

Specification

(Spezifikation)

19,0" Industrial - LCD - Flat Panel Display

(19,0" Industrie - LCD – Flachbildschirm)



LI 1912AU Rev. AA

Customer Address:	Qualification	Sign:	Date:
	Release confirm:		

Content

(Inhaltsverzeichnis)

1. Revision History	2
2. General Discription	3
3. Model version	3
4. Technical Data*	4
5. Signals	5
5.1 VGA Analog Signal Input	5
5.2 DVI-D Signal Input.....	5
5.3 Video Signal Input (Option).....	5
5.4 Touch Screen RS232C serial Interface (Option).....	5
5.5 DC Input (Option)	5
6. Dimensions	6
6.1 LI 1912AU- open Frame	6
6.2 LI 1912AU-Frontplate	7
6.3 LI 1912AU-9HE Rack	8
7. Manufacturer declaration of compliance with standards and regulations	9

1. Revision History

(Änderungshinweis)

Revision	Date	Page	Discription	Seriennummer
Rev. AA	14.12.2007	All	New Release / Erstausgabe	0001

2. General Discription

The LI 1912AU is a 19,0" Color TFT LCD-Monitor for general use with a resolution of 1280 x 1024 pixels and up to 16,7 Mio. colors.

The built in Analog to Digital converter allows the LI 1912AU to be used with VGA compatible graphic boards . The display settings can be controlled via On Screen Display.

Flat housing and low power consumption reveal many new applications which would not be possible with a standard CRT monitor.

Suitable and robust capacitive and resistive Touch Screen for hand and stylus input, or special glas for display protection.

3. Model version

For all open Frame LCD-monitors of the LI 1912AU series, following Naming System is applicable.
Für alle Open Frame Monitore der Serie LI 1912AU gilt das nachfolgende Bezeichnungssystem:

Model / Modell: LI 1912AU

Display resolution / Auflösung 12 => 1280 x 1024 pixel

Display size / Diagonale 19 => 19,0" / 482mm

Version / Ausführung:

- C Open Frame-Version (without front bezel)
- F Standard front bezel
- 9 19"-Front-Bezel (9HE,)

- N No Display protection
- S Protective Glass
- K analog-capacitive Touch-Screen
- R resistive Touch-Screen

- A AC-Input
- D DC-Input

- V VGA input (HD-Sub 15) & DVI D Single Link
- Y VGA input (HD-Sub 15) & DVI D Single Link & Video (SVHS / FBAS)

Following versions are available (please call for other configurations):

Folgende Ausführungen sind lieferbar (weitere auf Anfrage):

Version	Description
LI 1912AU-CNAV / (Y)	Open Frame Version, unprotected, AC-Input, VGA & DVI (& Video Inputs)
LI 1912AU-FSAV / (Y)	Standard Front Bezel, protective glass, AC-Input, VGA & DVI (& Video Inputs)
LI 1912AU-FKAV / (Y)	Standard Front Bezel, kap. Touch Screen, AC-Input, VGA & DVI (& Video Inputs)
LI 1912AU-FRAV / (Y)	Standard Front Bezel, res. Touch Screen, AC-Input, VGA & DVI (& Video Inputs)

4. Technical Data*

(*Technische Daten**)

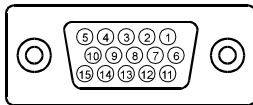
Modul Typ. / <i>Modul Art</i>	Colour Active Dot Matrix TFT Module
Display Size / <i>Displaygröße</i>	19,0" / 482,6 mm
Active Area / <i>Bildgröße</i>	Horizontal 376,32 mm Vertikal 301,05 mm
Resolution / <i>Auflösung</i>	1280 x 1024 (SXGA)
Horizontal Frequency / <i>Horizontal Frequenz</i>	30 - 82 kHz
Vertical Frequency / <i>Vertikal Frequenz</i>	85 Hz max.
Input VGA Signal / <i>Eingangssignal</i>	RGB - Video: Analog 0,7 Vss Seperate Sync., Composite Sync, SOG: TTL pos. / pos. VGA Standard-Input: D-Sub 15pol.
Input DVI Signal	Digital DVI-D single link TMDS
Input Video (Option)	NTSC, PAL, SECAM / SVHS & FBAS
Touch Screen (Option)	capacitive or resistive Touch Screen with serial or USB Interface
Contrast Ratio / <i>Kontrastverhältnis</i>	1300:1 typ.
Backlight / <i>Hintergrundbeleuchtung</i>	4 CCFL, MTBF 50.000 h
Brightness / <i>Helligkeit</i>	300 cd/m ² (typ. without Touch / <i>typ. ohne Touch</i>)
Response Time / <i>Ansprechzeit</i>	T _R / T _F : 15 / 10 mS
Pixel Pitch / <i>Pixel Größe</i>	0,294 (0,098 x 3) x 0,294mm
Viewing Angle / <i>Betrachtungswinkel</i>	Horizontal 89° left, 89° right; typ. Vertikal 89° up, 89° down; typ.
Number of Colours / <i>Farbtiefe</i>	16,7 Mio (8 bits per RGB sub pixel)
Power Input / <i>Spannungseingang</i>	AC 100 – 240 V 50 - 60 Hz; or DC 24V (18V to 32V)
Consumtion / <i>Stromverbrauch</i>	max. 45W
Chassis Dimensions / <i>Chassis-Abmessungen</i>	441 x 365 x 67 mm (W x H x D)
Weight / <i>Gewicht</i>	Approx. 7,5 kg With Front bezel
Vibration tested / <i>gestestet</i>	MIL-STD-810E Method 514.4 Category I (1Grms, 10-500Hz) each Direction / <i>jede Richtung X, Y, Z</i>
Shock tested / <i>Schock getestet</i>	MIL-STD-810E Method 516.4 40Grms each Direction / <i>jede Richtung X, Y, Z</i>
Temperature Range / <i>Temperaturbereich</i>	Operating / <i>Betrieb</i> 0° to +40° C Storage / <i>Lagerung</i> -20° to + 60° C
Compliance / <i>Richtlinie</i>	RoHS <i>gerecht</i>

* After 30 minutes warm-up time / *nach 30 Minuten Aufwärmzeit*

5. Signals

5.1 VGA Analog Signal Input

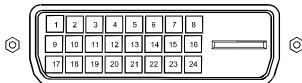
VGA Standard D-SUB 15-pol. HD (female / Buchse)



Pin - #	Signal (Analog)	Pin - #	Signal (Analog)
1	Red	9	–
2	Green	10	Digital Ground
3	Blue	11	–
4	–	12	DDC serial Data
5	Digital Ground	13	Horizontal-Sync.
6	Red-Ground	14	Vertical-Sync.
7	Green-Ground	15	DDC serial Clock
8	Blue-Ground		

5.2 DVI-D Signal Input

24 Pin DVI connector, single link TMDS



5.3 Video Signal Input (Option)

FBAS

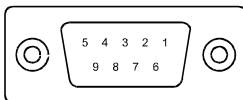
SVHS

Cinch



5.4 Touch Screen RS232C serial Interface (Option)

Standard D-SUB 9-pol. (female / Buchse)



Pin - #	Signal	Pin - #	Signal
1	–	6	–
2	RxD	7	–
3	TxD	8	–
4	–	9	–
5	Ground		

Use 1:1 cable to connect to the PC

5.5 DC Input (Option)

Switchcraft EN3P4M

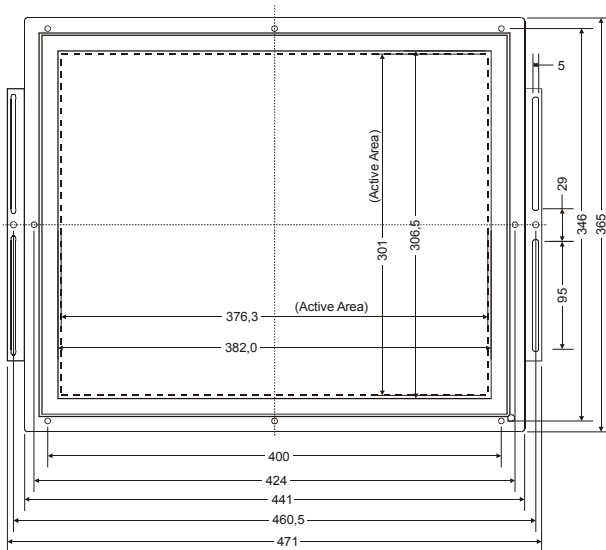
- Pin 1 +V_{in}
- Pin 2 GND
- Pin 3 NC
- Pin 4 NC

6. Dimensions

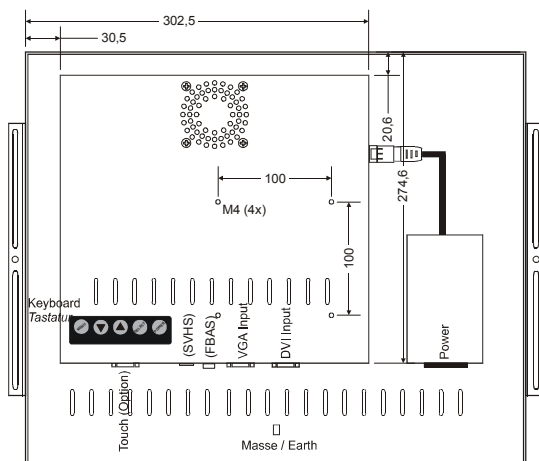
6.1 LI 1912AU- open Frame

(Abmessungen)

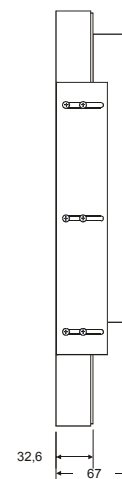
Frontview / Vorderansicht



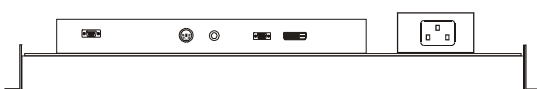
Rearview / Rückansicht



Sideview / Seitenansicht



Bottomview / Unteransicht

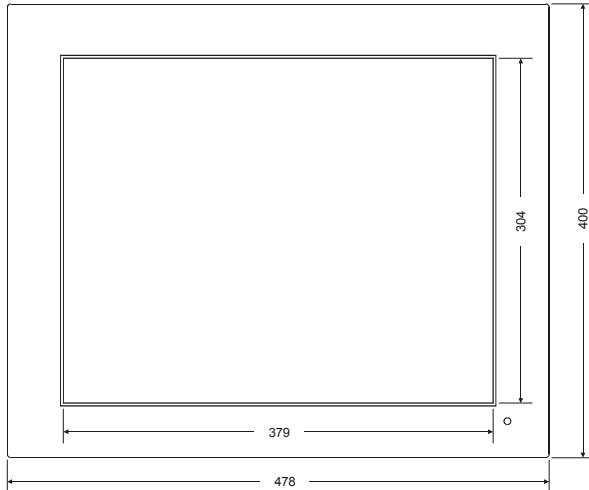


Dimensions in mm
Abmessungen in mm

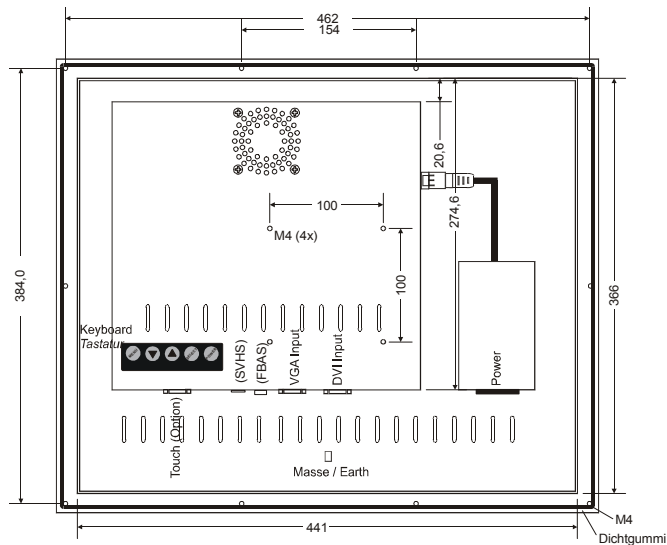
Tolerance/ Toleranz
Nach DIN ISO 2768
mittel

6.2 LI 1912AU-Frontplate

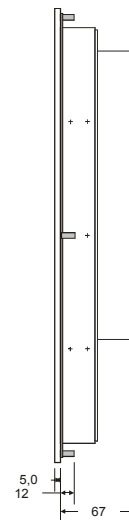
Frontview / Vorderansicht



Rearview / Rückansicht



Sideview / Seitenansicht



Bottomview / Unteransicht

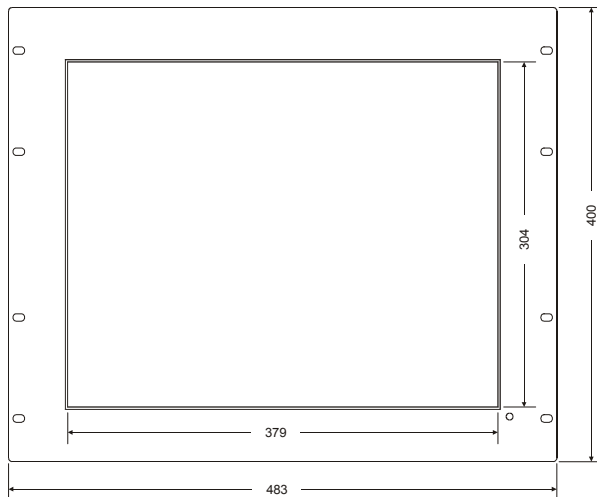


Dimensions in mm
Abmessungen in mm

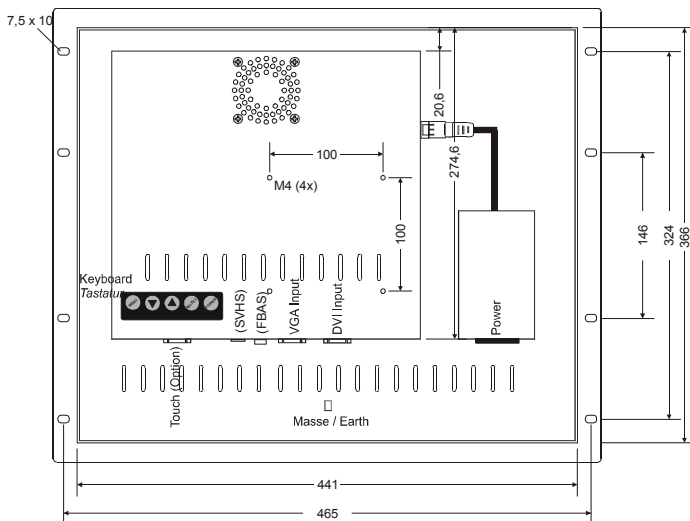
Tolerance/ Toleranz
Nach DIN ISO 2768
mittel

6.3 LI 1912AU-9HE Rack

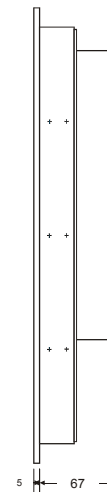
Frontview / Vorderansicht



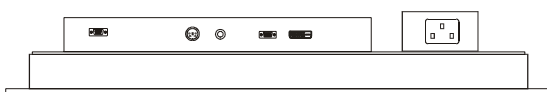
Rearview / Rückansicht



Sideview / Seitenansicht



Bottomview / Unteransicht



Dimensions in mm
Abmessungen in mm

Tolerance/ Toleranz
Nach DIN ISO 2768
mittel

7. Manufacturer declaration of compliance with standards and regulations

Herstellereklärung zur Einhaltung von Normen und Richtlinien

Certificate that the industrial monitors **LI 1912AU** is developed, manufactured and tested according to the following guidelines, which are fixed by the council of the European Community:

Bescheinigung, daß die Industriemonitore LI 1912AU den folgenden Richtlinien und Normen, die vom Rat der Europäischen Gemeinschaft festgelegt wurden, entwickelt, gefertigt und getestet wurden:

2004/108/EG Electromagnetic Compatibility / Elektromagnetische Verträglichkeit

EMC - Emission (Residential areas)
EMV - Störaussendung (Wohnbereich)

- EN 55022 B Interference Voltage / *Störspannung* (150kHz - 30Mhz)
Interference Radiation / *Störfeldstärke* (30MHz - 1Ghz)

EMC - Immunity (Industrial areas)
EMV-Störfestigkeit (Industriebereich)

- EN 61000-4-2 ESD / *elektrostatische Entladungen*
- EN 61000-4-3 em-Field / *HF-Feld* [80 - 1000Mhz], [900MHz]
- EN 61000-4-4 Burst / *schnelle Transienten*
- EN 61000-4-5 Surge / *energiereiche Transienten*
- EN 61000-4-6 conducted RF-Field / *leitungsgebundenes HF-Feld*
- EN 61000-4-11 Power variations / *Netzschwankung*

EMC-Tests have been carried out using standard cables with cable lengths of up to 2,5 meters. If longer cables are used, additional tests might be necessary to prove compliance with the EMC-directive.

EMV-Tests wurden mit Standardkabeln mit Leitungslängen bis 2,5 Meter durchgeführt. Werden längere Kabel verwendet, dann sind eventuell weitergehende Tests erforderlich um die Konformität mit der EMV-Richtlinie nachweisen zu können.

73/23/EWG (Low voltage directive / Niederspannungsrichtlinie)

EN 60950-1:2001 Electrical safety / *Elektrische Sicherheit*

93/68/EWG (CE marking / CE-Kennzeichnung)

