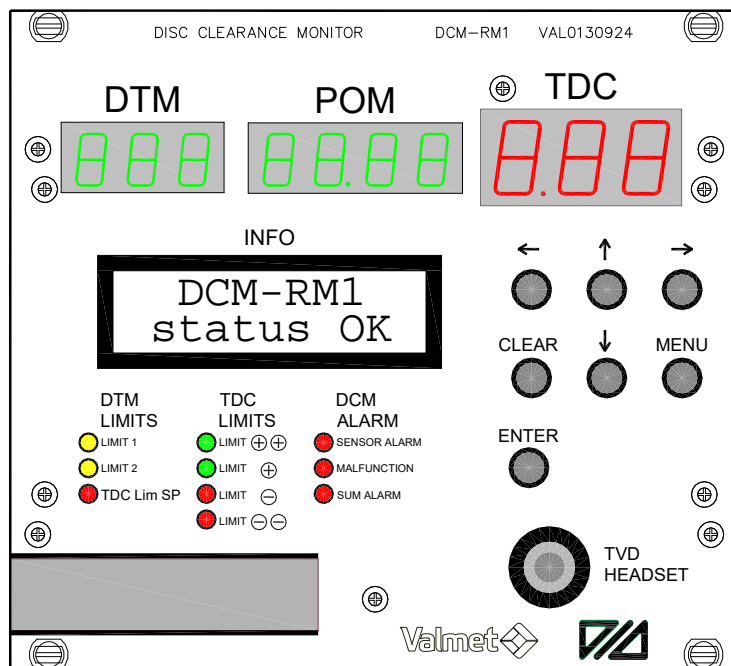




DCM-RM1

VAL0130924 / SKC7322695

DISC CLEARANCE MONITOR USER'S MANUAL



1 GENERAL

The DCM-RM1 is a measuring module for the RMS-RS1 measuring system.

This unit includes measuring functions for true disc clearance and disc temperature and also operates as a service unit for the other measuring modules in the rack. The unit includes displays for TDC (true disc clearance) and DTM (disc temperature monitor) and the external POM unit (rotor position).

To set parameters and alarm limits, a push switch and a 2-row LCD are used.

TDC calibration is performed with internal push buttons or via digital input signals (24 VDC).

DTM calibration is performed with internal push buttons.

Digital outputs (24 VDC) supply an external relay card for galvanic isolation.

The software supports TDC calibration with automatic reading of the POM (rotor position) during touch point measurement to aid the operator.

For sensor calibration and alarm limits adjustment, refer to the calibration manual, KAL-RS1.

For parameter programming, refer to the programming manual, PRO-RS1.

2 REVISIONS

- Jan. 20, 2010. Alarm limit DTM-3 has been removed for the addition of a 5th TDC limit. DCM-RM1 with software version 1.63 and later has this new feature.
- June 24, 2014 Added FeedGuard supervision and the DXM-DM1 unit.
DCM-RM1 with software 1.70 or later.
- Oct. 8, 2014 Updated DCM-RM1 to 1.7: 3-point measurement of the FG-supervision.

3 TECHNICAL DATA

Supply voltage: 24 VDC, $\pm 10\%$

Power consumption: Max. 1.5 A

Module size: Height=130 mm (3 HE), Width=142 mm (28 TE), Depth=220 mm

Panel indicators: TDC, red 7-segment displays, three 14 mm high digits
DTM, green 7-segment displays, three 9 mm high digits
POM, green 7-segment displays, four 9 mm high digits
Yellow, green and red LEDs for alarm limit outputs

Digital outputs: Voltage: 24 VDC, type: PNP output from +24 V system voltage
Load: max. 50 mA

TDC Limit ++, Limit +, Limit SP, Limit -, Limit --:

The LED is off and the digital output is high when the disc clearance is greater than the set limit

DTM Limit 1, Limit 2:

The LED is off and the digital output is high when the temperature is lower than the set limit

SENSOR ALARM: The LED is lit and the digital output is low when the TDC sensor alarm is active

MALFUNCTION: The LED is lit and the digital output is low in case of DCM malfunction

SUM ALARM: The LED is lit and the digital output is low in case of external RMS unit malfunction

Panel switch: Seven self-returning push buttons for parameter and alarm limit settings

Sensor: TDC sensor with temperature measurement.

Analogue output 1, TDC: Galvanically isolated current output, 4-20 mA, $\pm 0.5\%$, 0-800 Ω load,

500 V isolation voltage
AO+DCA Analogue +
AO-DCA Analogue -
Analogue output 2, DTM: Galvanically isolated current output, 4-20 mA, $\pm 0.5\%$, 0-800 Ω load,
500V isolation voltage
AO +DTM Analogue +
AO -DTM Analogue -
RMS interface: Yes
Interface: RS-232 for program upgrades
CAN for communication with the RCS (Refiner Control System)

4 CONTACT

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