS

Construction: 303 Stainless Steel and Aluminum coverplate

Power Source: 8.0 to 30 VDC

Supply Current: ≤ 15mA

Output: Open Collector, NPN

Input Signal:

Rotor rotation; Internal coil: 400 gauss, 30 mV sensitivity

Accuracy:

No additional error over coupled flow meters accuracy

Time: Rise Time: .04u sec Fall Time: .8u sec

Frequency Range: 5 to 10k Hz

Temperature: Sensor is capable of operating in the range of -40° to +185°F (-40° to +85°C)

For Class I, II, III, Division 1

Group ABCDEFG and CSA: Class 1, Div. 1 Group ABCD, the following temperature codes apply:

T6 +185°F (+85°C) at +149°F (+65°C) Ambient Temperature

T5 +212°F (+100°C) at +185°F (+85°C) Ambient Temperature

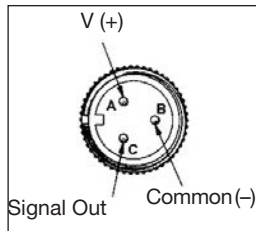
Cable: None provided – 3 conductor required for use

Mechanical Connections: 5/8-18 threaded body with 1.75 in. of thread minimum. Mountable via coverplate to any G2 meter housing.

Electrical Connections: MS3106-10SL-3S (ITT CANNON/ AMPHENOL Mil-Spec Connector).

Pin Out for the Sensor:

- Pin A: V (+)
- Pin B: Common (-)
- Pin C: Signal Out



Certifications for IS90 –

USA: Intrinsically Safe
Class I, II, III, Division I
GROUP ABCDEFG
Class I, Zone 0, AEx ia IIC

Canada: Intrinsically Safe
Class I, Division I
GROUP ABCD
Class I, Zone 0, Ex ia IIC

Certifications for IS90A –

ATEX: II 1 G Ex ia IIC
FM08ATEX0066X

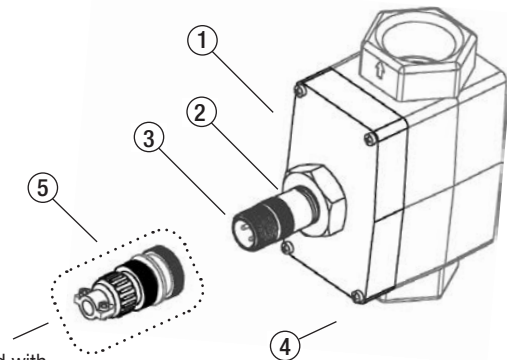
CE: Compliance with
EN55011, EN50022-2

WEEE DIRECTIVE



The Waste Electrical and Electronic Equipment (WEEE) directive (2002/96/EC) was approved by the European Parliament and the Council of the European Union in 2003. This symbol indicates that this product contains electrical and electronic equipment that may include batteries, printed circuit boards, liquid crystal displays or other components that may be subject to local disposal regulations at your location. Please understand those regulations and dispose of this product in a responsible manner.

ILLUSTRATED PARTS DRAWING



Not included with FM and ATEX Approved Sensor Kits

Item No.	Part No.	Description	No. Req'd
1	113409-4	Coverplate	1
2	904007-10	Hex Jam Nut	1
3	IS90-K221142-350G	Sensor, FM Approved.....	1
	IS90A-K221142-350G	Sensor, ATEX Approved.....	1
4	904004-12	Screw, (Metallic Turbine Housing).....	4
	904003-88	Screw, (Plastic Turbine Housing).....	4
Kits:			
5	113524-01	Connector Kit (Includes MS3106-10SL-3S and cable clamp)	

NOTE: ATEX Approved sensor has knurl removed.

SERVICE

For technical assistance, warranty replacement or repair contact your FLOMEC® distributor:

In North or South America:

888-996-3837 / GPI.net

Outside North or South America:

+61 2 9540 4433 / flomec.com.au

To obtain prompt, efficient service, always be prepared with the following information:

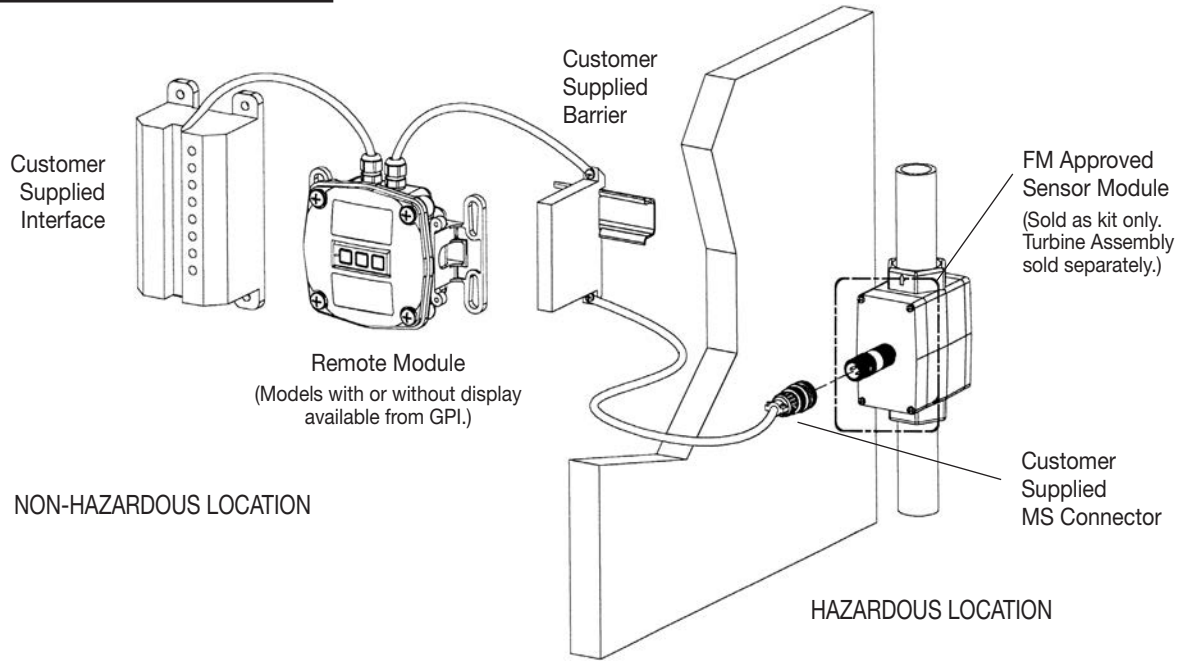
- The model number
- The manufacturing date code (located under the coverplate)

For warranty work, always be prepared with your original sales slip or other evidence of purchase date.

Please contact your FLOMEC distributor before returning any part. It may be possible to diagnose the trouble and find a solution with a telephone call. You may also be informed of any special requirements you will need to follow for shipping.

FIGURE 1

FM APPROVED SENSOR



ESPAÑOL

INFORMACIÓN DE CARÁCTER GENERAL

Los sensores FLOMEC® aprobados por FM y ATEX están diseñados para usarse con cualquier medidor de turbina G2 cuando se requieren datos sobre los impulsos del rotor y el medidor está ubicado en un lugar peligroso. Los sensores resultan ideales para aplicaciones en interiores y exteriores, y la señal de salida es compatible con el sistema electrónico FLOMEC ya existente.

Tenga cuidado al manejar sustancias peligrosas o al trabajar en ambientes potencialmente peligrosos. Siga las medidas apropiadas de seguridad y las recomendaciones del fabricante.

INSTALACIÓN

! ADVERTENCIA

Este sensor se debe utilizar con una barrera aprobada para mantener el Grado Intrínseco de Seguridad. (Referencia FMRC Engineering Control Drawing 85047)

Utilice los siguientes procedimientos para instalar los sensores FLOMEC aprobados por FM y ATEX.

1. Instalar la cubierta de la placa usando los cuatro tornillos proporcionados.
2. Atornillar la tuerca hexagonal por completo, hasta llegar al sensor.
3. Insertar el sensor en el agujero del centro de la cubierta de la placa. Atornille el sensor hasta que quede unido por completo.
4. Apretar la tuerca hexagonal contra la cubierta de la placa.

ESPECIFICACIONES

Construcción: 303 cubierta de la placa del acero inoxidable del aluminio

Fuente De Energía: 8.0 á 30 VDC

Corriente De la Fuente: ≤ 15mA

Salida: Colector abierto, NPN

Señal De Entrada: Rotación del rotor; Bobina interna: 400 gauss, sensibilidad de 30 mV

Exactitud: Ningún excedente adicional del error juntó exactitud de los metros de flujo

Tiempo: Tiempo De Subida: .04u sec
Tiempo De la Caída: .8u sec

Gama De Frecuencia: 5 á 10k Hz

SERVICIO

Para la consideración de la garantía, las piezas o la otra información de servicio, contacte con su distribuidor local. Si usted necesita ayuda adicional, contacte con el departamento de servicio al cliente de GPI® en Wichita, Kansas, durante horas de oficina normales.

Un número gratuito se proporciona para su comodidad.

1-888-996-3837

Temperatura: El sensor es capaz del funcionamiento en la gama de -40° a +185°F (-40° a +85°C)

Para La Clase I, II, III, División 1

Grupo ABCDEFG y CSA: Clase 1, Div. 1 Grupo ABCD, los códigos siguientes de la temperature se aplican:

T6 +185°F (+85°C) en +149°F (+65°C) Temperatura Ambiente

T5 +212°F (+100°C) en +185°F (+85°C) Temperatura Ambiente

Cable: Ningunos proporcionados - Conductor de tres requerido para el uso

Conexiones Mecánicas: 5/8-18 roscó el cuerpo con 1.75 pulgadas mínimo del hilo de rosca. Es aumentable via la placa frontal a para cualquier cubierta del metro G2.

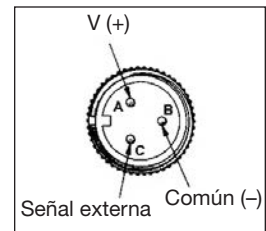
Conexiones Eléctricas: MS3106-10SL-3S (ITT CANNON/ AMPHENOL Mil-Spec Conector).

Perno hacia fuera para el sensor:

Pin A: V (+)

Pin B: Común (-)

Pin C: Señal externa



Certificaciones para IS90 –

EE. UU.: Intrínsecamente seguro
Clase I, II, III, División I
GRUPOS ABCDEFG
Clase I, Zona 0, AExia IIC

Canadá: Intrínsecamente seguro
Clase I, División I
GRUPOS ABCD
Clase I, Zona 0, Exia IIC

Certificaciones para IS90A –

ATEX: II1 G Ex ia IIC
FM08ATEX0066X

CE: En cumplimiento con
EN55011, EN50022-2

WEEE DIRECTIVA



La Directiva 2002/96/CE del Parlamento Europeo y del Consejo de la Unión Europea sobre Residuos de Aparatos Eléctricos y Electrónicos (RAEE) fue aprobada por el Parlamento Europeo y el Consejo de la Unión Europea en 2003. Este símbolo indica que este producto contiene equipo eléctrico y electrónico que puede incluir baterías, tableros de circuito impresos, indicadores de crystal líquido u otros componentes que pueden estar sujetos a regulaciones locales de desecho. Por favor informese acerca de estas reglas y desecho de este producto de manera responsable.

DEUTSCH

ALLGEMEINES IN DER ANORDNUNG

Die gemäß FM und ATEX genehmigten FLOMEC®-Sensoren sind für die Verwendung mit jedem G2-Turbinenmessinstrument ausgelegt, wenn Rotorimpulsdaten erforderlich sind und das Messinstrument sich an einem gefährlichen Ort befindet. Die Sensoren eignen sich ideal für Innen- oder Außenanwendungen und das Ausgangssignal ist mit den vorhandenen FLOMEC-Elektronikgeräten kompatibel.

Vorsicht, wenn Sie gefährliche Substanzen anfassen oder in den möglicherweise gefährlichen Klimatisierungen. Passender Sicherheit Praxis und Empfehlungen des Herstellers folgen.

AUFSTELLUNG

⚠️ WARNUNG

Dieser Sensor muß mit einer anerkannten Sperre benutzt werden, um die eigensichere Bewertung beizubehalten. (Zeichnet Engineering Control Drawing 85047)

Gehen Sie wie folgt vor, um die FM- und ATEX-genehmigten FLOMEC-Sensoren zu installieren.

1. Das Stirnblech mit den vier bereitgestellten Schrauben anbringen.
2. Die Hexagon-Gegenmutter auf den Sensor vollständig schrauben.
3. Den Sensor in die Mittelbohrung des Stirnblechs einsetzen. Ziehen den Sensor fest.
4. Die Hexagon-Gegenmutter gegen das Stirnblech festziehen.

SPEZIFIKATIONEN

Aufbau: 303 rostfreier Edelstahl- und Aluminium-Stirnblech

Energiequelle: 8.0 zu 30 VDC

Versorgungsmaterial-Strom: ≤ 15mA

Ausgang: Open Collector, NPN

Eingangssignal: Rotorumdrehung; Interne Spule: 400 gauss, 30 mV Empfindlichkeit

Genauigkeit: Kein zusätzlicher Störung Überschub verband Strömungsmessergenauigkeit

Zeit: Aufstieg Zeit: .04u sec Fall-Zeit: .8u sec

Frequenzbereich: 5 zu 10k Hz

SERVICE

Für Garantiebetachtung treten die Teile oder andere Service-Informationen, bitte mit Ihrem lokalen Verteiler. Wenn Sie weitere Unterstützung benötigen, mit der GPI® Kundendienstabteilung in Wichita, Kansas in Verbindung treten, während der normalen kostenlos-Geschäftsstunden.

Eine kostenlose Telefonnummer wird für Ihre Bequemlichkeit.

1-888-996-3837

Temperatur: Der Sensor ist zum Funktionieren in der Strecke -40° zu +185°F (-40° zu +85°C)

Für Kategorie I, II, III, Abteilung 1

Gruppe ABCDEFG und CSA: Kategorie 1, Abteilung 1 Gruppe ABCD, die folgenden Temperaturcodes treffen:

T6 +185°F (+85°C) an +149°F (+65°C) Umgebende Temperatur

T5 +212°F (+100°C) an +185°F (+85°C) Umgebende Temperatur

Kabel: Keine liefern - den Leiter 3, der für Gebrauch

Mechanische Anschlüsse: 5/8-18 verlegten Körper mit 1.75 Zoll des Gewindeminimums. Besteigbar über das Stirnblech zu irgendeinem Gehäuse des Meßinstruments G2.

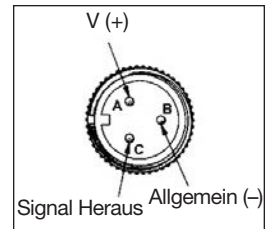
Elektrische Anschlüsse: MS3106-10SL-3S (ITT CANNON/AMPHENOL Mil-Spec Stecker).

Stift heraus für den Sensor:

Pin A: V (+)

Pin B: Allgemein (-)

Pin C: Signal Heraus



Zertifizierungen für IS90 –

USA: Eigensicher
Klasse I, II, III, Bereich I
GRUPPE ABCDEFG
Klasse I, Zone 0, AEx ia IIC

Kanada: Eigensicher
Klasse I, Bereich I
GRUPPE ABCD
Klasse I, Zone 0, Ex ia IIC

Zertifizierungen für IS90A –

ATEX: II1 G Ex ia IIC
FM08ATEX0066X

CE: Erfüllung von
EN55011, EN50022-2

WEEE RICHTLINIE



Der Richtlinie 2002/96/EG über Elektro- und Elektronik-Altgeräte (WEEE) des Europäischen Parlaments bzw. des EU-Ministerrats. Dieses Symbol zeigt an, daß dieses Produkt elektrische und elektronische Ausrüstung, die Batterien mit einschließen kann, Printplatte verschalt, Flüssigkristall-Sichtanzeigen oder andere Bestandteile enthält, die abhängig von Einheimischvergeudung Regelungen sein können. Bitte verstehen Sie jene Regelungen wenn Sie dieses Produkt sich entledigen.

ITALIANO

INFORMAZIONI GENERICHE

I sensori approvati da FLOMEC® FM e ATEX sono progettati per l'uso con qualsiasi misuratore della turbina G2 quando occorre rilevare i dati degli impulsi del rotore e il misuratore deve essere installato in una posizione pericolosa. I sensori sono ideali per applicazioni interne o esterne e il segnale trasmesso è compatibile con gli esistenti dispositivi elettronici FLOMEC.

Prestare attenzione quando maneggiano le sostanze pericolose o funzionano negli ambienti potenzialmente pericolosi. Seguire le pratiche adatte di sicurezza e le raccomandazioni del fornitore.

INSTALLAZIONE

⚠ AVVERTIMENTO

Questo sensore deve essere utilizzato con una barriera approvata per effettuare la valutazione di per sé sicura. (Riferimento Engineering Control Drawing 85047)

Procedere come indicato di seguito per installare i sensori approvati da FLOMEC FM e ATEX.

1. Installare la piastra di faccia per mezzo delle quattro viti fornite.
2. Avvitare il dado di inceppamento del Hex tutto il senso sul sensore.
3. Inserire il sensore nel buco centrista della piastra di faccia. Stringa strettamente il sensore fino a che.
4. Stringa il dado di inceppamento del Hex contro la piastra di faccia.

SPECIFICHE

Costruzione: 303 piastra di faccia dell'alluminio e dell'acciaio inossidabile

Fonte Di energia: 8.0 a 30 VDC

Corrente Del Rifornamento: ≤ 15mA

Uscita: Corrente Aperta, NPN

Segnale in Ingresso: Rotazione del rotore; Bobina Interna: 400 gauss, sensibilità di sistemi 30 mV

Esattezza: Nessun'eccedenza di errore coppia l'esattezza dei contatori

Tempo: Tempo Di Aumento: .04u sec
Tempo Di Caduta: .8u sec

Gamma Di Frequenza: 5 a 10k Hz

SERVIZIO

Per considerazione della garanzia, le parti o altre informazioni di servizio, si mettono in contatto con prego il vostro distributore locale. Se avete bisogno di ulteriore assistenza, mettersi in contatto con il reparto di servizio del cliente di GPI® a Wichita, Kansas, durante le ore normali di affari.

Un numero gratis è fornito per la vostra convenienza.

1-888-996-3837

Temperatura: Il sensore è capace di funzionamento nella gamma di -40° a +185°F (-40° a +85°C)

Per Codice categoria I, II, III, Divisione 1

Gruppo ABCDEFG e CSA: Codice categoria 1, Divisione 1 Gruppo ABCD, i seguenti codici di temperatura si applicano:

T6 +185°F (+85°C) a +149°F (+65°C) Temperatura Ambientale

T5 +212°F (+100°C) a +185°F (+85°C) Temperatura Ambientale

Cavo: Nessun hanno fornito - il conduttore 3 richiesto per uso

Collegamenti Meccanici: 5/8-18 ha filettato il corpo con 1.75 pollice del minimo del filetto. Montabile via la piastra di faccia a qualsiasi alloggiamento del tester G2.

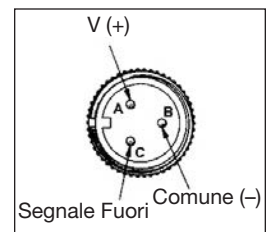
Collegamenti Elettrici: MS3106-10SL-3S (ITT CAN-NON/AMPHENOL Mil-Spec Connettore).

Perno fuori per il sensore:

Pin A: V (+)

Pin B: Comune (-)

Pin C: Segnale Fuori



Certificazioni per IS90 -

Stati Uniti: Intrinsecamente sicuro
Classe I, II, III, Divisione I
GRUPPO ABCDEFG
Classe I, Zona 0, AEx ia IIC

Canada: Intrinsecamente sicuro
Classe I, Divisione I
GRUPPO ABCD
Classe I, Zona 0, Ex ia IIC

Certificazioni per IS90A -

ATEX: II1 G Ex ia IIC
FM08ATEX0066X

CE: Conformità a
EN55011, EN50022-2

WEEE DIRETTIVA



La direttiva 2002/96/EC del Parlamento europeo e del Consiglio dell'Unione europea sui rifiuti di apparecchiature elettriche ed elettroniche (RAEE) è stato approvato dal Parlamento europeo e del Consiglio dell'Unione europea. Questo simbolo indica che questo prodotto contiene l'apparecchiatura elettrica ed elettronica che può includere le batterie, i bordi stampati del circuito, i display a cristalli liquidi o altri componenti che possono essere conforme alle regolazioni locali di eliminazione. Prego capire quelle regolazioni e disfare di questo prodotto in un modo responsabile.

FRANÇAIS

INFORMATIONS GÉNÉRALES

Les capteurs homologués FLOMEC® FM et ATEX sont conçus pour l'utilisation avec n'importe quel débitmètre à turbine G2, lorsque des données d'impulsion du rotor sont nécessaires et que le compteur se trouve dans une zone dangereuse. Les capteurs sont adaptés aux applications intérieures et extérieures, et le signal de sortie est compatible avec l'électronique FLOMEC existante.

Faire attention en manipulant les substances dangereuses ou en travaillant dans les environnements potentiellement dangereux. Suivre les pratiques de sécurité appropriées et les recommandations du fabricant.

INSTALLATION

⚠ ATTENTION

Ce capteur doit être utilisé avec une barrière approuvée pour maintenir le Intrinsically Safe Rating. (Référence FMRC Engineering Control Drawing 85047)

Utilisez les procédures suivantes pour installer les capteurs homologués FLOMEC FM et ATEX.

1. Installez le couvercle de protection un utilisant des quatre vis fournies.
2. Visser l'écrou d'Hex Jam sur le capteur.
3. Insérez le capteur dans le trou central du couvercle de protection. Avec la main, serrer le capteur jusqu'à bien ajusté.
4. Serrez l'écrou d'Hex Jam contre le couvercle de protection.

SPECIFICATIONS

Construction: 303 le couvercle de protection d'acier inoxydable et d'aluminium

Source D'Énergie: 8.0 à 30 VDC

Courant D'Alimentation: ≤ 15mA

Sortie: Open Collector, NPN

Signal D'Entrée: Rotation de rotor; Enroulement interne: 400 gauss, sensibilité du 30 mV

Exactitude: Aucune erreur supplémentaire sur la précision des compteurs de flux couplée

Temps: Temps de montée: .04u sec
Temps De Chute: .8u sec

Chaîne De Fréquence: 5 à 10k Hz

SERVICE

Pour la considération de la garantie, les pièces ,ou d'autre information du service, contactez votre distributeur local. Si vous avez besoin d'aide, contactez le département du service de la clientèle de GPI® à Wichita, Kansas, pendant les heures normales d'ouverture.

Un numéra vert est fourni pour votre commodité.

1-888-996-3837

Température: La sonde est capable du fonctionnement dans la gamme de -40° à +185°F (-40° à +85°C)

Pour La Classe I, II, III, Division 1

Groupe ABCDEFG et CSA: Classe 1, Div. 1 Groupe ABCD, les codes suivants de la température s'appliquent:

T6 +185°F (+85°C) à +149°F (+65°C) La Température Ambiante

T5 +212°F (+100°C) à +185°F (+85°C) La Température Ambiante

Câble: Aucun n'a fourni - 3 conducteurs sont nécessaires pour l'usage

Raccordements Mécaniques: 5/8-18 a fileté le corps avec 1.75 pouces du minimum de fil. Montable avec le couvercle de protection à tout logement du compteur G2.

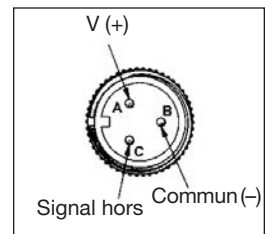
Raccordements Électriques: MS3106-10SL-3S (ITT CANNON/AMPHENOL Mil-Spec Connecteur).

Pin Out Pour le Capteur:

Pin A: V (+)

Pin B: Commun (-)

Pin C: Signal hors



Certifications pour IS90 –

USA: Sécurité intrinsèque
Classe I, II, III, Division I
GROUPE ABCDEFG
Classe I, Zone 0, AEx ia IIC

Canada: Sécurité intrinsèque
Classe I, Division I
GROUPE ABCD
Classe I, Zone 0, Ex ia IIC

Certifications pour IS90A –

ATEX: II1 G Ex ia IIC
FM08ATEX0066X

CE: Conformité avec
EN55011, EN50022-2

WEEE DIRECTIVE



Le Waste Electrical and Electronic Equipment (WEEE) directive (2002/96/EC) a été approuvée par le Parlement Européen et le Conseil de l'Union Européenne en 2003. Ce symbole indique que ce produit contient l'équipement électrique et électronique qui peut inclure les batteries, les cartes électroniques les affichages à cristaux liquides ou d'autres composants qui peuvent être sujets à des règlements locaux de disposition à votre endroit. Veuillez comprendre ces règlements et débarrassez-vous de ce produit d'une façon responsable.

Limited Warranty Policy

Great Plains Industries, Inc. 5252 E. 36th Street North, Wichita, KS USA 67220-3205, hereby provides a limited warranty against defects in material and workmanship on all products manufactured by Great Plains Industries, Inc. This product includes a 1 year warranty. Manufacturer's sole obligation under the foregoing warranties will be limited to either, at Manufacturer's option, replacing or repairing defective Goods (subject to limitations hereinafter provided) or refunding the purchase price for such Goods theretofore paid by the Buyer, and Buyer's exclusive remedy for breach of any such warranties will be enforcement of such obligations of Manufacturer. The warranty shall extend to the purchaser of this product and to any person to whom such product is transferred during the warranty period.

The warranty period shall begin on the date of manufacture or on the date of purchase with an original sales receipt.

This warranty shall not apply if:

- A. the product has been altered or modified outside the warrantor's duly appointed representative;
- B. the product has been subjected to neglect, misuse, abuse or damage or has been installed or operated other than in accordance with the manufacturer's operating instructions.

To make a claim against this warranty, contact the GPI Customer Service Department at 316-686-7361 or 888-996-3837. Or by mail at:

Great Plains Industries, Inc.

5252 E. 36th St. North,
Wichita, KS, USA 67220-3205

If you are outside North or South America contact:

Great Plains Industries – Australia

1/16 Atkinson Road,
Taren Point NSW 2229, Sydney, Australia

The company shall, notify the customer to either send the product, transportation prepaid, to the company at its office in Wichita, Kansas, or to a duly authorized service center. The company shall perform all obligations imposed on it by the terms of this warranty within 60 days of receipt of the defective product.

GREAT PLAINS INDUSTRIES, INC., EXCLUDES LIABILITY UNDER THIS WARRANTY FOR DIRECT, INDIRECT, INCIDENTAL AND CONSEQUENTIAL DAMAGES INCURRED IN THE USE OR LOSS OF USE OF THE PRODUCT WARRANTED HEREUNDER.

The company herewith expressly disclaims any warranty of merchantability or fitness for any particular purpose other than for which it was designed.

This warranty gives you specific rights and you may also have other rights which vary from U.S. state to U.S. state.

Note: In compliance with MAGNUSON MOSS CONSUMER WARRANTY ACT – Part 702 (governs the resale availability of the warranty terms).



Wichita · Sydney · Mexico City



Great Plains Industries, Inc. / 888-996-3837 / GPI.net