DLOGIC

PRODUCT SPECIFICATION

PART NUMBER & MODEL:
103385 DL-DM1850-6U

DESCRIPTION:
DOC SPECIFICATION PRODUCT TOUCH DISPLAY MONITOR

VERSION:
1.0

_____   _____   _____

Customer Name   Customer Approval   Date

Revision Status

Revision	Revision Date	Page	Content	Notes
1.0	2022-11-25		Initial Release	

Table of Content

1   Cautions and Warnings

WARNING!
Do not apply a power supply voltage above 36V.
Do not open the device.
If device shows any sign of damage, do not connect power and return device to DLOGIC for service.
If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

2   Introduction

The DLOGIC family of Monitors is designed for the industrial, marine, manufacturing, medical, pharmaceutical, and harsh environments.

The DLOGIC monitors are carefully designed for high performance, simplicity, reliability, and long life. Interfaces provided support the latest generation of computers with Display Port and USB for the touch interface.

The IPS screen has excellent colors and ultra-wide viewing angles and is equipped with a 1000 cd/m^2 long-life high brightness backlight.

The monitor is controlled via the AUX channel command interface (DDC/CI), giving the application software full control of configuration such as brightness and configuration settings.

A underglass + and – and off button is available to manually control the brightness of the screen. If not needed the buttons can be disabled.

The monitor has a unibody aluminium frame which protects the screen and provides an elegant modern look to the monitor. The flat backside of the panel makes it easy to install the monitor in many different consoles. Further the monitor has VESA FDMI 100x100mm or 200x100mm compliant mounting positions with M4x10mm screws.

The cover glass is a 1.8mm chemically strengthened low reflection Glass that provides solid protection for the monitor.

State-of-the-art multitouch panel with Adaptive Sensing technology. Adaptive sensing technology is highly resistant to moisture. Differential touch sensing delivers unparalleled noise immunity ensuring superior touch performance even in a harsh environment.

Key features:

- Industrial Grade IPS Display Panel with a resolution of 1920x1080.
- 1000 cd/m^2 high brightness backlight with 80000 hours life.
- High-resolution capacitive multitouch panel with state-of-the-art Microchip mXT2952TD Touch Controller.
- Optically bonded Display and Touch Panel to reduce internal reflection, improve sunlight readability and prevent dust and moisture from entering the optical assembly.
- Chemically hardened 1.8mm low reflection Cover Glass
- Power input from 18-36Vdc
- Display port display interface and USB touch interface for the newest generation of Computers.
- Brightness control through the Display Port AUX DDC channel.
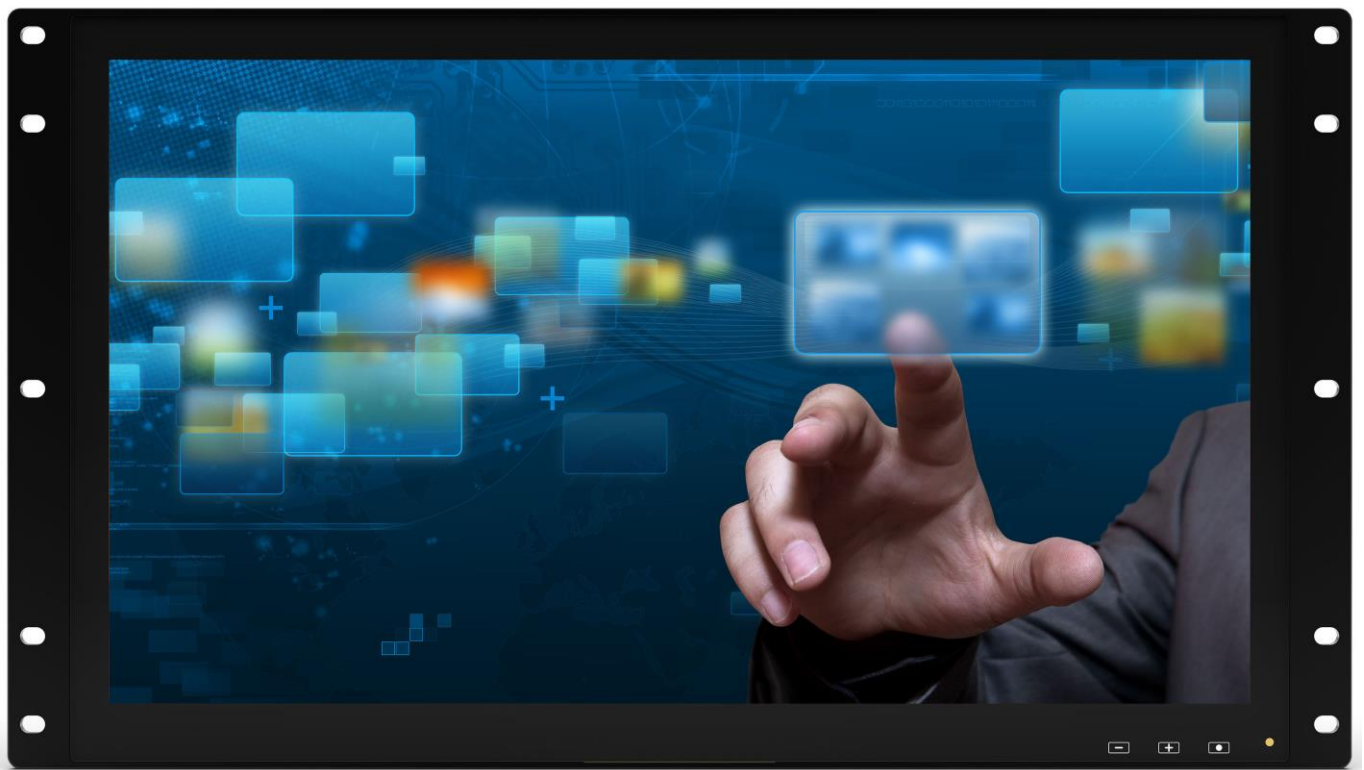
DL-DM1850-6U Front View

DL-DM1850-6U Rear View

3   Dimension Drawings

3.1   Dimension Drawing 103385 DL-DM1850-6U

DLOGIC LLC.

DESCRIPTION
DL-DM1850-6U TOUCH DISPLAY MONITOR DIMENSION

PART NUMBER
103385

REV.
1.0

SCALE
Free

NAME
Gavin.Qian

DATE
2022.06.29

DRAWN
CHK'ED
APPR

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES

DECIMALS
X.XX± 0.10
X.X ± 0.25

ANGULAR
± 1°

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THIRD ANGLE PROJECTION

REVISIONS
MATERIAL
PLATING

VESA MOUNTING HOLES (100x100mm, 200x100mm)
Screw Holes: M4 (14x)

PHOENIX:1776511   USB TYEP-C   DISPLAY PORT
HDMI TYEP-A (Optional)

4   Specification Summary

Display Interface	
Display Port	Display Port Version 1.2

Display DL-DM1850-6U	
Display Size	IPS 18.5-inch
Resolution	1920x1080
Brightness	1000 cd/m²
Colors	16.7 million
Viewing Angle	+/- 89 deg. (typical) (Up/Down, Left/Right)
Aspect Ratio	16:9
Pixel Pitch	0.213 (H) x 0.213 (V)
Response Time	14ms (typical)
Contrast	1000:1 (typical)
Dimensions	444mm x 274mm, Display Panel T=20.1mm, including electronics T=41mm
Input Voltage	18 – 36VDC
Power max.	30W
Net unit weight	8.1 kg

Touch Interface	
Touch Screen Type	Projected Capacitive Multi-Touch Panel
Fingers supported	10 fingers

Cover Glass	
Glass	1.8mm
Surface	Chemically hardened and anti-glare treatment

Housing	
Housing	Aluminium UNS A384.0 (ADC12)
Electronic Cover	Aluminium UNS A96061
Side Panel	Chi Mei PC-681U (a)(f1), UL94, Rated V-0, 90°C, UL746C
Steel Reinforcement Panel	Stainless Steel UNS S30400

UL Material information	
Double Sided Tape	3M VHB Tape RP16, Thickness 0.4mm, UL QOQW2.MH17478 RP16
PCB Material	UL796, Rated V-0, 105°C
Label Material	YUPO FPG80, Synthetic Paper

Environmental	
Operating Temperature	-20 to 70 degC.
Storage Temperature	-20 to 70 degC.
Humidity	Up to 95%
IP Rating	Protection: IP66 front, IP42 rear, EN60529

Mean Time Between Failure (MTBF)	
MTBF	50,000 hours
Condition:	A failure is anything that causes the product not to function to its specification. Reduction of brightness due to backlight life is not included as failure. The MTBF is to be measured using the actual system.

Compliance	
CE EMC Test & Measurement	IEC 61326-1: 2021
CE EMC ITE & Multimedia	EN55032:2015 +A1:2022, EN55035: 2017 +A11: 2020
CE LVD	IEC 62368-1: 2018
FCC	FCC CRF Title 47 Part 15 Subpart B – Section 15.107 and 15.109, Class B
	ANSI C63.4-2014
ICES	IC Regulation ICES-003: Issue 6
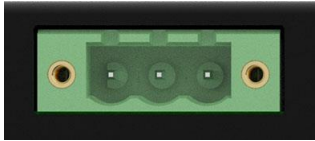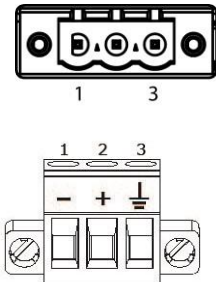
5   Connectors & Cables

5.1   Power

	Manufacturer:	Part Number:
PCB Connector:	Phoenix Contact	1776511, MSTB 2,5/ 3-GF-5,08
Cable Connector:	Phoenix Contact	1777992, MSTB 2,5/ 3-STF-5,08

Connector Specification:	
Voltage rating:	320V AC, DC
Current rating:	12.0A AC, DC (AWG12)
Mechanical:	Secure locking mechanism with screws
	Mechanical prevention from inverse insertion

Pin:	Signal Name:	Function:	
1	GND	Ground	
2	24V	24Vdc	
3	SHIELD	Shield Ground	

UL, CSA, VDE:	UL Recognized E60425-19931011, CSA Certified LR13631-2585950, VDE 40050694

5.2 Display Port

		Manufacturer:	Part Number:
PCB Connector:		Industry Standard	Display Port Standard Type
Cable Connector:		Industry Standard	Display Port HBR2 or better

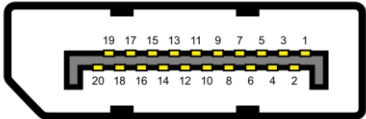| Connector Specification:	
Voltage rating:	40V AC, DC
Current rating:	0.5A AC, DC
Mechanical:	Friction locking connector and mechanical latch
	Mechanical prevention from inverse insertion
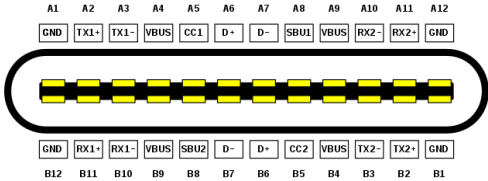
Pin:	Signal Name:	Description:	
1	ML_Lane 3 (n)		
2	GND	Lane 3	
3	ML_Lane 3 (p)		
4	ML_Lane 2 (n)		
5	GND	Lane 2	
6	ML_Lane 2 (p)		
7	ML_Lane 1 (n)		
8	GND	Lane 1	
9	ML_Lane 1 (p)		
10	ML_Lane 0 (n)		
11	GND	Lane 0	
12	ML_Lane 0 (p)		
13	Config 1	Connected to ground	
14	Config 2	Connected to ground	
15	AUX CH (p)	Auxiliary Channel	
16	GND	Ground	
17	AUX CH (n)	Auxiliary Channel	
18	Hot Plug Detect	Hot plug detection	
19	Return DP_PWR	Return for power	
20	DP_PWR	Power for connector 3.3V, 500mA	

5.3 USB Type-C

	Manufacturer:	Part Number:
PCB Connector:	Industry Standard	USB Type-C
Cable Connector:	Industry Standard	USB Type-C to USB Type A Cable

Connector Specification:	
Voltage rating:	100V AC, DC
Current rating:	3.0A AC, DC
Mechanical:	Friction locking connector
	Can be inserted in two directions

Pin:	Signal Name:	Description:	
A1	GND	Ground return	
A2		N.C.	
A3		N.C.	
A4	VBUS	Bus Power 5V	
A5		N.C.	
A6	D1+	USB 2.0 D+	
A7	D1-	USB 2.0 D-	
A8		N.C.	
A9	VBUS	Bus Power 5V	
A10		N.C.	
A11		N.C.	A1 A2 A3 A4 A5 A6 A7 A8 A9 A10 A11 A12
A12	GND	Ground return	GND TX1+ TX1- VBUS CC1 D+ D- SBU1 VBUS RX2- RX2+ GND
B12	GND	Ground return	
B11		N.C.	
B10		N.C.	GND RX1+ RX1- VBUS SBU2 D- D+ CC2 VBUS TX2- TX2+ GND
B9	VBUS	Bus Power 5V	B12 B11 B10 B9 B8 B7 B6 B5 B4 B3 B2 B1
B8		N.C.	
B7	D2-	USB 2.0 D-	
B6	D2+	USB 2.0 D+	
B5		N.C.	
B4	VBUS	Bus Power 5V	
B3		N.C.	
B2		N.C.	
B1	GND	Ground return	
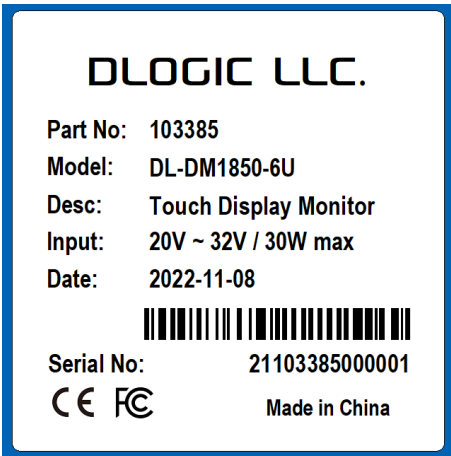
6   Product Label

6.1   Label

Label:	Description:
Size	50mm x 55mm, rounded corners, T=0.15mm
Material	YUPOTACK, SGS 60, Water proof, tear resistant
Color	Light Gray

6.1.1 Position and Artwork

The label is placed on the lower right corner of the display housing.

Label Position	Label Artwork

6.1.2 Serial Number Coding

Message Header, Serial Number Identifier:	21
Part Number (last 4 digits):	103385
Product Number:	000001 to 999999
Code Type:	Code 128

6.1.3 Manufacturing Date

Message Header	Mfg. Date
Date:	YYYY-MM-DD

7   Display Port and USB Cable (optional)

Part No:	Description:
102815	CABLE DP ULTRA-HIGH SPEED 8K, L=3000mm BLACK
102749	CABLE USB3.0 TYPE-C to TYPE-A, L=3000mm BLACK
102843	ME POWER SUPPLY AC90-264V C14 DC24.0V 60W DoE-VI IEC62368-1 TINNED-LEADS UL2468 BLACK LF I

7.1   Display Port Cable (optional)
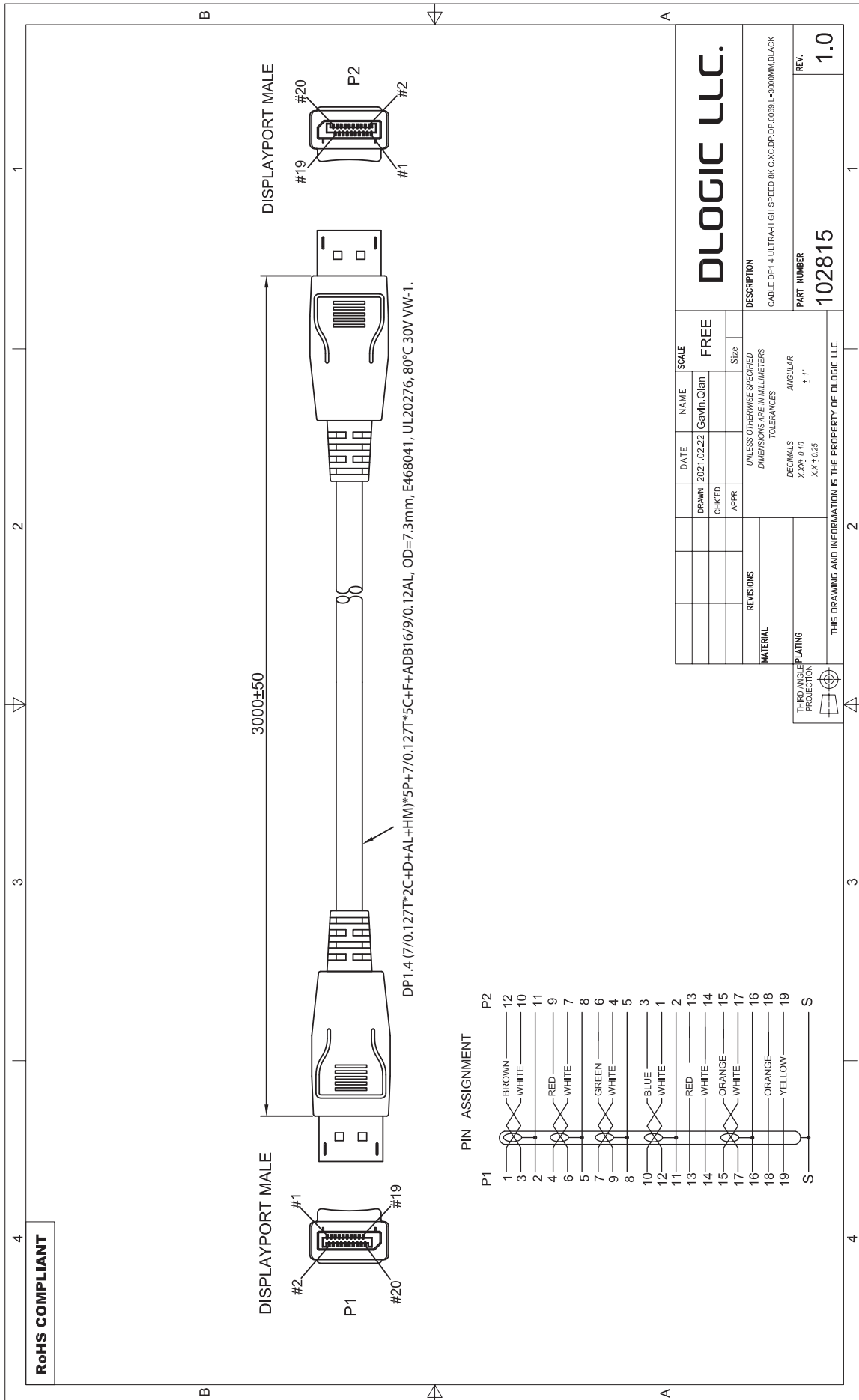
7.2   USB Type-C to Type-A Cable (optional)

USB TYPE-C MALE

3000±50

30#TC*2P+30#TC*4C+22#*2C+AE+64B, BLACK

USB A TYPE MALE

P1

PIN ASSIGNMENT

P1		P2
1		VBUS
2		D -
3		D +
4		GND
5		SSTXnI
6		SSTXpI
7		GND
8		SSRXnI
9		SSRXpI
SHELL		SHELL

DLOGIC LLC.

		DATE	NAME	SCALE	
DRAWN		2021.02.22	Gavin.Qian	FREE	
CHK'ED					
APPR				Size	

DESCRIPTION
CABLE USB TYPE-C TO USB2.0 TYPE-A,UL2725,L=3000MM,BLACK

PART NUMBER   102749

REV.   1.0

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES

DECIMALS   ANGULAR
X.XX± 0.10   ± 1'
X.X ± 0.25

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REVISIONS

MATERIAL

PLATING

THIRD ANGLE
PROJECTION

RoHS COMPLIANT

7.3 Industrial Grade 60W Power Supply (optional)

Electrical Characteristics:					
Characteristics	Condition	Min.	Typ.	Max.	Unit
Input Voltage	Safety Approval	100		240	VAC
Input Voltage	80% load	80		275	VAC
Input Frequency	Sine wave	47		63	Hz
Output Power Rating	See Rating Chart			60	W
Over Load Protection	Recovers automatically after fault condition is removed	110		150	%

Environmental:					
Characteristics	Condition	Min.	Typ.	Max.	Unit
Operating Temperature	Derating linearly from 100% load at 40°C to 50% load at 70°C	-20		70	°C
Storage Temperature	0 ~ 95% RH	-40		85	°C
Operating Humidity	Non-condensing	0		95%	RH
Storage Humidity	Non-condensing	0		95%	RH
Mean Time Between Failure	Calculate per MIL-HDBK-217F, Temp: 25°C	100k			h

Certification:		
Type	Standard	Certificate No.
cUL	UL62368-1 and CSA C22.2 No. 62368-1-14	20180410-E183744
CE	CE 2014/30/EU EN55032-2015/A11:2020 Class B EN61000-3-2:2019 EN61000-3-3:2013+A1:2019 EN55035:2017/A11:2020 - IEC61000-4-2 Edition 2.0 2008-12 - IEC61000-4-3 Edition 3.2 2010-04 - iEC61000-4-4 Edition 3.0 2012-04 - IEC61000-4-5 Edition 3.1 2017-08 - IEC61000-4-6 Edition 4.0 2013-10 - IEC61000-4-8 Edition 2.0 2009-09 - IEC61000-4-11 Edition 2.1 2017-05	EC570722-03
CB	IEC62368-1:2014	JPTUV-083897-A1/M1
FCC	47 CFR FCC Rules and Regulations Part 15 Subpart B, Class B Digital Device	FV570722
TUV	EN62368-1:2014+A11 AfPS GS 2014:01 Par.3.1	S 50392967
CCC	GB 17625.1-2012 GB 4943.1-2011 GB/T 9254-2008	2021010907389337
Department of Energy	Level VI, CoC Tier 2	

Phoenix: 1777992

3000.00mm±50.00

118.00

47.00

30.30

1.00

1800.00mm±50.00

AC INPUT:
IEC-320-C14 INLET

DLOGIC LLC.

	DATE	NAME	SCALE	
DRAWN	2022.03,10	Gavin.Qian	1:1	
CHK'ED				
APPR			Size	A1

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETERS
TOLERANCES

DECIMALS	ANGULAR
X.XX° 0.10	± 1°
X.X ± 0.25	

REVISIONS

MATERIAL

PLATING

THIRD ANGLE PROJECTION

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DESCRIPTION
POWER SUPPLY AC90-264V C14 DC24V 60W DoE-VI IEC62368-1

PART NUMBER
102843

REV.
1.0

8   Packaging Specification

8.1   Product Box

Description:	Dimensions (mm)
Product Box	690 x 490mm, H=145mm
Material	Double Wall Cardboard
Color	Brown
Packaged Unit Weight	8.1 kg

8.2   Shipping Box

Description:	Dimensions (mm)
Shipping Carton Size	700x500mm H=320mm
Modules per Carton	2 units
Weight per Shipping Box	18.3 kg

8.3   Shipping Label

Label:	Description:
Size	101mm x 76mm, rounded corners
Material	Paper, self-adhesive
Color	White

8.3.1   Position:

8.3.2 Artwork:

DLOGIC™

Part No.   103385
Desc: DL-DM1850-6U Touch Display Monitor

Qty.   0001

Date: 2022-11-08
Weight: 10.0 kg

To: DLOGIC EU   Tel. +49 7745 2799390
     Schellenberg 8
     D-79798 Jestetten, Germany   Made in China

9   Quality

9.1   Environmental Conditions

Operating Temperature	-20°C to +70°C The operating temperature refers to the surface temperature of the display.
Storage Temperature	-20°C to +70°C
Humidity range	5% to 95% RH, non-condensing
RoHS Compliance	Compliant with European Union Directive 2011/65/EU and subsequent amendments. Please refer to the DLOGIC RoHS Policy for details.
REACH Declaration	Please refer to the DLOGIC REACH Declaration for details
Phthalate Restriction	Please refer to the DLOGIC Phthalate Restriction Policy for details

9.2   Precautions using Products with LCD Modules

9.2.1 Safety & Health

- Do not attempt to disassemble the display module.
- If the display module is damaged and the liquid crystal substance leaks out, be sure not to get any in your mouth. If the substance contacts your skin or clothes, wash it off using soap and water.
- If the housing is damaged, cracked, or broken, don't connect the power.

9.2.2 Operation Caution

- The touch panel and display panel are made of glass. Do not subject it to mechanical shock.
- Do not apply excessive force to the glass surface or the adjoining areas since this may cause damage.

9.2.3 Cleaning of the Display Module

- If the display module surface is contaminated, breathe on the surface and gently wipe it with a soft dry cloth. If still not completely clear, moisten a cloth with one of the following solvents: Isopropyl alcohol, ethyl alcohol
- Solvents other than those mentioned above may damage the touch panel or display. Especially, do not use the following: Ketone solvents or Aromatic solvents

9.2.4 Storage precautions

- Avoid exposure of the control panel module to direct sunlight or to the light of fluorescent lamps during storage.
- Control panels need to be stored within the storage temperature range.
- If the control panels are stored for a long time, the recommended conditions are:
- Temperature: 0°C ~ 40°C, Relatively humidity: ≤80%
- Control panels should be stored in a room without acid, alkali, and harmful gases.

9.2.5 Transportation Precautions

- Control Panels can't be dropped or exposed to violent shook during transportation. As well as avoid excessive pressure, water, damp environments, and sunshine.

10 Warranty

Unless otherwise agreed between DLOGIC GmbH (DLOGIC) and the customer, DLOGIC will replace or repair any of its products that are found to be functionally defective when inspected in accordance with DLOGIC's acceptance criteria (copies available upon request) for a period of two years from date of shipment. Cosmetic / Visual defects must be returned to DLOGIC within 120 days of shipment. Confirmation of such a date shall be based on freight documents. The warranty liability of DLOGIC is limited to the repair and/or replacement on the terms set forth above. DLOGIC will not be responsible for any subsequent or consequential losses and/or events.

Returning Products under Warranty

No warranty can be granted if the precautions stated above have been disregarded. The typical examples of violations are:

- Broken Glass, Touch Panel or LCD glass
- Display Module was opened or disassembled in any way
- Circuits are modified in any way, including the addition of components

Product repairs will be invoiced to the customer upon mutual agreement. Products must be returned with a sufficient description of the failures and/or defects. Any connectors or cables installed by the customer must be removed completely prior to returning the product.
The product must be returned in the original packaging to avoid any damage during transportation.

11 Intellectual Property, Copyright and Trademark

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12 Contact Information

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