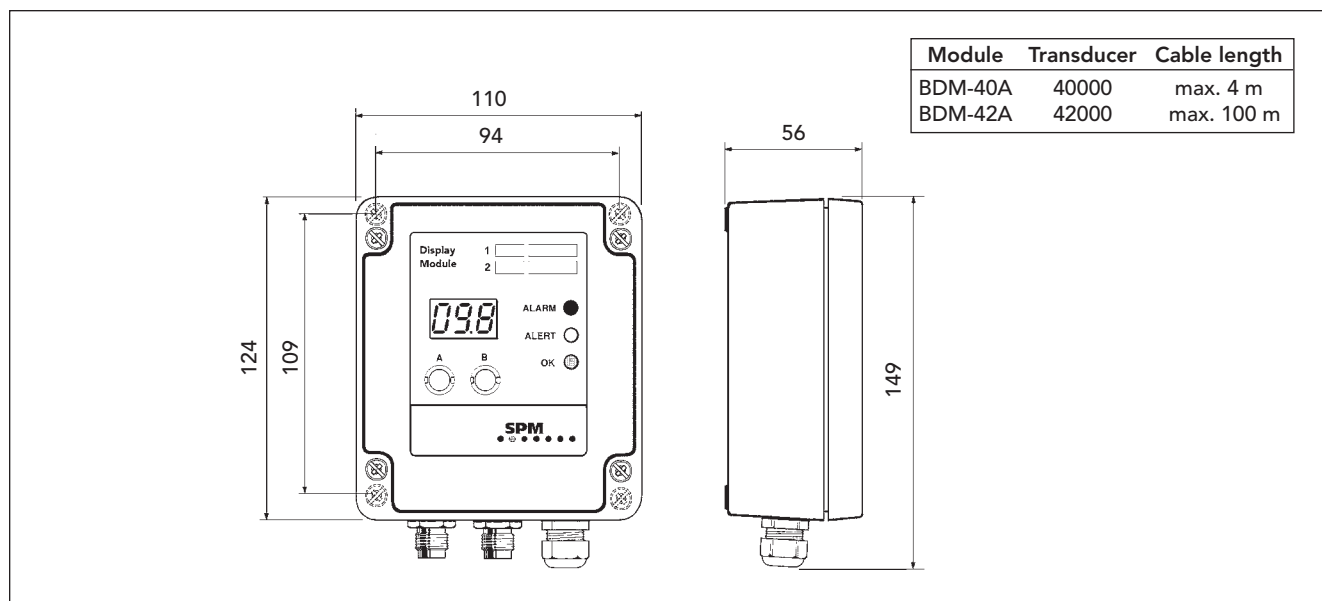


# CMM System - Bearing Display Module BDM



Bearing Display Modules BDM have two functions:

- they measure bearing condition (unnormalized maximum value) on two channels and convert the result into an analog 4-20 mA signal which can be sent to a PLC.
- they display analog 4-20 mA signals as a 3 digit measured value. All units have two inputs for analog 4-20 mA, connected to the value display, the condition display and the alarm relays. The analog signal normally comes from the module's measuring channels, but can even come from external sources.

There are two versions:

BDM-40A for shock pulse transducer type 40000. The coaxial cable between transducer and module is max. 4 m.

BDM-42A for shock pulse transducer type 42000. The coaxial cable between transducer and module is max. 100 m.

The measuring range for both channels can be jumper set to either 0 to 80 or 20 to 100 dBsv. The modules are wall mounted and supplied with 12 to 24 VDC. A transducer line fault is indicated by an output of  $\leq 1$  mA. This output can be disconnected by a jumper setting.

The display circuit acts as a programmable ampere meter with two channels. Using two push-buttons, one can select preprogrammed measuring units and ranges from a list and set two alarm levels (with alarm delay) for each channel. These are connected to the condition display (green-yellow-red) and to two relay outputs.

The relays can be controlled by either display channel. In one channel mode, both relays are slaved to a single display channel and provide relay switching at two levels (ALERT and ALARM). In two channel mode, each display channel uses one relay which switches at the ALARM level.

## Technical data

Measuring method:	SPM dBm, unnormalized maximum value
Measuring channels:	2, multiplexing
Measuring range 1:	0 to 80 dBsv (5 dB /mA, 0.2mA/dB)
Measuring range 2:	20 to 100 dBsv (6.25 dB /mA, 0.16 mA/dB)
Measuring time:	approx. 1 second per channel
Transducer type:	SPM 40000 (BDM-40A), SPM 42000 (BDM-42A)
Transducer cable:	coaxial cable, SPM 90005-L, or 90267-L (L = length in m)
Analog output:	4 to 20 mA, no galvanic separation
Fault indication:	$\leq 1$ mA out = interrupted or faulty transducer line
Loop resistance:	100 $\Omega$ . Higher resistance will reduce signal accuracy (max. 400 $\Omega$ at 12 V, 800 $\Omega$ at 24 V)
Power supply:	12 to 24V DC ( $\pm 10\%$ , tested accord- ing to EN 50082-2)
Supply current:	max 0.15 A
Cable inlet:	IP 65 at $\varnothing$ 5.5 to 10 mm
Input connectors:	silver plated brass, 10 to 15 $\mu$
Housing:	polycarbonate, IP65
Temperature range:	0° to 55° C
Vibration exposure:	max 5 mm/s RMS
Dimensions:	110 x 149 x 56 mm
Mounting screws:	4 screws, $\varnothing$ 4 mm, spacing 109x94 mm
Weight:	400 g
Signal to display:	4 to 20 mA, 2 channels
Relays:	2, max. 24 V/100 mA
Value display:	3 digits LED
Condition display:	green, yellow, and red LED
Alarm limits:	2 per input channel, set with push- buttons
Push-buttons:	2, for display control, alarm limit and alarm delay setting

