



Model number

VAN-24DC-K28

AS-Interface power supply, data decoupling, 4 A, 24 V DC input voltage

Features

- Output current max. 4 A
- PELV
- Input voltage 24 V DC
- LED operating display
- 90.5 % efficiency level

Function

The VAN-24DC-K28 DC/DC transducer was designed for field bus applications, which transmit both energy and data via a two-wire cable (AS-Interface design). It powers a fully loaded AS-Interface system with a maximum output current of 30.55 V and 4 A.

In this case, the DC/DC transducer provides the energy, decouples data of the power source and balances the two output cables (AS-Interface + and AS-Interface -) in relation to ground (screen connection).

The precise and transformer coupling permits the use of unshielded load lines. The PELV output circuit is electronically protected against overload and continuous short circuit.

The DC/DC transducer is electronically protected against continuous short circuit. In case of a defect, the internal fuse disconnects the DC/DC transducer from the power supply.

The precise and transformer coupling permits the use of unshielded load lines. The PELV output circuit is electronically protected against overload and continuous short circuit.

Fusing:

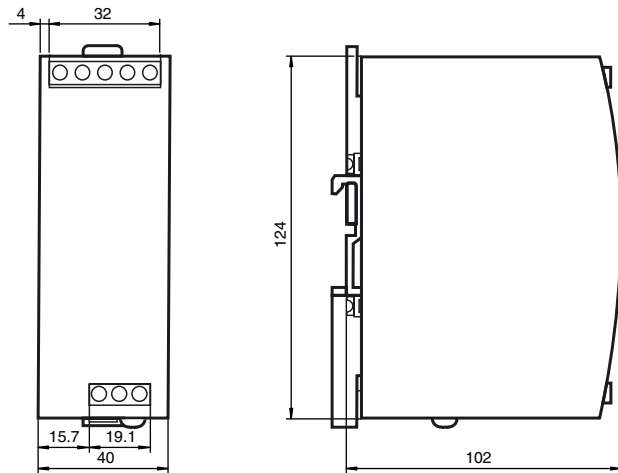
The DC/DC transducer is electronically protected against continuous short circuit. In case of a defect, the internal fuse disconnects the DC/DC transducer from the power supply.

Accessories

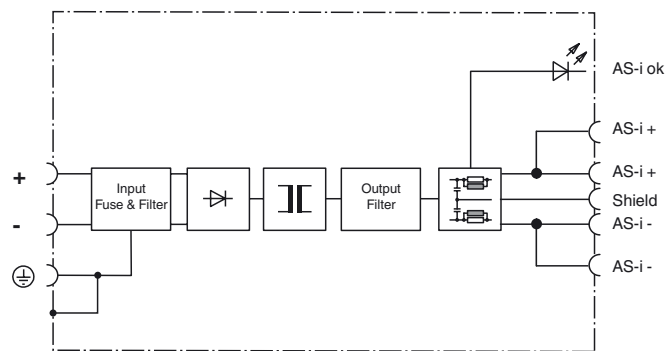
AS-Interface Power Calculator

AS-Interface Power supply and network checking utility

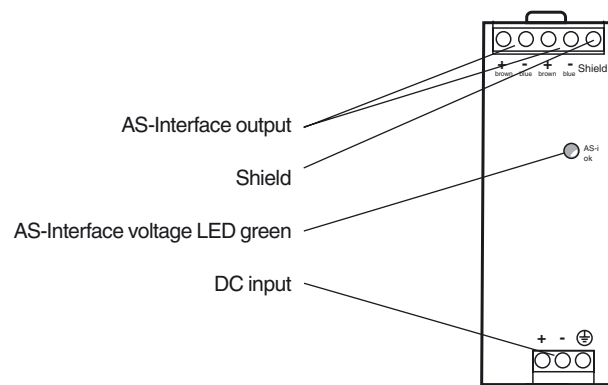
Dimensions



Electrical connection



Indicating / Operating means



Release date: 2019-08-21 14:28 Date of issue: 2019-08-21 238750_eng.xml

Technical data**General specifications**

UL File Number	E223176
MTBF	100 a

Indicators/operating means

LED AS-i ok	LED green: ON: AS-Interface voltage OK OFF: overload or no supply voltage
-------------	---

Electrical specifications

Fusing	T10A HBC (not accessible)
Rated operating voltage	U_e 24 V _{DC} 18 ... 32.4 V _{DC} (continuous operation) 14 ... 18 V _{DC} (max. 60 s or with derating) max. 36 V _{DC} (max. continuous input voltage with no damage to the DC/DC converter)
Rated operating current	I_e 5.6 A at 24 V _{DC}
Efficiency	typ. 90.5 % (24 V _{DC} , 4 A)

Output

Short-circuit protection/overload	> 5 A < 9 A
Current limit	> 4.4 A
Voltage	30.55 V _{DC} ±3 % fixed
Current	4 A
Residual ripple	< 50 mV _{SS} (500 kHz bandwidth, 50 Ω measurement, with resistive load)
Overvoltage protected	max. 36 V

Ambient conditions

Ambient temperature	-25 ... 70 °C (-13 ... 158 °F) Note derating
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
Shock and impact resistance	30g/6 ms 20g/11 ms
Vibration resistance	Sine 2 - 17.8 Hz: ± 1.6 mm Sine 17.8 ... 500 Hz : 2 g
Pollution degree	2

Mechanical specifications

Degree of protection	IP20
Protection class	1 (IEC 60536); Protective conductor connection necessary
Connection	Connection terminals, max. conductor cross-section Flexible cable: 0.5 ... 4 mm ² Rigid cable: 0.5 ... 6 mm ² Stripping length 7 mm
Mass	approx. 500 g
Mounting	DIN mounting rail

Compliance with standards and directives

Directive conformity	
EMC Directive 2004/108/EC	EN 55022:2006, EN 55011:2009 Class B EN 61000-6-3:2001, EN 61204-3:2001
Standard conformity	
Noise immunity	EN 61000-6-2:2005
Emitted interference	EN 61000-6-3:2007 EN 61000-3-2:2010 EN 61000-3-3:2009
Galvanic isolation	IEC 60364-4-41:2005 (PELV) IEC 60950:1999 (SELV)
Degree of protection	IEC 60529:2001
Pollution degree	EN 60950-1:2006
Shock and impact resistance	EN 60068-2-27:1995
Vibration resistance	EN 60068-2-6:2008

Notes

Characteristic Curve

Derating

Output current

