

# X LNB 7.25 - 8.50 GHz 2 Band

## Key features



- 7.25-7.75 GHz and 7.75-8.50 GHz
- External reference with fallback to Internal reference
- Alarm, Monitoring & Control as standard



### Description

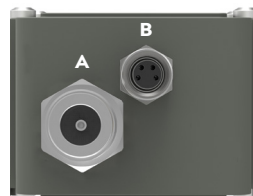
Swedish Microwave is a premium manufacturer of LNB and RF Distribution Systems. All in house and made in Sweden, since 1986.



Optional enclosure fixing points

The Swedish Microwave X-band LNB is based on a well proven technology platform. It's designed and optimized to cover the X-Band with two switchable bands.

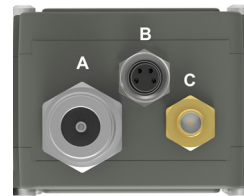
### LNB connectors (standard)



#### Connector A (standard)

Type: N-female, or SMA-female  
Functions: L-Band out, DC in, External ref. in

### LNB connectors (optional)



#### Connector C (optional)

Type: SMA-female only  
Functions: Ext. ref. in and/or DC input

### Connector B (standard)



- 1 = Alarm open collector (max. 200 mA) or optionally DC input.
- 2 = A pos+ RS485
- 3 = B neg- RS485
- 4 = Common (GND)
- 5 = Shield



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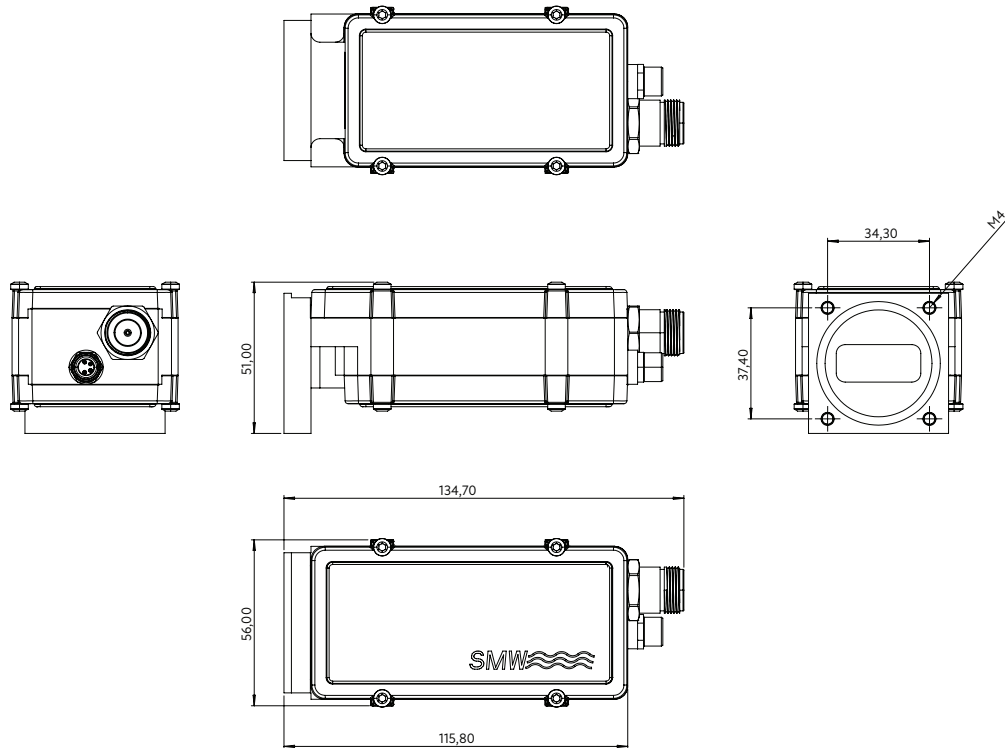
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## Technical specifications

|          |                         |                                                                                                                                                                                                                                                          |
|----------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|          | <b>MODEL/LO</b>         | <b>6.30/6.80</b>                                                                                                                                                                                                                                         |
|          | Input frequencies       | Band 1: 7.25 - 7.75 GHz, Band 2: 7.75-8.50 GHz                                                                                                                                                                                                           |
|          | Input                   | WR 112 / R 84. Flange PBR 84                                                                                                                                                                                                                             |
| INPUT    | DC Input                | nom +12 to +28 V                                                                                                                                                                                                                                         |
|          | Band switching          | Voltage and/ or 22 kHz tone                                                                                                                                                                                                                              |
|          | Power consumption       | 3W typ.                                                                                                                                                                                                                                                  |
|          | Input max power         | 0 dBm, survival level in the range 6.2-9.6                                                                                                                                                                                                               |
|          | Input VSWR              | 2:1 max.                                                                                                                                                                                                                                                 |
| INTERNAL | LO ref.                 | External 10 MHz or 100 MHz ref. with fallback to Internal $\pm 25$ ppm -40 to +80°C. Note! Different models for 10 MHz and 100 MHz ext ref.                                                                                                              |
|          | External LO ref.        | Sine Wave, Level +5dBm, 0 to +10 dBm. Supplied through output connector.                                                                                                                                                                                 |
|          | LO Leakage              | -60 dBm max. @ waveguide input, -40dBm max. @ IF output                                                                                                                                                                                                  |
|          | Gain                    | 60 dB typ                                                                                                                                                                                                                                                |
|          | Gain variation over 24h | $\pm 0.1$ dB @ 23°C                                                                                                                                                                                                                                      |
|          | Flatness                | $\pm 0.4$ dB within 30 MHz, $\pm 2$ dB max. over band                                                                                                                                                                                                    |
|          | Noise figure @ 23°C     | 0.80 dB / 58 K max., 0.65 dB / 42 K typ.                                                                                                                                                                                                                 |
|          | Phase Noise             | -45 dBc @ 10 Hz -75 dBc @ 100 Hz -95 dBc @ 1 kHz -100 dBc @ 10 kHz -105 dBc @ 100 kHz -122 dBc @ $\geq 1$ MHz -122 dBc @ $\geq 10$ MHz                                                                                                                   |
|          | Spuriouses in band      | -65 dBc max (800-2200 MHz incl 2nd harmonic) @ -10dBm output level                                                                                                                                                                                       |
|          | Spuriouses out of band  | -40 dBm max (100 kHz-949 MHz and 2000-30000 MHz) @ -10dBm output level                                                                                                                                                                                   |
|          | Group delay             | $\pm 1$ ns max.                                                                                                                                                                                                                                          |
|          | Image Rejection         | 35 dB min.                                                                                                                                                                                                                                               |
|          | IF output               | Band 1: 950-1450 MHz, Band 2: 950-1700 MHz                                                                                                                                                                                                               |
| OUTPUT   | Output P1dB             | 15 dBm min                                                                                                                                                                                                                                               |
|          | Output IP3 60 dB gain   | 26 dBm min                                                                                                                                                                                                                                               |
|          | Output VSWR             | 1.5:1 max.                                                                                                                                                                                                                                               |
|          | Output Connector        | N female 50 $\Omega$ , optional SMA female 50 $\Omega$                                                                                                                                                                                                   |
| GENERAL  | Dimensions              | 135 x 56 x 51 mm (N-connector) 128 x 56 x 51 mm (SMA-connector)                                                                                                                                                                                          |
|          | Weight                  | 381 g (N-connector), 375 g (SMA-connector)                                                                                                                                                                                                               |
|          | Alarm                   | Sum alarm, set via M&C to alarm in any combination of: LNA failure, Total current, LO lock (Ext/Int/n/a), signal power High/Low, supply voltage High/Low. Open collector 3.3 to 28 V, max. 200 mA (pullup 10 k Ohm at host side), pin 1 in M8 connector. |
|          | M&C                     | Via MODBUS RTU RS485 electrical interface, see document <a href="#">Monitoring and Control technical interface</a> for details.<br>NOTE! Mates with M8 male connector/Cable, use only shielded CAT 5 cables                                              |
|          | MTBF                    | MTBF as per MIL-HDBK-217F Notice 2: Environmental Condition GF (Ground Fixed): >690000 hours, Environmental Condition A1C (Airborne, Inhabited, Cargo): >360000 hours, Quality level: Commercial, Temp used for MTBF calculation: +35 C Ambient          |
|          | Temperature range       | Storage and operating: -40 to +80°C, -40 to +176° F                                                                                                                                                                                                      |
|          | Miscellaneous           | Enclosed conductive O-ring, mounting screws (M4 x 10) 4 pcs                                                                                                                                                                                              |
| OPTIONS  | Options                 | -Separate SMA connector for DC input and/or External reference<br>-Customized gain<br>-CPR 112 G flange adaptor<br>-Pressurizable waveguide 0.1 bar max.<br>-Band switching via RS485 Modbus RTU<br>-Fixing points                                       |

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## Technical Drawing



With CPR112G adapter

