

Charge Amplifier

for WIM Lineas®

Type 5153A...

Industrial charge amplifier with 18 or 9 channels for connecting up to respectively 36 or 18 Lineas sensors.

- No settings required to be made by the customer (plug and play)
- Various power supplies possible (power line, battery and solar)
- Designed for applications in the field (electronic control cabinet)

Short Description

The supply voltage and the 'Operate' signal are electrically isolated from the measuring signal. As a result of a time constant configuration of all channels, the charge amplifier can be operated in 'continuous operate' mode. The sensors can be quickly and reliably connected with a simple cut-and-grip technique.

The customer is not required to make any adjustments to the charge amplifier. The signal cable can be connected to this charge amplifier with the 41-pin MIL connector.

Screening of the charge cable installed must be ensured outside the charge amplifier.

The instrument has CE-conformity within the meaning of EU Directives 89/336/EEC and complies with the EMC standards: EN 50081-1 and EN 50081-2 Interference Emissions as well as EN 50082-1 and EN 61000-6-2 Interference Immunity.

Application

The charge amplifier Type 5153A... is intended specifically for Kistler Lineas sensors. The signal cables are drawn through the PG9 cable screw glands provided and screwed onto the corresponding terminals.



Technical Data

Charge Amplifier

Measuring range	5153Ax1x	pC	±100 000
Measuring range	5153Ax2x	pC	±60 000
Number of measuring channels	5153A1xx		18
	for connection up to 36 Lineas		
Number of measuring channels	5153A2xx		9
	for connection up to 18 Lineas		
Output voltage		V	0 ... ±5
Output current		mA	0 ... ±2
Error		%	<±2
Offset	5153Axx1	mV	<±10
Offset	5153Axx2	V	1 ±0,05
Output resistance (DC ... 20 kHz)		Ω	100
Frequency range (-3 dB)		kHz	>10
Time constant		s	≈100
Output noise signal		mVpp	<10
	(0,1 Hz ... 1 MHz)		

General Data

Supply voltage	VDC	10 ... 30
Power consumption	W	<2
Operate	Continuous operation	
Storage temperature range	°C	-10 ... 70
Operating temperature range	°C	0 ... 60
Degree of protection (EN60529)	IP65	
Lightning protection	gas filled Lightning arrester	
Sensor inputs	via 1µF capacitors decoupled	
Dimensions Width x Height x Depth	mm	202 x 232 x 111
Weight	kg	3,8
Parallel connection up to 4 Lineas sensors at Type 5153Ax1x possible		

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This information corresponds to the current state of knowledge. Kistler reserves the right to make technical changes. Liability for consequential damage resulting from the use of Kistler products is excluded.

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Connections

Supply / Reset	Cables with 4-pole MIL male connector Type ITT Canon KPT02E8-4P-C	Type 1485A2
Signal outputs	2 or 1 cable resp. with 10-pole MIL female connector Type ITT Canon KPT02E12-10S-C	Type 1483A2

Sensor

Cable gland	PG gland in each case for 4x ø3,2	Type PG9
Cable inner conductor	Screw terminal strip	Type PCB terminal 2,5 mm ²
Shield	Screw terminal	Type Terminal 16 mm ²
Earth	4 x ground connections to chassis	Type Bride 35 mm ²

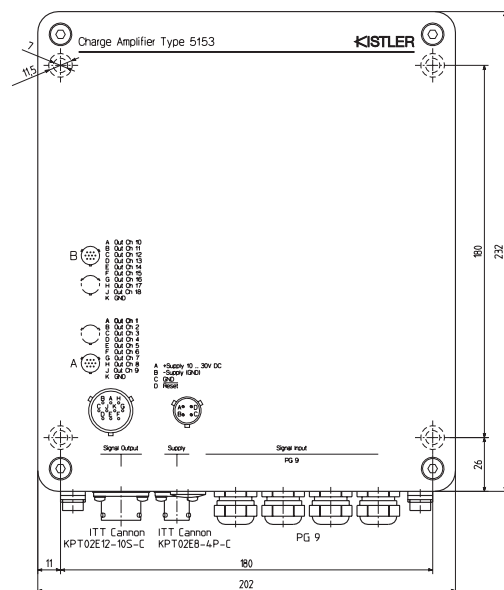
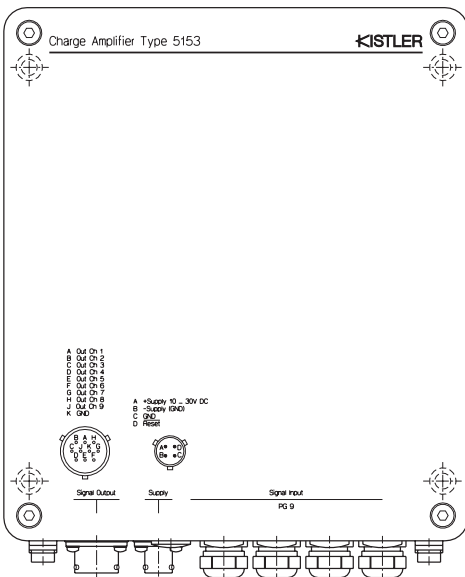
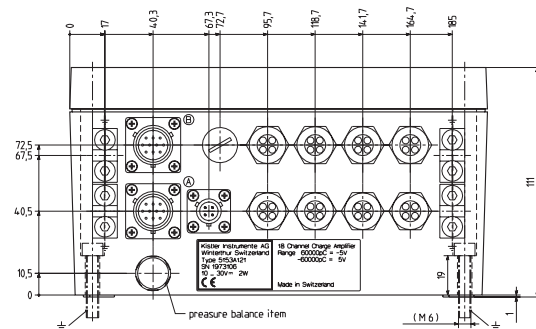
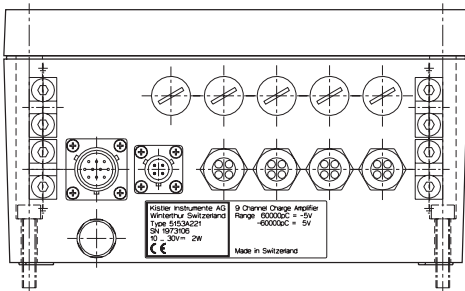


Fig. 1: 9-channel charge amplifier for WIM Lineas Type 5153A2xx

Fig. 2: 18-channel charge amplifier for WIM Lineas Type 5153A1xx

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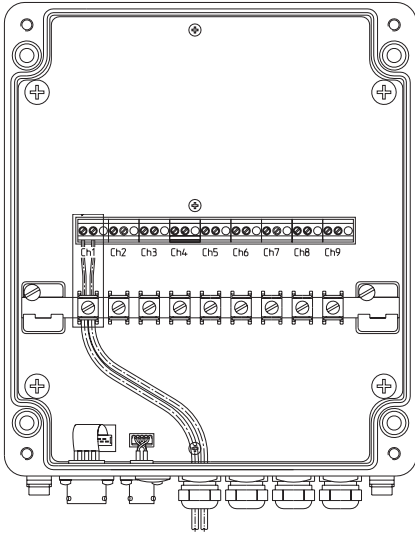


Fig. 3: Connection of sensors to charge amplifier Type 5153A2xx

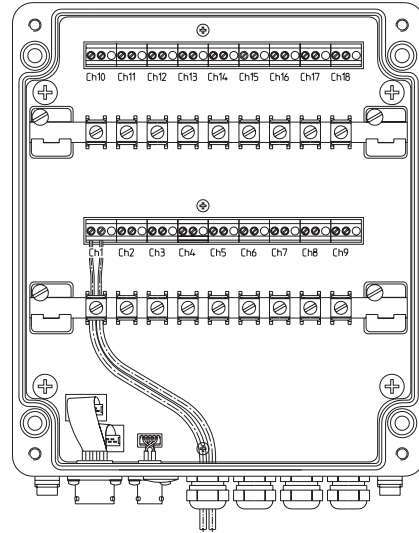


Fig. 4: Connection of sensors to charge amplifier Type 5153A1xx

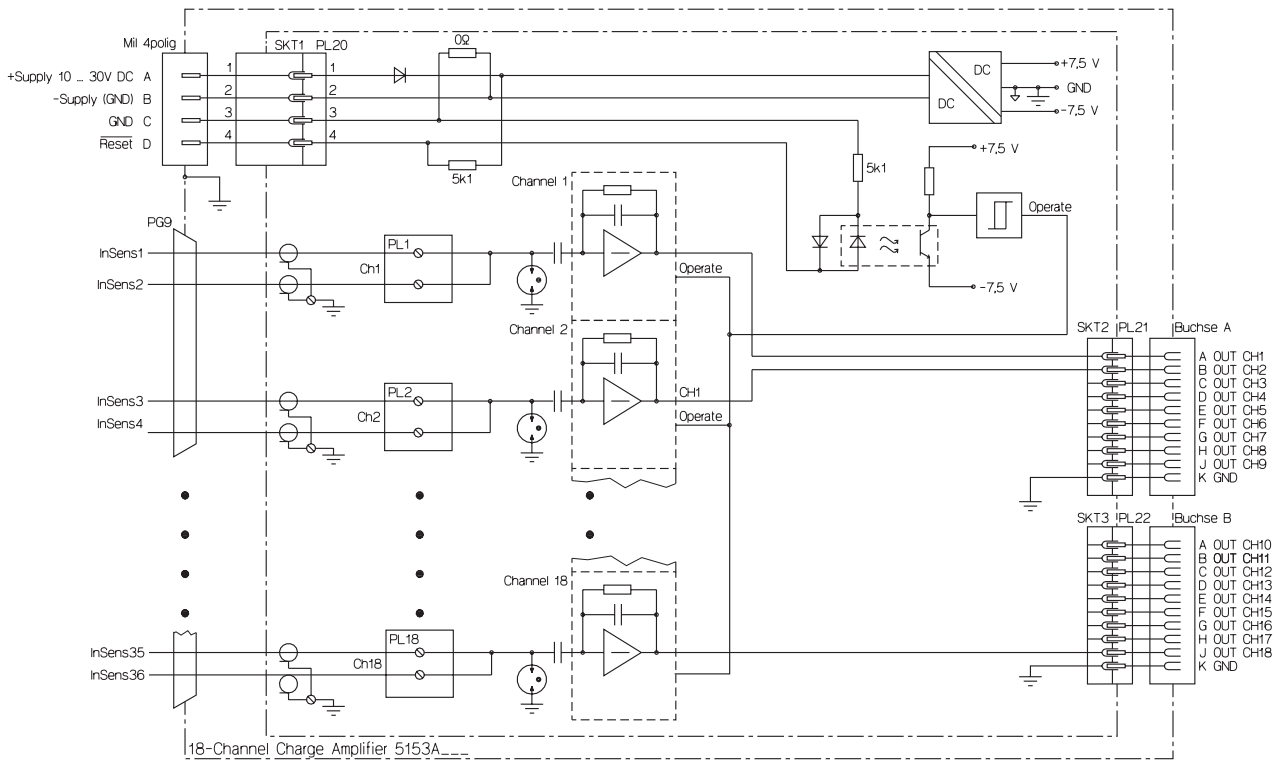


Fig. 5: Block diagram of the charge amplifier

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Accessories Included

- Allen wrench
SW19 slot for PG9

Type 5153A1xx

- 4 units stuffing box PG9 for 4 ø3,5 mm
- 1 unit stuffing box PG9 for 2 ø2,3-3,5 mm
- 1 unit stuffing box PG9 for ø3,0-4,5 mm
- 8 units blind plug

Type 5153A2xx

- 8 units stuffing box PG9 for 4 ø3,5 mm
- 1 unit stuffing box PG9 for 2 ø2,3-3,5 mm
- 1 unit stuffing box PG9 for ø3,0-4,5 mm
- 8 units blind plug

Optional Accessories

- Signal cable 10-pole Mil on open end, length 2 m
- Supply cable 4-pole Mil on open end, length 2 m

Art.No.

5.210.355

5.210.354

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5.210.352

5.210.180

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5.210.352

5.210.180

Type/Art.No.

1483A2

1485A2

Ordering Key

Type 5153A

18 measuring channels	1
9 measuring channels	2

Measuring range 100 000 pC	1
Measuring range 60 000 pC (standard)	2

Offset 0 V	1
Offset 1 V	2

