

Industrial Charge Amplifier

for WIM Lineas®

Type 5038A2Y...

Industrial charge amplifier with 2 channels for converting electric charge generated by piezoelectric sensors into a proportional voltage.

- Robust aluminum diecast housing
- Vibration-proof
- Degree of protection IP60
- No adjustment necessary
- Conforming to **CE**
- Internal connected for continuous operate

Description

The charge amplifier Type 5038A2Y... has a hybrid capacitive feedback amplifier with extremely high insulating resistance in each input channel.

An unregulated voltage source of 15 ... 30 V suffices for powering the charge amplifier.

The instrument is conforming to EC with EC Directive 89/336/EC and complies with EMC standards (EN 50081-1 resp. EN 50081-2 regarding interference emission and EN 50082-1 resp. EN 50082-2 regarding interference immunity); compliance is required with the relevant installation information.

Application

The charge amplifier Type 5038A2Y... is especially intended for use in industrial applications together with Lineas sensors.

The output signals can be transferred to control units and processed.



Technical Data

Charge amplifier

Measuring range	Type 5038A2Y43	pC	±60 000
	Type 5038A2Y53	pC	±100 000
Error		%	<1
Output voltage		V	0 ... ±5
Output current		mA	0 ... ±2
Output impedance		Ω	100
Output interference signal		mV _{pp}	<3
Frequency range (-3 dB)		kHz	≈0,0016 ... >10
Time constant		s	≈100

Power supply

Supply voltage	VDC	15 ... 30
Current consumption	mA	<25

General Data

Operating temperature range	°C	0 ... 60
Storage temperature range min./max.	°C	-10/+60
Housing material		Aluminum
Degree of protection acc. to EN 60529		IP60
Vibration resistance	g _p	10
Test conditions: 20 ... 2 000 Hz continuous in 2 min., 8x within 16 min.		
Shock resistance during 1 ms	g	200
Weight	grams	≈550
Dimensions		
LxWxH	mm	150x64x34,5
with isolation plate	mm	172x64x42,5
Connections		
Charge input		Type BNC neg.
Output/Supply		Type 8-pol. male DIN 45 326

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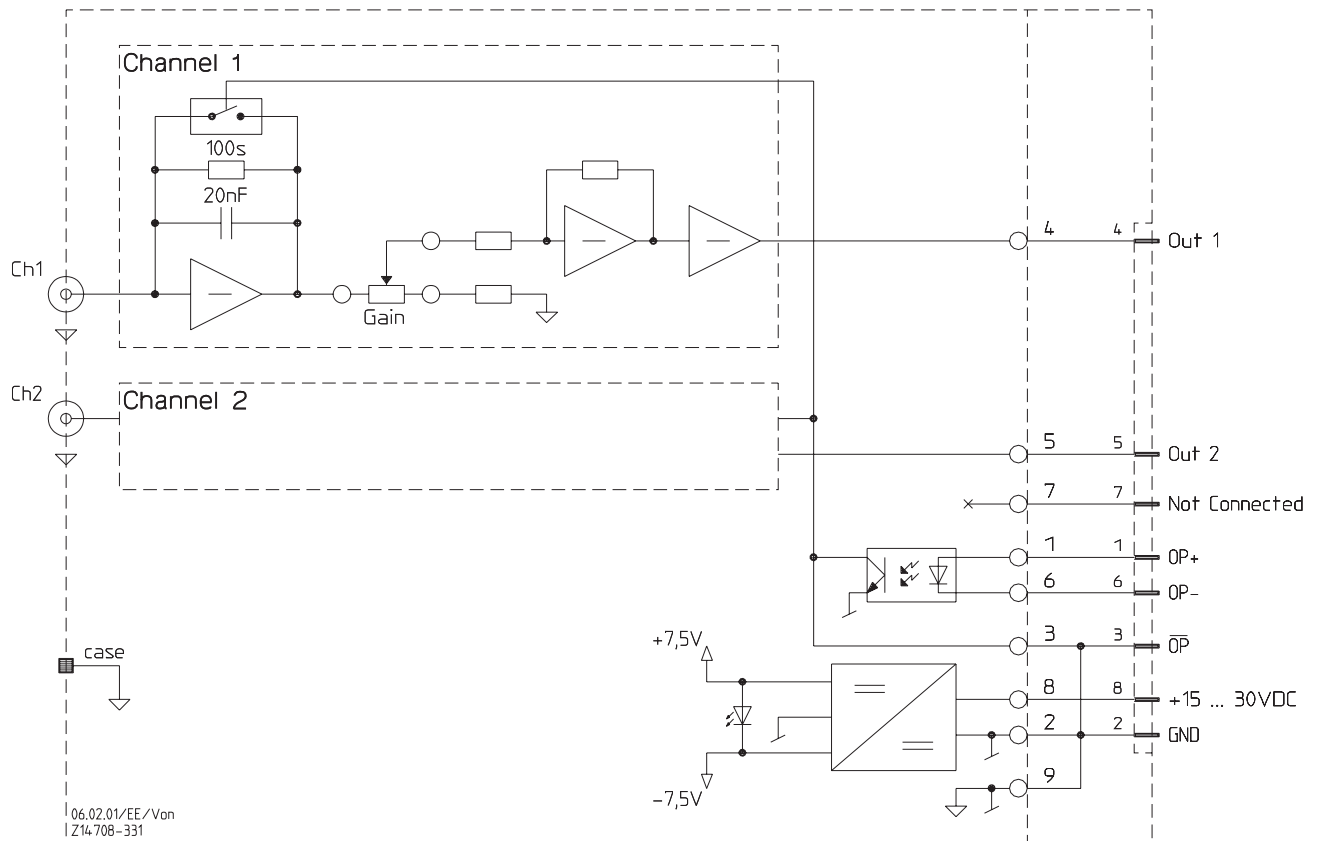


Fig. 1: Block diagram of charge amplifier

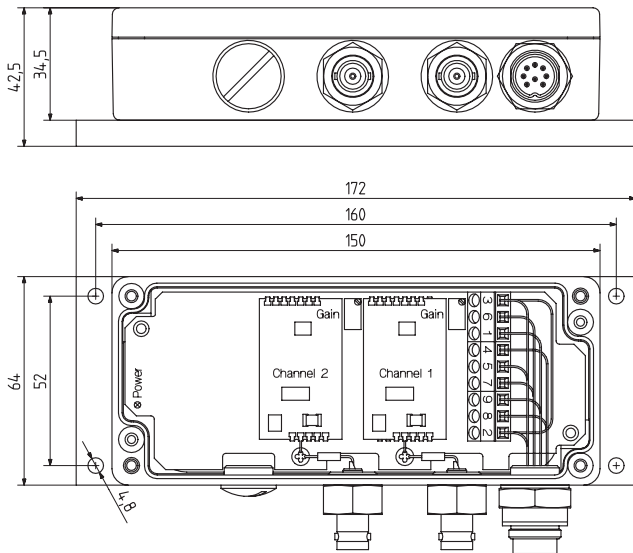


Fig. 2: Charge amplifier for WIM Lineas® Type 9195...

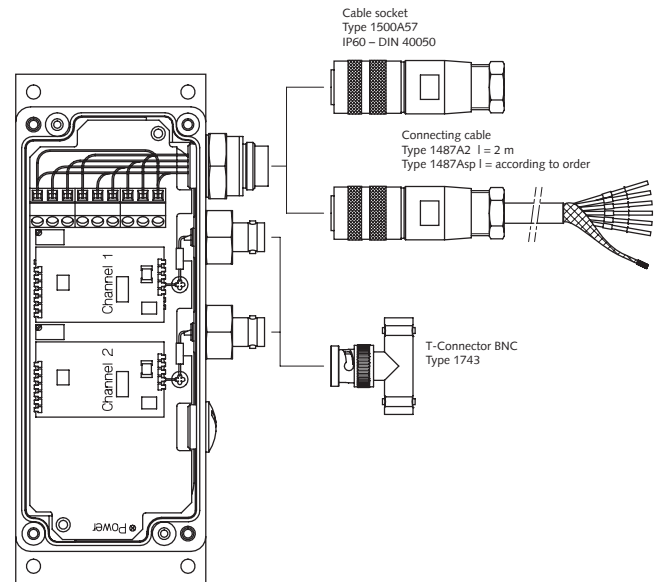


Fig. 3: Connection of sensors to the charge amplifier

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D-Sub connector

Amphenol Buchse
Amphenol prise
Amphenol Socket

Abschirmung
Blindage
Shield

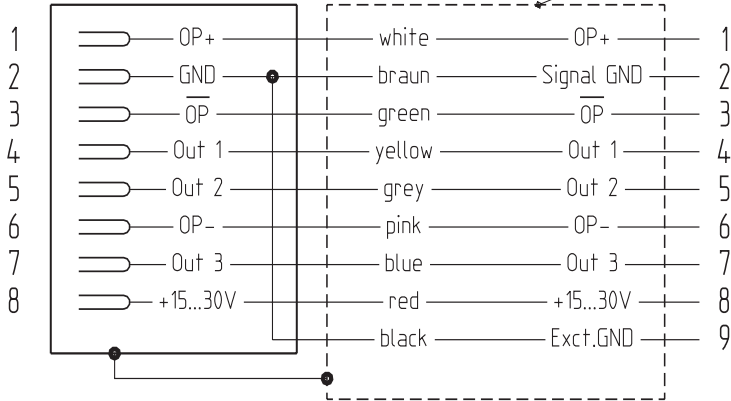


Fig. 4: Terminal allocation to Type 1487A...

Included Accessories

- None

Optional Accessories

- Cable socket 8 PIN DIN 45326
- Cable socket 8 PIN DIN 45326 with connection cable
length = 2 m
length = customized
($L_{min} = 0,1 \text{ m} / L_{max} = 15 \text{ m}$)
- T-connector BNC

Type/Art. No.

- 1500A57
- 1487A2
- 1487Asp
- 1743

Ordering Key

Industrial charge amplifier for WIM Lineas®

$\pm 60\,000 \text{ pC}$ for wheel load measuring (1 sensor per channel)	43
$\pm 100\,000 \text{ pC}$ for axle load measuring (2 sensors per channel)	53

Type 5038A2Y