

TSX Micro

TSX AEZ 801/802/414

Analog Inputs for TSX Micro PLCs
Analogeingänge für die Steuerungen
TSX Micro

Entrées analogiques pour TSX Micro
Entradas analógicas para autómatas
TSX Micro

Ingressi analogici per PLC TSX Micro

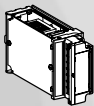
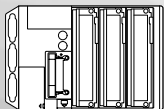
Quick Reference Guide

Bedienungsanleitung

Instruction de service

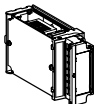
Guía de funcionamiento

Guida di riferimento rapido



Description

TSX AEZ 801 / 802 / 414 analog input interface modules are half-format modules with a screw terminal block.



Functions

These input modules perform the following functions :

- scanning of input channels by multiplexing and acquisition of values,
- analog/digital conversion.

Modules	TSX	AEZ 801	AEZ 802	AEZ 414
Number of channels		8	8	4
Electrical range	+/-10V	●		●
	0-10V	●		●
	0-5V			●
	1-5V			●
	0-20mA		●	●(1)
	4-20mA		●	●(1)
	Temp. probe			●
	Thermocouple (2)			●

(1) 250 Ω external shunt supplied with the module (reference TSX AAK2)

(2) Cold junction compensation
 - internal and automatic, or
 - external by Pt 100 on channel 0.

Implantation

- a maximum of 2 modules for a TSX 37-10 configuration,
- a maximum of 4 modules for a TSX 37-21/22 configuration.

They can be installed in all positions, except for the first position of the PLC base.

⚠ Modules must be inserted and removed when the PLC is powered off.

To install the modules refer to following manuals :

- TSX DM 37 ●● E,
- TLX DS ●● E,

Characteristics

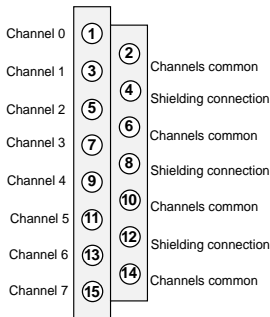
Modules	TSX AEZ 801	TSX AEZ 802	TSX AEZ 414
Analog/digital conversion	12 bits(4096 points)		16 bits (65535points)
Acquisition scan time	32 ms	32 ms	520 ms
Digital filter	1st order. User-definable time constant		
Hardware filter	Cut-off frequency	33 Hz	255 Hz 169 Hz(thermocouples) 10,8 KHz (temperature probe)

Inserting/ removing modules

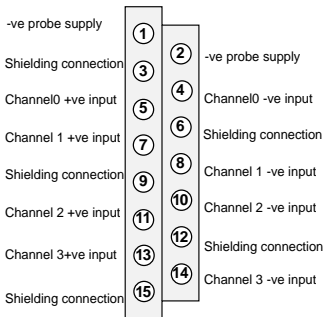
Modules must be inserted and removed when the PLC is **powered off**.

Connection

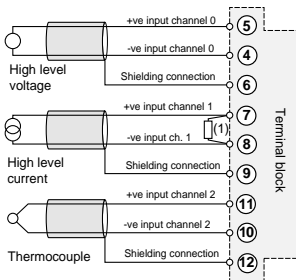
Terminal block TSX AEZ 801 / 802



Terminal block Bornier TSX AEZ 414



Example TSX AEZ 414 Wiring



(1) external shunt 250 Ω

Others connections : refer to TSX DM37●●E,

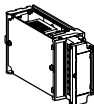
Beschreibung

Bei den analogen Eingangsmodulen TSX AEZ 801 / 802 / 414 handelt es sich um Module im Halbformat, die jeweils mit einer Schraubklemmleiste ausgestattet sind.

Funktionen

Diese Module führen folgende Funktionen aus:

- Abfrage der Eingangskanäle im Multiplexbetrieb und Erfassung der Werte
- Analog-/Digitalkonvertierung



Modul	TSX	AEZ 801	AEZ 802	AEZ 414
Anzahl Kanäle		8	8	4
Meßbereich	+/-10V	●		●
	0-10V	●		●
	0-5V			●
	1-5V			●
	0-20mA			●(1)
	4-20mA			●(1)
	Thermosonde			●
Thermoelement (2)			●	

(1) Shunt 250 Ω extern, im Lieferumfang des Moduls enthalten (Referenz TSX AAK2)

(2) Kompensierung der Vergleichsstelle
- intern und automatisch oder
- extern über Pt 100, Kanal 0

Einbau

- max. 2 Module für TSX 37-10
- max. 4 Module für TSX 37-21/22

Mit Ausnahme des ersten Steckplatzes des Basisgeräts können die Module in sämtlichen Steckplätzen eingebaut werden.

Handhabung der Module stets bei unterbrochener Netzspannung

Für die Inbetriebnahme der Module sollten folgende Dokumente herangezogen werden:

- Handbuch TSX DM 37 ●● G,
- Handbuch TLX DS ●● G,

Eigenschaften

Modul	TSX AEZ 801	TSX AEZ 802	TSX AEZ 414
Ana/Digitalkonvertierung	12 Bits (4096Punkte)		16 Bits (65535Punkte)
Erfassungszeit	32 ms	32 ms	520 ms
Digitalfilterung	1. Befehl, parametrierbare Zeitkonstante		
Hardwarefilterung	Unterbrechungsfrequenz	33Hz	255HZ
			169Hz(Thermoelemente)
			10,8Khz(Thermosonden)

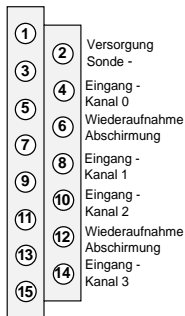
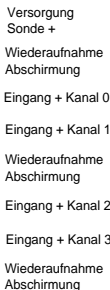
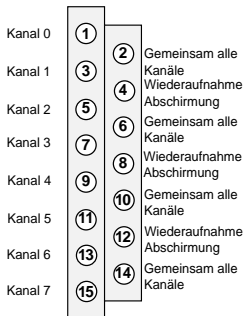
Montage

Die **Montage/Demontage** der Module muß stets bei **unterbrochener Netzspannung** erfolgen.

Anschlüsse

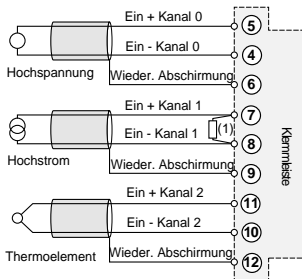
Klemmleiste TSX AEZ 801 / 802

Klemmleiste TSX AEZ 414



DEUTSCH

Beispiel für einen Schaltplan TSX AEZ 414



(1) Shunt 250 Ω extern

Weitere Anschlüsse: siehe Handbuch TSX DM37●● G

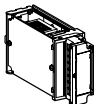
Présentation

Les modules d'entrées analogiques TSX AEZ 801 / 802 / 414 sont des modules au demi format équipés d'un bornier à vis.

Fonctions

Ces modules réalisent :

- la scrutation des voies d'entrées par multiplexages et l'acquisition des valeurs,
- la conversion analogique/numérique.



Module	TSX	AEZ 801	AEZ 802	AEZ 414
Nombre de voies		8	8	4
Gamme	+/-10V	●		●
	0-10V	●		●
	0-5V			●
	1-5V			●
	0-20mA		●	●(1)
	4-20mA		●	●(1)
	Thermosonde			●
Thermocouple (2)			●	

(1) Shunt externe 250 Ω livré avec le module (référence TSX AAK2)

(2) Compensation de soudure froide
- interne et automatique, ou
- externe par Pt 100 sur voie 0.

Implantation

- 2 modules maxi pour TSX 37-10
- 4 modules maxi pour TSX 37-21/22

Ils peuvent être implantés dans tous les emplacements, à l'exception du premier emplacement de la base.

Manipuler les modules hors tension.

La mise en oeuvre des modules nécessite de consulter les documents suivants :

- Manuel TSX DM 37●● F,
- Manuel TLX DS ●● F,

Caractéristiques

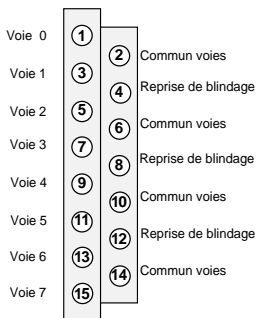
Module	TSX AEZ 801	TSX AEZ 802	TSX AEZ 414
Conversion ana/numérique	12 bits (4096 points)		16 bits (65535points)
Temps acquisition	32 ms	32 ms	520 ms
Filtrage numérique	1er ordre constante de temps paramétrable		
Filtrage matériel	Fréquence de coupure	33 Hz	255 Hz
			169 Hz(thermocouples)
			10,8 Khz (thermosondes)

Montage

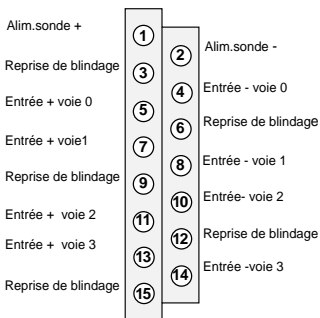
Le **montage/démontage** des modules doit toujours s'effectuer **hors-tension**.

Raccordement / Connection

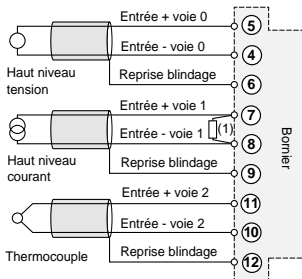
Bornier TSX AEZ 801 / 802



Bornier TSX AEZ 414



Exemple de câblage TSX AEZ 414



(1) Shunt externe 250 Ω

Autres raccordements voir manuel TSX DM37●●F,

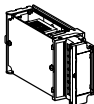
Presentación

Los módulos de entradas analógicas TSX AEZ 801 / 802 / 414 son módulos en semi formato, dotados de un bornero con tornillo.

Funciones

Estos módulos realizan :

- la escrutación de las vías de entradas mediante multiplexados y la asignación de los valores,
- la conversión analógico/digital.



Módulo TSX	AEZ 801	AEZ 802	AEZ 414
Número de vías	8	8	4
Gama	+/-10V ●		●
	0-10V ●		●
	0-5V		●
	1-5V		●
	0-20mA	●	●(1)
	4-20mA	●	●(1)
Termosonda			●
Termopar (2)			●

(1) Shunt externo 250 Ω que se entrega con el módulo (referencia TSX AAK2)

(2) Compensación de soldadura fría - interna y automática, o
- externa por Pt 100 en la vía 0.

Instalación

- 2 módulos máx. para TSX 37-10
- 4 módulos máx. para TSX 37-21/22

Se pueden instalar en cualquier alojamiento, excepto en el primer alojamiento de la placa.

⚠ Manipular los módulos cuando estén desconectados !

Para la instalación de los módulos consúltense los siguientes documentos :

- Manual TSX DM 37 ●● S,
- Manual TLX DS ●● S,

Características

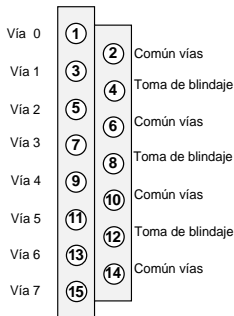
Módulo	TSX AEZ 801	TSX AEZ 802	TSX AEZ 414
Conversión anal./digital	12 bits (4096 punt.)		16 bits (65535 punt.)
Tiempo asignación	32 ms	32 ms	520 ms
Filtrado numérico	1er orden constante de tiempo parametrizable		
Filtrado material	Frecuencia de corte	33 Hz	255 Hz 169 Hz (termopares) 10,8 kHz (termosondas)

Montaje

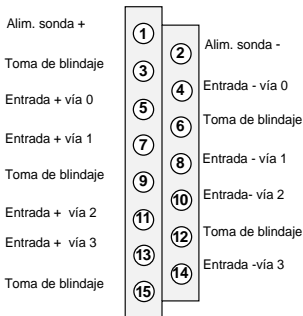
El montaje/desmontaje de los módulos debe hacerse siempre **sin tensión**.

Conexión

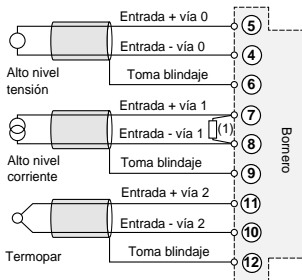
Bornero TSX AEZ 801 / 802



Bornero TSX AEZ 414



Ejemplo de cableado TSX AEZ 414



(1) Shunt externo 250 Ω

Para otras conexiones véase manual TSX DM37●● S,

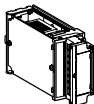
Presentazione

I moduli d'ingressi analogici TSX AEZ 801 / 802 / 414 sono moduli a metà formato dotati di morsetteria a viti.

Funzioni

Questi moduli realizzano:

- l'esame dei canali d'ingressi mediante multiplexing e l'acquisizione dei valori,
- la conversione analogica/digitale.



Modulo	TSX	AEZ 801	AEZ 802	AEZ 414
Numero di canali		8	8	4
Gamma	+/-10V	●		●
	0-10V	●		●
	0-5V			●
	1-5V			●
	0-20mA		●	●(1)
	4-20mA		●	●(1)
Sonda termica			●	
Coppia termica (2)			●	

(1) Shunt esterno 250 Ω fornito con il modulo (riferimento TSX AAK2)

(2) Compensazione con saldatura a freddo - interno e automatico, o
- esterno con Pt 100 su canale 0.

Installazione

- 2 moduli massimo per TSX 37-10
- 4 moduli massimo per TSX 37-21/22

Possono essere installati in tutti gli alloggiamenti tranne nel primo della base.

⚠ Manipolare i moduli quando non sono in tensione.

La messa in servizio dei moduli richiede la consultazione dei seguenti documenti:

- Manuale TSX DM ●●●●,
- Manuale TLX DS●●●●,

Caratteristiche

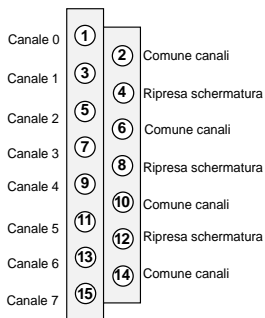
Modulo	TSX AEZ 801	TSX AEZ 802	TSX AEZ 414
Conversione ana/digitale	12 bit (4096 punti)		16 bit (65535 punti)
Tempo acquisizione	32 ms	32 ms	520 ms
Filtraggio digitale	1° ordine costante di tempo parametrabile		
Filtraggio materiale	Frequenza interruzione	33 Hz	255 HZ
			169 Hz (coppie termiche)
			10,8 Khz (sonde term.)

Montaggio

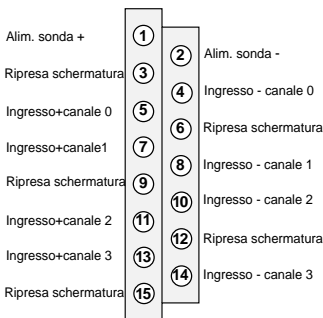
Montaggio/smontaggio dei moduli vanno effettuati quando **non sono in tensione.**

Raccordo / Collegamento

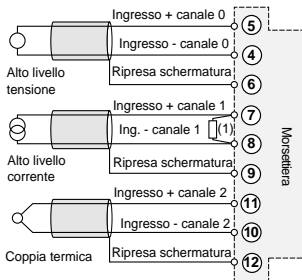
Morsettiere TSX AEZ 801 / 802



Morsettiere TSX AEZ 414



Esempio di cablaggio TSX AEZ 414



(1) Shunt esterno 250 Ω

Per gli altri collegamenti, vedere il manuale TSX DM37●●●●●,



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