

The DMC-SX module represents the latest generation of Digital Magnetic Compass from Leica Geosystems. Significantly smaller and lighter, more rugged, and with better performance than the previous DMC-1S, the LEICA DMC-SX is designed to deliver azimuth, elevation and bank information in digital format to host systems such as:

- Handheld observation instruments, binoculars and rangefinders
- Tripod-mounted goniometers, angulation heads, cameras and radars
- Fire control systems for small arms and crew served weapons
- Navigation systems for land vehicles

***Great performance,
minimum weight and size***

The DMC-SX incorporates three magnetic field sensors and two inclination sensors in a package only 20% in volume and 25% in weight compared to the DMC-1S. The same 3-D concept ensures equally accurate azimuth and a much wider operational elevation and bank range of up to 80°. Measurement data output rate has been increased to 30 Hz. The DMC-SX module weighs less than 28 g (less than 1 ounce), and measures a mere 33 x 31 x 13.5 mm.



Application support

Leica Geosystems has an excellent reputation in systems engineering and application support to guarantee maximum probability of successfully integrating compass technology into a system. A substantial body of experience on the intricacies of magnetic effects and appropriate design guidelines can be provided to our customers.

Vehicle applications

The Leica VDF Vehicle Direction Finder is a heading reference system for vehicles, the Leica ANAV Autonomous Navigation module is a dead reckoning navigation system for vehicles. Both VDF and ANAV combine the DMC with vehicle-specific software and appropriate mechanical and electrical interfaces to facilitate vehicle integration and for ease of use.

LEICA DMC-SX Technical Data

The following table briefly summarises the generic characteristics of the DMC-SX. Comprehensive and binding specifications will be established in the course of detailed analysis and discussions between your project engineers and our specialists.

	Range	Accuracy (2σ)
Azimuth	360°, 6400 mils	0.5°, 10 mils
Elevation	-30° to +30°, -530 mils to +530 mils -45° to +45°, -800 mils to +800 mils	0.15°, 3 mils 0.20°, 4 mils
Bank	-80° to +80°, -1422 mils to +1422 mils -30° to +30°, -530 mils to +530 mils -45° to +45°, -800 mils to +800 mils -80° to +80°, -1422 mils to +1422 mils	on request 0.15°, 3 mils 0.20°, 4 mils on request
Measurement rate	up to 30 Hz	
3 inclination sensors	optional tilt sensor range $\pm 180^\circ$ and/or accelerometer range 2 g in 3 directions	
Temperature indicator	-56°C to +85°C	2°C
Magnetometer	$\pm 100 \mu\text{T}$	resolution 0.01 μT

Mechanical parameters

Weight	< 28 grams (< 1 ounce)
Dimensions	31 x 33 x 13.5 mm

Electrical parameters

Power supply	5 V DC, $\pm 5\%$
Consumption	250 mW average
Interface connector	four pins
Data interface	RS232
Software interface	fully programmable via RS232

Environmental specifications

Operating temperature	-32°C to +55°C
Storage temperature	-55°C to +85°C
Shock	50 g / 11 msec., 1000 g* / 0.5 msec., half sine *ruggedized version: 2000 g
Vibration	random, 5 Hz to 2000 Hz, 0.04 g / 2 Hz



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