

## Data Sheet

# PLUS+1<sup>®</sup> HMI Peripherals

## HMR CAN Rotary Input Device

PLUS+1

### Mobile Machine Management

Danfoss HMI Peripherals are an expansion of the PLUS+1<sup>®</sup> family of mobile machine management products.

The HMR CAN Rotary Input Device brings screen navigation closer to the operator, allowing “blind operation” and minimizing the need to reach for buttons/dials/touch-screen on the display during operation. The back-lit buttons can be used as hot keys to quickly navigate to a screen or used for machine functions, while the indicator bars on each button provide optical feedback to the operator.

*Navigation graphics*



### Modern, Ergonomic and Rugged Design

The HMR has been optimized for ergonomic, five finger control. The seven large buttons are available with standard icons, or customizable to meet application needs. Each button features RGB LEDs for backlight and light bars that are controllable via CAN messaging, with adjustable light intensity. The rotary knob encompasses an eighth push button and includes RGB LED lighting at the base.

*Number graphics*



### Modern Industrial Design

The HMR features robust mechanical, electrical, and Ingress Protection specifications that meet the demands of mobile machine operation. It is suitable for installation in open and enclosed cabs.

### Features

- Seven large configurable push buttons
- Hall effect rotary dial, with 32 detents/revolution and additional push button inside
- Back-lit buttons with standard or customizable icons
- All LEDs are RGB: Buttons Backlights, Indicator Bar and Rotary Backlight
- PLUS+1<sup>®</sup> GUIDE configurable
- CAN J1939
- Rugged IP66 and IP67 ratings
- Integrated DEUTSCH connector
- CE compliant, E1 E-Mark (pending) and ROHS compliant
- Optional hand-rest (future development or customer-created for application needs)
- Button and Rotary Life: 1 Million Cycles

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

**HMR with DM430E, a typical application**



**Specifications**

*Characteristics*

<b>Processor</b>	ARM Cortex M3, 32 bit, 120 MHz
<b>RAM</b>	64 kB
<b>EEPROM</b>	32 kB
<b>Supply voltage</b>	9 to 36 V <sub>DC</sub>
<b>Connector</b>	DEUTSCH DT-4
<b>IP rating (with mating connector attached)</b>	IP66 and IP67
<b>Operating temperature</b>	-40°C to +85°C [-40°F to 185°F]
<b>Storage temperature</b>	-40°C to +85°C [-40°F to 185°F]
<b>Weight</b>	0.159 kg [0.351 lb]
<b>Vibration/Shock</b>	IEC 60068-2-64 (7.67g) /2-27 (50g)
<b>EMI/RFI rating</b>	100 V/M
<b>Humidity</b>	IEC 60068-2-78, 60068-2-30
<b>Transients</b>	ISO 7637/1, 2, 3
<b>Button Cycle Life</b>	1 Million Cycles
<b>Rotary Dial Cycle Life</b>	1 Million Cycles





**Model variants**

Part number	Order code	Description
11217428	HMR-111-00-1-0-0-0-0	HMR, No Graphics, LED Indicators
11202900	HMR-111-00-1-0-1-0-0	HMR, Number Graphics, LED Indicators
11202899	HMR-111-00-1-0-2-0-0	HMR, Navigation Graphics, LED Indicators
11217427	HMR-111-00-1-1-1-0-0	HMR, Number Graphics, LED Indicators, Danfoss Logo
11217426	HMR-111-00-1-1-2-0-0	HMR, Navigation Graphics, LED Indicators, Danfoss Logo

**Model code**

A			B			C	D	E	F	G	H
H	M	R									

**Model code key**

A—Model name	Description
HMR	HMR CAN Rotary Input Device, PLUS+1 <sup>®</sup> HMI Peripherals

B—LED lights	Description
111	Indicator bar, back-light, and knob LEDs (RGB)

C—PCBA / Special features	Description
00	HMR, version 0

D—Rotary knob configuration	Description
1	Standard ring-style knob

E—Knob logo	Description
0	No logo
1	Danfoss logo
2	Generic <b>Your Logo Here</b> logo
9	Custom logo

F—Button graphic configuration	Description
0	No graphics (blank)
1	Number graphics
2	Navigation graphics
8	ISO graphics
9	Custom graphics

G—Special features (software)	Description
0	No special software features
9	Custom configuration file

H—Hand-rest option	Description
0	No hand-rest
9	Custom hand-rest

**Related products**

4 pin mating connector	Part number
DEUTSCH 4 PIN Connector Kit	11028348

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