

CIM 1XX LON module

Installation and operating instructions



CIM 1XX LON module

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Declaration of Conformity

(GB) Declaration of Conformity

We **Grundfos** declare under our sole responsibility that the product **CIM 1XX LON modul**, to which this declaration relates, is in conformity with these Council Directives on the approximation of the laws of the EC Member States:

- Low Voltage Directive (2006/95/EC).
Standard used: EN 61010-1: 2001.
- EMC Directive (2004/108/EC).
Standard used: EN 61326-1: 2006.

(CZ) Prohlášení o shodě

My firma **Grundfos** prohlašujeme na svou plnou odpovědnost, že výrobek **Modul CIM 1XX LON**, na nějž se toto prohlášení vztahuje, je v souladu s ustanoveními směrnice Rady pro sblížení právních předpisů členských států Evropského společenství v oblastech:

- Směrnice pro nízkonapětové aplikace (2006/95/EG).
Použitá norma: EN 61010-1: 2001.
- Směrnice pro elektromagnetickou kompatibilitu (EMC) (2004/108/EG).
Použitá norma: EN 61326-1: 2006.

(D) Konformitätserklärung

Wir, **Grundfos**, erklären in alleiniger Verantwortung, dass das Produkt **CIM 1XX LON Modul**, auf das sich diese Erklärung bezieht, mit den Anforderungen der Richtlinien des Rates zur Angleichung der Rechtsvorschriften der EU-Mitgliedsstaaten übereinstimmt:

- Niederspannungsrichtlinie (2006/95/EG).
Norm, die verwendet wurde: EN 61010-1: 2001.
- EMV-Richtlinie (2004/108/EG).
Norm, die verwendet wurde: EN 61326-1: 2006.

(GR) Δήλωση Συμμόρφωσης

Εμείς, η **Grundfos**, δηλώνουμε με αποκλειστικά δική μας ευθύνη ότι τα προϊόντα **Μονάδα CIM 1XX LON**, στα οποία αναφέρεται η παρούσα δήλωση, συμμορφώνονται με τις εξής Οδηγίες του Συμβουλίου περί προσέγγισης των νομοθεσιών των κρατών μελών της ΕΕ:

- Οδηγία χαμηλής τάσης (2006/95/ΕΚ).
Πρότυπο που χρησιμοποιήθηκε: EN 61010-1: 2001.
- Οδηγία Ηλεκτρομαγνητικής Συμβατότητας (EMC) (2004/108/ΕΚ).
Πρότυπο που χρησιμοποιήθηκε: EN 61326-1: 2006.

(F) Déclaration de Conformité

Nous, **Grundfos**, déclarons sous notre seule responsabilité, que le produit **Module CIM 1XX LON**, auquel se réfère cette déclaration, est conforme aux Directives du Conseil concernant le rapprochement des législations des Etats membres CE relatives aux normes énoncées ci-dessous :

- Directive Basse Tension (2006/95/CE).
Norme utilisée : EN 61010-1: 2001.
- Directive Compatibilité Electromagnétique (2004/108/CE).
Norme utilisée : EN 61326-1: 2006.

(I) Dichiarazione di Conformità

Grundfos dichiara sotto la sua esclusiva responsabilità che il prodotto **Modulo LON CIM 1XX**, al quale si riferisce questa dichiarazione, è conforme alle seguenti direttive del Consiglio riguardanti il ravvicinamento delle legislazioni degli Stati membri CE:

- Direttiva Bassa Tensione (2006/95/CE).
Norma applicata: EN 61010-1: 2001.
- Direttiva EMC (2004/108/CE).
Norma applicata: EN 61326-1: 2006.

(LT) Atitikties deklaracija

Mes, **Grundfos**, su visa atsakomybę pareiškiamo, kad gaminytis **CIM 1XX "LON" modulis**, kuriam skirta ši deklaracija, atitinka šias Tarybos Direktyvas dėl Europos Ekonominės Bendrijos šalių narių įstatymų suderinimo:

- Žemų įtampų direktyva (2006/95/EK).
Taikomas standartas: EN 61010-1: 2001.
- EMS Direktyva (2004/108/EK).
Taikomas standartas: EN 61326-1: 2006.

(BG) Декларация за съответствие

Ние, фирма **Grundfos**, заявяваме с пълна отговорност, че продукта **CIM 1XX LON модул**, за който се отнася настоящата декларация, отговаря на следните указания на Съвета за уеднаквяване на правните разпоредби на държавите членки на ЕС:

- Директива за нисковолтови системи (2006/95/EO).
- Приложен стандарт: EN 61010-1: 2001.
- Директива за електромагнитна съвместимост (2004/108/EO).
Приложен стандарт: EN 61326-1: 2006.

(DK) Overensstemmelseserklæring

Vi **Grundfos** erklærer under ansvar, at produktet **CIM 1XX LON-modul**, som denne erklæring omhandler, er i overensstemmelse med disse af Rådets direktiver om indbyrdes tilnærmelse til EF medlemsstaternes lovgivning:

- Lavspændingsdirektivet (2006/95/EF).
Anvendt standard: EN 61010-1: 2001.
- EMC-direktiv (2004/108/EF).
Anvendt standard: EN 61326-1: 2006.

(EE) Vastavusdeklaratsioon

Meie, **Grundfos**, deklareerime enda ainuvastutusel, et toode **CIM 1XX LON modul**, mille kohta käesolev juhend käib, on vastavuses EÜ Nõukogu direktiividega EMÜ liikmesriikide seaduste ühitamise kohta, mis käsitlevad:

- Madalpinge direktiiv (2006/95/EG).
- Kasutatud standard: EN 61010-1: 2001.
- Elektromagnetilise ühilduvus (EMC direktiiv) (2004/108/EC).
Kasutatud standard: EN 61326-1: 2006.

(E) Declaración de Conformidad

Nosotros **Grundfos** declaramos bajo nuestra propia respons. que el producto **Modulo CIM 1XX LON**, al cual se refiere esta declaración, está conforme con las Directrices del Consejo en la aproximación de las leyes de los Estados Miembros del EM:

- Directiva de Baja Tensión (2006/95/CE).
Norma aplicada: EN 61010-1: 2001.
- Directiva EMC (2004/108/CE).
Norma aplicada: EN 61326-1: 2006.

(HR) Izjava o usklađenosti

Mi, **Grundfos**, izjavljujemo pod vlastitom odgovornošću da je proizvod **CIM 1XX LON modul**, na koji se ova izjava odnosi, u skladu s direktivama ovog Vijeća o usklađivanju zakona država članica EU:

- Direktiva za niski napon (2006/95/EZ).
Korištena norma: EN 61010-1: 2001.
- Direktiva za elektromagnetsku kompatibilnost (2004/108/EZ).
Korištena norma: EN 61326-1: 2006.

(LV) Paziņojums par atbilstību prasībām

Sabiedrība **GRUNDFOS** ar pilnu atbildību dara zināmu, ka produkts **Modulis CIM 1XX LON**, uz kuru attiecas šis paziņojums, atbilst šādam Padomes direktīvu par tuvināšanos EK dalībvalstu likumdošanas normām:

- Zema sprieguma direktīva (2006/95/EK).
Piemērotais standarts: EN 61010-1: 2001.
- Elektromagnētiskās saderības direktīva (2004/108/EK).
Piemērotais standarts: EN 61326-1: 2006.

(H) Megfelelőségi nyilatkozat

Mi, a **Grundfos**, egyvedüli felelősséggel kijelentjük, hogy a **CIM 1XX LON modul** termék, amelyre jelen nyilatkozik vonatkozik, megfelel az Európai Unió tagállamainak jogi irányelveit összehangoló tanács alábbi előírásainak:

- Kisfeszültségű Direktíva (2006/95/EK).
Alkalmazott szabvány: EN 61010-1: 2001.
- Elektromágneses sáderbás direktíva (2004/108/EK).
Alkalmazott szabvány: EN 61326-1: 2006.

(NL) Overeenkomstigheidsverklaring

Wij **Grundfos** verklaren geheel onder eigen verantwoordelijkheid dat het product **CIM 1XX LON module** waarop deze verklaring betrekking heeft, in overeenstemming is met de Richtlijnen van de Raad in zake de onderlinge aanpassing van de wetgeving van de EG lidstaten betreffende:

- Laagspannings Richtlijn (2006/95/EG).
Gebruikte norm: EN 61010-1: 2001.
- EMC Richtlijn (2004/108/EG).
Gebruikte norm: EN 61326-1: 2006.

(PL) Deklaracja zgodności

My **Grundfos**, oświadczamy z pełną odpowiedzialnością, że nasze wyroby **Moduł CIM 1XX LON**, których deklaracja niniejsza dotyczy, są zgodne z następującymi wytycznymi Rady d/s ujednolicenia przepisów prawnych krajów członkowskich WE:

- Dyrektywa Niskonapięciowa (LVD) (2006/95/EG).
Zastosowana norma: EN 61010-1: 2001.
- Dyrektywa EMC (2004/108/EG).
Zastosowana norma: EN 61326-1: 2006.

(RU) Декларация о соответствии

Мы, компания **Grundfos**, со всей ответственностью заявляем, что изделия **Модуль CIM 1XX LON**, к которым относится настоящая декларация, соответствуют следующим Директивам Совета Евросоюза об унификации законодательных предписаний стран-членов ЕС:

- Низковольтное оборудование (2006/95/EC).
Применявшийся стандарт: EN 61010-1: 2001.
- Электромагнитная совместимость (2004/108/EC).
Применявшийся стандарт: EN 61326-1: 2006.

(SK) Prehľadzenie o konformite

My firma **Grundfos** prehlasujeme na svoju plnú zodpovednosť, že výrobok **Modul CIM 1XX LON**, na ktorý sa toto prehľadzenie vzťahuje, je v súlade s ustanovením smernice Rady pre zblíženie právnych predpisov členských štátov Európskeho spoločenstva v oblastiach:

- Smernica pre nízkonapäťové aplikácie (2006/95/EG).
Použitá norma: EN 61010-1: 2001.
- Smernica pre elektromagnetickú kompatibilitu (2004/108/EG).
Použitá norma: EN 61326-1: 2006.

(SER) Deklaracija o konformitetu

Mi, **Grundfos**, izjavljujemo pod vlastitom odgovornošću da je proizvod **CIM 1XX LON modul**, na koji se ova izjava odnosi, u skladu sa direktivama Saveta za usklađivanje zakona država članica EU:

- Direktiva niskog napona (2006/95/EG).
Korišćen standard: EN 61010-1: 2001.
- EMC direktiva (2004/108/EG).
Korišćen standard: EN 61326-1: 2006.

(S) Försäkran om överensstämmelse

Vi, **Grundfos**, försäkrar under ansvar att produkten **CIM 1XX LON-modul**, som omfattas av denna försäkran, är i överensstämmelse med rådets direktiv om inbördes närmande till EU-medlemsstaternas lagstiftning, avseende:

- Lågspanningsdirektivet (2006/95/EC).
Tillämpad standard: EN 61010-1: 2001.
- EMC-direktivet (2004/108/EC).
Tillämpad standard: EN 61326-1: 2006.

(ZH) 产品合格声明书

我们**格兰富**在我们的全权责任下声明，产品**CIM 1XX LON 模块**，即该合格证书所指之产品，符合欧共体使其成员国法律趋于一致的以下欧共理事会指令：

- 低电压指令 (2006/95/EC)。
所用标准：EN 61010-1: 2001。
- 电磁兼容性指令 (2004/108/EC)。
所用标准：EN 61326-1: 2006。

(UA) Свідчення про відповідність вимогам

Компанія **Grundfos** заявляє про свою виключну відповідальність за те, що продукт **Модуль CIM 1XX LON**, на який поширюється дана декларація, відповідає таким рекомендаціям Ради з уніфікації правових норм країн - членів ЕС:

- Низька напруга (2006/95/EC).
Стандарти, що застосовувалися: EN 61010-1: 2001.
- Електромагнітна сумісність (2004/108/EC).
Стандарти, що застосовувалися: EN 61326-1: 2006.

(P) Declaração de Conformidade

A **Grundfos** declara sob sua única responsabilidade que o produto **Módulo CIM 1XX LON**, ao qual diz respeito esta declaração, está em conformidade com as seguintes Directivas do Conselho sobre a aproximação das legislações dos Estados Membros da CE:

- Directiva baixa tensão (2006/95/EC).
Norma utilizada: EN 61010-1: 2001.
- Directiva EMC (compatibilidade electromagnética) (2004/108/EC).
Norma utilizada: EN 61326-1: 2006.

(RO) Declarație de Conformitate

Noi **Grundfos** declarăm pe propria răspundere că produsele **Modul CIM 1XX LON**, la care se referă această declarație, sunt în conformitate cu aceste Directive de Consiliu asupra armonizării legilor Statelor Membre CE:

- Directiva Tensiune Joasă (2006/95/EC).
Standard utilizat: EN 61010-1: 2001.
- Directiva EMC (2004/108/EC).
Standard utilizat: EN 61326-1: 2006.

(SI) Izjava o skladnosti

V **Grundfosu** s polno odgovornostjo izjavljamo, da so naši izdelki **CIM 1XX LON modul**, na katere se ta izjava nanaša, v skladu z naslednjimi direktivami Sveta o približevanju zakonodaje za izenačevanje pravnih predpisov držav članic ES:

- Direktiva o nizki napetosti (2006/95/EG).
Uporabljena norma: EN 61010-1: 2001.
- Direktiva o elektromagnetni združljivosti (EMC) (2004/108/EG).
Uporabljena norma: EN 61326-1: 2006.

(FIN) Vaatimustenmukaisuusvakuutus

Me **Grundfos** vakuutamme omalla vastuullamme, että tuote **CIM 1XX LON-moduuli**, jota tämä vakuutus koskee, on EY:n jäsenvaltioiden lainsäädännön yhdenmukaistamiseen tähtäävien Euroopan neuvoston direktiivien vaatimusten mukainen seuraavasti:

- Pienjännitedirektiivi (2006/95/EY).
Sovellettu standardi: EN 61010-1: 2001.
- EMC-direktiivi (2004/108/EY).
Sovellettu standardi: EN 61326-1: 2006.

(TR) Uygunluk Bildirgesi

Grundfos olarak bu beyannameye konu olan **CIM 1XX LON modülü** ürünlerinin, AB Üyesi Ülkelerin kanunlarını birbirine yaklaştırmaya üzerine Konsey Direktifleriyle uyumlu olduğunun yalnızca bizim sorumluluğumuz altında olduğunu beyan ederiz:

- Düşük Voltaj Yönetmeliği (2006/95/EC).
Kullanılan standart: EN 61010-1: 2001.
- EMC Direktifi (2004/108/EC).
Kullanılan standart: EN 61326-1: 2006.

(JP) 適合宣言

Grundfos は、その責任の下に、**CIM 1XX LON モジュール** 製品が EC 加盟諸国の法規に關連する、以下の評議会指令に適合していることを宣言します：

- 低電圧指令 (2006/95/EC)。
適用規格：EN 61010-1: 2001。
- EMC 指令 (2004/108/EC)。
適用規格：EN 61326-1: 2006。

(KO)

Grundfos LON

EC

CIM 1XX

- (2006/95/EC).
: EN 61010-1: 2001.
- EMC (2004/108/EC).
: EN 61326-1: 2006.

Bjerringbro, 1st February 2010



Jan Strandgaard
Technical Director

English (GB) Installation and operating instructions

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Warning



Prior to installation, read these installation and operating instructions. Installation and operation must comply with local regulations and accepted codes of good practice.

1. Symbols used in this document



Warning

If these safety instructions are not observed, it may result in personal injury!

Caution

If these safety instructions are not observed, it may result in malfunction or damage to the equipment!

Note

Notes or instructions that make the job easier and ensure safe operation.

2. Applications

The CIM 1XX LON module (CIM = Communication Interface Module) enables data transmission between a LON network and a Grundfos product.

The CIM 1XX is fitted in the product to be communicated with or in a CIU 1XX unit (CIU = Communication Interface Unit).

Retrofitting of the CIM 1XX is described in the installation and operating instructions of the Grundfos product.

Further information

For further information about configuration and functionality of the CIM 1XX, see the specific functional profile on the CD-ROM supplied with the product.

2.1 CIM 1XX LON module

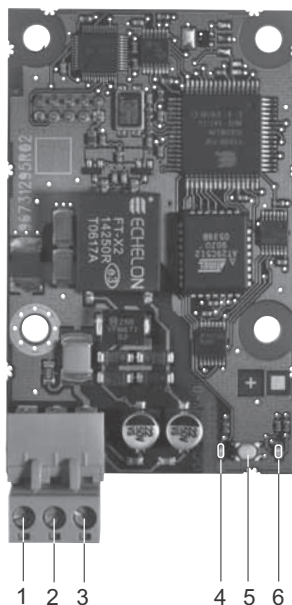


Fig. 1 CIM 1XX LON module

Pos.	Designation	Description
1	A	LON terminal A
2	B	LON terminal B
3	Screen	LON terminal for cable screen
4	LED1	Yellow service LED
5	Pin	Service pin (push-button)
6	LED2	Red/green status LED for internal communication between the CIM 1XX and the Grundfos product

3. Installation



Warning

The CIM 1XX must only be connected to SELV or SELV-E circuits.

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3.1 Connecting the LON

Grundfos recommends to use a cable according to Echelon standards.

Examples of recommended cable types

- Belden 85102
- Belden 8471
- Level IV, 22 AWG
- JY(St) Y 2 x 2 x 0.8
- TIA Category 5.

A LON network must be terminated. The termination depends on the network topology chosen.

Fitting the cable

Procedure:

See fig. 2.

1. Connect the conductors to terminal A (pos. 1).
2. Connect the conductors to terminal B (pos. 2).
3. Connect the twisted screen ends to terminal "Screen" (pos. 3).

The screen must only be connected to the screen terminal of the CIM 1XX LON module. See fig. 2, pos. 3.

Note

The cable screen must never be connected to earth via the earth clamp. See fig. 2, pos. 4.

The stripped part of the cable screen must be as short as possible to reduce the impedance at high frequencies.

Note

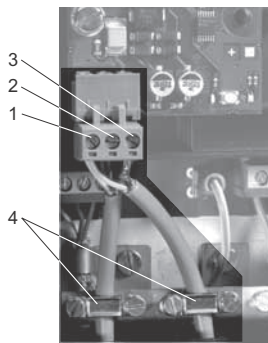


Fig. 2 Connecting the LON

Pos.	Description
1	LON terminal A
2	LON terminal B
3	LON terminal for cable screen
4	Earth clamp

3.2 Registration in a LON network

Grundfos products with a CIM 1XX LON module are registered by a LON network in one of these ways:

- Service pin
- Bar code label.

Service pin

When the service pin push-button of the module is activated, the module will send a unique 48 bit ID code (Neuron ID) which is registered in the LON network.



Fig. 3 Service pin

Bar code label

The Neuron ID on the module or on the enclosed bar code label is scanned and registered in the LON network. The bar code of the Neuron ID is in Code 128 format. The additional bar code label can be attached to the building installation plan.

4. LEDs

The CIM 1XX LON module has two LEDs. See fig. 1.

- Yellow service LED (LED1)
- Red/green status LED (LED2) for internal communication between the CIM 1XX and the Grundfos product.

LED1

The yellow LED on the CIM 1XX functions as a service LED. When the Grundfos product is connected to the power supply, the service LED will flash once and then remain off if the installation has been made correctly. In case of deviations, see section 5. *Fault finding*.

LED2

Status	Description
Off	The CIM 1XX has been switched off.
Flashing red	No internal communication between the CIM 1XX and the Grundfos product.
Permanently red	The CIM 1XX does not support the Grundfos product connected.
Permanently green	Internal communication between the CIM 1XX and the Grundfos product is OK.

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5. Fault finding

Faults in a CIM 1XX LON module can be detected by observing the status of the service LED (LED1) and the LED for internal communication (LED2). See the table below.

CIM 1XX fitted in a Grundfos product

Fault (LED status)	Possible cause	Remedy
1. The service LED (LED1) remains off when the power supply is connected.	a) The CIM 1XX has not been fitted correctly in the Grundfos product.	Fit the CIM 1XX correctly in the Grundfos product.
	b) No power supply to the CIM 1XX.	Check the power supply to the Grundfos product.
	c) The CIM 1XX is defective.	Replace the CIM 1XX.
2. The service LED (LED1) is permanently on.	a) The CIM 1XX is defective.	Replace the CIM 1XX.
3. The service LED (LED1) flashes when the power supply is connected to the CIM 1XX, turns off, turns on again and remains permanently on.	a) The CIM 1XX has no application software (application-less).	Try to download application software via a LON installation tool such as LonMaker.
	b) The CIM 1XX is defective.	Replace the CIM 1XX.
4. The service LED (LED1) flashes every second.	a) The CIM 1XX has not been installed.	Install the CIM 1XX by means of a LON installation tool such as LonMaker.
5. The Grundfos product does not react to changes of settings, and the readout from the LON network is incorrect. The LED for internal communication (LED2) is permanently red.	a) The CIM 1XX does not support the Grundfos product connected.	Contact the nearest Grundfos company.
	b) The LON application may be wrong, for instance CIM 110 software where CIM 100 software is required.	Download correct software via a LON installation tool such as LonMaker.
6. The Grundfos product does not react to changes of settings, and the readout from the LON network is incorrect. The LED for internal communication (LED2) is flashing red.	a) The cable between the CIM 1XX and the Grundfos product is connected incorrectly or damaged.	Connect the cable correctly, or replace the cable.

CIM 1XX fitted in the CIU 1XX

Fault (LED status)	Possible cause	Remedy
1. The service LED (LED1) remains off when the power supply is connected.	a) No power supply to the CIU 1XX.	Check the power supply to the CIU 1XX.
	b) The CIM 1XX is defective.	Replace the CIM 1XX.
2. The service LED (LED1) is permanently on.	a) The CIM 1XX is defective.	Replace the CIM 1XX.
3. The service LED (LED1) flashes when the power supply is connected to the CIM 1XX, turns off, turns on again and remains permanently on.	a) The CIM 1XX has no application software (application-less).	Try to download application software via a LON installation tool such as LonMaker.
	b) The CIM 1XX is defective.	Replace the CIM 1XX.
4. The service LED (LED1) flashes every second.	a) The CIM 1XX has not been installed.	Install the CIM 1XX by means of a LON installation tool such as LonMaker.
5. The Grundfos product does not react to changes of settings, and the readout from the LON network is incorrect. The LED for internal communication (LED2) is permanently red.	a) The CIM 1XX does not support the Grundfos product connected.	Contact the nearest Grundfos company.
	b) The LON application may be wrong, for instance CIM 110 software where CIM 100 software is required.	Download correct software via a LON installation tool such as LonMaker.
6. The Grundfos product does not react to changes of settings, and the readout from the LON network is incorrect. The LED for internal communication (LED2) is flashing red.	a) The cable between the CIM 1XX and the Grundfos product is connected incorrectly or damaged.	Connect the cable correctly, or replace the cable.

Note *Fault finding in a LON network requires a special tool such as Honeywell Excelon (not supplied by Grundfos).*

6. Technical data

Transceiver	FTT 10
Cable	Screened, twisted-pair, according to Echelon standards
Transmission speed	78 kbits/s
Protocol	LonTalk
Supply voltage	5 V ± 5 %
Current consumption	Max. 200 mA
Storage temperature	-25 °C to +70 °C -13 °F to +158 °F

7. Service

7.1 Service documentation

Service documentation is available on www.grundfos.com > International website > WebCAPS > Service.

If you have any questions, please contact the nearest Grundfos company or service workshop.

8. Disposal

This product or parts of it must be disposed of in an environmentally sound way:

1. Use the public or private waste collection service.
2. If this is not possible, contact the nearest Grundfos company or service workshop.

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