

# SIEMENS

Process Industries and Drives Division  
Process Automation  
Analytical Products and Solutions

## **Amendment 1 to Operating Instructions A5E01132948-04 Laser Gas Analyzer SITRANS SL (7MB6221)**

### **Product Information**

#### **Introduction**

This amendment contains necessary information to the following paragraphs of the Operating Instructions A5E01132948-04:

- Section 3.1
- Section 4.2.3
- Section 4.2.4
- Section 4.3.3
- Section 5.1.4
- Section 5.2
- Section 5.2.2
- Section 11.1
- Section 13.1
- Annex A

To ensure safe operation of this device, make sure you also read the standard operating instructions for the SITRANS SL laser gas analyzer (A5E01132948) as of revision 04. This applies, above all, to the warnings and safety information provided there.

# Product Information

## Section 3.1

Section 3.1 is renamed to read: 'Preparing electric connection'.

The existing paragraph 'Cable selection recommendation' remains as it is, the following paragraph is added:

### **Power switch and fuse**

The device does not have a power switch. For power supply connection install an external power switch with a switching capacity of min. 1.5 A and a slow-blow fuse with a rating of 1.6 A.

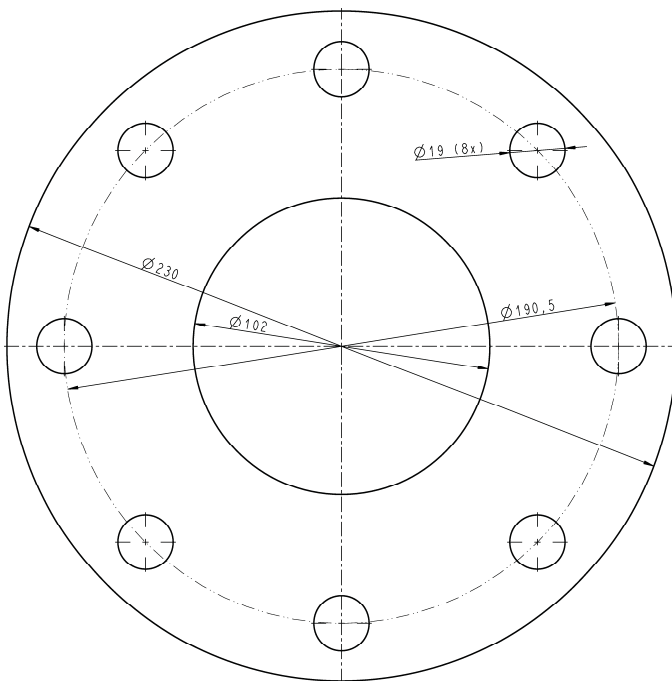
Install the power switch such that it is easily accessible during operation of the device.

### Section 4.2.3

The following paragraph is added to Section 4.2.3:

#### ANSI 4"/150 lbs Process Interface

When using a SITRANS SL analyzer with an ANSI 4"/150 lbs process interface (fabrication no. 7MB6221-xxxx-xBxx), always make sure to use the right gasket and counterflange. The proper gasket is the one delivered either with the analyzer or as a spare part (A5E02789535). Its dimensions are stated in the following figure. The proper counterflange is the one specified in the operating instructions. Its dimensions are quoted there in chapter 'Dimensional drawings'. The M16 bolts shall be tightened with a torque of  $M = 80 \text{ Nm}$ .



If a customer process flange with an inner diameter of more than 4" (101.6 mm) or an unsuitable gasket is used the flange joint will become leak-prone.


#### Pressure ratings

The different pressure ratings for the SITRANS SL flanges depend on the fabrication number stated on the nameplate. All quoted pressure values apply to room temperature.

Fabrication No.	p [MPa]	p [bar]	p [psi]
7MB6221-xxxx-xBxx	1.6 MPa	16 bar	232.0 psi
7MB6221-xxxx-xCxx	2.5 MPa	25 bar	362.5 psi
7MB6221-xxxx-xExx	4.0 MPa	40 bar	580.0 psi

## Section 4.2.4

The following paragraph is added to Section 4.2.4:

 <b>WARNING</b>
<p><b>Toxic and/or corrosive gases</b></p> <p>When measuring toxic or corrosive gases, it could occur that sample gas accumulates in the analyzer because of leaks in the environment.</p> <p>To prevent the danger of poisoning or damage to parts of the analyzer, the analyzer or the system is subject to a leak test following the installation of the sensors.</p>

## Section 4.3.3

In Section 4.3.3, Table 4-2 'Electric connections for receiver junction box cable of sensor connection cable kit (accessory)' has changed to read now:

This change is valid for receiver cable as delivered from June 2018 to be identified by cable gland with red cap.

Table 4-2 Electric connections for receiver junction box cable of sensor connection cable kit (accessory)

Conductor color	Connector position in junction box	Remarks	
Red	1	+	24 V DC power supply for transmitter unit
Blue	2	-	
Pink	3	Com +	RS485 communication
Grey	4	Com -	
White	5	Sync+	
Brown	6	Sync -	
-	7	NC	
Green	8	Tx +	Ethernet connection
Yellow	9	Tx -	
Black	10	Rx +	
Violet	11	Rx -	

Conductor color	Connector position in junction box	Remarks
-	PE terminal	
-	PE terminal	
Shield	Gland	

In Section 4.3.3, Table 4.4 'Electric connection for PROFIBUS connection cable (accessory)' of items 1 and 3 the supply voltage rating in the function column has changed to read now 19 ... 30.2 V DC.

## Section 5.1.4

In Section 5.1.4, Table 5-2 'Electric connections for receiver junction box cable, valid for ATEX product versions' has changed to read now:

This change is valid for receiver cable as delivered from June 2018 to be identified by cable gland with red cap.

Table 5-2 Electric connections for receiver junction box cable, valid for ATEX product versions

Conductor color	Connector position (Receiver junction board)	Connector position (Receiver junction box)	Remarks	Function
Red	L1	1	+	24 V DC power supply to transmitter unit
Blue	L2	2	-	
Pink	L3	3	Com+	RS 485 communication
Grey	L4	4	Com-	
White	L5	5	Sync+	
Brown	L6	6	Sync-	
Green	16	8	Tx+	Ethernet connection
Yellow	17	9	Tx-	
Black	18	10	Rx+	
Violet	19	11	Rx-	
Shield	Chassis	Gland		

In Section 5.1.4, Table 5-3 'Electric connections for transmitter junction box cable, valid for ATEX product versions' has changed to read now:

This change is valid for transmitter cable as delivered from June 2018 to be identified by cable gland with red cap.

Table 5-3 Electric connections for transmitter junction box cable, valid for ATEX product versions

Conductor color	Connector position (Transmitter board)	Connector position (Transmitter junction box)	Remarks	Function
Red	L1	1	+	24 V DC power supply to transmitter unit
Blue	L2	2	-	
Pink	L3	3	Com+	RS 485 communication
Grey	L4	4	Com-	
White	L5	5	Sync+	
Brown	L6	6	Sync-	
Green	Chassis	PE terminal		
Yellow	Chassis	PE terminal		
Shield	Chassis	Gland		

In Section 5.1.4, Table 5-4 'Electric connections for connection cable analog and Modbus, valid for ATEX product versions' has changed to read now:

This change is valid for connection cable as delivered from June 2018 to be identified by cable gland with red cap.

Table 5-4 Electric connections for connection cable analog and Modbus, valid for ATEX product versions

Conductor color	Connector position (Receiver junction board)	Remarks	Function
Red	1	+	Supply voltage 19 ... 30,2 V DC, 10 VA <sup>1)</sup>
Blue	2	-	
Pink	3	Closed when energized <sup>4)</sup>	Digital Out 0 (relay) 30 V DC, 0.5 A <sup>3)</sup>
Grey	4		
White	5	Closed when energized <sup>4)</sup>	Digital Out 1 (relay) 30 V DC, 0.5 A <sup>3)</sup>
Brown	6		
Green	7	+	Digital In 0 0 ... 30 V DC <sup>2)</sup>
Yellow	8	-	
Black	9	+	Analog Out 0 30 V DC, 24 mA <sup>3)</sup>
Violet	10	-	

Conductor color	Connector position (Receiver junction board)	Remarks	Function
Grey - pink	11	+	Analog Out 1 30 V DC, 24 mA <sup>3)</sup>
Red - blue	12	-	
White - green	13	Modbus D1 (RxD/TxD_N)	RS 485 (Modbus) -7 ... + 12 V DC
Brown - green	14	Modbus D0 (RxD/TxD_P)	
White - yellow	15	Shield Modbus	
White - grey	20	+	Analog In 0 0 ... 30 mA <sup>2)</sup>
Grey - brown	21	-	
White - pink	22	+	Analog In 1 0 ... 30 mA <sup>2)</sup>
Pink - brown	23	-	
Yellow - brown	Chassis	PE	
Shield	Chassis	PE	

In Section 5.1.4, Table 5.5 'Electric connection for PROFIBUS connection cable' of items 1 and 3 the supply voltage rating in the function column has changed to read now 19 ... 30.2 V DC.

## Section 5.2

Section 5.2 applies to all FM and CSA applications and therefore its header is renamed to read 'FM/CSA'. Throughout this section any 'FM' statement is modified to read 'FM/CSA' instead.

### Section 5.2.2

The following paragraph is added to this Section:

#### Special Conditions for Safe Use

- Always consult the manufacturer for dimensional information on the flameproof joints in case of repair.
- The painted surface of the SITRANS SL may be subject to electrostatic charge and thus become a source of ignition in applications with a low relative humidity of less than 30 % when the painted surface is free of surface contamination such as dirt, dust or oil. If necessary clean the painted surface only using a damp cloth.
- The SITRANS SL analyzers used for process measurement and control shall not measure oxygen concentrations greater than 21%.

## Section 11.1

In Section 11.1, Table 3 'Electric characteristics' the rating of item 'Power supply' has changed. The correct rating is 24 V DC nominal (19 ... 30.2 V DC).

## Section 13.1

In Section 13.1, Table 13-1 ' General spare parts' has changed to read now:

Table 13-1 General spare parts

Spare parts	Order No.
SITRANS SL, Process interface ANSI 4" / 150 lbs incl. gasket	A5E01009883
SITRANS SL, Process interface for DN 50 / PN10-40 incl. gasket	A5E01009881
SITRANS SL, Purging tube 340 mm (13 3/8") incl. gasket for DN50/PN25	A5E01009892
SITRANS SL, Window lid for receiver unit	A5E01009897
SITRANS SL, Lid for transmitter unit	A5E02568437
SITRANS SL, Cable for Analog and Modbus (ATEX), cable gland made of brass nickel plated	A5E02608597
SITRANS SL, Cable PROFIBUS DP (ATEX), cable gland made of brass nickel plated	A5E02608594
SITRANS SL, Cable for receiver (ATEX), cable gland made of brass nickel plated	A5E44678567
SITRANS SL, Cable for transmitter (ATEX), cable gland made of brass nickel plated	A5E44678580
SITRANS SL, Junction Box and cable for transmitter (ATEX), cable gland made of brass nickel plated	A5E02568463
SITRANS SL, Junction Box and cable for receiver (ATEX), cable gland made of brass nickel plated	A5E02568465
SITRANS SL, Cable for Analog and Modbus (ATEX), cable gland made of stainless steel	A5E34834297
SITRANS SL, Cable PROFIBUS DP (ATEX), cable gland made of stainless steel	A5E34834296
SITRANS SL, Cable for receiver (ATEX), cable gland made of stainless steel	A5E34831050
SITRANS SL, Cable for transmitter (ATEX), cable gland made of stainless steel	A5E34830928
SITRANS SL, Transmitter Junction Box (ATEX), cable gland made of stainless steel	A5E34831075
SITRANS SL, Receiver Junction Box (ATEX), cable gland made of stainless steel	A5E34831078
SITRANS SL, Clamp ring	A5E01010033
SITRANS SL, Remote control IS, CSA, FM, ATEX proof	A5E02091214
SITRANS SL, Transmitter Junction box (ATEX), cable gland made of brass nickel plated	A5E02091532
SITRANS SL, Installation kit choke for sensor purging	A5E02183375
SITRANS SL, Gasket for DN50 / PN10-40	A5E02522036
SITRANS SL, Gasket for ANSI 4" / 150 lbs	A5E02789535
SITRANS SL, Needle valve kit	A5E02569944
SITRANS SL, Sensor connection cable 5 m	A5E02571180
SITRANS SL, Sensor connection cable 10 m	A5E02571184
SITRANS SL, Sensor connection cable 25 m	A5E02571186
SITRANS SL, Cable gland for non-Ex cable	A5E02568457



## Annex A

The following two paragraphs are added to Annex A:

### Classification according to Pressure Equipment Directive (97/23/EC)

For gases of fluid group 1 and liquids of fluid group 1 the SITRANS SL gas analyzer complies with the requirements of the Pressure Equipment Directive 97/23/EC, article 3, paragraph 3 (sound engineering practice).

### A marking in accordance with KC (Korea)

KC marking for use in Korea only

Device version	Operating instructions
A 급 기기	이 기기는 업무용(A 급) 전자파 적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며 가정 외의 지역에서 사용하는 것을 목적으로 합니다.
Class A device	This device is classified as having electromagnetic resistance suitable for industrial use (Class A) and may be used universally, apart from in domestic use.

Siemens AG  
Process Industries and Drives Division  
Postfach 48 48  
90026 NÜRNBERG  
Germany



Process Industries and Drives Division  
Process Automation  
Analytical Products and Solutions

**Nachtrag 1 zu Betriebsanleitung A5E01132949-04**  
**Laser Gas Analyzer**  
**SITRANS SL (7MB6221)**

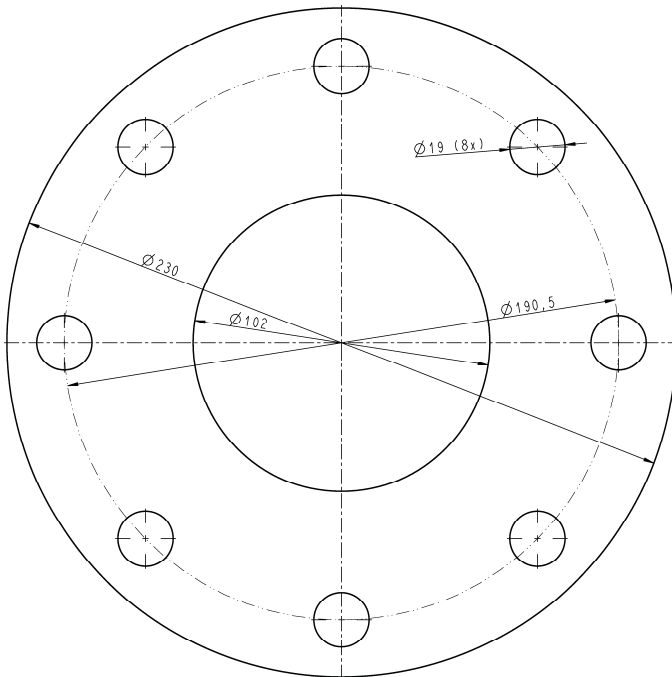
**Produktinformation**

## Abschnitt 4.2.3

Abschnitt 4.2.3 wird um den folgenden Absatz ergänzt:

### Prozessschnittstelle ANSI 4"/150 lbs

Stellen Sie bei Einsatz eines SITRANS SL Analysegerätes mit ANSI 4"/150 lbs Prozessschnittstelle (Herstellungsnr. 7MB6221-xxxx-xBxx) jederzeit sicher, dass Sie die korrekte Dichtung und den korrekten Gegenflansch verwenden. Die korrekte Dichtung erhalten Sie entweder zusammen mit dem Analysegerät oder als Ersatzteil (A5E02789535). Die Maße der Dichtung sind in der folgenden Abbildung aufgeführt. Der korrekte Gegenflansch wird in der Betriebsanleitung spezifiziert. Die Gegenflanschmaße werden im Kapitel „Maßzeichnungen“ angegeben. Die Schrauben vom Typ M16 sind mit einem Anzugsmoment von  $M = 80 \text{ Nm}$  anzuziehen.



Falls ein kundenseitiger Prozessflansch mit einem Innendurchmesser von über 4" (101,6 mm) oder eine ungeeignete Dichtung verwendet wird, wird die Flanschverbindung anfällig gegenüber Undichtigkeiten.

### Druckstufen

Die verschiedenen Druckstufen der SITRANS SL Flansche hängen von der auf dem Typenschild angegebenen Herstellungsnummer ab. Alle angegebenen Druckwerte gelten bei Raumtemperatur.

Herstellungsnr.	p [MPa]	p [bar]	p [psi]
7MB6221-xxxx-xBxx	1,6 MPa	16 bar	232,0 psi
7MB6221-xxxx-xCxx	2,5 MPa	25 bar	362,5 psi
7MB6221-xxxx-xExx	4,0 MPa	40 bar	580,0 psi

## Anhang A

Anhang A wird um die folgenden zwei Absätze ergänzt:

### Klassifizierung gemäß Druckgeräte richtlinie (97/23/EG)

Das SITRANS SL Gasanalysegerät entspricht, bezugnehmend auf Gase und Flüssigkeiten der Flüssigkeitsgruppe 1, den Anforderungen der Druckgeräte richtlinie (97/23/EG), Artikel 3, Absatz 3 (anerkannte Regeln der Technik).

### Kennzeichnung A gemäß KC (Korea)

KC Kennzeichnung nur zur Verwendung in Korea

Geräteausführung	Betriebsanleitung
A 급 기기	이 기기는 업무용(A 급) 전자파 적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며 가정 외의 지역에서 사용하는 것을 목적으로 합니다.
Gerät der Klasse A	Dieses Gerät ist klassifiziert als elektromagnetisch beständig für industriellen Gebrauch (Klasse A) und kann überall genutzt werden außer in häuslicher Umgebung.

Siemens AG  
Process Industries and Drives Division  
Postfach 48 48  
90026 NÜRNBERG  
DEUTSCHLAND



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**Annexe 1 aux Instructions de service A5E01132951-04**  
**Laser Gas Analyzer**  
**SITRANS SL (7MB6221)**

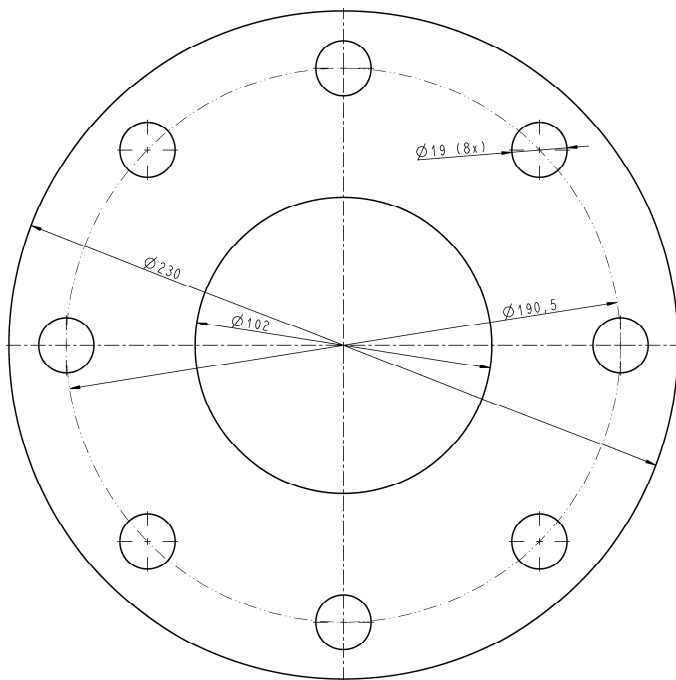
**Information produit**

## Section 4.2.3

Le paragraphe suivant est un ajout à la section 4.2.3 :

### Interface de processus ANSI 4"/150 livres

Lorsqu'on utilise un analyseur SITRANS SL avec une interface de processus ANSI 4"/150 livres (no de fabrication 7MB6221-xxxx-xBxx), il faut systématiquement s'assurer que l'on utilise le joint et la contre-bride appropriés. Le joint approprié est délivré soit avec l'analyseur soit comme pièce détachée (A5E02789535). Ses dimensions sont indiquées dans le schéma suivant. La contre-bride appropriée est décrite dans les instructions de service et ses dimensions sont indiquées ici au chapitre "Dessins cotés". Les goujons M16 doivent être serrés à un couple de  $M = 80 \text{ Nm}$ .



Si un client utilise une bride d'un diamètre intérieur de plus de 4" (101,6 mm), ou si un joint inadapté est utilisé, le raccord de la bride est susceptible de fuir.

### Pressions nominales

Les différentes pressions nominales des brides SITRANS SL dépendent du numéro de fabrication indiqué dans la signalétique. Toutes les valeurs de pression citées s'appliquent à la température de la pièce.

No de fabrication	p [MPa]	p [bar]	p [psi]
7MB6221-xxxx-xBxxx	1,6 MPa	16 bars	232,0 psi
7MB6221-xxxx-xBxxx	2,5 MPa	25 bars	362,5 psi
7MB6221-xxxx-xBxxx	4,0 MPa	40 bars	580,0 psi

## Appendice A

Les deux paragraphes suivants sont un ajout à l'appendice A :

### Classification selon la directive d'équipement sous pression (97/23/CE)

Pour les gaz du groupe de fluides 1 et les liquides du groupe de fluides 1, l'analyseur de gaz SITRANS SL est conforme aux exigences de la Directive d'équipement sous pression 97/23/CE, article 3, paragraphe 3 (saines pratiques d'ingénierie).

### Sélection selon KC (Corée)

Sélection KC pour la Corée uniquement

Version de l'appareil	Instructions de service
A 급 기기	이 기기는 업무용(A 급) 전자파 적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며 가정 외의 지역에서 사용하는 것을 목적으로 합니다.
Appareil de catégorie A	Cet appareil appartient à la catégorie d'appareils ayant une résistance électromagnétique adaptée à un usage industriel (catégorie A) et peut faire l'objet d'un usage universel, à l'exception d'un usage domestique.

Siemens AG  
Process Industries and Drives Division  
Postfach 48 48  
90026 NÜRNBERG

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## **Enmienda 1 de las instrucciones de servicio A5E01132953-04 Laser Gas Analyzer SITRANS SL (7MB6221)**

**Información del producto**

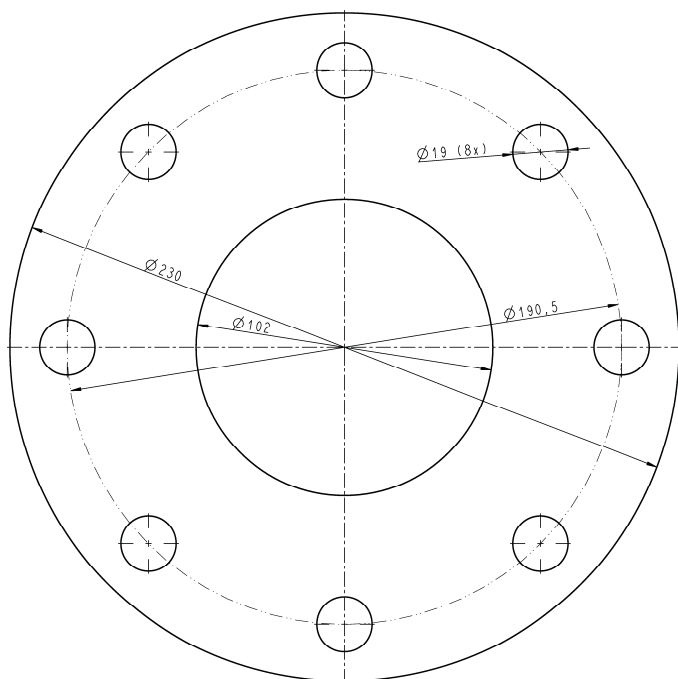


## Apartado 4.2.3

El párrafo siguiente ha sido añadido al apartado 4.2.3:

### Interfaz de proceso ANSI 4"/150 lbs

Al usar un analizador SITRANS SL con interfaz de proceso ANSI 4"/150 lbs (referencia 7MB6221-xxxx-xBxx), asegúrese de usar la junta y la contrabrida adecuadas. La junta apropiada es la que se suministra junto con el analizador o bien como repuesto (A5E02789535). Sus dimensiones aparecen en la figura siguiente. La contrabrida correcta es la que aparece especificada en las instrucciones de servicio, sus dimensiones aparecen en el capítulo "Croquis acotados". Los pernos M16 se deben apretar aplicando un par de apriete de  $M = 80 \text{ Nm}$ .



Si usa una brida de proceso de otro fabricante con un diámetro interno de más de 4" (101,6 mm) o una junta inadecuada, la unión embriada será propensa a presentar fugas.

### Presiones nominales

Las distintas presiones nominales aplicables a las bridas del SITRANS SL dependen de la referencia que figura en la placa de características. Todos los valores de presión mencionados se refieren a temperatura ambiente.

Referencia	p [MPa]	p [bar]	p [psi]
7MB6221-xxxx-xBxx	1,6 MPa	16 bar	232,0 psi
7MB6221-xxxx-xCxx	2,5 MPa	25 bar	362,5 psi
7MB6221-xxxx-xExx	4,0 MPa	40 bar	580,0 psi

## Anexo A

Los dos párrafos siguientes han sido añadidos al anexo A:

### Clasificación según la Directiva de equipos a presión (97/23/CE)

Para gases del grupo de fluidos 1 y líquidos del grupo de fluidos 1, el analizador de gases SITRANS SL cumple con los requisitos de la Directiva de equipos a presión 97/23/CE, artículo 3, párrafo 3 (buenas prácticas de ingeniería).

### Marcado conforme a KC (Corea)

Marcado KC únicamente para uso en Corea

Versión de dispositivo	Instrucciones de servicio
A 급 기기	이 기기는 업무용(A 급) 전자파 적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며 가정 외의 지역에서 사용하는 것을 목적으로 합니다.
Dispositivo clase A	La resistencia electromagnética del presente dispositivo está catalogada como apropiada para un uso industrial (clase A) y es de uso universal, excepto para uso doméstico.

Siemens AG  
Process Industries and Drives Division  
Postfach 48 48  
90026 NÜRNBERG



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**Modifica 1 alle Istruzioni operative A5E01132952-04**  
**Laser Gas Analyzer**  
**SITRANS SL (7MB6221)**

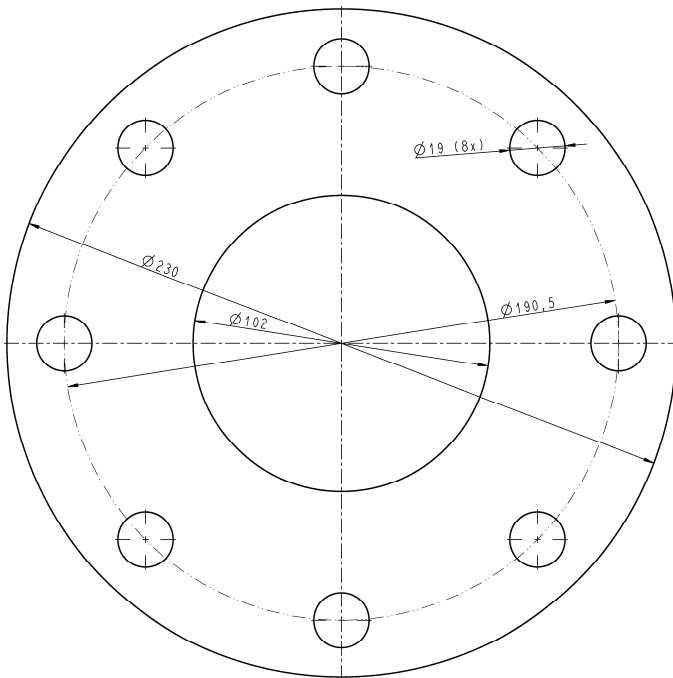
**Informazioni sul prodotto**

## Sezione 4.2.3

Alla Sezione 4.2.3 viene aggiunto il paragrafo seguente:

### Interfaccia di processo ANSI 4"/150 lb

Quando si utilizza un analizzatore SITRANS SL con interfaccia di processo ANSI 4"/150 lb (nr. di fabbricazione 7MB6221-xxxxx-xBxx) assicurarsi di utilizzare sempre guarnizione e controflangia corrette. La guarnizione corretta è quella fornita con l'analizzatore oppure come ricambio (A5E02789535). La sua dimensione è indicata nella figura seguente. La controflangia corretta è quella specificata nelle istruzioni operative e le sue dimensioni sono indicate al capitolo "Disegni quotati". I bulloni M16 devono essere serrati con una coppia di  $M = 80 \text{ Nm}$ .



Se viene utilizzata una flangia di processo fornita dal cliente con un diametro interno superiore a 4" (101,6 mm) o una guarnizione non adatta, è probabile che si verifichino delle perdite in corrispondenza del giunto della flangia.

### Classi di pressione

Le diverse classi di pressione delle flange del SITRANS SL dipendono dal nr. di fabbricazione indicato sulla targhetta identificativa. Tutti i valori di pressione indicati si riferiscono alla temperatura ambiente.

Nr. di fabbricazione	p [MPa]	p [bar]	p [psi]
7MB6221-xxxxx-xBxx	1,6 MPa	16 bar	232,0 psi
7MB6221-xxxxx-xCxx	2,5 MPa	25 bar	362,5 psi
7MB6221-xxxxx-xExx	4,0 MPa	40 bar	580,0 psi

## Allegato A

All'Allegato A vengono aggiunti i due paragrafi seguenti:

### Classificazione secondo la Direttiva apparecchi a pressione (97/23/CE)

Per i gas del gruppo 1 e i liquidi del gruppo 1, l'analizzatore di gas SITRANS SL soddisfa i requisiti della Direttiva apparecchi a pressione 97/23/CE, articolo 3, paragrafo 3 (corretta prassi costruttiva).

### Marchio conformemente a KC (Corea)

Marchio KC da utilizzare solo in Corea

Versione apparecchio	Istruzioni operative
A 급 기기	이 기기는 업무용(A 급) 전자파 적합기기로서 판매자 또는 사용자는 이 점을 주의하시기 바라며 가정 외의 지역에서 사용하는 것을 목적으로 합니다.
Apparecchio di Classe A	Questo apparecchio è classificato come dotato di resistenza elettromagnetica adatta all'uso industriale (Classe A) e può essere impiegato universalmente, tranne che nell'uso domestico.

Siemens AG  
Process Industries and Drives Division  
Postfach 48 48  
90026 NÜRNBERG