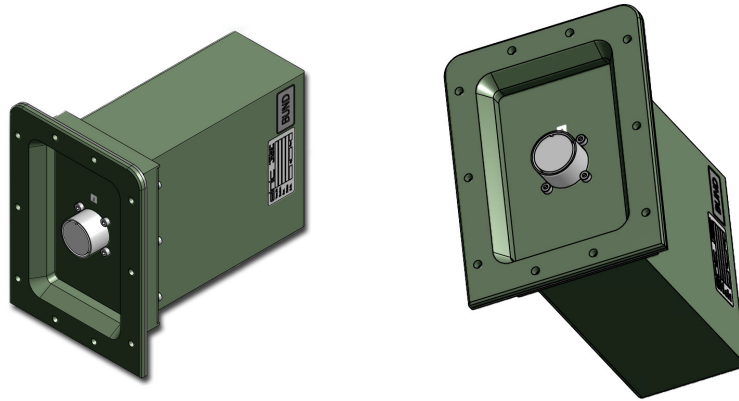


DC POWER INFEED MODULE

Description

The DC Power Infeed Module is destined to supply power on-board voltage (24V DC/50A) into shielded cabins. The dimensions and anchor points are adapted to the standard cut-out. In order to maintain the necessary attenuation of shielding, the DC power infeed module is implemented with a flat, conductive gasket between the shielded cabin and the DC infeed module through the included EMC seal. As a protection against compromising and in order to maintain the attenuation of shielding all paths are provided with passive filters. This ensures an integrated personnel and equipment protection against overvoltage in the cabin which may be caused by indirect lightning strikes or NEMP.



Functional description

Normally, the DC Power Infeed Module serves to feed in the charging current for the “FM batteries” in the cabin via the alternator of the carrying vehicle, when driving. An alarm in the driver’s cab may be activated from the cabin through the signal lines.

The on-board vehicle power supply may also function as emergency power supply in case the “FM batteries” fail. This is possible due to a changeover facility.

Technical data

Outside connections, (outside of cabin)	1	(J1) socket, 6-poled, VG95234B1-20-8SN
Inside connections, (inside the cabin)	1	(J11) socket, 6-poled, VG95234B1-20-8SN
Number of lines	2	Power supply lines (A+ and D-)
	1	Signal line (E) Bipolar
	1	Signal line (C) internal connected to HD-

DC POWER INFEED MODULE

Electrical values

Nominal voltage	24 V GS (DC)
Nominal current Line A (+) and line D (-) Line E (SIGNAL)	≤ 50 A (permanent current, maximum of ≤ 60 A) ≤ 5 A
Voltage drop when in full load ¹ Line A (+) at + 24 V Line D (-) at - 24 V Line E (SIGNAL) at ± 24 V	≤ + 1 V ≤ - 1 V ≤ ± 1 V
Range of operating voltage	20....32 V GS (DC) reverse polarity protection line A and D integrated
Breakdown voltage ² Terminal A (+) Terminal D (-) Terminal E (SIGNAL)	≤ + 33.8 V ≤ - 33.8 V ≤ ± 33.8 V
DC resistance (Line A, D and E)	≤ 0.05Ω
Attenuation of shielding from 100kHz up to 1 GHz Acc. to VG 95370, Part 15	≥ 60 dB
Blocking attenuation 100 kHz up to 1 GHz Measuring procedure acc. to MIL-STD 220A, Z = 50Ω	≥ 60 dB per line
Leakage current ³ Line A (+) Line D (-) Line E (SIGNAL)	≤ + 150 μA ≤ - 150 μA ≤ ± 150 μA
Residual voltage (clamping voltage) For above tests on connection inside of cabin for Z = 50Ω asymmetrical	≤ ± 72 Vos
- NEMP-protection - Lightning protection acc. to VG 96 901, part 4, class of threat „Normal“	- test acc. to VG 96 903, part 70, unipolar pulse ± 10 kV, load resistance 100Ω, pulse form 5/200 ns - test acc. to VG 96 903, part 76, unipolar pulse ± 4 kV, internal resistance 2Ω, pulse form of current 8/20 μs

¹ with nominal current

² with 5mA

³ with 32V DC

DC POWER INFEED MODULE

Electrical wiring

Connection outside J1	Connection inside J11	Pin allocation
A	A	+ 24 V / 50 A
B	B	Not allocated
C		Connected to J1/D
	C	Not allocated
D	D	- 24 V / 50 A
E	E	+ 24 V / 5 A bipolar
F	F	Not allocated

Mechanical data

Temperature range

- 32°C up to + 55°C

Weight

3.2 kg

Surface

coating acc. to TLA-0033 in RAL6031-F9

Delivery contents

incl. HF-gasket

