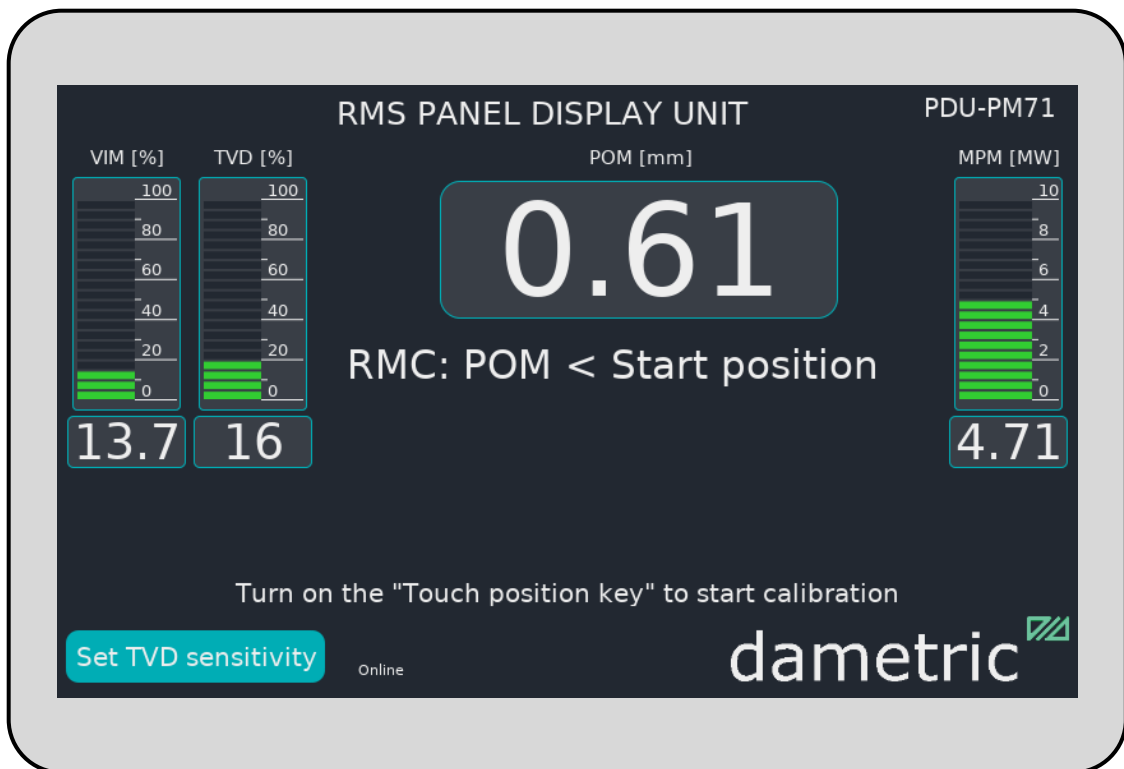




# PDU-PM71



## Panel Display Unit for the GMS-V1X type systems

### Manual

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**1 General**

The PDU-71 is a display unit used to reflect the basic data from a pulp refiner monitoring system, and to make it easier to perform an RMC calibration.

The display is used together with the BRM-DM1 in the GMS-VIX systems, without any gap measuring devices.

**2 Document revision**

May 15, 2020/BL Created.

June 15, 2020/SK Release version

Sept 8, 2020/JL Updated section 6.1 and added 6.3 FeedGuard

**3 Article number, Valmet**

*Unit* Valmet

PDU-PM71 VAL0424875

**4 Technical specification**

Display size: 7" LCD

Resolution: 800 × 480

Aspect ratio: 16:9

Contrast ratio: 500:1

Brightness: 400cd/m2

Touchscreen pressure-sensitive: Yes, Resistive Film Type

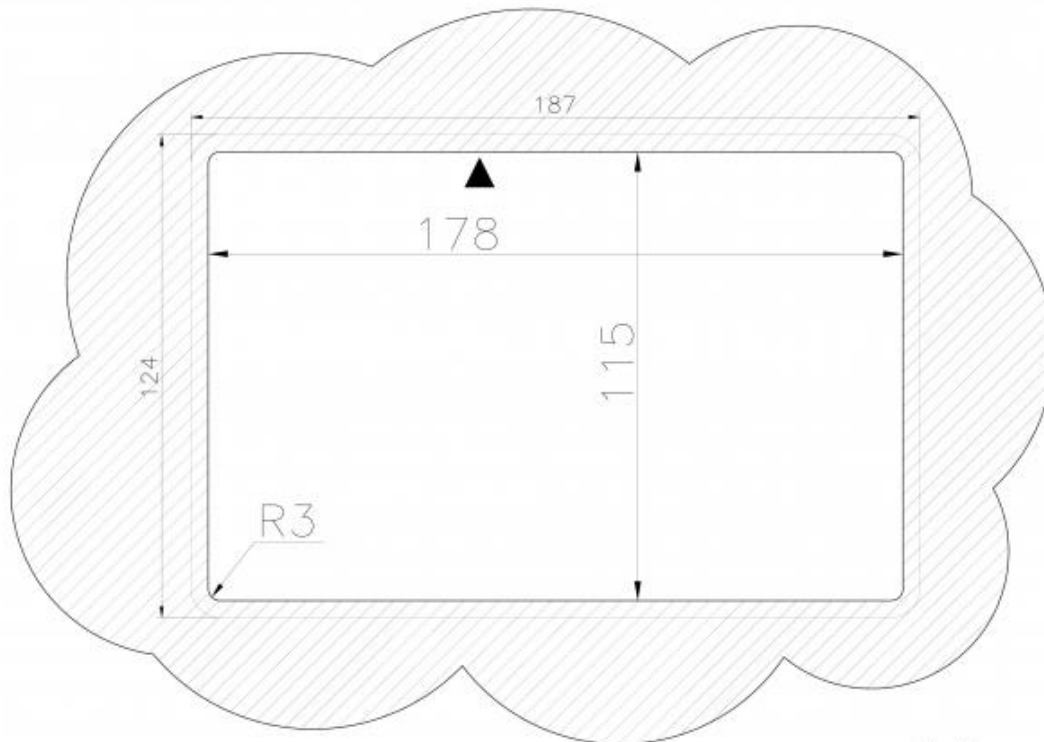
Supply voltage:	24 VDC, ± 10 %
Power consumption:	6W
Housing:	Flame retardant ABS
Enclosure / sealing class:	IP65 from the front
Mounting:	4 mounting brackets from the back side
Weight:	0.5 kg
Power connection:	Plinth
Memory:	1GB RAM and 8GB SD card preloaded with OS and display software.
Buttons	Software programmable
Ports	Ethernet port RJ45, 10/100 Mbps
	USB ports x 3 (USB2.0)
Operating temperature:	0°C ~ 70°C
Storage temperature: -	20°C ~ 80°C

**5 Installation**

**5.1 Mounting**

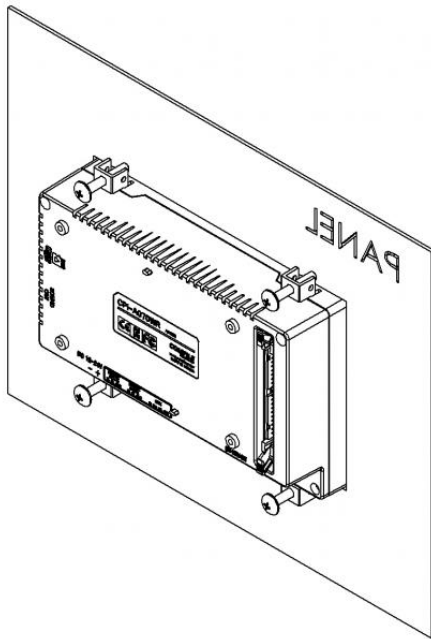
**5.1.1 Panel Cutout**

Recommended panel thickness: 1.6 to 5.0 (mm) [0.07 to 0.2 (in)].



Unit: mm

## 5.1.2 Mounting



## 5.2 Connection

DC/+	+24VDC
DC/-	0V
Ethernet	RJ45 connector

## 5.3 Configuration

### 5.3.1 PDU System type

The BRM-unit must be configured to use the correct display system type. From the BRM menu, set parameter [PDU type] to PDU-PM71.

### 5.3.2 Information bars

There are three display bars on the PDU showing VIM, TVD and MPM values. These can be turned on or off by enabling or disabling the corresponding function in the BRM-unit. The range of the MPM display bar can be configured by changing the [PDU MPM Range] parameter in the BRM-unit. When set to 0, the PDU will dynamically adjust the display bar to fit the value set in the [MPM Range] parameter.

### 5.3.3 RMC Calibration type

There are three types of RMC calibrations available: static, manual and automatic. Choose the desired type from the BRM-unit by setting the [RMA Touchp.func.] parameter.

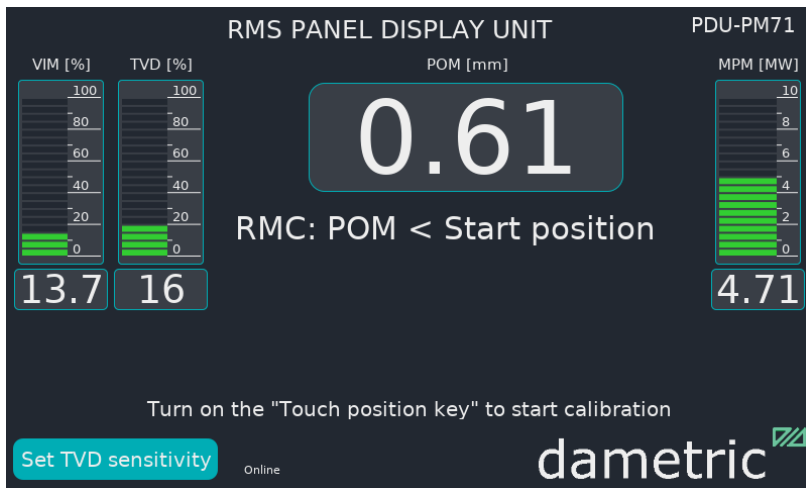
## 6 Operation

The PDU-panel will connect to the BRM-unit automatically, if the ethernet cable is connected to the BRM-unit, and if the BRM-unit is configured correctly as described in 'Configuration' above.

It will display the POM-value as well as up to three information bars with additional values, (configured as described in ‘Configuration’).

The PDU-panel works using two separate modes: production mode and RMC calibration mode, and is controlled by the physical “Touch position-switch”

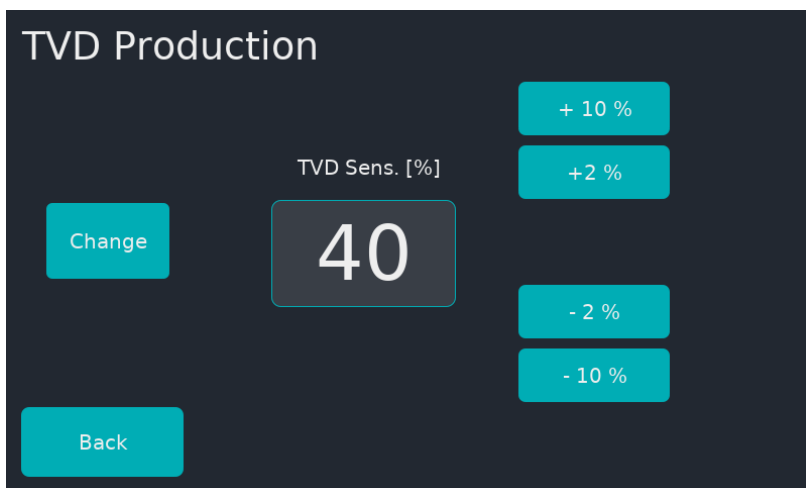
**6.1 Production mode**



The TVD production sensitivity can be changed by pressing the button “Set TVD sensitivity” from the main view while in production.

Press the Change-button to unlock buttons to increase or decrease the sensitivity. The value will be changed immediately when the buttons are pressed.

This option is only available if the BRM unit is configured to not use industrial bus communication i.e. [BRM Ind.bus type] is set to 0.

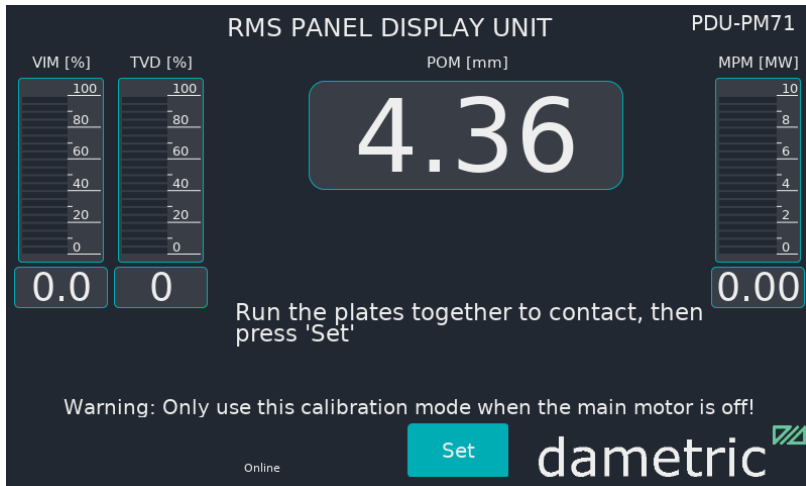


**6.2 RMC Calibration mode**

When the touch position key is activated, the PDU will enter the calibration mode.

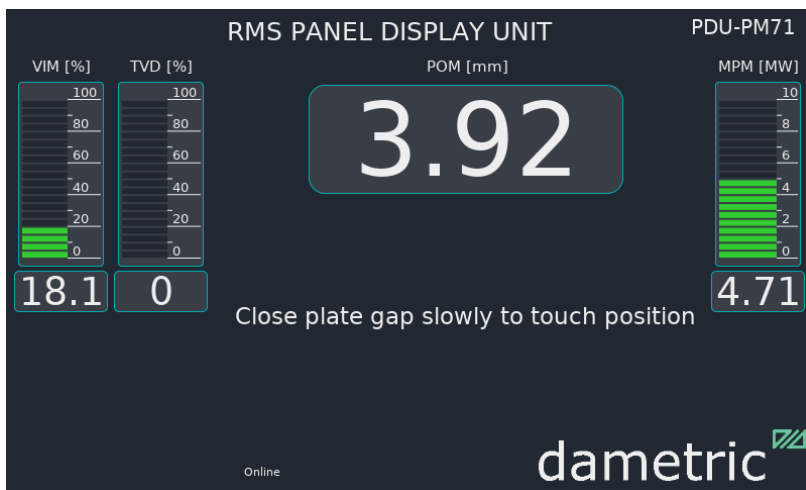
There are three different modes, and the one in use is controlled by the [RMA Touchp func.] parameter in the BRM-unit. Each mode is briefly described in the sections below. For further information regarding RMC calibration, see the *GMS-VIX0X RMC Function* manual.

6.2.1 Static calibration



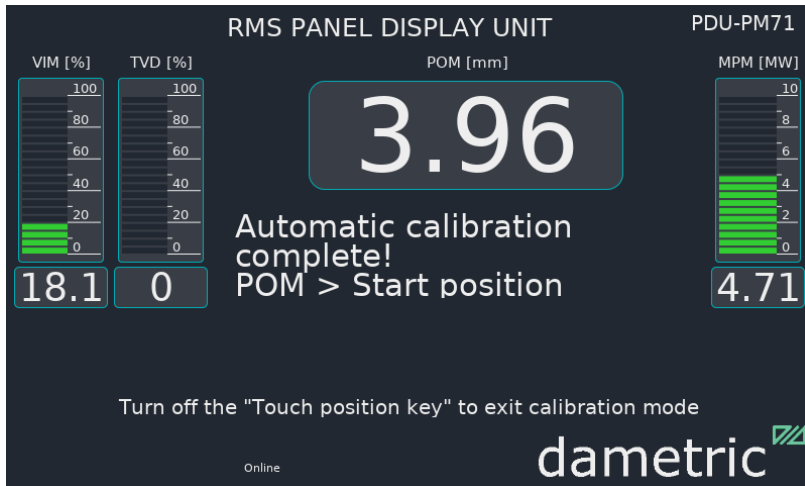
The static calibration means that the plates are brought together, with the main motor off, to a chosen hydraulic pressure. The operator then sets this position as the production position by pressing the “Set” button. The static calibration can be used as a pre-calibration which is used when doing a manual or automatic calibration at a later stage.

6.2.2 Manual calibration



During manual calibration, the operator runs the plates manually, first together to the touch position and then apart to the production start position. The main motor must be running to be able to measure the plate touch position by a vibration transducer (TVD). The level of TVD vibration required for a touch indication is configurable and can be set in the BRM unit, [RMA Touchp.level].

### 6.2.3 Automatic calibration



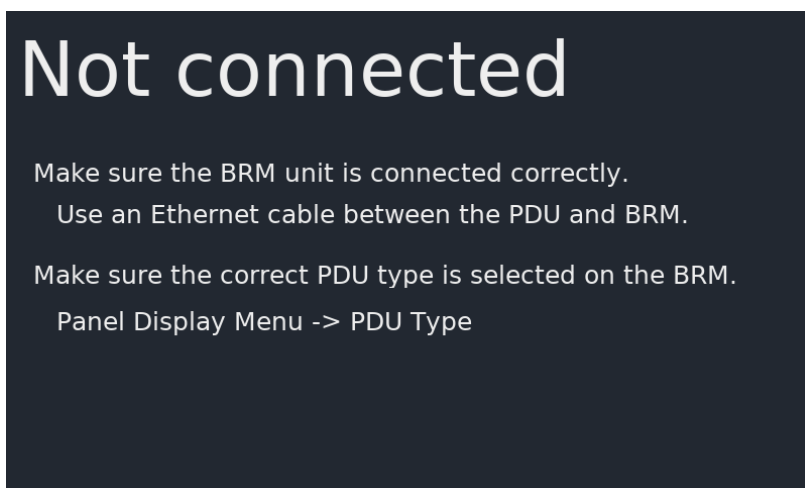
During automatic calibration, the operator runs the plates together to the touch position and stops when told to do so. The main motor must be running to be able to measure the plate touch position by a vibration transducer (TVD). The level of TVD vibration required for a touch indication is configurable and can be set in the BRM-unit, [RMA Touchp.level]. After the operator has stopped moving the plates, they are automatically backed off to the production start position.

### 6.3 FeedGuard

The PDU-panel will display current status of the FeedGuard function when in production mode. FeedGuard idle state or disabled state is not displayed.

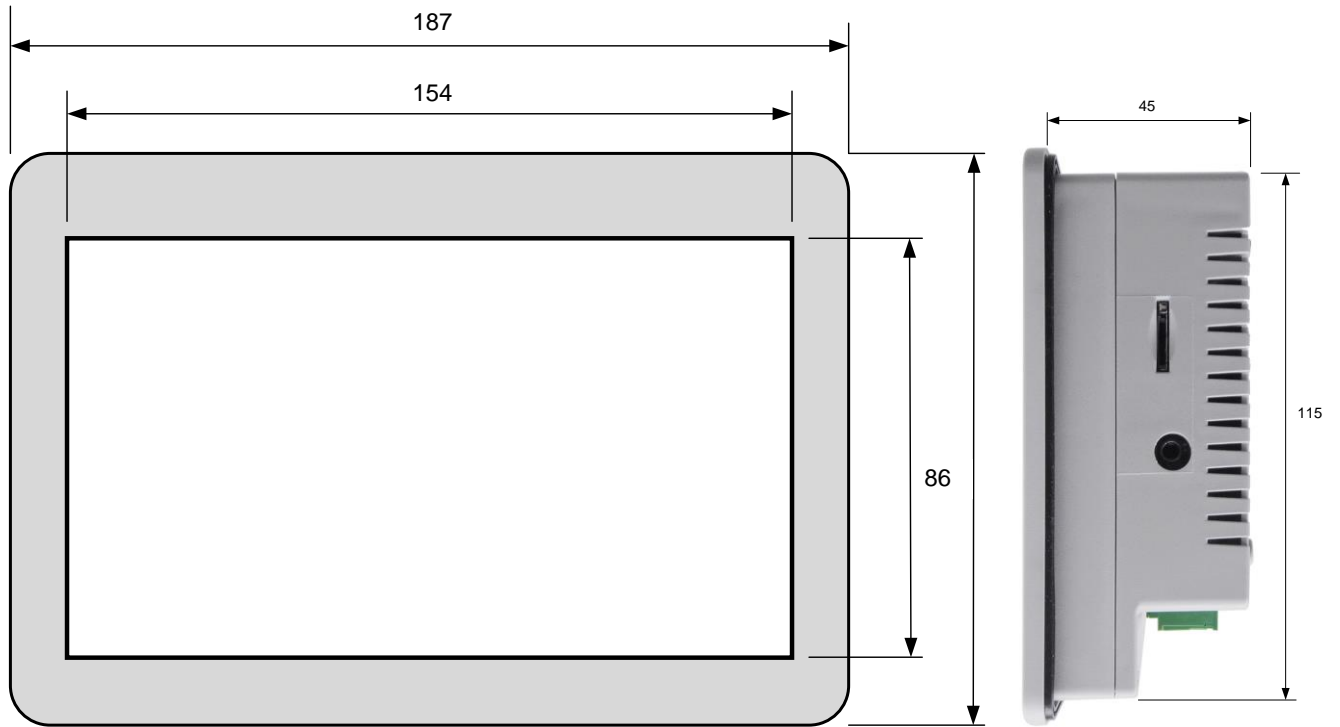
## 7 Troubleshooting

If the PDU doesn't have a connection with the BRM-unit, the PDU will put itself in a "N/C" state.



As soon as the cable connection is established, and when the BRM-unit is properly configured, the PDU-unit will automatically navigate to the main view.

8 Outline



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