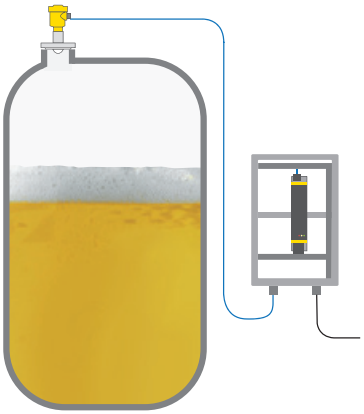
Isolation and protection devices



Area of application

Isolation devices are used in all applications where hazardous area regulations must be observed. In addition to powering the sensors in the field, they ensure electrical isolation from the connected PLC or process control system.

Principle of operation

Isolation devices separate intrinsically safe circuits from non-intrinsically safe circuits. Distinguishing features are the type of power supply and the size of the Ex-specific characteristic values.

Advantages

Reliable separation of intrinsically safe and non-intrinsically safe circuits. Simple installation, as no additional power supply is required. Simple installation via carrier rail mounting.

	VEGATRENN 141/142	VEGATRENN 151/152
		
Application	Separator for 4 … 20 mA/HART sensors	Separator for 4 … 20 mA/HART sensors
Sensors	4 … 20 mA	4 … 20 mA
Input and sensor power supply	VEGATRENN 141: single channel VEGATRENN 142: double channel	VEGATRENN 151: single channel VEGATRENN 152: double channel
Output	VEGATRENN 141: single channel VEGATRENN 142: double channel	VEGATRENN 151: single channel VEGATRENN 152: double channel
Operating voltage	VEGATRENN 141: 24 … 65 V DC 24 … 230 V AC, 50/60 Hz VEGATRENN 142: 24 … 31 V DC	Via 4 … 20 mA current loop
Mounting	Carrier rail 35 x 7.5 acc. to EN 50022	Carrier rail 35 x 7.5 acc. to EN 50022
Voltage loss	–	4 mA < 3 V 20 mA < 5 V
Approvals	ATEX, IEC, cULus, Ship, SIL2	ATEX, IEC, cULus, Ship, SIL2
Benefit	▪ Secure power supply and reliable separation of intrinsically safe and non-intrinsically safe measuring circuits ▪ Complete HART permeability allows unrestricted access to sensor settings ▪ Easy installation via rail mounting and removable, coded terminals	▪ Reliable separation of intrinsically safe and non-intrinsically safe measuring circuits. ▪ Simple installation, as no additional power supply is required ▪ Easy installation via rail mounting and removable, coded terminals

Isolation and protection devices

	B53-19/B61-300/B61-300 FI	B62-36G/B62-30W
		
Application	B53-19: Overvoltage arresters for conductive probes B61-300: Overvoltage arresters of supply and control cables B61-300FI: Overvoltage arresters of supply and control cables with FI protective circuits	B62-36G: Overvoltage arresters for two-wire circuits B62-30W: Overvoltage arresters for Profibus PA and Foundation Fieldbus circuits
Mounting	Carrier rail 35 x 7.5 acc. to EN 50022 or on carrier rail 32 mm acc. to EN 50035	Carrier rail 35 x 7.5 acc. to EN 50022 or on carrier rail 32 mm acc. to EN 50035
Operating voltage	B53-19: max. 19 V AC, 27 V DC B61-300/B61-300 FI: 110 … 300 V AC/DC, max. 16 A	B62-36G: 9.6 … 36 V DC, max. 450 mA B62-30W: 12 … 36 V DC, max. 450 mA
Nominal leak current	< 10 kA	< 10 kA
Protection	IP20	IP20
Temperature range	-40 … +60 °C	-40 … +60 °C
Approvals	ATEX	ATEX
Benefit	▪ High operational reliability even with impermissible voltage surges ▪ Simple installation via carrier rail mounting	

	B63-48/B63-32	B81-35
		
	B63-48: Overvoltage arresters for two-wire circuits B63-32: Overvoltage arresters for Profibus PA and Foundation Fieldbus circuits	Pluggable overvoltage arresters for supply and signal circuits
	Direct mounting in the cable entry of the field device	Pluggable to the plics® mains electronics of VEGAPULS series 60, VEGAFLEX series 80, VEGABAR series 80 and VEGADIS 82
	B63-48: 12 ... 48 V DC B63-32: max. 32 V DC	max. 35 V DC
	< 10 kA	< 10 kA
	IP66	-
	-40 … +85 °C	-40 … +85 °C
	ATEX	ATEX, IEC, EAC
	▪ High operational reliability even with impermissible voltage surges ▪ Simple installation in the cable gland of the field device ▪ No additional, separate on-site assembly	▪ High operational reliability of the measuring point through surge protection ▪ Simple installation in the terminal compartment of the field device through compact design ▪ Easy retrofitting in already installed sensors