

Network Devices

N.	Name	Specifications	Quantity
1.	Viper-220A-T4G, EN 50155 managed Gbps routing switch	Dimensions (W x H x D): 178 x 160 x 61 mm Weight: 1.6 kg Rated voltage: 24 to 110 VDC Operating voltage: 16.8 to 143 VDC (14.4 to 154 VDC for 100 ms) Rated current: 670 mA at 24 V and 160 mA at 110 V Power interruption: Class S2 (10 ms hold-up) Ethernet ports: 4 Gbps + 16x100 Mbps Backup and restore port: 1 x USB Console port: 1 x RS-232 Operating temperature: -40 to +70°C (-40 to +158°F) (operational for a limited time) Storage and transport temperatures: -55 to +85°C (-67 to +185°F) MTBF: 522,000 hours (MIL-HDBK-217F2) Ingress protection: IP67 Climate: • EN 50155/IEC 60571 class TX, Railway applications - Electronic equipment used on rolling stock • IEEE 1478 class 1, condition E4 (incl Salt Mist) EMC: • EN 61000-6-2, Immunity industrial environments • EN 61000-6-4, Emission industrial environments • EN 50121-4/IEC 62236-4, Railway signaling and telecommunications apparatus • EN 50121-3-2/IEC 62236-3-2 Railway applications – Rolling stock – apparatus • Tested and verified for Class S1, DB EMC Regulation 06, • Tested and verified for Class S1, • Tested and verified for FCC part 15 Mechanical:(Shock and vibration) • EN 61373 category 1, class A • EN 60068-2-27 10 g, 30 ms and 100 g, 6 ms Insulation: • EN 50124-1, Railway applications – Insulation coordination • EN 50155/IEC 60571, Railway applications - Electronic equipment used on rolling stock Fire protection: • EN 45545-2, Fire protection on railway vehicles • NFPA130, Fire protection for fixed guideway transit and passenger rail system	10
2.	Power cable M12, 1,5 m	Westermo code: 3146-1106	10
3.	Phoenix contact Network cable - NBC-MSX/ 2,0- 94F/R4AC SCO - 1407472	- Network cable, Ethernet CAT6A (10 Gbps), CC-Link IE CAT6A (10 Gbps), - 8-position, PUR, - water blue RAL 5021, - shielded, - Plug straight M12 SPEEDCON / IP67, - coding: X, - on Plug straight RJ45 / IP20, - cable length: 2 m	40

4.	Network cable RJ45-M12 - 1 m	Westermo code: 3146-1103	160
5.	EN 50155 Configuration Backup Device USB-M12	- Westermo code: 3641-7190 - USB M12 plug IP67, with fastening strap	10