

Data Sheet

# PLUS+1<sup>®</sup> Mobile Machine Displays

## DM430M Series



The DM430M series 4.3" displays are the first ruggedized displays that Danfoss is introducing to the marine market after many years of experience building rugged equipment.

The DM430M series displays come marine pre-certified with the American Bureau of Shipping (ABS) Type Approval decreasing machine certification time and reducing time to market.

As the visual interface for the machine, the DM430M series provide customer with a modern, yet rugged design. As well as supreme screen viewing quality and a wide range of features.

The optically-bonded and anti-glare coated screen is optimized for usage in all lighting conditions. It provides outstanding sunlight viewability and wide viewing angles. In darker settings, the light sensor automatically adjusts screen brightness and switches between day and night display themes.

With the Engine Information Center (EIC) application, the DM430M series displays can be set up in a matter of minutes with pre-defined screen graphics and without any programming.



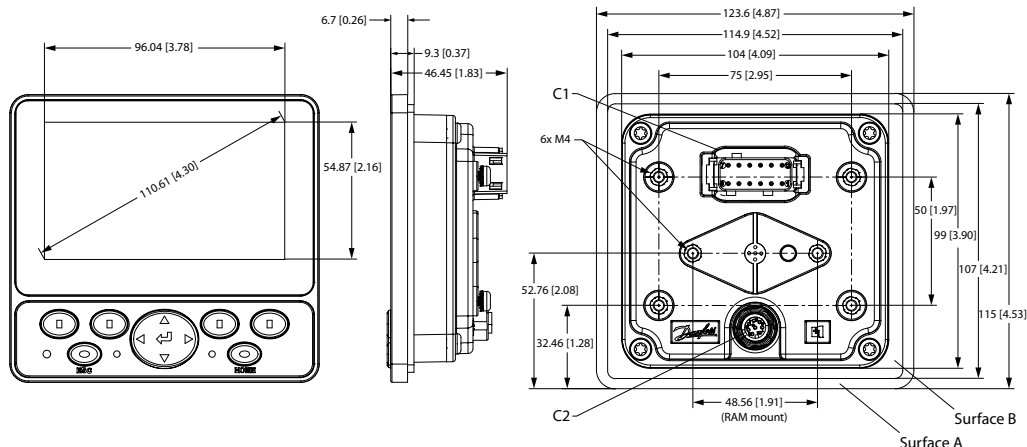
### Features

- 2 different keypads
  - Traditional 4 button
  - 6 button plus navigation buttons (11 total)
- Backlit buttons
- Up to 6 LEDs
- Integrated light sensor
- EIC application (optional), Tier 4 / Stage IV ready
- Real Time Clock (RTC)
- PLUS+1<sup>®</sup> GUIDE programmable (Vector-Based Screen Editor)
- Rugged IP66 and IP67 ratings (with mating connectors installed)
- Integrated DEUTSCH connector
- Fast Start-up Time (~2 sec)
- RAM<sup>®</sup> or Bracket (optional) mount
- Portrait and landscape
- 32MB application log
- CE compliant, E1-Mark (pending) and RoHS compliant
- USB device & RS232 (optional)
- ABS type approved

Comprehensive technical literature is online at [www.danfoss.com](http://www.danfoss.com)

**Dimensions in mm [in]**

Front, side view, and rear view



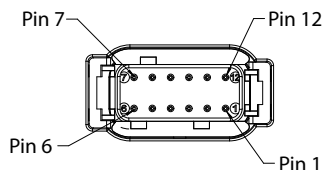
**Specifications**

Characteristics

<b>Processor</b>	ARM-based Cortex-M7
<b>RAM</b>	32MB
<b>EEPROM</b>	32kB
<b>Flash (Program memory)</b>	32MB
<b>Flash (Application log)</b>	32MB
<b>Supply voltage</b>	9-36 V <sub>DC</sub>
<b>Connector</b>	DEUTSCH DTM06-12
<b>Size</b>	4.3"
<b>Aspect ratio</b>	Wide
<b>Resolution</b>	480x272
<b>Brightness</b>	>700 cd/m <sup>2</sup>
<b>Contrast ratio</b>	500:1
<b>Viewing angle</b>	+/- 70 degrees in all directions
<b>Color depth</b>	24-bit
<b>Glass</b>	Optically bonded, anti-glare coating
<b>IP rating (with mating connector attached)</b>	IP66 and IP67 (front and back)
<b>Operating temperature</b>	-25°C to +70°C [-13°F to +158°F]
<b>Storage temperature</b>	-40°C to +85°C [-40°F to 185°F]
<b>Weight</b>	328 g (0.72 lb)
<b>Vibration</b>	IEC 60068-2-6 Fc
<b>Salt Mist</b>	IEC60068-2-52 Kb
<b>EMC</b>	IEC60068-4-2, -4-3, -4-4, -4-5, -4-6, CISPR 16 -2-1, -2-3
<b>Programmable ambient light sensor</b>	OSRAM SFH3410

**PLUS+1 Mobile Machine Displays DM430M Series**

12 pin DEUTSCH connector

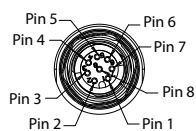


DEUTSCH DTM06-12SA 12 pin

C1 pin	DM430M-0-x-x-x	DM430M-1-x-x-x	DM430M-2-x-x-x
1	Power ground -	Power ground -	Power ground -
2	Power supply +	Power supply +	Power supply +
3	CAN 0 +	CAN 0 +	CAN 0 +
4	CAN 0 -	CAN 0 -	CAN 0 -
5	AnIn/CAN 0 Shield	AnIn/CAN 0 Shield	AnIn/CAN 0 Shield
6	DigIn/AnIn	DigIn/AnIn	DigIn/AnIn
7	DigIn/AnIn	DigIn/AnIn	DigIn/AnIn
8	DigIn/AnIn	CAN 1+	Sensor power 5 V/100 mA
9	DigIn/AnIn	CAN 1-	Secondary power input*
10	Multifunction input (DigIn/AnIn/Freq/4-20 mA/Rheostat)	Multifunction input (DigIn/AnIn/Freq/4-20 mA/Rheostat)	Multifunction input (DigIn/AnIn/Freq/4-20 mA/Rheostat)
11	Multifunction input (DigIn/AnIn/Freq/4-20 mA/Rheostat)	Multifunction input (DigIn/AnIn/Freq/4-20 mA/Rheostat)	Multifunction input (DigIn/AnIn/Freq/4-20 mA/Rheostat)
12	Digital out (0.5A sinking)	Digital out (0.5A sinking)	Digital out (0.5A sinking)

\* From controller (requires surge protection).

8 pin M12 connector



M12-A 8 pin

C2 pin	Function
1	Device Vbus
2	Device data -
3	Device data +
4	Ground
5	Ground
6	RS232 Rx
7	RS232 Tx
8	NC



**Model code variants**

Model code	Part number
DM430M-0-0-0-0	11267564
DM430M-0-0-1-0	11267565
DM430M-0-1-0-0	11267566
DM430M-0-1-1-0	11267567
DM430M-1-0-0-0	11267568
DM430M-1-0-1-0	11267569
DM430M-1-1-0-0	11267570
DM430M-1-1-1-0	11267571
DM430M-2-0-0-0	11267592
DM430M-2-0-1-0	11267593
DM430M-2-1-0-0	11267594
DM430M-2-1-1-0	11267595
DM430M-0-0-0-1	11267541
DM430M-0-0-1-1	11267602
DM430M-0-1-0-1	11267603
DM430M-0-1-1-1	11267604
DM430M-1-0-0-1	11267605
DM430M-1-0-1-1	11267591
DM430M-1-1-0-1	11267612
DM430M-1-1-1-1	11267574
DM430M-2-0-0-1	11267606
DM430M-2-0-1-1	11267607
DM430M-2-1-0-1	11267608
DM430M-2-1-1-1	11267609

D—Button Pads	Description
0	4 Buttons, 6 LEDs
1	Navigation buttons, 2 Dual-color LEDs

E—Application key (EIC Application)	Description
0	No Application Key
1	Application Key (EIC Application)

*Related product part numbers*

<b>DEUTSCH 12-pin Connector Kit (DTM06-12SA)</b>	10100944
<b>Mounting Bracket Kit</b>	11198661
<b>CG150-2 CAN/USB Gateway (Sold separately)</b>	11153051
<b>PLUS+1® GUIDE Professional</b>	11179523
<b>Cable, M12 8-Pin to USB Device</b>	11130518
<b>Cable, M12 8-Pin to Lead Wires</b>	11130713

**Model code**

A	B	C	D	E
DM430M				

**Model code key**

A—Model name	Description
DM430M	4.3" Color Graphical Display

B—Inputs/Outputs	Description
0	1 CAN Port, 4DIN/AIN, 2 MFIN
1	2 CAN Port, 2DIN/AIN, 2 MFIN
2	1 CAN Port, 2DIN/AIN, 2 MFIN, Sensor Power

C—M12 connector	Description
0	No USB Device, No RS232
1	USB Device, RS232

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