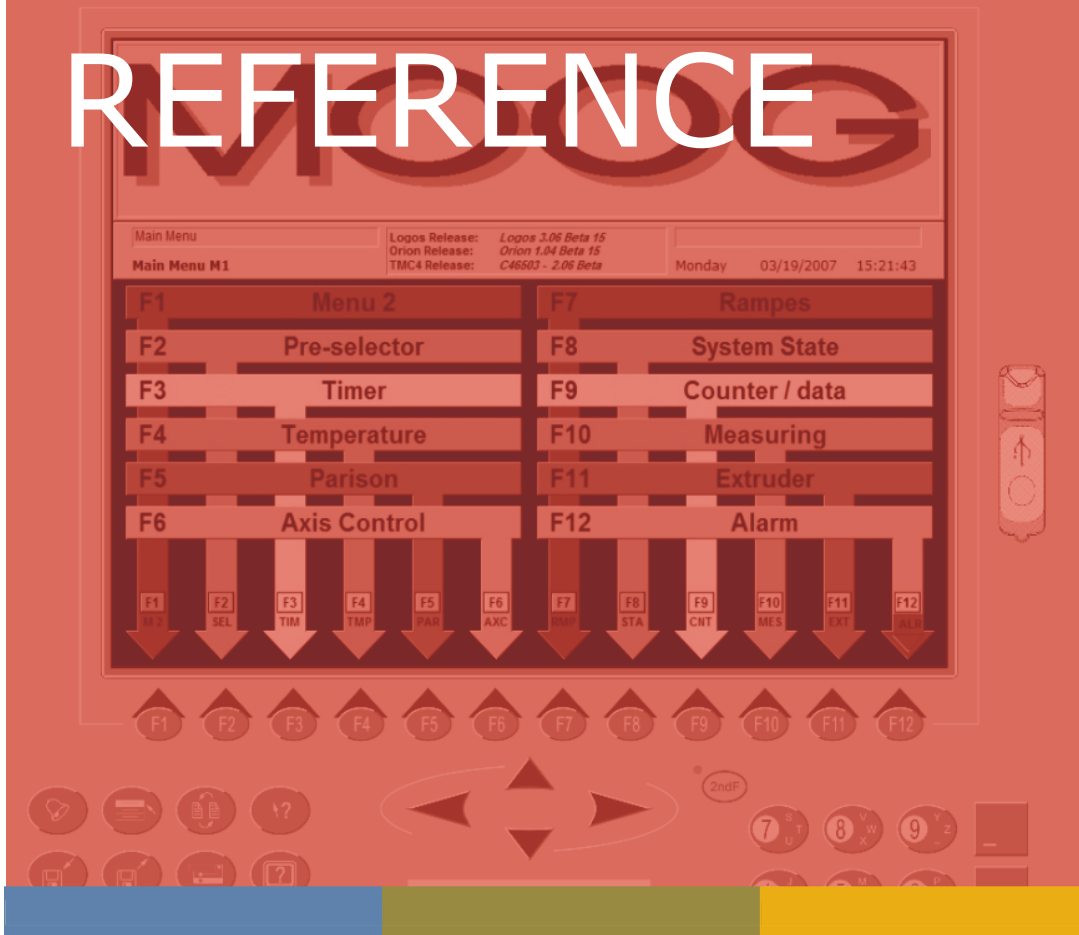


# TERMINALS TECHINICAL REFERENCE



HUMAN MACHINE INTERFACE  
INDUSTRIAL APPLICATION

# OVERVIEW



<b>Section</b>	<b>Page</b>
Overview	2
Terminals Specification	3-4
Technical data	5-17
General Information	18-33
Notes	34-35
General index	36



The Terminals described herein comply with the EMC directives.

## TERMINALS

**IMI220-100A101:** remote terminal equipped with backlight B/W LCD 240x64 pixel (40x8 char.) and 37 keys keyboard, which 16 are programmable function keys; the terminal can display both alphanumeric and graphic maps; communication to PLC is through RS232 serial interface (max 15 m).

**IMI220-101A100:** remote terminal equipped with backlight B/W LCD 240x128 pixel (40x16 char.) and 37 keys keyboard, which 16 are programmable function keys; the terminal can display both alphanumeric and graphic maps; communication to PLC is through RS232 serial interface (max 15 m).

**IMI220-104A001:** local terminal equipped with backlight B/W LCD 640x480 pixel (80x30 char.) and 42 keys keyboard + selector 3 position; 8 keys are programmable functions keys; there are 14 programmable keys with LED; the terminal can display both alphanumeric and graphic maps; communication to PLC is through flat cables (max 3 m).

**IMI220-105A001:** local terminal equipped with backlight TFT color LCD 640x480 pixel (80x30 char.) and 76 keys keyboard, which 16 are programmable functions keys; there are 40 programmable keys with LED; the terminal can display both alphanumeric and graphic maps; communication to PLC is through flat cables (max 3 m).

**IMI220-109A001:** local terminal equipped with backlight B/W LCD 640x480 pixel (80x30 char.) and 76 keys keyboard, which 16 are programmable function keys; 40 programmable keys with LED; the terminal can display both alphanumeric and graphic maps; communication to PLC is through flat cables (max 3 m).

**IMI220-107B107:** terminal PC with display LCD VGA 12" with 1Gb SSD 256Mb Ram with Xp Embedded. CPU 800MHz Fan less + Keyboard.

**IMI220-107B108:** terminal PC with display LCD VGA 12" with 1Gb SSD 256Mb Ram with Xp Embedded. CPU 800MHz Fan less + Keyboard + Touch screen.

**IMI220-123B001:** local graphic color MMI - 12" LCD Touch screen (800x600) - USB driver - LVDS interface.

**IMI220-124A001:** portable MMI - 16x4 B/W - VT100 protocol - RS232 interface.

Moog utilizes its own know-how to design local or remote custom terminals.

---

## TERMINALS

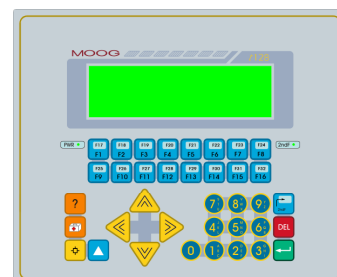
<i>IMI220-100A101:</i>	Remote graphic terminal B&W LCD (240x64) - RS232 - Keyboard
<i>IMI220-101A100:</i>	Remote graphic terminal B&W LCD (240x128) - RS232 - Keyboard
<i>IMI220-109A001:</i>	Local graphic terminal B&W LCD (640x480) - Keyboard
<i>IMI220-104A001:</i>	Local graphic terminal B&W LCD (640x480) - Keyboard
<i>IMI220-105A001:</i>	Local graphic terminal color LCD (640x480) - Keyboard
<i>IMI220-107B107:</i>	PC based MMI 12" - CPU 800MHz - 1Gb SSD - RAM 256Mb - Keyboard - Fun less
<i>IMI220-107B108:</i>	PC based MMI 12" - CPU 800MHz - 1Gb SSD - RAM 256Mb - Keyboard - Fun less - Touch screen
<i>IMI220-123B001:</i>	Local graphic color MMI with touch screen (800x600) - Keyboard - LVDS communication - USB
<i>IMI220-124A001:</i>	Portable MMI - LCD (16x4) B/W - VT100 protocol - RS232 interface

## ACCESSORIES

<i>C46600:</i>	Power connectors for 100A101 + 101A100
<i>C46567:</i>	F-F RS232 cable (5 m)
<i>C46602:</i>	F-F RS232 cable (15 m)
<b>Flat cable for HMI:</b>	
<i>C46570:</i>	IMI109A001 - cable set (2 m)
<i>C46571:</i>	IMI109A001 - cable set (3 m)
<i>C46572:</i>	IMI109A001 - cable set (4.5 m - Max length recommended)
<i>C46574:</i>	IMI109A001 - cable set (3 m - 40 wires flat cable Special customer version)
<i>C46573:</i>	IMI105A001 - cable set (3 m - color local display)
<b>LVDS cable for HMI:</b>	
<i>C46659:</i>	IMI123B001 - LVDS cable set 3 m (CAT 5E)
<i>C46660:</i>	IMI123B001 - LVDS cable set 10 m (CAT 6E)
<i>C46661:</i>	IMI123B001 - LVDS cable set 15 m (CAT 7E)
<b>Others:</b>	
<i>C46657:</i>	UPS for IMI220-107B107/108 (Battery included)

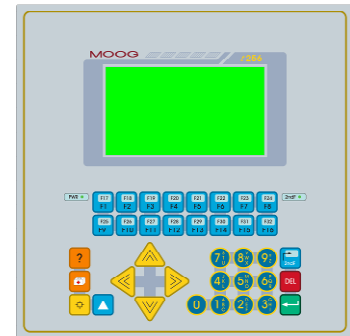
## IMI220-100A101 - Remote graphic terminal B&W LCD (240x64) - RS232 - Keyboard

TECHNICAL CHARACTERISTICS	UNIT	IMI220-100A101
Input voltage	Vac/Vdc	20 / 24
Range	%	± 15
Current consumption	mA	260
Floppy disk drive		no
Immunity vibration		-
EMC environment		-
Environment class	IP	-
<b>Interfaces characteristics</b>		
Serial port		RS232
Baud rate RS232	Bit/s	19200
<b>Display characteristics</b>		
Display type		B/W LCD
Touch screen		no
Backlight		led matrix
Resolution	pixel	240 x 64
Lines x columns		8 x 40
Graphics		no
Font		user programmable
Stand by		user programmable
Led		
- power		green led
- 2ndF		green led
Contrast regulation		yes
Brightness regulation		no
<b>Keyboard characteristics</b>		
Keys		
- total keys		37
- functional keys		16 (32 with 2ndF)
- programmable keys		-
- programmable leds		-
<b>General characteristics</b>		
Alarm Message		user programmable
Language (max)		10
Password protection		6 levels
Fields type		numeric, check, button, histogram, deviation, constant string, text list, alphanumeric, draw, date, tod, dt, time
Programming software		Logos
Connectors		
- power supply		5 pins M, 5.08 mm
- RS232		type D 9 pins M
Cables section power supply		
- material		copper
- field of lock (min/max)	mm <sup>2</sup>	0.08...2.5
- rigid H05(07) V-U	mm <sup>2</sup>	0.5...2.5
- flexible H05(07) V-k	mm <sup>2</sup>	0.5...2.5
- flexible with terminal according to DIN 46228/1	mm <sup>2</sup>	0.5...2.5
- flexible with insulating collar according to DIN 46228/4	mm <sup>2</sup>	0.5...1.5
Cables section RS232	mm <sup>2</sup>	0.14...0.5
Operating temperature	°C	0...55
External dimensions (H x W x D)	mm	198 x 238 x 52
Weight	Kg	1.25



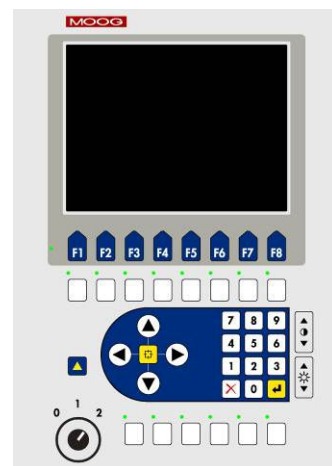
## IMI220-101A100 - Remote graphic terminal B&W LCD (240x128) - RS232 - Keyboard

TECHNICAL CHARACTERISTICS	UNIT	IMI220-101A100
Input voltage	Vac/Vdc	20 / 24
Range	%	± 15
Current consumption	mA	400
Floppy disk drive		no
Immunity vibration		-
EMC environment		-
Environment class	IP	-
<b>Interfaces characteristics</b>		
Serial port		RS232
Baud rate	bit/s	19200
<b>Display characteristics</b>		
Display type		B/W LCD
Touch screen		no
Backlight		led matrix
Resolution	pixel	240 x 128
Lines x columns		16 x 40
Graphics		no
Fonts		user programmable
Stand by		user programmable
Led		
- power		green led
- 2ndF		green led
Contrast regulation		yes
Brightness regulation		no
<b>Keyboard characteristics</b>		
Keys		
- total keys		37
- functional keys		16 (32 with 2ndF)
- programmable keys		-
- programmable leds		-
<b>General characteristics</b>		
Alarm Message		user programmable
Language (max)		10
Password protection		6 levels
Fields type		numeric, check, button, histogram, deviation, constant string, text list, alphanumeric, draw, date, tod, dt, time
Programming software		Logos
Connectors		
- power supply		5 pins M, 5.08 mm
- RS232		type D 9 pins M
Cables section power supply		
- material		copper
- field of lock (min/max)	mm <sup>2</sup>	0.08...2.5
- rigid H05(07) V-U	mm <sup>2</sup>	0.5...2.5
- flexible H05(07) V-k	mm <sup>2</sup>	0.5...2.5
- flexible with terminal according to DIN 46228/1	mm <sup>2</sup>	0.5...2.5
- flexible with insulating collar according to DIN 46228/4	mm <sup>2</sup>	0.5...1.5
Cables section RS232	mm <sup>2</sup>	0.14...0.5
Operating temperature	°C	0...55
External dimensions (H x W x D)	mm	237 x 238 x 52
Weight	Kg	1.4



## IMI220-104A001 - Local Terminal B/W LCD (640X480) - Keyboard

TECHNICAL CHARACTERISTICS	UNIT	IMI220-104A001
Input voltage	Vdc	24
Range	%	± 15
Current consumption	mA	206
Floppy disk drive		no
Immunity vibration		-
EMC environment		-
Environment class	IP	-
<b>Interfaces characteristics</b>		
Video		IMI220-432D001, IMI220-437D001
Keyboard		IMI220-432D001, IMI220-437D001
<b>Display characteristics</b>		
Display type		B/W LCD
Touch screen		no
Backlight		neon lamp
Resolution	pixel	640 x 480
Lines x columns		30 x 80
Graphics		yes
Fonts		user programmable
Stand by		user programmable
Led		
- power		green led
- 2ndF		green led
- keys		green led
Contrast regulation		yes
Brightness regulation		yes
<b>Keyboard characteristics</b>		
Keys		
- total keys		42 + selector 3 position
- functional keys		8 (16 with 2ndF)
- programmable keys		14
- programmable leds		14
<b>General characteristics</b>		
Alarm Message		user programmable
Language (max)		10
Password protection		6 levels
Fields type		numeric, check, button, histogram, deviation, constant string, text list, graphic, alphanumeric, draw, date, tod, dt, time
Programming software		Logos
Connectors		
- power supply		3 pins M, 5.08 mm
- display		34 pins M, with central polarization
- keyboard		type D 25 pins M



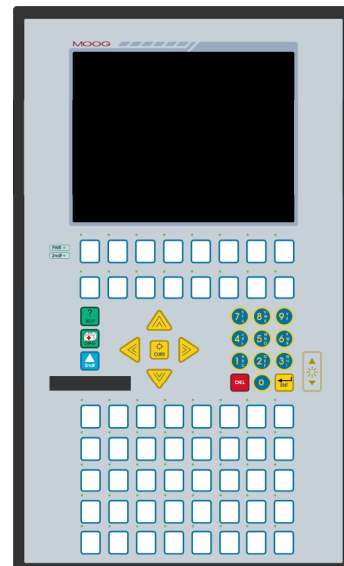
---

TECHNICAL CHARACTERISTICS	UNIT	IMI220-104A001
Cables section power supply		
- material		copper
- field of lock (min/max)	mm <sup>2</sup>	0.08...2.5
- rigid H05(07) V-U	mm <sup>2</sup>	0.5...2.5
- flexible H05(07) V-k	mm <sup>2</sup>	0.5...2.5
- flexible with terminal according to DIN 46228/1	mm <sup>2</sup>	0.5...2.5
- flexible with insulating collar according to DIN 46228/4	mm <sup>2</sup>	0.5...1.5
Cables section		
- display		flat cable 28 AWG
- keyboard	mm <sup>2</sup>	0.14...0.5
Operating temperature	°C	0...55
External dimensions (H x W x D)	mm	434 x 316 x 52
Weight	kg	3.0



## IMI220-105A001 - Local Terminal Color LCD (640X480) - Keyboard

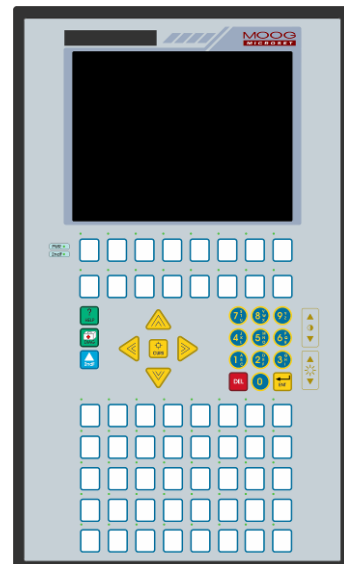
TECHNICAL CHARACTERISTICS	UNIT	IMI220-105A001
Input voltage	Vdc	24
Range	%	± 15
Current consumption	mA	435
Floppy disk drive		no
Immunity vibration		-
EMC environment		-
Environment class	IP	-
<b>Interfaces characteristics</b>		
Video		IMI220-434D001
Keyboard		IMI220-434D001
<b>Display characteristics</b>		
Display type		color LCD
Touch screen		no
Backlight		lamp neon
Resolution	pixel	640 x 480
Lines x columns		30 x 80
Graphics		yes
Fonts		user programmable
Stand by		user programmable
Led		
- power		green led
- 2ndF		green led
- keys		green led
Contrast regulation		yes
Brightness regulation		yes
<b>Keyboard characteristics</b>		
Keys		
- total keys		76
- functional keys		16 (32 with 2ndF)
- programmable keys		56
- programmable leds		56
<b>General characteristics</b>		
Alarm Message		user programmable
Language (max)		10
Password protection		6 levels
Fields type		numeric, check, button, histogram, deviation, constant string, text list, graphic, alphanumeric, draw, date, tod, dt, time
Programming software		Logos
Connectors		
- power supply		3 pins M, 5.08 mm
- display		40 pins M, with central polarization
- keyboard		type D 25 pins M



TECHNICAL CHARACTERISTICS	UNIT	IMI220-105A001
Cables section power supply		
- material		copper
- field of lock (min/max)	mm <sup>2</sup>	0.08...2.5
- rigid H05(07) V-U	mm <sup>2</sup>	0.5...2.5
- flexible H05(07) V-k	mm <sup>2</sup>	0.5...2.5
- flexible with terminal according to DIN 46228/1	mm <sup>2</sup>	0.5...2.5
- flexible with insulating collar according to DIN 46228/4	mm <sup>2</sup>	0.5...1.5
Cables section		
- display		flat cable 28 AWG
- keyboard	mm <sup>2</sup>	0.14...0.5
Operating temperature	°C	0...55
External dimensions (H x W x D)	mm	543 x 316 x 52
Weight	kg	3.5

## IMI220-109A001 - Local Graphic Terminal B/W LCD (640X480) - Keyboard

HARDWARE CHARACTERISTICS	UNIT	IMI220-109A001
Input voltage	Vdc	24
Range	%	± 15
Current consumption	mA	240
Floppy disk drive		no
Immunity vibration		-
EMC environment		-
Environment class	IP	-
<b>Interfaces characteristics</b>		
Video		IMI220-432D001, IMI220-434D001, IMI220-437D002
Keyboard		IMI220-432D001, IMI220-434D001, IMI220-437D002
<b>Display characteristics</b>		
Display type		B/W LCD
Touch screen		no
Backlight		lamp neon
Resolution	pixel	640 x 480
Lines x columns		30 x 80
Graphics		yes
Fonts		user programmable
Stand by		user programmable
Led		
- power		green led
- 2ndF		green led
- keys		green led
Contrast regulation		yes
Brightness regulation		yes
<b>Keyboard characteristics</b>		
Keys		
- total keys		76
- functional keys		16 (32 with 2ndF)
- programmable keys		56
- programmable leds		56
<b>General characteristics</b>		
Alarm Message		user programmable
Language (max)		10
Password protection		6 levels
Fields type		numeric, check, button, histogram, deviation, constant string, text list, alphanumeric, graphic, date, tod, dt, time
Programming software		Logos
Connectors		
- power supply		3 pins M, 5.08 mm
- display		34 pins M, with central polarization
- keyboard		type D 25 pins M



HARDWARE CHARACTERISTICS	UNIT	IMI220-109A001
Cables section power supply		
- material		copper
- field of lock (min/max)	mm <sup>2</sup>	0.08...2.5
- rigid H05(07) V-U	mm <sup>2</sup>	0.5...2.5
- flexible H05(07) V-k	mm <sup>2</sup>	0.5...2.5
- flexible with terminal according to DIN 46228/1	mm <sup>2</sup>	0.5...2.5
- flexible with insulating collar according to DIN 46228/4	mm <sup>2</sup>	0.5...1.5
Cables section		
- display		flat cable 28 AWG
- keyboard	mm <sup>2</sup>	0.14...0.5
Operating temperature	°C	0...55
External dimensions (H x W x D)	mm	543 x 316 x 52
Weight	kg	3.0

## IMI220-107B107/108 - PC based MMI 12.1" - CPU 800MHz - 512Mb SSD - RAM 256Mb - Keyboard - Fun less

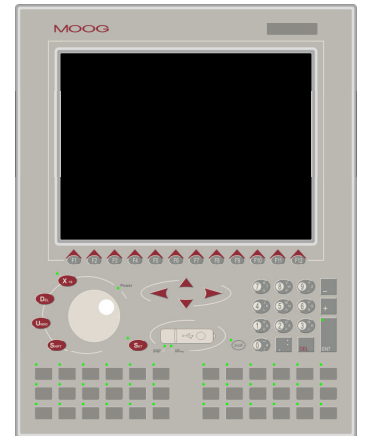
HARDWARE CHARACTERISTICS	UNIT	IMI220-107B107/108
Input voltage	Vdc	24
Range	Vdc	18-36
Current consumption	A	3
Floppy disk drive		no
CPU type		Transmeta Crusoe TM5900, 800MHz
RAM memory	Mb	256
Hard Disk	Gb	1 type SSD
Solid State Disk		yes
Slot for expansion		yes
Immunity vibration		yes
EMC environment		yes
Environment class	IP	65
<b>Software characteristics</b>		
Browser		Orione
Font		user programmable
Stand by		user programmable
Operating system - WIN Xp Embedded		yes
<b>Interfaces characteristics</b>		
Serial port		2 RS232 - SER3 RS232/422/485
Baud rate RS232/422	Kbit/s	115
Parallel port		optional
Ethernet port	Mbps	10/100
VGA port		1
PS2 port		1 mini din
USB port		5 (2.0)
<b>Display characteristics</b>		
Display type		Color TFT VGA 12.1" 350 cd/mq, 262144 colors
Touch screen		only IMI220-107B108
Resolution	pixel	800 x 600
Graphics		yes
Video adapter		ATI Rage PCI 4Mb
Backlight		2 CCFL (Cold Cathode Fluorescent Lamp)
Led - power - 2ndF - on line - 36 keys		green led green led green led green led
<b>Keyboard characteristics</b>		
Keys - total keys - functional keys - programmable keys - programmable leds		84 12 (24 with 2ndF) 36 36
Mouse		Touch pad + 2 buttons



HARDWARE CHARACTERISTICS	UNIT	IMI220-107B107/108
<b>General characteristics</b>		
Connectors - power supply - serial port - serial port (SER3) - ethernet port - VGA port - PS 2 port - USB port		3 pins M, 5.08 mm type D 9 pins M type D 15 pins M type RJ45 8 pins type D 15 pins F 6 pins F type A
Cables section power supply - material - field of lock (min/max) - rigid H05(07) V-U - flexible H05(07) V-k - flexible with terminal according to DIN 46228/1 - flexible with insulating collar according to DIN 46228/4	 mm <sup>2</sup> mm <sup>2</sup> mm <sup>2</sup> mm <sup>2</sup> mm <sup>2</sup>	 copper 0.08...2.5 0.5...2.5 0.5...2.5 0.5...2.5 0.5...1.5
Operating temperature	°C	0...50
External dimensions (H x W x D)	mm	428 x 335 x 93.6
Weight	kg	5.8

**IMI220-123B001 - Local graphic color MMI with touch screen (800x600) - Keyboard - LVDS - USB**

HARDWARE CHARACTERISTICS	UNIT	IMI220-123B001
Input voltage	Vdc	24
Range	%	± 15
Current consumption	mA	
Floppy disk drive		no
USB drive		yes
Immunity vibration		-
EMC environment		-
Environment class	IP	-
<b>Interfaces characteristics</b>		
Video		IMI220-438B001 - IMI220-804A001
Keyboard		IMI220-438B001 - IMI220-804A001
<b>Display characteristics</b>		
Display type		color LCD TFT
Touch screen		yes
Backlight		lamp neon
Resolution	pixel	800 x 600
Graphics		yes
Fonts		user programmable
Stand by		user programmable
Led		
- Power		green led
- 2ndF		green led
- X10		green led
- Set		green led
- Enter		green led
- 36 Keys		green led
Brightness regulation		yes
<b>Keyboard characteristics</b>		
Keys		
- total keys		73 + Rotary knob
- functional keys		12
- programmable keys		36
- programmable leds		36
<b>General characteristics</b>		
Alarm Message		user programmable
Language (max)		20
Password protection		30 levels
Fields type		numeric, check, button, histogram, deviation, constant string, text list, alphanumeric, graphic, date, tod, dt, time
Programming software		Logos
Connectors		
- power supply		3 pins M, 3.5 mm
- display		type RJ45
- keyboard		type RJ45



HARDWARE CHARACTERISTICS	UNIT	IMI220-123B001
<b>General characteristics</b>		
Cables section power supply		
- material		copper
- field of lock (min/max)	mm <sup>2</sup>	0.08...2.5
- rigid H05(07) V-U	mm <sup>2</sup>	0.5...2.5
- flexible H05(07) V-k	mm <sup>2</sup>	0.5...2.5
- flexible with terminal according to DIN 46228/1	mm <sup>2</sup>	0.5...2.5
- flexible with insulating collar according to DIN 46228/4	mm <sup>2</sup>	0.5...1.5
Cables section		
- display		Ethernet CAT E5/E6/E7
- keyboard		Ethernet CAT E5/E6/E7
Operating temperature	°C	0...55
External dimensions (H x W x D)	mm	428 x 335 x 45
Weight	kg	5.9

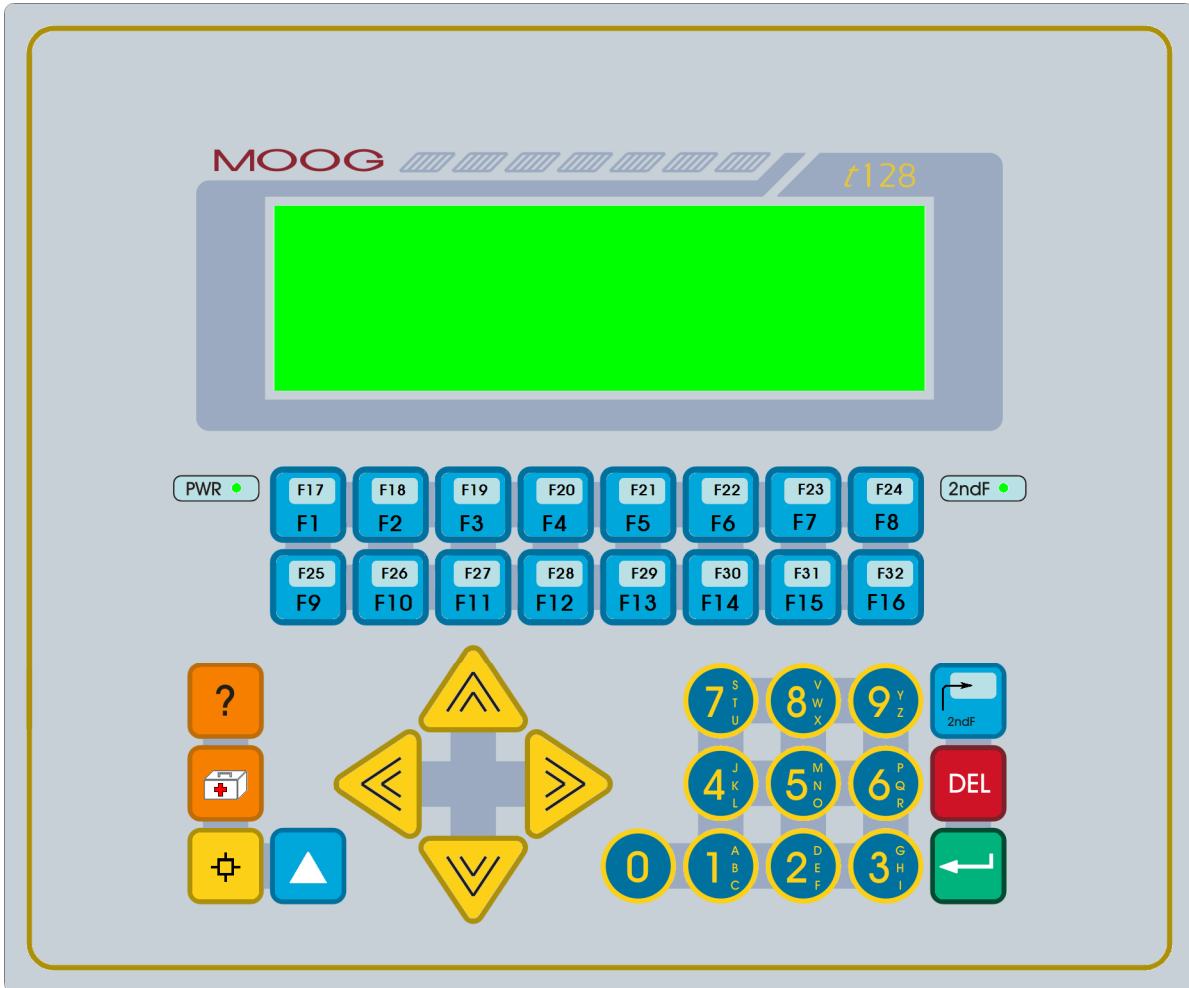


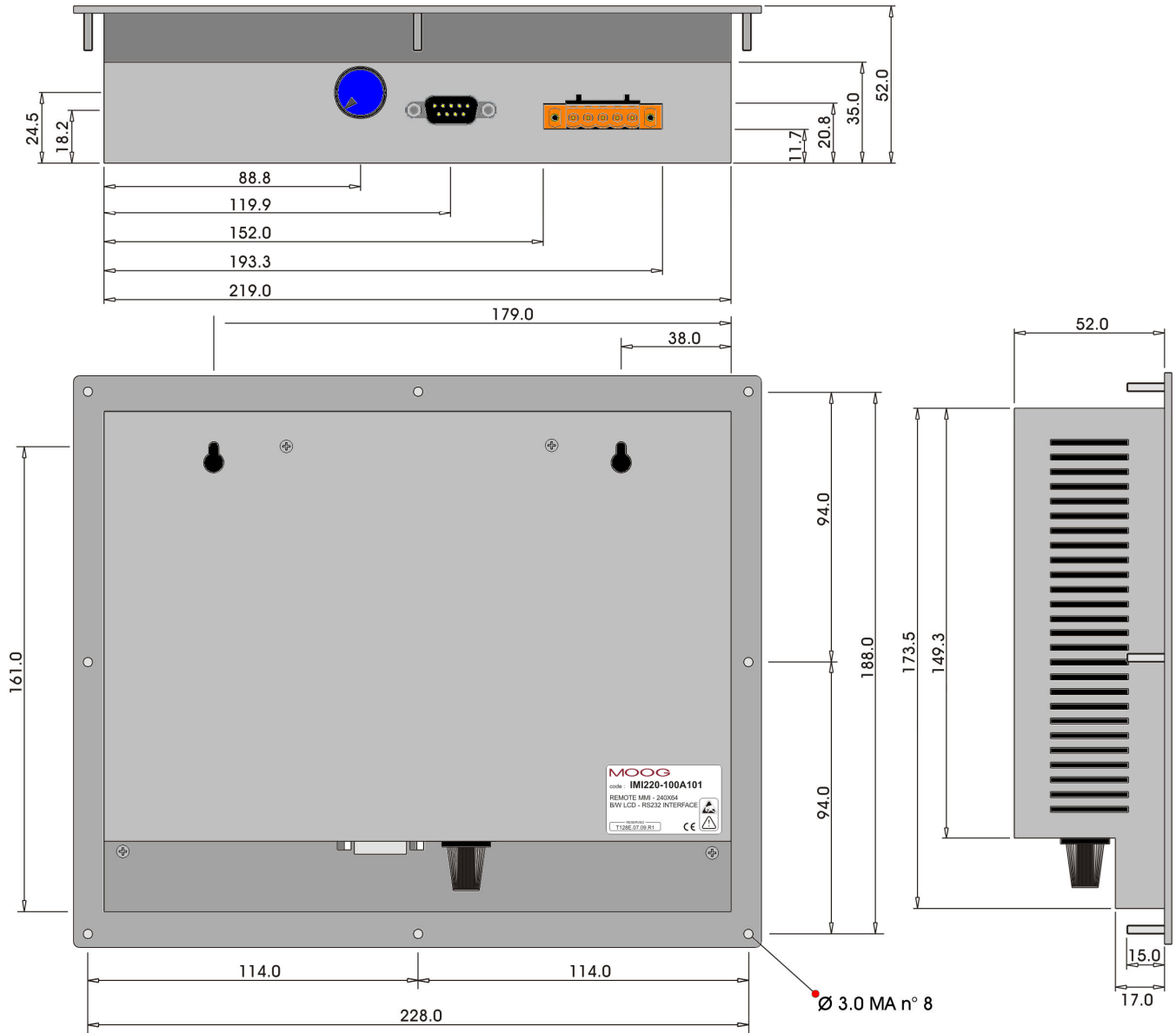
## IMI220-124A001 - Portable MMI - LCD 16x4 B/W - VT100 protocol - RS232 interface

HARDWARE CHARACTERISTICS	UNIT	IMI220-124A001
Input voltage	Vac/Vdc	24/Battery
Range	%	± 15
Current consumption	mA	
Floppy disk drive		no
Immunity vibration		-
EMC environment		-
Environment class	IP	-
<b>Interfaces characteristics</b>		
Serial port		RS232
Baud rate	bit/s	19200
<b>Display characteristics</b>		
Display type		B/W LCD
Touch screen		no
Backlight		led matrix
Resolution	pixel	128 x 64
Lines x columns		16 x 4
Graphics		no
Fonts		user programmable
Stand by		user programmable
Contrast regulation		no
Brightness regulation		no
<b>Keyboard characteristics</b>		
Keys		
- total keys		18
- functional keys		3
- programmable keys		-
- programmable leds		-
<b>General characteristics</b>		
Alarm Message		user programmable
Language (max)		10
Password protection		6 levels
Fields type		numeric, check, button, histogram, deviation, constant string, text list, alphanumeric, draw, date, tod, dt, time
Programming software		Logos
Connectors		
- power supply		2 pins F
- RS232		type D 9 pins F
Cables section power supply		
- material		copper
- field of lock (min/max)	mm <sup>2</sup>	0.08...2.5
- rigid H05(07) V-U	mm <sup>2</sup>	0.5...2.5
- flexible H05(07) V-k	mm <sup>2</sup>	0.5...2.5
- flexible with terminal according to DIN 46228/1	mm <sup>2</sup>	0.5...2.5
- flexible with insulating collar according to DIN 46228/4	mm <sup>2</sup>	0.5...1.5
Cables section RS232	mm <sup>2</sup>	0.14...0.5
Operating temperature	°C	0...55
External dimensions (H x W x D)	mm	220 x 116 x 51
Weight	Kg	0.72

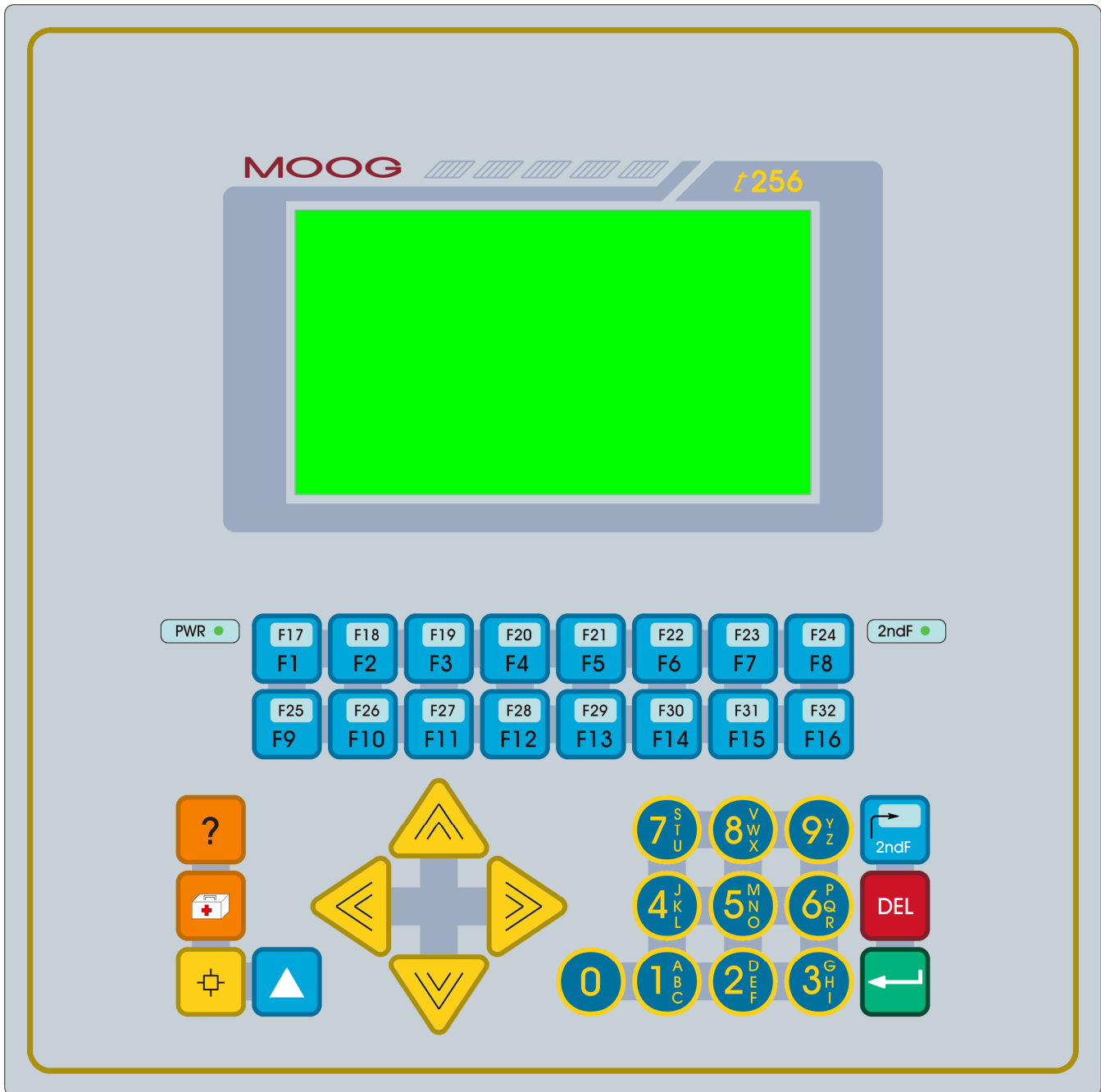


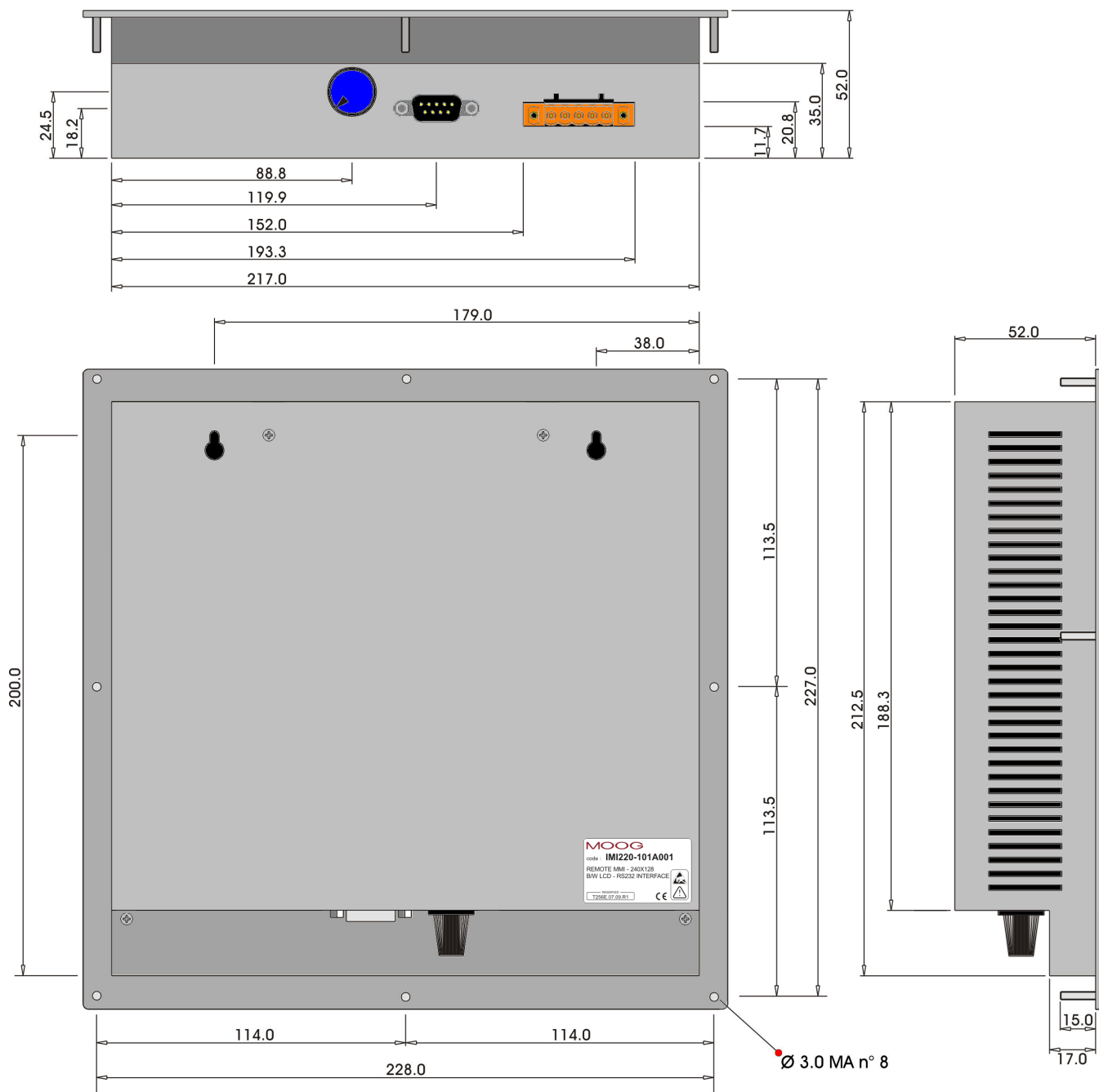
IMI220-100A100 Dimensions



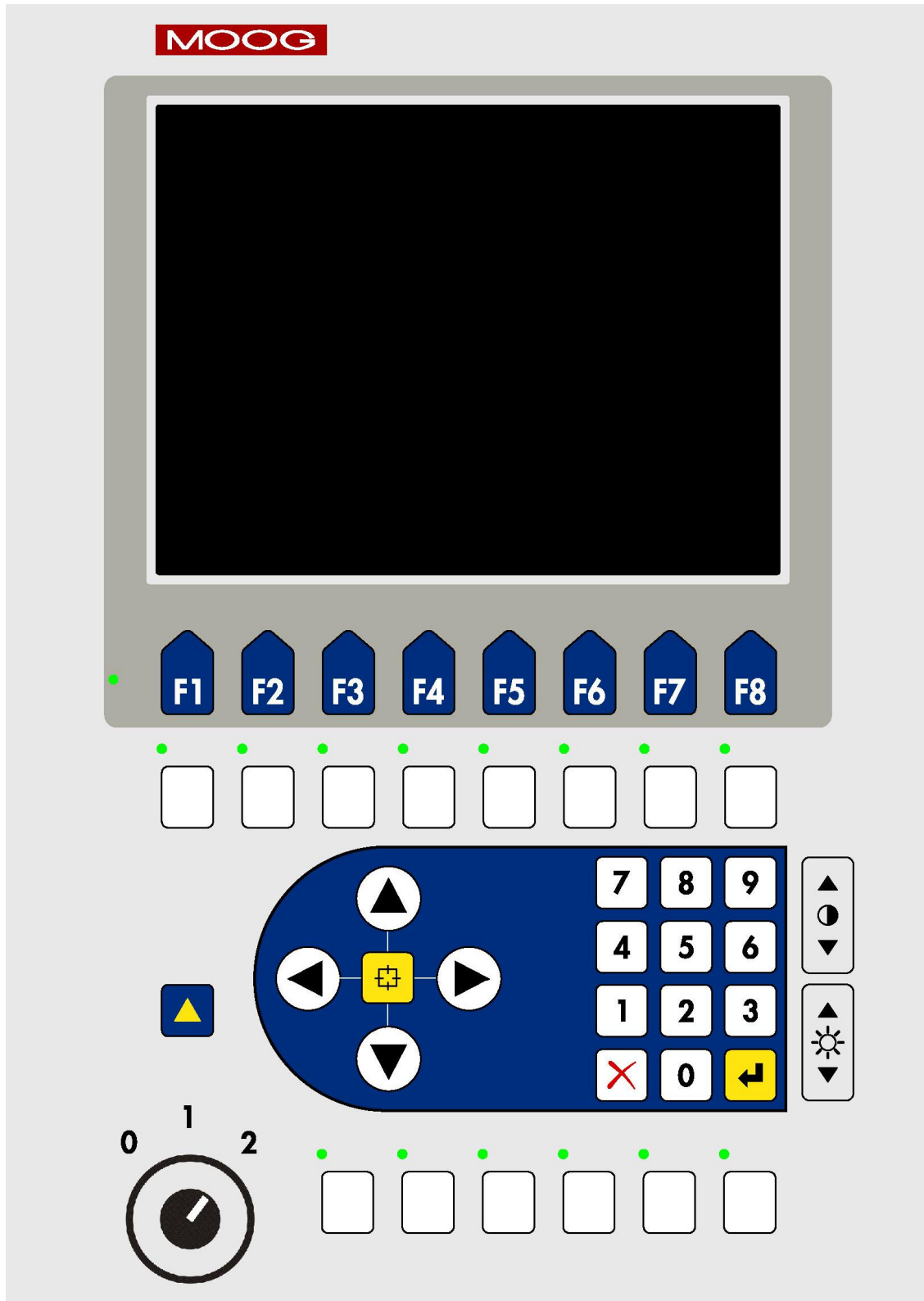


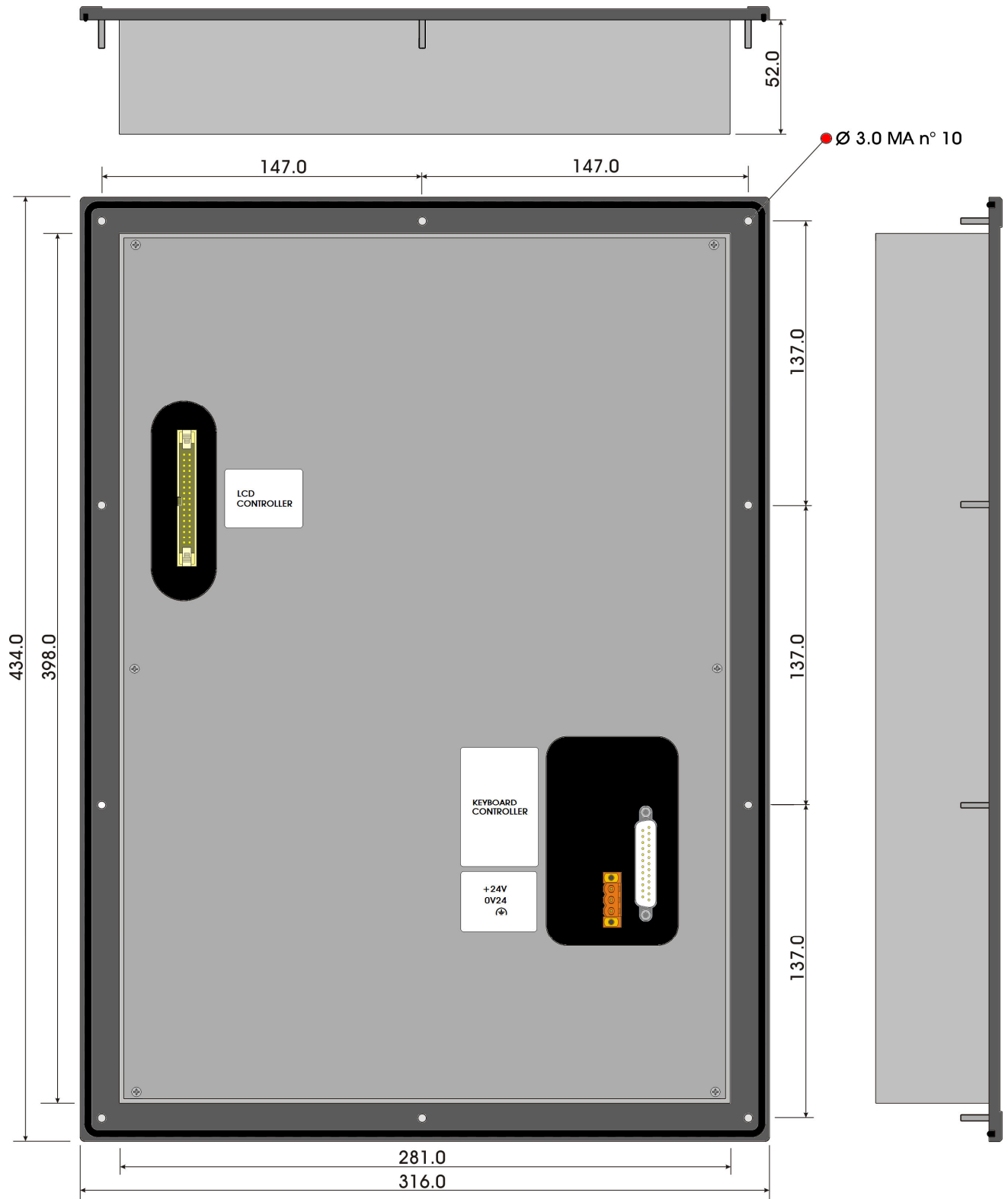
IMI220-101A100 Dimensions



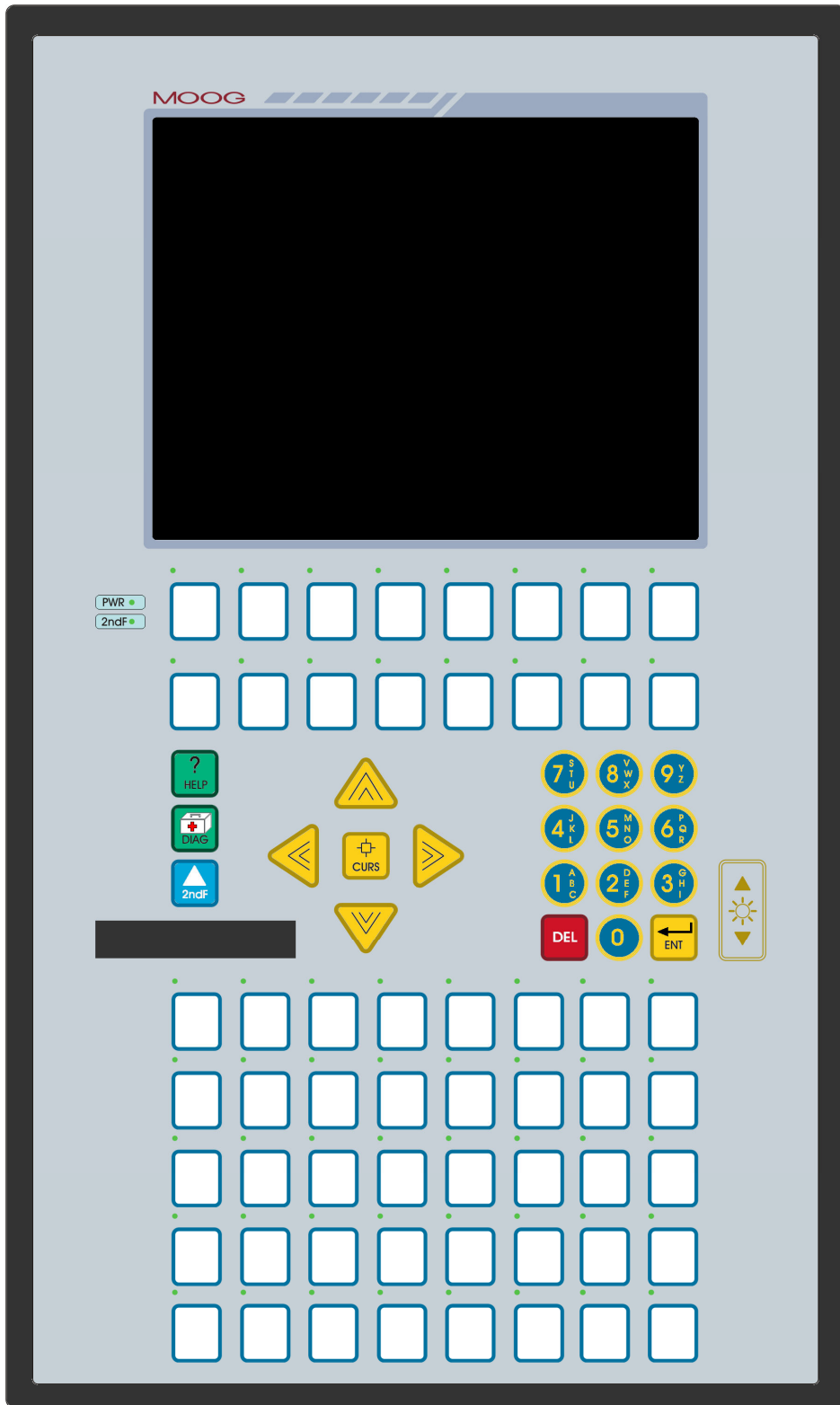


IMI220-104A001 Dimensions

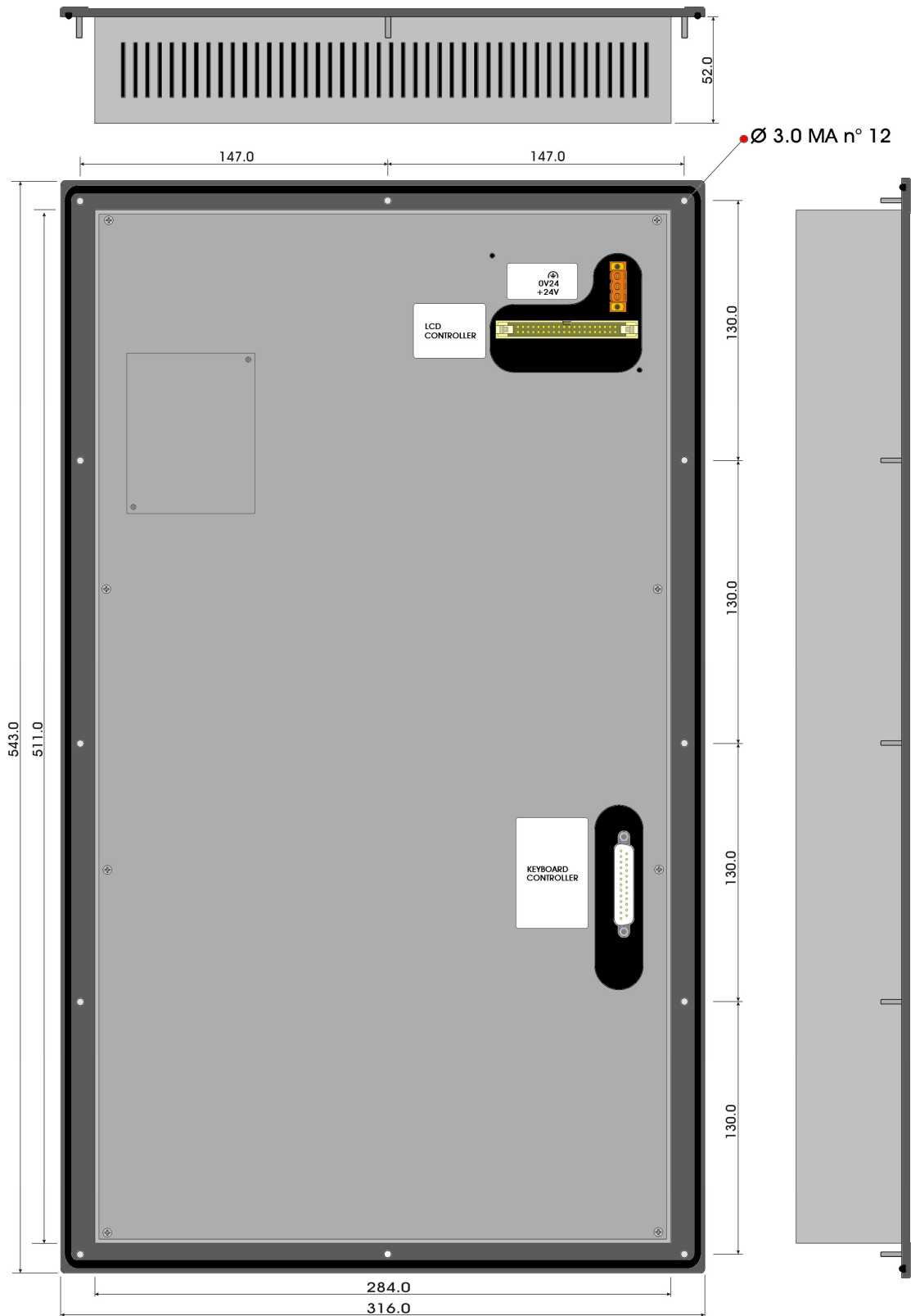




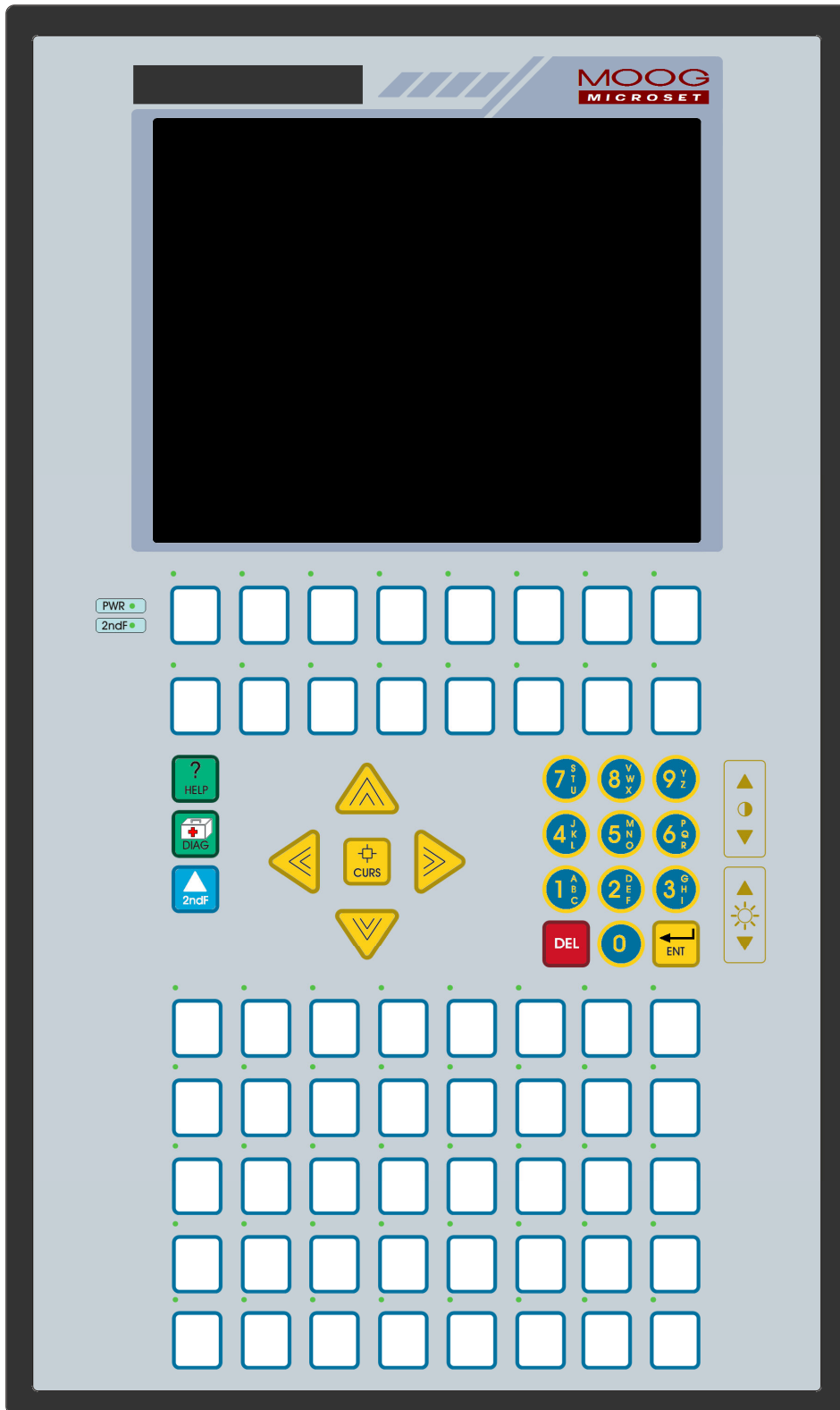
IMI220-105A001 Dimensions

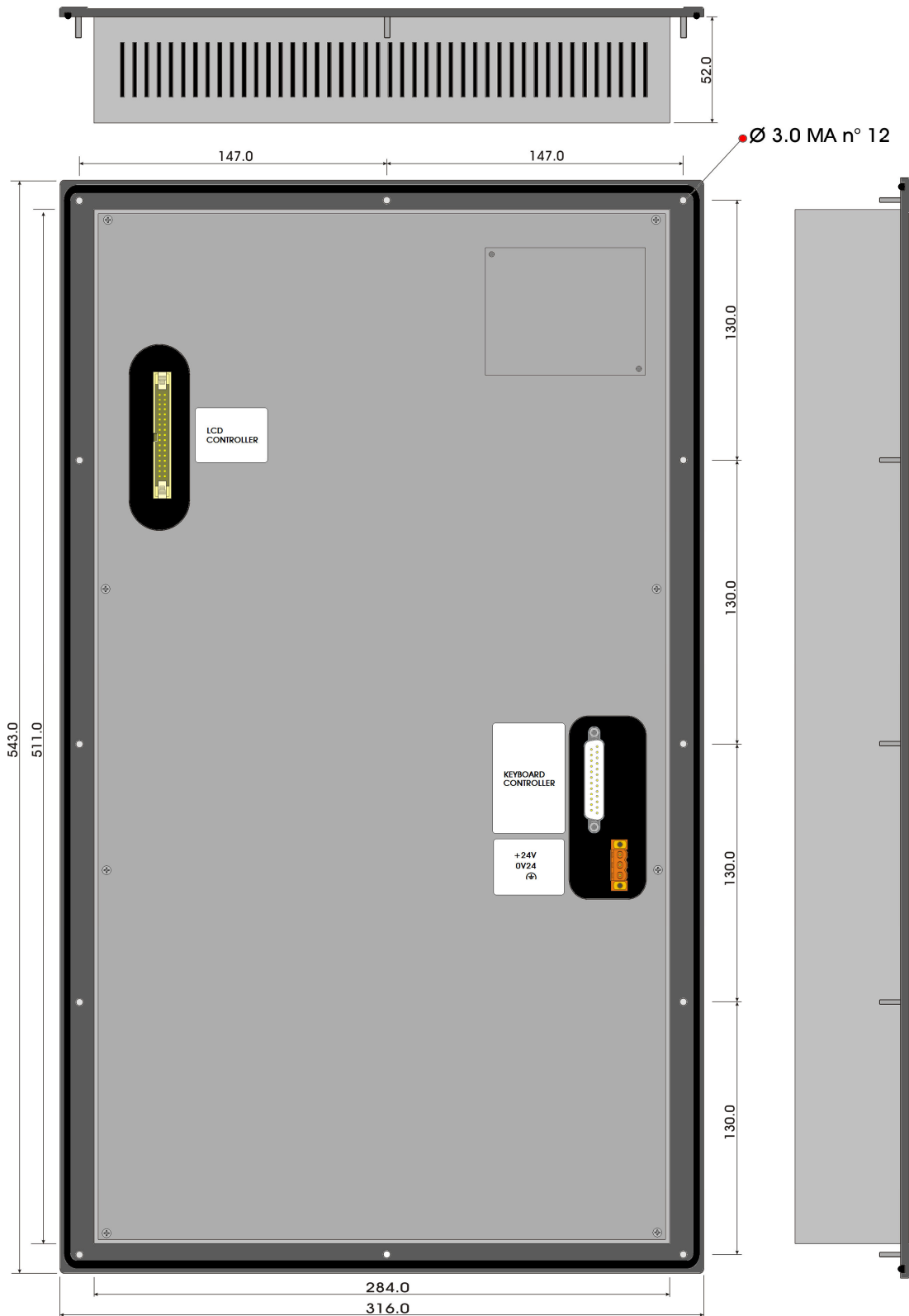




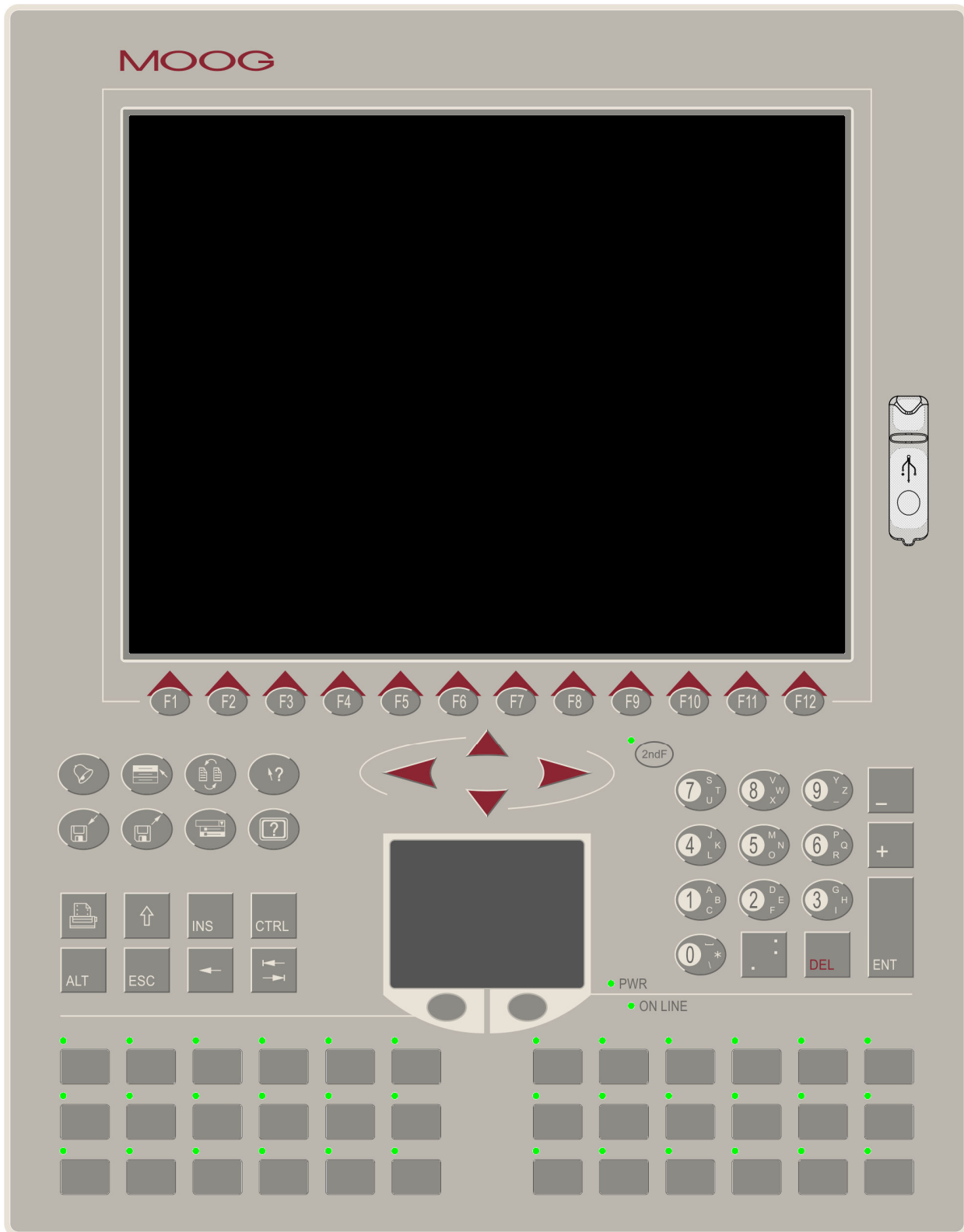


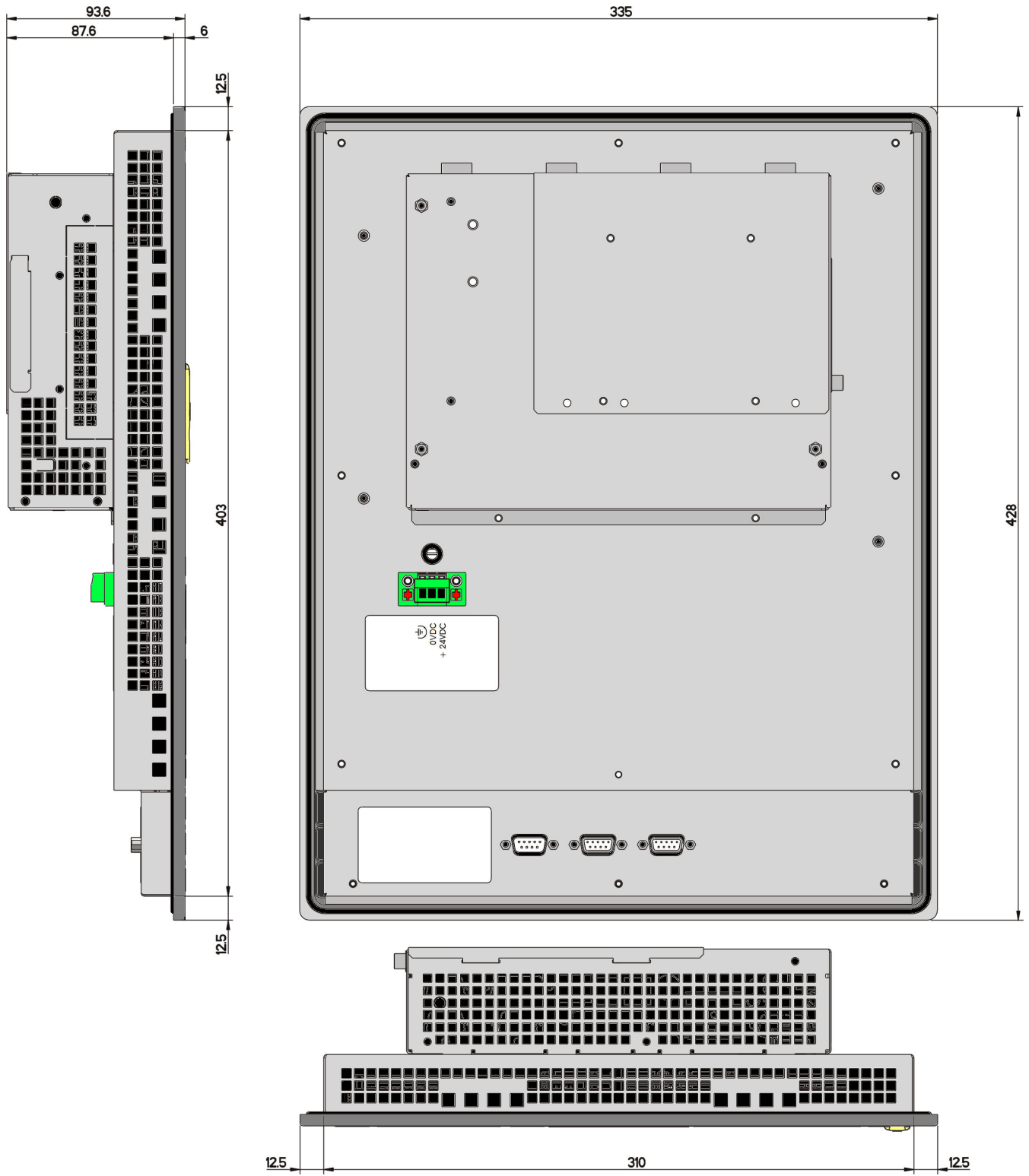
IMI220-109A001 Dimensions



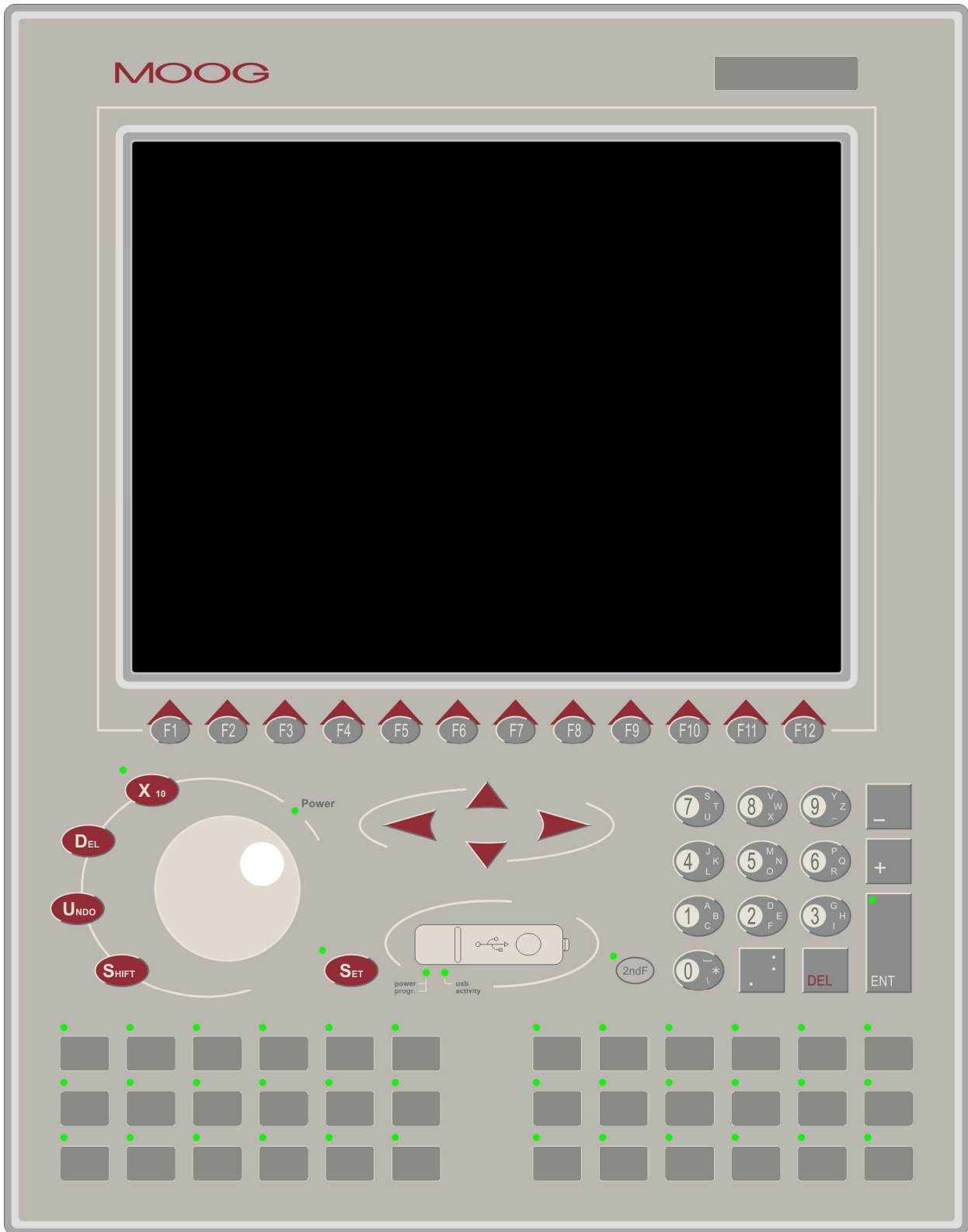


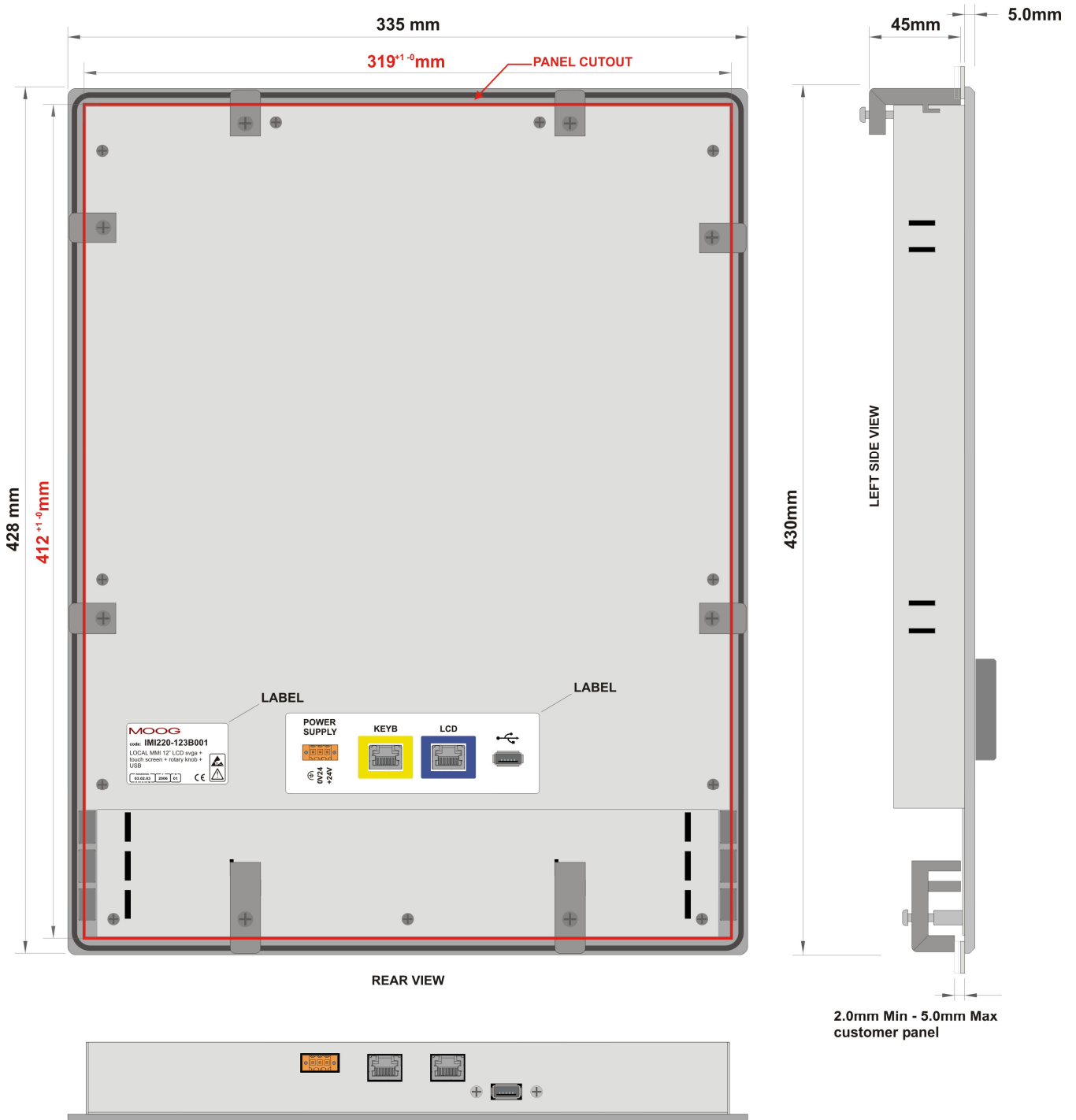
IMI220-107B107/108 Dimensions





IMI220-123B001 Dimensions & cutout

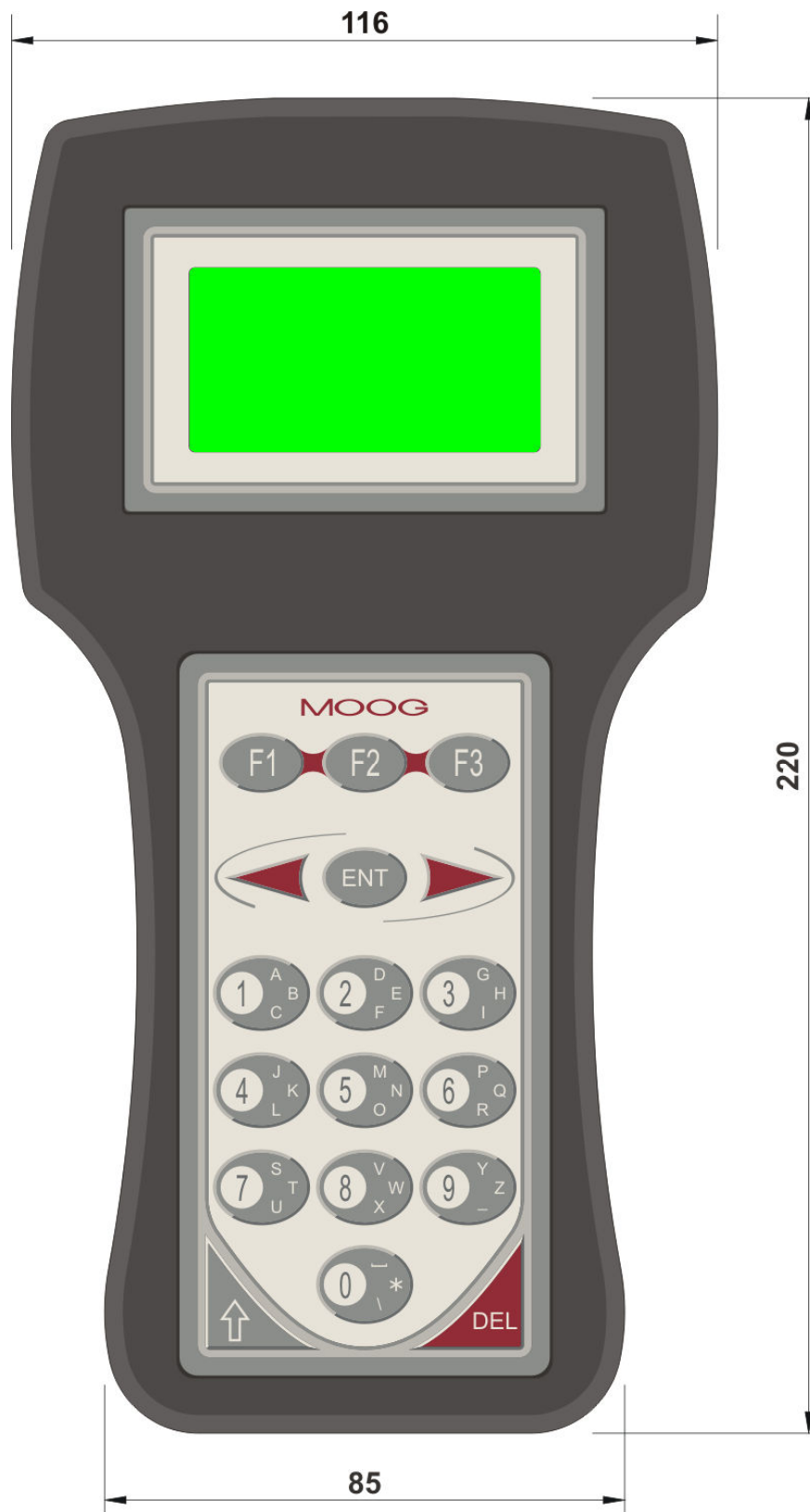




IMI220-124A001 Dimensions











---

**GENERAL INDEX**

TERMINALS..... 3  
TERMINALS..... 4  
IMI220-100A101 - Remote graphic terminal B&W LCD (240x64) - RS232 - Keyboard..... 5  
IMI220-101A100 - Remote graphic terminal B&W LCD (240x128) - RS232 - Keyboard..... 6  
IMI220-104A001 - Local Terminal B/W LCD (640X480) - Keyboard ..... 7  
IMI220-105A001 - Local Terminal Color LCD (640X480) - Keyboard ..... 9  
IMI220-109A001 - Local Graphic Terminal B/W LCD (640X480) - Keyboard..... 11  
IMI220-107B107/108 - PC based MMI 12.1" - CPU 800MHz – 1Gb SSD - RAM 256Mb - Keyboard - Fun less..... 13  
IMI220-123B001 - Local graphic color MMI with touch screen (800x600) - Keyboard - LVDS - USB ..... 15  
IMI220-124A001 - Portable MMI - LCD 16x4 B/W - VT100 protocol - RS232 interface ..... 17  
IMI220-100A100 Dimensions ..... 18  
IMI220-101A100 Dimensions ..... 20  
IMI220-104A001 Dimensions ..... 22  
IMI220-105A001 Dimensions ..... 24  
IMI220-109A001 Dimensions ..... 26  
IMI220-107B107/108 Dimensions ..... 28  
IMI220-123B001 Dimensions ..... 30  
IMI220-124A001 Dimensions ..... 32

---

*The Moog reserves the right to change data without prior notice.*

# TAKE A CLOSER LOOK.

Moog solutions are only a click away. Visit our worldwide Web site for more information and the Moog facility nearest you.

Argentina  
+54 11 4326 5916  
info.argentina@moog.com

Ireland  
+353 21 451 9000  
info.ireland@moog.com

Spain  
+34 902 133 240  
info.spain@moog.com

Australia  
+61 3 9561 6044  
info.australia@moog.com

Italy  
+39 0332 421111  
info.italy@moog.com

Sweden  
+46 31 680 060  
info.sweden@moog.com

Austria  
+43 664 144 65 80  
info.austria@moog.com

Japan  
+81 463 55 3767  
info.japan@moog.com

Switzerland  
+41 71 394 5010  
info.switzerland@moog.com

Brazil  
+55 11 3572 0400  
info.brazil@moog.com

Korea  
+82 31 764 6711  
info.korea@moog.com

United Kingdom  
+44 1564 784 777  
info.uk@moog.com

China  
+86 21 2893 1600  
info.china@moog.com

Luxembourg  
+352 40 46 401  
info.luxembourg@moog.com

USA  
+1 734 887 4250  
info.usa@moog.com

Finland  
+358 9 2517 2730  
info.finland@moog.com

Netherlands  
+31 252 462 000  
info.netherlands@moog.com

France  
+331 4560 7000  
info.france@moog.com

Norway  
+47 649 419 48  
info.norway@moog.com

Germany  
+49 7031 6220  
info.germany@moog.com

Russia  
+7 31713 1811  
info.russia@moog.com

Hong Kong  
+852 2 635 3200  
info.hongkong@moog.com

Singapore  
+65 6773 6238  
info.singapore@moog.com

India  
+91 80 4120 8785  
info.india@moog.com

South Africa  
+27 12 653 6768  
info.southafrica@moog.com

**[www.moog.com/industrial](http://www.moog.com/industrial)**

©2011 Moog Italy

Moog is a registered trademark of Moog Inc. All trademarks as indicated herein are the property of Moog Inc. and its subsidiaries. All right reserved.

Moog Terminals  
English/304/0211