

Herstellereklärung Manufacturer's Declaration of Conformity

Hirschmann Automation and Control GmbH

**Stuttgarter Straße 45-51
D-72654 Neckartenzlingen, Germany**

declares in sole responsibility, that the product(s)

Industrial Cellular Router

(Product description)

OWL LTE M12, 942 147-002

(Type, reference number)

has been designed and manufactured in accordance with the following standards

EN 50155:2017 – Railway Applications – Environmental conditions

<i>Test description</i>	EN 50155 Section	Test Reference	Requirement
<i>Operating temperature</i>	4.3.2	EN 60068-2-1, Ad EN 60068-2-2, Bd	Class OT4 -40 °C to +70 °C in rack
<i>Start-up temperature</i>	4.3.3		Class ST1 OT over +15 K, 10 min.
<i>Power supply from battery</i>	5.1.1	-	24 V, 36 V,
<i>Over voltage test</i>	13.4.3.2	-	1.4 x UN during 1.0 s
<i>Switching between power supplies</i>	13.4.3.3	-	Class C1 0.6 x UN during 100 m
<i>Power supply interrupts</i>	13.4.3.4	-	Class S2 <= 10 ms
<i>Low air temperature</i>	13.4.4	EN 60068-2-1	Test Ad, -40 °C
<i>High air temperature</i>	13.4.5	EN 60068-2-2	Test Be, +70 °C in rack Cycle B: T start-up +15 K, 10 min.
<i>Humidity</i>	13.4.7	EN 60068-2-30	Test Db, 95 %
<i>Low Temperature storage</i>	13.4.8	EN 60068-2-1	Test Ab, -40 °C
<i>Electromagnetic compatibility</i>	13.4.8	EN 50121-3-2:2016	


Test description	EN 50155 Section	Test Reference	Requirement
Dielectric test	13.4.9	-	U _{rated} < 72 VDC: 750 Vdc Transient protection allows a max DC-Offset ±(60 V-U _{rated})
Insulation test	13.4.9	-	Test voltage: 500 VDC Insulation resistance: > 20 MΩ *1)
Vibration test	13.4.11	IEC 61373	Category 1, Class B broadband noise 5-150 Hz <i>vertical axis:</i> 1,0 m/s ² , life test: 5,72 m/s ² <i>longitudinal / transverse axis:</i> 0,7 m/s ² , life test: 3,96 m/s ²
Shock	13.4.11	IEC 61373	Category 1, Class B <i>vertical axis:</i> 30 m/s ² , 30 ms <i>longitudinal / transverse axis:</i> 50 m/s ² , 30 ms

*1) Falls in case of high-impedance bleeder resistors between adjacent equipotential areas or between an equipotential area and functional earth, the effect of these resistors shall be deducted. (prEN50155:2019)

EN 50121-3-2: 2016 – Railway Applications – EMC – Rolling stock

Test description	EN 50121-3-2 Section	Test Reference	Requirement
Radiated electromagnetic field	table 5.1 table 5.2	IEC 61000-4-3 IEC 61000-4-3	80...1000 MHz, 20 V/m 1400...2000 MHz, 10 V/m 2000...2700 MHz, 5 V/m 5100...6000 MHz, 3 V/m
Electrostatic discharge	table 5.3	IEC 61000-4-2	±6 kV contact discharge ±8 kV air discharge
Conducted disturbances	table 3.1/ 4.1	IEC 61000-4-6	Signal ports, power ports: 10 V
Fast transient / burst	table 3.2/ 4.2	IEC 61000-4-4	Signal ports, power ports: ±2 kV
Surges 1,2/50µs	table 3.3	IEC 61000-4-5	Signal ports, power ports: CM ±2 kV DM ±1 kV
Radiated Emission	7	EN 61000-6-4	30...230 MHz: 40 dBµV/m (10m) 230...1000 MHz: 47 dBµV/m (10m) 1...3 GHz: 76 dBµV/m peak (3m) 56 dBµV/m av. (3m) 3...6 GHz: 80 dBµV/m peak (3m) 60 dBµV/m av. (3m)
Conducted Emission	table 2.1	EN 55016-2-1	AC or DC power ports: 150...500 kHz: 99 dBµV qp. 500 kHz...30 MHz: 93 dBµV qp.


(Brian Lieser
Vice President & General Manager
Industrial Network Solutions)


(i.V. Peter Schumacher
Quality Manager)

Neckartenzlingen, 2021-01-27
(Issue place and date)