

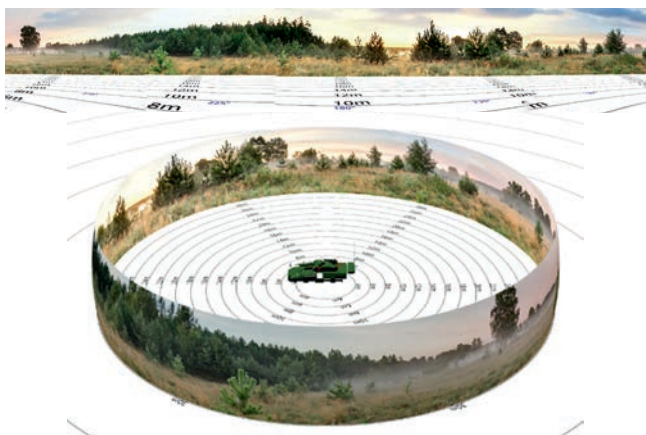


SURVEILLANCE CAMERA MODULE (SCM)

KM8000A101

SCM180 is the vehicle mounted version of Rheinmetall's Surveillance Camera Module family.

In combat environments, military personnel and vehicles are exposed to a constant threat through enemy fire. Therefore, a Situational Awareness System which allows for driver vision and 360° surveillance vision without exposing personnel to enemy fire, is essential. The vehicle crew can get separate day and night vision as well as a fused image. This allows the driver or commander a situational awareness without looking directly out of the vehicle hatch. Therefore, the system ensures that the crew can remain in the protected area of the vehicle.



HOW IT WORKS

The Surveillance Camera Module (SCM180) supplies image data to external displays. The main components of the SCM180 are three thermal and daylight cameras, as well as the associated signal processing and signal conditioning.

The SCM180 can be extended by further SCM60-II or SCM180 modules to provide a 360° visibility. In combination with the Rheinmetall Generic Modular Computing Unit and associated displays the individual images can be displayed as an borderless 360° panorama. On request, a fused infrared and daylight vision image can also be provided, which significantly improves target recognition for the operator.

Operation of the SCM180 is simple and intuitive. Minimal training is needed in order for the user to operate the system. The SCM180 is designed for multiple tracked and wheeled vehicle platforms.

TECHNICAL DATA

Parameter	Specification
Daysight camera	
Wavelength	400 – 700 nm
Resolution	1600 x 1200 px
Frame rate	typ. 60 Hz
FoV (horizontal)	180°
Target detection range	>550 m ¹⁾
Thermal imager	
Wavelength	8 – 14 μm
Resolution	640 x 480 px
Frame rate	typ. 60 Hz
FoV (horizontal)	180°
Target detection range	>350 m ¹⁾

Interfaces

Voltage range	16 V – 32 VDC (nominal 28 VDC)
Power consumption	<100 W ²⁾
External sensor interface	1 G Ethernet
External sensor power supply	28 VDC
Communication	CAN, Ethernet 1000Base-SX, 3G-SDI
Video compression	H.264 and YCbCr 4:2:2

Physical characteristics

Colour	RAL6031 Bronze green
Weight	<18 kg
Dimensions (LxWxH)	<307 mm x 655 mm x 114 mm

Qualification

Temperature (storage)	-46°C to +69°C ³⁾
Temperature (operating)	-32°C to +44°C ³⁾
Water protection	IP68 ⁴⁾

¹⁾ acc. to Johnson-Criteria 1-3-6 line pairs with TRM4v3 analytical model of the Fraunhofer Institute (Target: Height 1.8 m x Width 0.5 m)

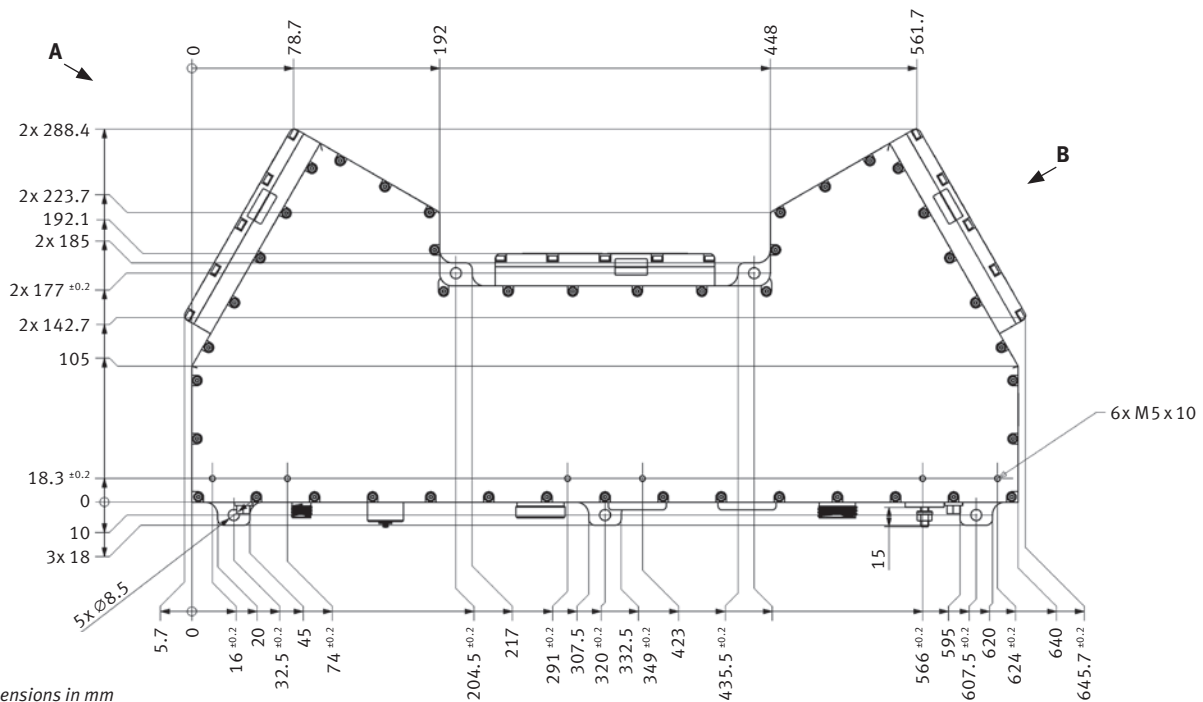
²⁾ normal operation without external sensor

³⁾ acc. to MIL-STD-810E

⁴⁾ acc. to IEC 60529



Dimensions in mm



Dimensions in mm

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