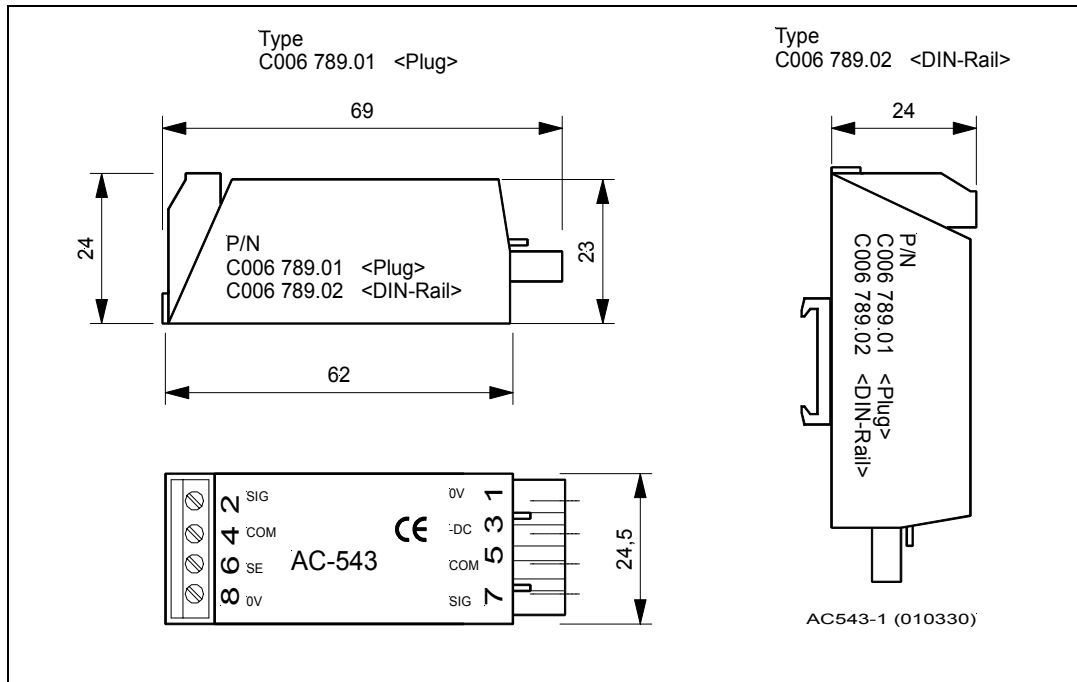


## AC - 543

### Connection module for constant-current powered acceleration sensors



Dimension diagram AC-543

## 1 Application

The AC-543 module serves for providing power to constant-current sensors. This is necessary when only a -24 V DC supply voltage is available at the sensor connections to the instrument to power the sensor.

In the form AC-543/01 this module is exclusively conceived for use with the measuring system VIBROCONTROL 4000t, and can be directly plugged into the terminal sockets at the sensor inputs.

For special applications the module is available in the form AC-543/02, and can be mounted, using a pre-mounted foot, near to the machine on a rail acc. to EN50022, for example in a distribution panel. This application permits the use of constant-current sensors together with vibration monitoring units of the series VIBRO-CONTROL 1000 and 1100.

## 2 Technical Data

Operating temperature range	-0 ... + 65 °C
Storage temperature range	-40 °C ... + 100 °C
Measuring frequency range	0 ... 40 kHz ( $\pm 0,5$ dB)
Constant-current supply $I_{Bout}$	10 mA
Supply voltage $U_{in}$	-18 V ... -30 V DC
Input capacitance	< 1 nF
Rest potential of signal with a connected sensor (0 ... 65 °C)	$= U_{in} + ((U_{in}^* - 1) \text{BIAS}) / 3$
Connected Load	480mW

### Example:

with AS – 062:

$$U_{in} = -24 \text{ V} ; \text{BIAS} = + 12 \text{ V} \quad = -12 \text{ V} \pm 5 \%$$

$$\text{Rest potential with open input; BIAS} = -U_{in} \quad = -8 \text{ V} \pm 5 \%$$

$$\text{Rest potential with short-circuit; BIAS} = 0 \text{ V} \quad = -16 \text{ V} \pm 5 \%$$

Insulation resistance	$\geq 20 \text{ M}\Omega$
Dynamic input impedance	< 5 $\Omega$

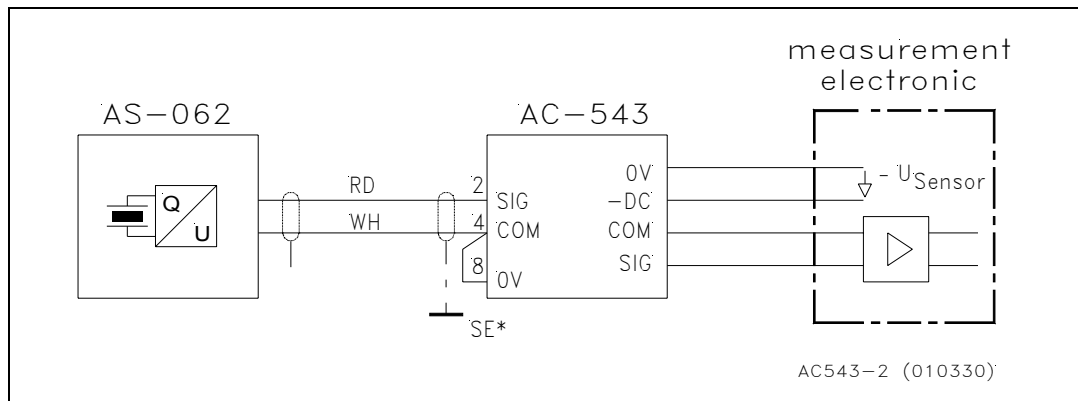
The OK-function of the monitoring system can be used. The short-circuit or open-circuit condition of the cable is passed through to the monitoring system electronics by the AC-543 module.

Housing	Stainless steel
Protection class	IP 20
Weight	approx. 50 g

### EMC:

Interference emission	DIN EN 55011:1998-12
Interference resistance	DIN EN 61000-6-2:2000-03

### 3 Connection diagram



#### Advice \*

*The shield of the sensor cable is preferably attached to an external shield connecting rail (VC-4000 = SE connection at the rack).*

*Terminal 6 at the AC-543 module (SE) can then only be used for the cable shield when the module is insulated at its mounting.  
(Terminal 6, SE = Module housing)*

### 4 Ordering code

AC-543/01  
P/N: C 006789.01

Module for constant-current supply for direct plug-in connection to the sensor inputs at VC-4000

AC-543/02  
P/N: C 006789.02

Module for constant-current supply for mounting onto a clip-on rail (EN 50022)