

SKF Alarm and display module (CMPT DCL)

for machinery fault detection

The SKF CMPT DCL is a digital alarm and display module. It is used as part of a machinery fault detection system to monitor analog signals from the SKF CMPT CTU vibration transmitter, various thermocouples and Resistive Temperature Detectors (RTD).

The SKF CMPT DCL is a single channel module with digital display and alarm function with LED event lamp and relay contacts. The front panel digital display gives the user a visual indication of the monitored signal. The display can be scaled to indicate vibration (gE, g, mm/s, inch/s), temperature (°C, °F), etc.

The SKF CMPT DCL has programmable alarm and relay functions for remote control/indication of an alarm event and has a variable time delay. The SKF CMPT DCL can indicate High, Low, High-Low, and various other alarm limits. The front panel event lamp illuminates (red) to indicate alarm. The relay contacts are programmable with various options (Normally Open/Normally Close, Non-latching/latching).

The SKF CMPT DCL provides a 4 to 20 mA output signal proportional to the scaled analog input signal.

Two SKF CMPT DCL modules are needed for standalone monitoring of a SKF CMPT CTU vibration transmitter (one each for vibration and temperature). One SKF CMPT CTU and two SKF CMPT DCL modules are together a user-friendly fault



detection system of machinery vibration and temperature. The SKF CMPT CTU transmitter can also be connected directly to the PLC/DCS automation system without the SKF CMPT DCL modules.

Features

- *Monitors various inputs*
 - Current (mA)
 - DC voltage (i.e. vibration or temperature signals from SKF CMPT CTU)
 - Thermocouple
 - RTD
- *Digital LED display of monitored signals*



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Features *(continued)*

- Programmable alarm function (one channel)
 - Alarm on High, Low or High-Low signal input, etc.
 - Front panel LED event lamp
 - Relay contacts
 - Normally Open or Normally Closed
 - Latching or Non-latching
 - Time delay (0 to 9 999 seconds)
- Analog output signal (4 to 20 mA)
- Front panel user configurable
 - Input type
 - Display scaling
 - Alarm function
 - Analog output scaling
- No need for voltmeter and screw driver to set alarm function
- 35 mm DIN rail mounted

Specifications

Power requirements

- **Supply Voltage:** +24 V AC/DC (+20 to +28 V AC/DC)
- **Supply current:** 200 mA, maximum
- **Power:** 6 W, maximum

Sensor input

- **Current**Ⓢ: 4 to 20 mA, 0 to 20 mA (Input impedance: 50 Ω)
- **Voltage:** 0 to 10 V DC; 0 to 1 V DC; 0 to 5 V DC; 1 to 5 V DC (Input impedance >100 k Ω)
- **Thermocouple:** K, J, R, S, B, E, T, N, PL-II, C (W/Re5-26) (100 Ω wire resistance or less)
- **RTD:** Pt100, JPt100 three-wire system (10 Ω or less per wire)

Ⓢ 50 Ω shunt resistor required at input terminals (not included)

Alarm function

- LED event lamp on front display (red)
- Relay contact: 48 V DC / AC; 1 A maximum
- Programmable:
 - Alarm setting value

- Optional alarm on High limit, Low limit, High-Low limit, High-Low range limit
- Optional Normally Open or Normally Closed relay contacts
- Optional Latching or Non-latching relay contacts
- Variable time delay (0 to 9 999 seconds)

Output

- **Output signal:** 4 to 20 mA, proportional to scaled input

Digital display

- **LED:** Four red; 7.4 mm (height) x 4.0 mm (width)
- **Scaleable for:**
 - Vibration (gE, g, mm/s, inch/s),
 - Temperature ($^{\circ}$ C, $^{\circ}$ F)
 - etc.

Environmental

Operating temperature: -10 to +50 $^{\circ}$ C (+14 to +122 $^{\circ}$ F)

Storage temperature: -25 to +65 $^{\circ}$ C (-13 to +149 $^{\circ}$ F)

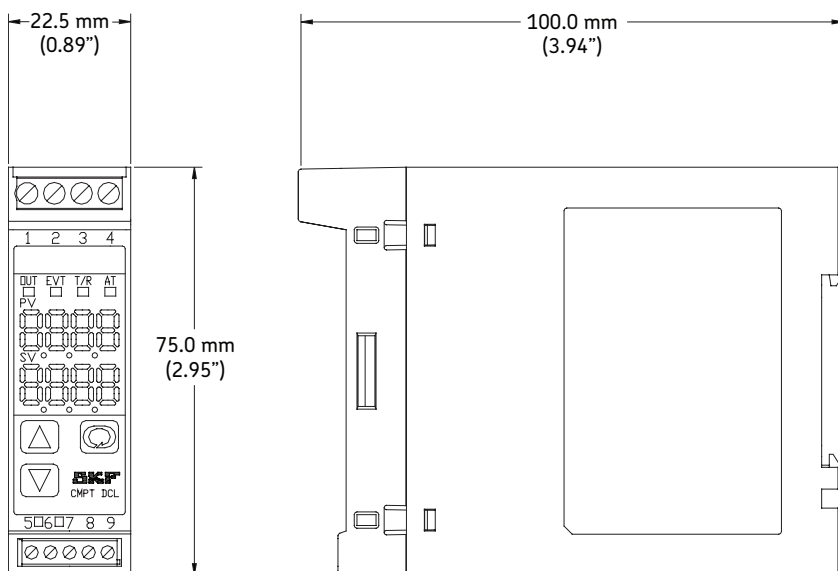
Humidity: 85 % maximum

IP rating: 30

Mechanical

- **Weight:** 0.12 kg (0.27 lbs)
- **Enclosure:** Polyethylene and PET resin
- **Color:** Gray with green terminals
- **Connectors:**
 - One 4-pole screw clamp
 - One 5-pole screw clamp
- **Wiring:**
 - Power and analog output 0.2 to 1.5 mm diameter (0.008 to 0.060 inches)
 - Input and relay out 0.2 to 0.5 mm diameter (0.008 to 0.030 inches)
- **Mounting:** 35 mm DIN-rail type EN50022
- **Dimensions H x W x D:** 75.0 x 22.5 x 100.0 mm (2.95 x 0.89 x 3.94 inches)
- **Approval:** CE

See the SKF CMPT DCL Installation Manual for programming information and additional details for the interface with sensors, SKF CMPT CTU, power supply, etc.



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