

de Sicherheitshinweise	
GEFAHR	
	Zur sicheren Installation und zum sicheren Betrieb des Gerätes ist Folgendes zu beachten: <ul style="list-style-type: none"> <li>Das Gerät darf nur von qualifiziertem Fachpersonal montiert werden.</li> <li>Vor dem Abschluss des festen Einbaus darf am Gerät keine gefährliche Spannung angelegt werden.</li> <li>Das Gerät darf nur in einer Umgebung betrieben werden, die nicht mehr als Verschmutzungsgrad 2 gemäß IEC 60664-1 aufweist.</li> <li>Bei Anwendungen, in denen gefährliche Spannungen an den Ein-/Ausgängen des Gerätes angeschlossen sind, ist auf genügend Abstand bzw. Isolation von Leitungen, Anschlussklemmen und Gehäusen zur Umgebung (inkl. Nebengeräten) zu achten, um den Schutz vor elektrischem Schlag zu gewährleisten.</li> <li>Das Gerät muss von einer SELV-Quelle versorgt werden, gemäß der Niederspannungsrichtlinie 2014/35/EU und 2014/30/EU.</li> </ul>
VORSICHT	
	Das Gerät erwärmt sich während des Betriebs. Lassen Sie das Gerät abkühlen oder tragen Sie Schutzhandschuhe, wenn Sie Arbeiten ausführen.

en Safety notices	
DANGER	
	For safe installation and safe operation the following must be observed: <ul style="list-style-type: none"> <li>The equipment may be installed only by qualified experts.</li> <li>Until the device is installed, do not connect hazardous voltages to the device.</li> <li>The device may only be operated in an environment with pollution degree 2 or lower acc. to IEC 60664-1.</li> <li>In applications where hazardous voltage is connected to in-/outputs of the device, sufficient spacing or isolation from wires, terminals and enclosure to surroundings (incl. neighbouring devices), must be ensured to maintain protection against electric shock.</li> <li>The device must be supplied by a SELV source as defined in the Low Voltage Directive 2014/35/EU and 2014/30/EU.</li> </ul>
CAUTION	
	The device heats up during operation. Allow the unit to cool down or use protection gloves when carrying out any work.

fr Consignes de sécurité	
DANGER	
	Afin que l'installation et le fonctionnement de l'appareil soient sécurisés, tenir compte de ce qui suit : <ul style="list-style-type: none"> <li>L'appareil doit être monté exclusivement par un personnel qualifié.</li> <li>Avant de terminer le montage fixe, n'appliquer aucune tension dangereuse sur l'appareil.</li> <li>L'appareil ne doit fonctionner que dans un environnement présentant un degré de pollution de niveau 2 au maximum selon IEC/EN 60664-1.</li> <li>Dans les applications pour lesquelles des tensions dangereuses sont appliquées aux entrées/sorties de l'appareil, il faut veiller à garder une distance ou une isolation suffisante entre les câbles, bornes de connexion et boîtier par rapport à l'environnement (appareils voisins compris) afin de garantir la protection contre les chocs électriques.</li> <li>L'appareil doit être alimenté par une source SELV telle que définie dans la directive basse tension 2014/35/EU et 2014/30/EU.</li> </ul>
ATTENTION	
	L'appareil chauffe pendant le fonctionnement. Laissez l'appareil refroidir ou portez des gants de protection lorsque vous réalisez des travaux.

it Indicazioni di sicurezza	
PERICOLO	
	Per un'installazione e un esercizio sicuri dell'apparecchio occorre attenersi a quanto segue: <ul style="list-style-type: none"> <li>Il dispositivo può essere montato solo da personale tecnico qualificato.</li> <li>Non dare tensione elettrica pericolosa all'apparecchio prima della conclusione dell'installazione fissa.</li> <li>Il dispositivo può essere utilizzato solo in un ambiente che non supera una gravità di inquinamento 2 secondo la norma IEC/EN 60664-1.</li> <li>Per le applicazioni in cui vengono collegate tensioni pericolose agli ingressi/alle uscite dell'apparecchio, occorre mantenere una distanza di assicurare un isolamento sufficienti in relazione ai cavi, ai morsetti di collegamento e alle custodie rispetto all'ambiente circostante (compresi gli apparecchi accessori), al fine di garantire la protezione dalle scosse elettriche.</li> <li>Il dispositivo deve essere alimentato da una sorgente SELV come definito nella direttiva sulla bassa tensione 2014/35/EU e 2014/30/EU.</li> </ul>
ATTENZIONE	
	Il dispositivo si surriscalda durante il funzionamento. Lasciare raffreddare il dispositivo oppure indossare guanti protettivi durante l'esecuzione dei lavori.

es Indicaciones de seguridad	
PELIGRO	
	Para una instalación y funcionamiento seguros del equipo debe tener presente lo siguiente: <ul style="list-style-type: none"> <li>El dispositivo debe ser instalado exclusivamente por personal cualificado.</li> <li>Antes de finalizar el montaje fijo, el aparato no debe exponerse a tensiones peligrosas.</li> <li>El dispositivo debe utilizarse únicamente en un ambiente que no supere el grado de contaminación 2 según la norma IEC/EN 60664-1.</li> <li>En aplicaciones en las que hay tensiones peligrosas conectadas a las entradas/salidas del aparato, debe procurarse una distancia o aislamiento suficiente entre cables, bornes de conexión y carcasas y el entorno (incluidos aparatos secundarios) para asegurar la protección frente a posibles electrocuciones.</li> <li>El dispositivo debe ser alimentado por una fuente SELV tal y como se define en la Directiva de Baja Tensión 2014/35/EU y 2014/30/EU.</li> </ul>
ATENCIÓN	
	El dispositivo se calienta durante su funcionamiento. Deje que el dispositivo se enfríe o utilice guantes protectores cuando realice trabajos.

zh 安全规程	
危险	
	为保证安装和操作安全, 请务必遵守下列规程: <ul style="list-style-type: none"> <li>只允许有资质的专业人员安装设备。</li> <li>在装置安装妥当前, 切勿将危险电压接通至装置。</li> <li>只允许在依据 IEC/EN 60664-1 有不超过 2 级污染等级的环境中运行设备。</li> <li>在应用中, 装置的输入/输出如果要接入危险电压, 必须保证导线、端子和外壳与四周 (包括相邻的装置) 之间有充分的空间间隔或隔离, 以确保防触电保护有效。</li> <li>设备必须由低电压指令 2014/35/EU 和 2014/30/EU 中定义的 SELV 电源供电。</li> </ul>
注意	
	设备在运行期间会升温。使设备冷却, 或者在执行作业时佩戴防护手套。

- de Bedienungsanleitung Gigabit Ethernet PoE++ Injector
- en Operating instructions Gigabit Ethernet PoE++ Injector

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IE-INJ-EL01-1GTPoE++ 3174750000

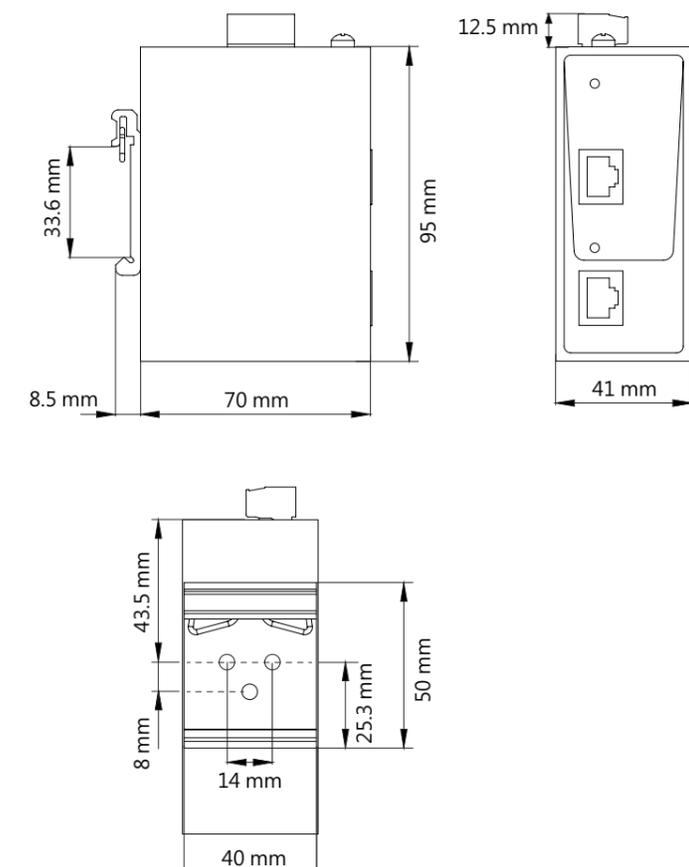
Zulassungen / Approvals / Agréments / Omologazioni / Homologaciones / 认证

c UL us	Normen / Standards / Normes / Norme / Normas / 适用标准 UL 61010-1 UL 61010-2-201
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Technische Daten / Technical Specifications

de	en	fr	it	es	zh	IE-INJ-EL01-1GTPoE++ 3174750000
<b>Elektrische Daten</b>	<b>Electrical data</b>	<b>Caractéristiques électriques</b>	<b>Dati elettrici</b>	<b>Datos eléctricos</b>	<b>电气数据</b>	
Eingangsspannung	Input voltage	Tension d'entrée	Tensione di ingresso	Tensión de entrada	输入电压	12 / 24 / 48 V DC
Betriebsspannung	Operating voltage	Tension de fonctionnement	Tensione d'esercizio	Tensión de servicio	工作电压	12 ... 57 V DC
Max. Leistungsaufnahme	Max. power consumption	Consommation de puissance max.	Potenza assorbita massima	Consumo de potencia máx.	最大功率消耗	2.54 A at 12 V DC = 30.48 W 3.82 A at 24 V DC = 91.68 W 1.90 A at 48 V DC = 91.20 W
Überlastschutz vorhanden	Overload current protection present	Protection contre les surcharges disponible	Protezione contro il sovraccarico presente	Protección contra sobrecarga disponible	有过载保护	✓
Verpolungsschutz vorhanden	Reverse polarity protection present	Protection contre les inversions de polarité disponible	Protezione contro l'inversione di polarità presente	Protección contra polarización inversa disponible	有反极性保护	✓
PoE-Leistungsbudget	PoE power budget	Budget de puissance PoE	Budget di potenza PoE	Presupuesto de potencia PoE	PoE 功率预算	30 W at 12 ... 23.9 V DC input 90 W at 24 ... 57 V DC input
<b>Umgebungsbedingungen</b>	<b>Environmental conditions</b>	<b>Conditions ambiantes</b>	<b>Condizioni ambientali</b>	<b>Condiciones del entorno</b>	<b>环境条件</b>	
Betriebstemperatur	Operating temperature	Température de fonctionnement	Temperatura d'esercizio	Temperatura de servicio	工作温度	-40 °C ... 75 °C
Lagertemperatur	Storage temperature	Température de stockage	Temperatura di magazzino	Temperatura de almacenamiento	存储温度	-40 °C ... 85 °C
Feuchtigkeit	Humidity	Humidité	Umidità	Humedad	湿度	5% ... 95%, no condensation
Max. Einsatzhöhe ohne Derating	Max. altitude without derating	Hauteur d'utilisation max. sans déclassement	Altezza di impiego massima senza derating	Altura máx. de funcionamiento sin derating	无降额的最大使用高度	2000 m
<b>Allgemeine Daten</b>	<b>General data</b>	<b>Données générales</b>	<b>Dati generali</b>	<b>Datos generales</b>	<b>常规数据</b>	
Höhe x Breite x Tiefe	Height x Width x Depth	Hauteur x largeur x profondeur	Altezza x Larghezza x Profondità	Altura x anchura x profundidad	高度 x 宽度 x 深度	95 x 41 x 70 mm
Gewicht	Weight	Poids	Peso	Peso	重量	346 g
Verschmutzungsgrad	Pollution degree	Degré de pollution	Livello di inquinamento	Grado de polución	污染等级	2
Schutzart	Protection class	Degré de protection	Classe di protezione	Tipo de protección	防护等级	IP30
<b>Anschlussdaten</b>	<b>Connection data</b>	<b>Données de connexion</b>	<b>Dati di collegamento</b>	<b>Datos de conexión</b>	<b>联接数据</b>	
Anzahl Anschlussstecker	Number of terminal blocks	Nombre de prises de raccordement	Numero di spine di collegamento	Número de clavijas de conexión	连接插头数量	1
Leiterquerschnitt	Wire cross-section	Diamètre du câble	Sezione del conduttore	Sección del conductor	导体横截面	0.25 ... 2.5 mm² (AWG 14 ... AWG 24)
Abisolierlänge	Insulation stripping length	Longueur de dénudage	Lunghezza di spellatura	Longitud de desaislado	剥皮长度	7 ... 8 mm
Schnittstellen	Interfaces	Interfaces	Interfacce	Interfaces	接口	1 x RJ45 port (10/100/1000Base-T(X), auto negotiation, full-/half-duplex mode, Auto MDI/MDI-X) 1 x RJ45 PoE++ port (10/100/1000Base-T(X) PoE PSE (Power Source Equipment), auto negotiation, full-/half-duplex mode, Auto MDI/MDI-X)
PoE-Pinbelegung	PoE pinout	Brochage PoE	Assegnazione dei pin PoE	Asignación de pines PoE	PoE 针脚分配	Mode A: Pin 1, 2 (V-); Pin 3, 6 (V+); Alternative A; MDI-X Mode B: Pin 4, 5 (V+); Pin 7, 8 (V-); Alternative B; MDI-X
<b>Technologie</b>	<b>Technology</b>	<b>Technologie</b>	<b>Tecnologia</b>	<b>Tecnología</b>	<b>技术</b>	
Ethernet Standard	Ethernet standards	Ethernet standard	Standard Ethernet	Estándar Ethernet	标准以太网	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3ab for 1000Base-T IEEE 802.3af/at/bt for Power over Ethernet
<b>Normen</b>	<b>Standards</b>	<b>Normes</b>	<b>Norme</b>	<b>Normas</b>	<b>标准</b>	
EMV	EMC	CEM	EMC	EMC	电磁兼容性	EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 5 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms
Vibrationsfestigkeit	Vibration resistance	Tenue aux vibrations	Resistenza alle vibrazioni	Resistencia a las vibraciones	抗震动性	IEC 60068-2-6
Schockfestigkeit	Shock resistance	Résistance aux chocs	Resistenza agli urti	Resistencia a choques	抗冲击性	IEC 60068-2-27
Freier Fall	Free fall	Chute libre	Caduta libera	Caída libre	自由落体	IEC 60068-2-31
<b>MTBF</b>	<b>MTBF</b>	<b>MTBF</b>	<b>MTBF</b>	<b>MTBF</b>	<b>MTBF (平均故障间隔时间)</b>	
Zeit	Time	Durée	Tempo	Tiempo	时间	1834973 hrs
Datenbank	Database	Base de données	Banca dati	Base de datos	数据库	Telcordia SR332

Abmessungen / Dimensions



## A Montage und Demontage / Mounting and demounting

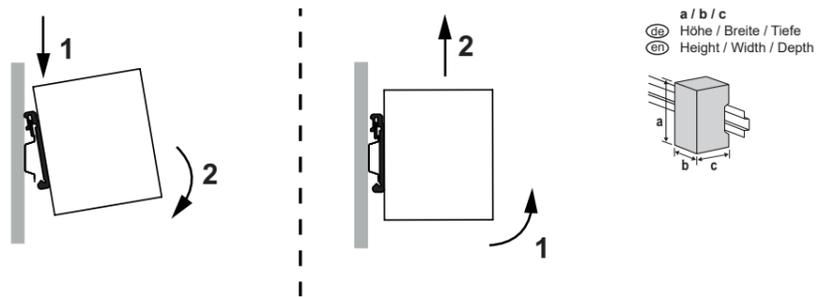
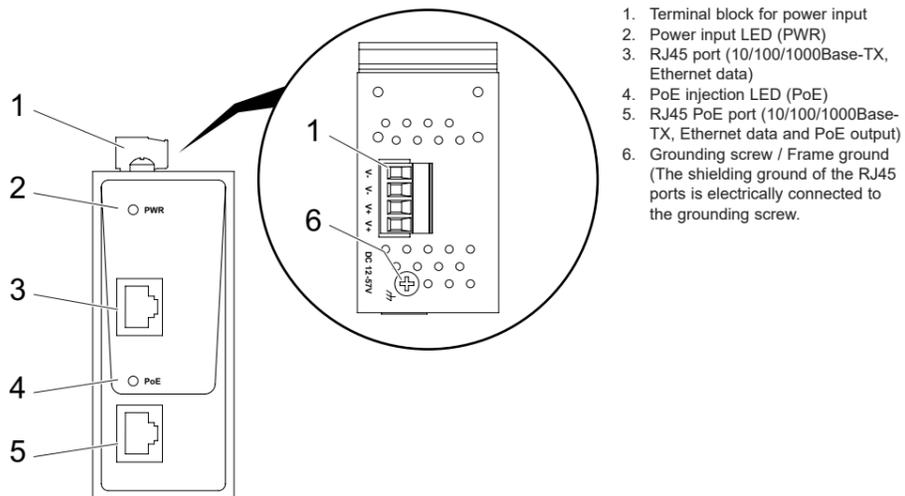


Abb. / Fig. A1

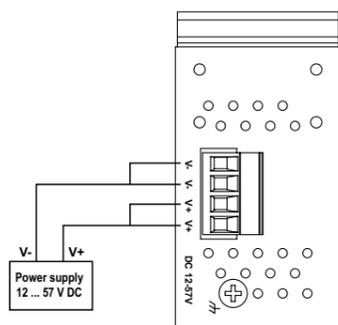
Abb. / Fig. A2

## B Anschlüsse / Connections



1. Terminal block for power input
2. Power input LED (PWR)
3. RJ45 port (10/100/1000Base-TX, Ethernet data)
4. PoE injection LED (PoE)
5. RJ45 PoE port (10/100/1000Base-TX, Ethernet data and PoE output)
6. Grounding screw / Frame ground (The shielding ground of the RJ45 ports is electrically connected to the grounding screw).

## C Anschluss Stromversorgung / Power supply connection



## D LED Anzeige / LED indicator

LED	Colour	Status
Power	green	Power supply OK
PoE	blue	PoE injector active
	off	No PoE device connected

## E Pinbelegung / Pinouts

1000Base T RJ45 Pinouts			10/100Base TX RJ45 Pinouts				
Pin	Ethernet port input (data only)	Ethernet port with P. S. E. output	8-pin RJ45	Pin	Ethernet port input (data only)	Ethernet port with P. S. E. output	8-pin RJ45
1	BI_DA+	BI_DA+ with PoE power output -		1	RD+ (receive)	RD+ with PoE power output -	
2	BI_DA-	BI_DA- with PoE power output -		2	RD- (receive)	RD- with PoE power output -	
3	BI_DB+	BI_DB+ with PoE power output +		3	TD+ (transmit)	TD+ with PoE power output +	
4	BI_DC+	BI_DC+ with PoE power output +		4	Not used	Only PoE power output +	
5	BI_DC-	BI_DC- with PoE power output +		5	Not used	Only PoE power output +	
6	BI_DB-	BI_DB- with PoE power output +		6	TD- (transmit)	TD- with PoE power output +	
7	BI_DD+	BI_DD+ with PoE power output -		7	Not used	Only PoE power output -	
8	BI_DD-	BI_DD- with PoE power output -		8	Not used	Only PoE power output -	

en

## Intended use

The device is intended for setting up communication networks within an industrial environment, it is intended to be used in a secure and restricted access location. The device forwards IEEE802.3 Ethernet standard packets without any encryption or additional security functionality. The devices may only be used within the scope of the specified technical data. Observing the documentation is part of the intended use.

The PoE++ injector is equipped with 1 x RJ45 port and 1 x RJ45 Power over Ethernet port in 10/100/1000Base-T(X) Gigabit Ethernet Speed.

 Assembly and installation may only be carried out by an electrician.

## Cyber security

 You can find the following information on the Weidmüller Industrial Security website:  
– Industrial Product Security Guideline

## Scope of delivery

- Gigabit Ethernet PoE++ injector
- Installation instructions
- Terminal block
- Wall mounting kit
- Protective caps for unused ports

## Mounting the device

### WARNING

-  **Dangerous contact voltage!**  
▶ Carry out mounting and wiring work only when the power supply is disconnected.  
▶ Make sure that the place of installation (switch cabinet etc.) has been disconnected from the power supply.

### NOTICE

**Material damage!**  
The supply voltage may not be greater than the voltage indicated on the product label.  
▶ To prevent the switch from overheating, consider a minimum clearance of 25 mm for the following sides: top, bottom, left, right and front.

▶ Clip the device on to a 35 mm DIN mounting rail, e.g. Weidmüller TS 35 x 7.5 (see Fig. A1).

▶ Alternatively, you can screw the device directly to a wall or mounting plate with the included wall mounting kit.

## Installing the device

### NOTICE

**Material damage!**  
The supply voltage may not be greater than the voltage indicated on the product label.  
▶ Check the voltage of your power source to make sure you are using the correct voltage.

## Wiring the device

When wiring the device observe the following aspects:

- Use separate paths to route wiring for power and devices. If power wiring and device wiring paths must cross, make sure the wires are perpendicular at the intersection point.
- Do not run signal or communications wiring and power wiring in the same wire conduit. To avoid interference, wires with different signal characteristics should be routed separately.
- You can use the type of signal transmitted through a wire to determine which wires should be kept separate. Wiring with similar electrical characteristics can be bundled together.
- Keep input wiring and output wiring separated.

 It is strongly advised to label the wiring for all devices in the system.

## Grounding the device

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screw to the grounding surface prior to connecting devices. The shielding ground of the RJ45 ports is electrically connected to the grounding screw.

 This product must be mounted to a well-grounded mounting surface, such as a metal panel. For functional grounding use at least cable type 1 mm<sup>2</sup> (AWG 18).

## Wiring the power input

The PoE Injector supports a single power supply input via a 4-pin terminal block located on top of the device. For each power input V+ and V- there are two internally connected pins available, see Fig. C.

### NOTICE

#### Material damage!

Before connecting the PoE++ injector to the power input, make sure the power source voltage is stable.  
▶ Use a copper conductor with the cable type 0.25 to 2.5 mm<sup>2</sup> (AWG 14 to 24) and the corresponding pin type cable terminals.  
The wire must be able to withstand at least 105 °C (221 °F). There should only be one individual conductor in a clamping point.

- ▶ Insert the negative/positive DC wires into the V-/V+ terminals.
- ▶ Insert the plastic terminal block connector prongs into the terminal block receptor, which is located on top of the device.

## LED indicators

LEDs indicating the status of power supply and the Ethernet connection are placed on the front of the device, see Fig. B. The LED behaviour is described in Fig. D.

## Pinouts

For pinouts of RJ45 ports, see Fig. E. If PoE sourcing is active the PoE++ injector uses modes A and B simultaneously according to IEEE 802.3bt standard.

## Disassembly

- ▶ Remove all cables and lines.
- ▶ Remove the device from the DIN rail, see Fig. A2.

## Disposal

 Observe the notes for proper disposal of the product. You can find the notes here:  
[www.weidmueller.com/disposal](http://www.weidmueller.com/disposal).

