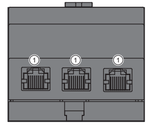
SIEMENS

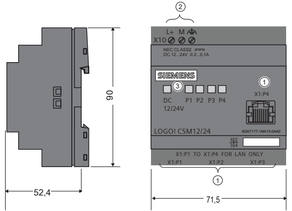
LOGO!

Installation, Connection, Technical specifications

CSM 12/24 Order number: 6GK7177-1MA10-0AA0 Release 02/2013

A5E03733190-AF Product information





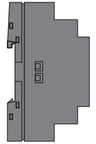
① RJ-45 jacks for connections via Ethernet (10/100 Mbps)

② Three screw terminals:
L+ 24 V DC
M Ground
Noiseles earth

③ LED for the power supply (12/24 VDC) and LEDs for the Ethernet communication status (P1 - P4)

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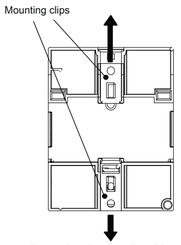
CAUTION
Protection of the external 24 VDC power supply:
The coupling in of strong electromagnetic pulses onto the power supply cables is possible. This can be caused, for example by lightning strikes or switching of higher loads.
The connector of the external 24 VDC power supply is not protected from strong electromagnetic pulses. To protect it, an external overvoltage protection module is necessary. A suitable device is, for example, the Dehn Blitzductor BVT AD 24V type no. 918 402 or comparable protective element.
Manufacturer:
DEHN + SÖHNE GmbH + Co. KG, Hans-Dehn-Str. 1, PO box 1640, D-92306 Neumarkt



Status of LEDs

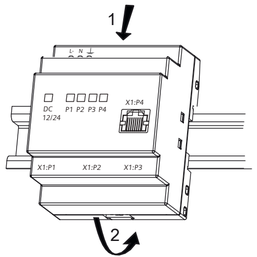
LED	Status	Meaning
DC 12/24	Off	Power is not connected or the connected power is too low.
DC 12/24	On	Power is connected.
P1 - P4	Off	No connection via Ethernet (link down).
P1 - P4	On	The connection via Ethernet is established (link up).
P1 - P4	Flashing	LOGO! receives / sends data via Ethernet.

Wall mounting



Prior to wall-mounting, the mounting slides on the back of the device are pushed open.

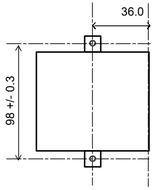
DIN rail mounting



1. Fit the LOGO! onto the DIN rail.
2. Press down the lower part until the device locks in place. The mounting slide on the back must snap into place.

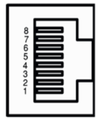
All dimensions in mm

Hole pattern for wall mounting



○ Hole for screw Ø 4 mm
Tightening torque 0.8 ... 1.2 Nm

RJ-45 jacks with MDI-X assignment



Pin 8 - n. c.
Pin 7 - n. c.
Pin 6 - TD -
Pin 5 - n. c.
Pin 4 - n. c.
Pin 3 - TD +
Pin 2 - RD -
Pin 1 - RD +

Technical specifications

Ethernet interface	
Communications connector	4 x RJ-45 jacks with MDI-X assignment 10/100 Mbps (half / full duplex), autopolarity, autonegotiation
Network cable	A standard Ethernet cable can be connected to the Ethernet interface. However, to minimize electromagnetic interference, Siemens recommends a shielded Ethernet cable with a twisted pair (category 5) with a shielded RJ-45 connector at both ends
Largest data packet	1518 byte
Smallest data packet	64 byte
Delay resulting from latency	When a frame passes through the CSM 12/24, it is delayed by the store and forward function of the switch: - with a 64 byte frame length by approx. 8 µs (at 100 Mbps). - with a 1518 byte frame length by approx. 125 µs (at 100 Mbps).
Topology	Star and bus topology Note that the direct connection of two ports on the switch or accidental connection over several switches causes an illegal loop. Such a loop can lead to network overload and network failures.
Insulation of the ports	All ports adhere to 1.5 kV insulation voltage: - to shield - between the ports.
Learnable MAC addresses	1024
Aging Time	300 seconds
Electrical specification	
Input voltage (permitted range)	DC 12 ... 24 V (10.2 ... 30.2 V)
Current consumption (I)	- DC 12 V: 0.2 A - DC 24 V: 0.1 A
Effective power loss	1.5 W
Connection	Per terminal for L+ and M Cable cross section: 1 x 2.5 mm² or 2 x 1.5 mm² Tightening torque 0.57 Nm (5 lb in) Use 75 °C conductors only. Use copper conductors only.
Functional grounding	Functional grounding can be established by connecting a cable from terminal 3, for example to the DIN rail. Such a cable should be kept as short as possible. Grounding is, however, not necessary for interference-free operation.

Technical specifications

Further technical specifications	
Operating temperature	0 … 55°C
Transport/storage temperature	- 40°C … +70°C
Relative humidity during operation	< 90% (no condensation)
Dimensions (W x H x D) in mm	72 (4 TE) x 90 x 55 mm
Net weight	140 g
Installation	35 mm DIN rail (DIN EN 60715 TH35) or wall mounting
Degree of protection	IP 20
Protection class	III

Approvals

You will find the currently valid approvals on the type plate.

cULus	- UL 508 Listed - CSA C22.2 Number 142
C-Tick	AS/NZS 2064 Class A
cULus Haz.Loc.	You can use the device in the following hazardous locations: IND. CONT. EQ., E223122, UL 1604, UL 2279-15 UL 60079-0, 6th Edition, UL 60079-15, 4th Edition CSA C22.2 No. 60079-15, 1st Edition – Issue 2012/01/01 CSA C22.2 No. 60079-0, 1st Edition – Issue 2007/03/01
FM	FM3600 and 3611: CL. I, Div. 2, Group A, B, C, D, T4 CL. I, Zone 2, Group IIC, T4, Ta = 0 ... +55°C
ATEX	ATEX 95 Zone 2: II 3 G / Ex nA IIC T4 Gc DEMKO 13 ATEX 1212135X - EN 60079-0: 2012 - EN 60079-15: 2010

General notices on use in hazardous areas according to ATEX

The CSM12/24 must be mounted in an enclosure with a minimum ingress protection rating of at least IP54 that encloses all current carrying components including wiring terminals. The enclosure must be ATEX-certified and used in an environment of not more than pollution degree 2.

All devices covered under an ATEX certificate must be used with an ATEX-certified power supply that is evaluated to the requirements of EN 60079-0:2012 and EN 60079-15:2010.

Provision shall be made to prevent the rated voltage being exceeded by the transient disturbances of more than 140%.

Installation

For use in Pollution Degree 2 Environment

Prior to installation, connecting up and commissioning, read the relevant sections in the LOGO! manual:
http://support.automation.siemens.com/WW/view/en/50074616
Entry ID: 50074616

When installing and connecting up, keep to the procedures described in the LOGO! manual.

To fulfill the requirements according radiated emission EN 55022 Class B, the shield of all connected LAN cables must be grounded.

CE

The product meets the requirements and aims of the following EC directives:

EU Directive 2004/108/EEC "Electromagnetic Compatibility" (EMC Directive)
- Emission: EN 55022 Class B: 2010
- Immunity: EN 61000-6-2: 2005

The EC Declaration of Conformity is available for all responsible authorities at:

Siemens AG
I IA SC CI
Oestl. Rheinbrueckenstr. 50
DE-76187 Karlsruhe
Germany

You will find the EC Declaration of Conformity for this product on the Internet at the following address:

http://support.automation.siemens.com/WW/view/en/10805878
→ Tab "Entry List"
Filter settings: Entry type: "Certificates"
Certificate Type: "Declaration of Conformity"
Search items(s): <name of the module>

Sources of information and other documentation

The "SIMATIC NET Industrial Ethernet Network Manual" contains detailed information on the network structure, maximum cable lengths, cabling technology etc.

http://support.automation.siemens.com/WW/view/en/27069465
Entry ID: 27069465

You will find additional information on the Siemens LOGO! Web page:

http://www.siemens.com/logo

Important notes

Notice
Always ensure that the wiring of your LOGO! is compliant with current rules and standards. Also, conform with all national and regional regulations when you install and operate the devices. For information on standards and regulations that apply to your specific case, contact your local authorities.

Warning
Modules of a LOGO! are open equipment. This means that you must install LOGO! only in an enclosure or cabinet. You will find more detailed information in the LOGO! manual.

Warning
Safety extra low voltage
The equipment is designed for operation with Safety Extra-Low Voltage (SELV) by a Limited Power Source (LPS). This means that only SELV / LPS (Limited Power Source) complying with IEC 60950-1 / EN 60950-1 / VDE 0805-1 must be connected to the power supply terminals. The power supply unit for the equipment power supply must comply with NEC Class 2, as described by the National Electrical Code (r) (ANSI / NFPA 70).

Notices regarding use in hazardous areas

Warning - Explosion hazard
Risk of explosion when connecting or disconnecting the device
Do not connect or disconnect equipment when a flammable or combustible atmosphere is present.

Warning - Explosion hazard
Replacing components
Replacing components may impair suitability for class I, division 2 or zone 2.

Warning
Requirements for the cabinet/enclosure
When used in hazardous areas corresponding to Class I, Division 2 or Class I, Zone 2, the device must be installed in a cabinet or a suitable enclosure.

Notices for use in hazardous areas according to ATEX

Warning
Requirements for the cabinet/enclosure
To comply with EU Directive 94/9 (ATEX95), this enclosure must meet the requirements of at least IP54 in compliance with EN 60529.

Warning
Cables suitable for temperatures in excess of 70°C
If the cable or conduit entry point exceeds 70°C or the branching point of conductors exceeds 80 °C, special precautions must be taken.
If the device is operated at ambient temperatures > 50°C, the permitted temperature range of the selected cable must be suitable for the temperatures actually measured.

Warning
Protection against transient voltage surges
Take measures to prevent the rated voltage from being exceeded by more than 40% by transient voltage surges. This condition is met if you operate the devices only with SELV (Safety Extra-Low Voltage)

Wichtige Hinweise

Hinweis
Stellen Sie sicher, dass Sie bei der Verdrahtung Ihrer LOGO! alle geltenden und verbindlichen Richtlinien und Normen befolgen. Beachten Sie bei Installation und Betrieb der Geräte die entsprechenden nationalen und regionalen Vorschriften. Erfragen Sie bei den Behörden vor Ort die Normen und Vorschriften, die für Ihren speziellen Fall zu befolgen sind.

Warnung
Baugruppen einer LOGO! sind offene Betriebsmittel. Das heißt, Sie dürfen LOGO! nur in Gehäuse oder Schränke einbauen.
Weitere Informationen finden Sie im Handbuch zu LOGO!

Warnung
Sicherheitskleinspannung
Das Gerät ist für den Betrieb mit einer direkt anschließbaren Sicherheitskleinspannung (Safety Extra Low Voltage, SELV) durch eine Spannungsversorgung mit begrenzter Leistung (Limited Power Source, LPS) ausgelegt.
Deshalb dürfen nur Sicherheitskleinspannungen (SELV) mit begrenzter Leistung (Limited Power Source, LPS) nach IEC 60950-1 / EN 60950-1 / VDE 0805-1 mit den Versorgungsanschlüssen verbunden werden oder das Netzteil für die Versorgung des Geräts muss NEC Class 2 gemäß National Electrical Code (r) (ANSI / NFPA 70) entsprechen.

Hinweise für den Einsatz im Ex-Bereich

Warnung - Explosionsgefahr

Explosionsgefahr beim Anschließen oder Abklemmen des Geräts
In einer leicht entzündlichen oder brennbaren Umgebung dürfen keine Leitungen an das Gerät angeschlossen oder vom Gerät getrennt werden.

Warnung - Explosionsgefahr

Austausch von Komponenten
Der Austausch von Komponenten kann die Eignung für Class I, Division 2 oder Zone 2 beeinträchtigen.

Warnung
Anforderungen an den Schaltschrank
Bei Einsatz in explosionsgefährdeter Umgebung entsprechend Class I, Division 2 oder Class I, Zone 2 muss das Gerät in einen Schaltschrank oder in ein Gehäuse eingebaut werden.

Hinweise für den Einsatz im Ex-Bereich gemäß ATEX

Warnung
Anforderung an den Schaltschrank
Um die EU-Richtlinie 94/9 (ATEX 95) zu erfüllen, muss das Gehäuse mindestens die Anforderungen von IP 54 nach EN 60529 erfüllt.

Warnung
Geeignete Kabel für Temperaturen über 70°C
Wenn am Kabel oder an der Gehäusebuchse Temperaturen über 70°C auftreten oder die Temperatur an den Adernverzweigungsstellen der Leitungen über 80°C liegt, müssen besondere Vorkehrungen getroffen werden. Wenn das Gerät bei Umgebungstemperaturen von > 50 °C betrieben wird, dann muss der zulässige Temperaturbereich des ausgewählten Kabels für die tatsächlich gemessenen Temperaturen geeignet sein.

Warnung
Schutz vor transienter Überspannung
Treffen Sie Maßnahmen, um transiente Überspannungen von mehr als 40% der Nennspannung zu verhindern. Das ist gewährleistet, wenn Sie die Geräte ausschließlich mit SELV (Sicherheitskleinspannung) betreiben.

Remarques importantes

Remarque
Assurez-vous toujours que le câblage de votre LOGO! est conforme aux règles et normes en vigueur. Lors de l'installation et de l'utilisation des appareils, respectez également les réglementations nationales et régionales. Consultez les administrations locales pour savoir quelles normes et réglementations doivent être appliquées dans votre cas particulier.

Attention
Les modules de LOGO! sont des équipements ouverts. Cela signifie que que vous devez installer LOGO! uniquement dans un boîtier ou une armoire.
Vous trouverez davantage d'informations dans le manuel de LOGO!

Attention
Très basse tension de sécurité
L'appareil est conçu pour une exploitation sous très basse tension de sécurité (TBTS) délivrée par une source d'alimentation de puissance limitée (LPS Limited Power Source)
C'est pourquoi on ne doit connecter aux bornes d'alimentation que des très basses tensions de sécurité (TBTS) à puissance limitée (Limited Power Source, LPS) selon CEI 60950-1 / EN 60950-1 / VDE 0805-1 ou n'utiliser qu'un bloc d'alimentation de l'appareil conforme à NEC Class 2 de la norme National Electrical Code (r) (ANSI / NFPA 70).

Consignes pour une mise en oeuvre en atmosphère explosible

Attention - Danger d'explosion
Danger d'explosion lors de la connexion ou déconnexion de l'appareil
Il est interdit, dans un environnement facilement inflammable ou combustible, de connecter des câbles à l'appareil ou de les déconnecter.

Attention - Danger d'explosion
Echange de composants
L'échange de composants peut porter préjudice à la conformité à Class I, Division 2 ou Zone 2.

Attention
Exigences relatives à l'armoire électrique
En cas d'utilisation en atmosphère explosible selon Class I, Division 2 ou Class 1, Zone 2, l'appareil doit être incorporé à une armoire électrique ou à un boîtier

Consignes pour une mise en oeuvre en atmosphère explosible conformément à ATEX

Attention
Exigences relatives à l'armoire électrique
Pour être conforme à la directive de l'UE 94/9 (ATEX 95), le boîtier doit satisfaire pour le moins aux spécifications de IP 54 selon EN 60529.

Attention
Câbles appropriés à une température supérieure à 70°C
Si la température régnant au niveau du câble ou du connecteur du boîtier est supérieure à 70°C ou si la température au niveau de l'embranchement des conducteurs du câble est supérieure à 80°C, des dispositions particulières doivent être prises. Si l'appareil est utilisé à une température > 50 °C, la plage de température admissible du câble sélectionné doit couvrir les températures effectivement mesurées.

Attention
Protection contre les surtensions transitoires
Prenez les mesures qui s'imposent pour empêcher des surtensions transitoires supérieures à 40% de la tension nominale. Cette condition est remplie si vous alimentez les appareils exclusivement en TBTS (très basse tension de sécurité).

Avvertenze importanti

Nota
Accertarsi sempre che il cablaggio di LOGO! sia conforme alle regole e alle norme correnti. Durante l'installazione e l'uso dei dispositivi attenersi alle norme nazionali e regionali vigenti. Per informazioni sulle norme e le prescrizioni applicabili al proprio caso specifico rivolgersi agli enti locali preposti.

Avvertenza
I moduli LOGO! sono dispositivi elettrici aperti e vanno pertanto installati in un case o un armadio. Ulteriori informazioni si trovano nel manuale di LOGO!

Avvertenza
Tensione di sicurezza a basso voltaggio
L'apparecchio è progettato per il funzionamento con una tensione di sicurezza a basso voltaggio collegabile direttamente (Safety Extra Low Voltage, SELV) tramite un'alimentazione con potenza limitata (Limited Power Source, LPS)
Per questo motivo possono essere collegate solo tensioni di sicurezza a basso voltaggio (SELV) con potenza limitata (Limited Power Source, LPS) secondo IEC 60950-1 / EN 60950-1 / VDE 0805-1 con i collegamenti di alimentazione oppure l'alimentatore per l'alimentazione dell'apparecchio deve essere conforme a NEC Class 2 secondo il National Electrical Code (r) (ANSI / NFPA 70).

Avvertenze generali per l'impiego in zone Ex

Avvertenza - Pericolo di esplosione
Pericolo di esplosione durante il collegamento o la rimozione dell'apparecchio
In un ambiente facilmente infiammabile o incendiabile non devono essere collegati o scollegati cavi dall'apparecchio.

Avvertenza - Pericolo di esplosione
Sostituzione di componenti
La sostituzione di componenti può compromettere l'idoneità per Dlass I, Division 2 o Zone 2.

Avvertenza
Requisiti richiesti per il quadro elettrico
In caso di impiego in ambiente a rischio di esplosione secondo la Class I, Division 2 o Class I, Zone 2, l'apparecchio deve essere montato in un quadro elettrico o in una custodia.

Avvertenze per l'impiego nell'area Ex secondo ATEX

Avvertenza
Requisiti richiesti per il quadro elettrico
Per soddisfare la direttiva UE 94/9 (ATEX 95), la custodia deve soddisfare almeno i requisiti richiesti da IP 54 secondo EN 60529.

Avvertenza
Cavo adatto per temperature superiori a 70°C
Se sul cavo o sulla presa della custodia si verificano temperature superiori a 70°C o se la temperatura sui punti di diramazione dei conduttori dei cavi è superiore 80°C, è necessario adottare particolari misure. Se l'apparecchio viene utilizzato a temperature ambiente comprese tra 50°C e 70°C, vanno utilizzati cavi con una temperatura d'esercizio ammessa di almeno 80°C.

Avvertenza
Protezione da sovratensione di transiente
Adottare misure per evitare sovratensioni di transiente superiori al 40% della tensione nominale. Questo viene garantito se l'apparecchio viene utilizzato esclusivamente con SELV (tensione di sicurezza a basso voltaggio).

Indicaciones importantes

Nota
Vigile siempre que el cableado del LOGO! cumpla todas las reglas y normas vigentes. Observe asimismo todos los reglamentos nacionales y regionales durante el montaje y la operación de los dispositivos. Para más información sobre las normas y reglamentos aplicables a su caso especifico, contacte con las autoridades locales.

Advertencia
Los módulos LOGO! son material eléctrico abierto. Por tanto, LOGO! debe montarse en una carcasa o armario eléctrico.
Encontrarán más informaciones en el manual sobre LOGO!

Advertencia
Baja tensión de seguridad
El equipo se ha concebido para trabajar con una baja tensión de seguridad directamente conectable (Safety Extra Low Voltage, SELV), con una alimentación eléctrica de potencia limitada (Limited Power Source, LPS).
Por esta razón se deben conectar sólo bajas tensiones de seguridad (SELV) de potencia limitada (Limited Power Source, LPS) según IEC 60950-1 / EN 60950-1 / VDE 0805-1 a las tomas de alimentación, o bien la fuente de alimentación del equipo tiene que ser conforme a NEC Class 2 según el National Electrical Code (r) (ANSI / NFPA 70).

Indicaciones para el uso en la zona Ex

Advertencia - Riesgo de explosión
Riesgo de explosión al conectar o desconectar el aparato
En una atmósfera fácilmente inflamable o combustible no se deben conectar cables al aparato ni desconectarlos del mismo.

Advertencia - Riesgo de explosión
Sustitución de componentes
La sustitución de componentes puede mermar la aptitud para la Class I, Division 2 o Zone 2.

Advertencia
Requisitos exigidos al armario de distribución
Para el uso en atmósferas potencialmente explosivas según Class I, Division 2 o Class I, Zone 2, el aparato se tiene que montar en un armario de distribución o en una carcasa

Indicaciones para el uso en la zona Ex según ATEX

Advertencia
Requisitos exigidos al armario de distribución
Para cumplir la directiva de la UE 94/9 (ATEX 95), la carcasa ha de cumplir al menos los requisitos de IP 54 según EN 60529.

Advertencia
Cables apropiados para temperaturas superiores a 70°C
Si se presentan temperaturas superiores a 70°C en el cable o en el conector de la carcasa, o si la temperatura en los puntos de bifurcación de los conductores de los cables es superior a 80°C, se han de tomar precauciones especiales. Si el equipo se utiliza a temperaturas ambiente superiores a 50 °C, el margen de temperatura permitido del cable seleccionado debe ser adecuado para las temperaturas medidas realmente.

Advertencia
Protección de sobretensión transitoria
Tome las medidas necesarias para evitar sobretensiones transitorias que superen en más del 40% la tensión nominal. Esto está garantizado si los aparatos trabajan sólo con baja tensión de seguridad (SELV).

重要事项

说明
始终确保 LOGO! 的接线符合当前的规定和标准。 并且确保设备的安装和操作符合国家和地区的所有规定。 请联系本地机构了解您具体情况下应遵守的标准和规章。

警告
LOGO! 模块是开放式设备。 也就是说，LOGO! 必须安装在外罩或者机柜中。
在 LOGO! 使用手册中有详细说明。

警告
安全超低电压
本设备适用于在受限电源（LPS，Limited Power Source）的安全超低电压（SELV，Safety Extra-Low Voltage）下工作。
这表示只能将符合 IEC 60950-1/EN 60950-1/VDE 0805-1 的 SELV/LPS 连接到电源端子上。 用作设备电源的供电单元必须符合美国国家电气法规 (r) (ANSI/NFPA 70) 中所述的 NEC 2 级标准。

有关在危险场所使用的通用注意事项
警告 – 爆炸危险
连接或断开本设备时有爆炸风险
请勿在易燃环境下连接或断开设备。

警告 – 爆炸危险
更换组件
更换组件可能损害在 I 级 2 分区或 2 区的适用性。

警告
机柜/机壳要求
在相当于 I 级 2 分区或 I 级 2 区的危险环境下使用本设备时，必须将其安装在机柜或适当的机壳内。

符合 ATEX 要求的危险场所使用通用注意事项
警告
机柜/机壳要求
为符合 EU 指令 94/9 (ATEX95)，该机壳必须至少满足 EN 60529 规定的 IP54 要求。

警告
温度超过 70 ° C 情况下的适用电缆
如果电缆或导线入口的温度超过 70 ° C，或者导线分支点超过 80 ° C，必须采取专门的预防措施。 如果设备工作在高于 50 ° C 的环境温度下，所选电缆的允许温度范围必须适合于实际测量的温度。

警告
瞬变电压浪涌防护
应采取预防措施，防止瞬变电压浪涌超出额定电压 40% 以上。 仅当通过 SELV（安全超低电压）供电时，才满足该标准。