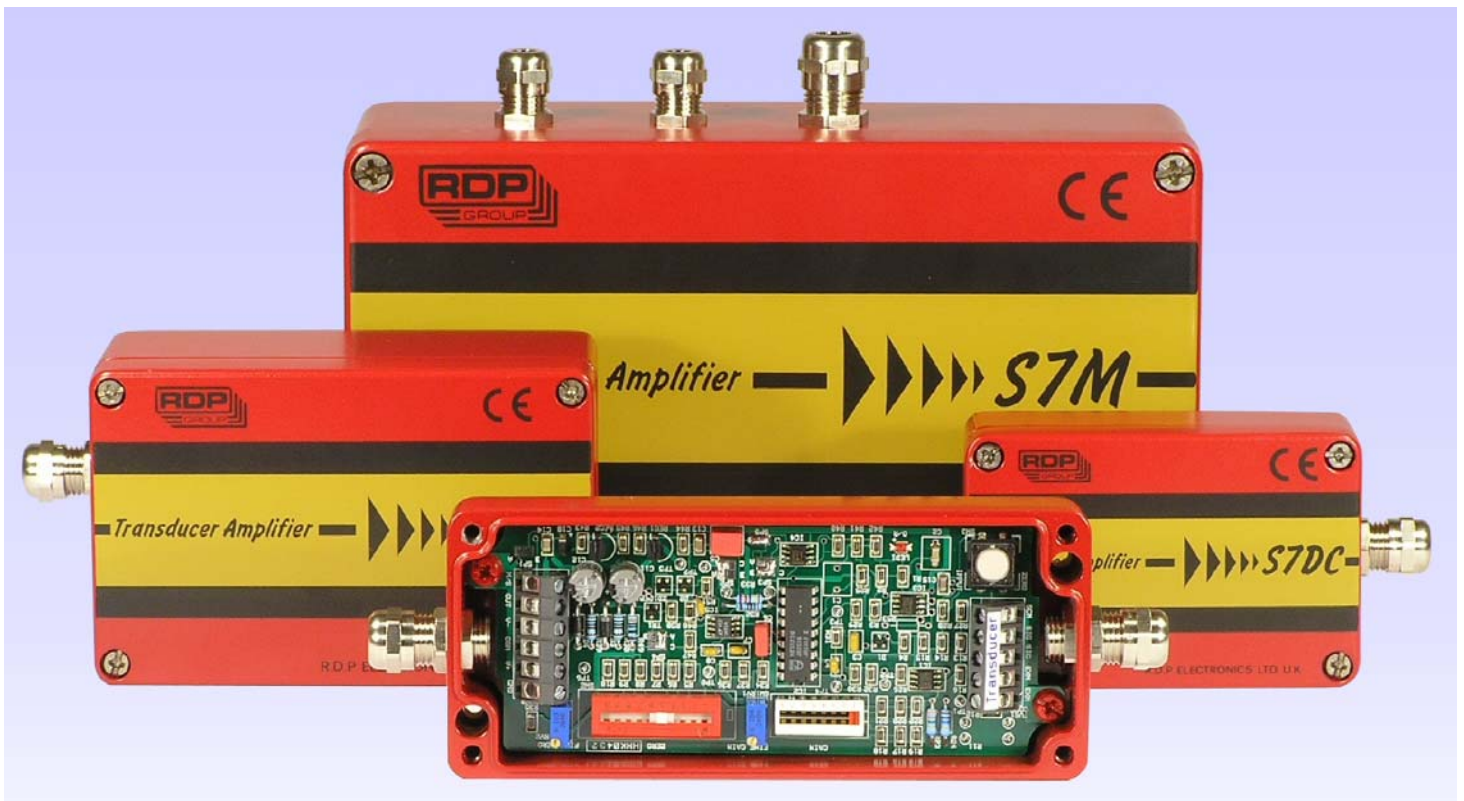


## S7 In-Line Signal Conditioning Amplifiers

- LVDT amplifier
- Strain gauge transducer amplifier
- High environmental protection
- Limit trips
- Voltage / 4-20mA output
- Simple trimpot controls



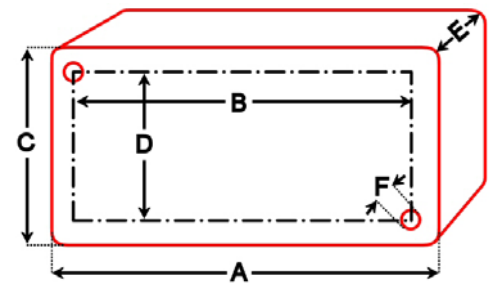
Signal conditioning is required where the output of a transducer needs to be boosted or changed into a form suitable for the monitor or logging device which will be used. These amplifiers are suitable for LVDT transducers, strain gauge sensors and some internally amplified transducers.

Our S7 amplifiers are specifically designed to be installed close to the transducer so that the signal can be boosted as soon as possible. The S7 signal conditioning units are mounted in a die-cast aluminium housing and have a good level of environmental protection and screening from electrical noise.

A very wide range of gain adjustment ensures that our amplifiers are compatible with the vast majority of LVDT and strain gauge sensors available from any manufacturer.

There are several versions with different input, output and transducer compatibility.

# S7AC dc powered LVDT transducer amplifier.

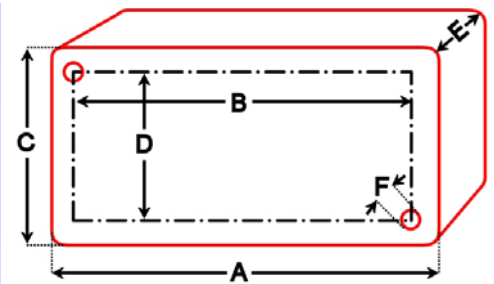


A	=	98mm
B	=	86mm
C	=	64mm
D	=	36mm
E	=	36mm
F	=	4mm

Drawing shows base of box

Compatible with	Any standard RDP LVDT (without integral electronics) LIN & PY When fitted with two 1k Ohm bridge completion resistors ( Does not provide analogue voltage linearisation for PY) Most LVDTs from any manufacturer
Supply voltage (single, must be floating)	12V to 36V dc, 50mA
Supply voltage (dual)	±6V to ±18V dc, 50mA
Transducer excitation	1V, 5kHz (1kHz to 10kHz with component change), 25mA
Output details	±4V to ±10V (may be affected by supply voltage) / 4-20mA (loop resistance 100 Ohms to 550 Ohms)
Amplifier gain range	0.07 to 500
Signal input range	30mV to 4V
Linearity error	±0.1% F.S.
Electrical output bandwidth	0 to 500Hz
Output ripple	0 to 500Hz
Input impedance	±130k Ohms
Temperature coefficient (zero)	±0.005% F.S. /°C minimum
Temperature coefficient (span)	±0.01% F.S. /°C minimum
Approximate zero adjustment range	±5V
Operating temperature range	-10°C to 60°C
Total weight	260g
Cable gland cable size	3.0mm to 6.5mm

# S7TW 4-20mA loop powered LVDT transducer amplifier.

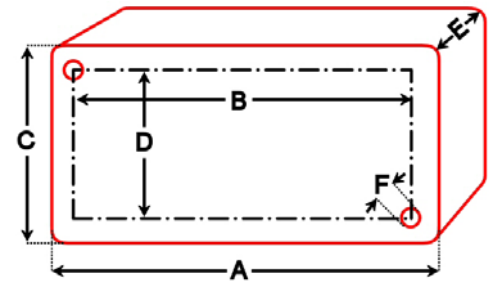


- A = 125mm
- B = 113mm
- C = 80mm
- D = 52mm
- E = 57mm
- F = 4mm

Drawing shows base of box

Compatible with	All standard RDP LVDT (without integral electronics) transducers except the following which require a free of charge modification called TM0202 D5/25, ACT2000, ACT2000A, ACT2000C, ACT4000, ACT4000C, ACT15000C, ACT18500C Most LVDTs from any manufacturer
Supply voltage	12V to 36V dc
LVDT minimum input impedance	130 Ohms
Transducer excitation	0.5V (4mA), 5kHz
Output details	4-20mA (loop resistance 50 Ohms to 1.2k Ohms maximum)
Amplifier gain range	2.5 to 333
Signal input range	30mV to 4V
Linearity error	±0.05% F.S.
Electrical output bandwidth	0 to 250Hz (25Hz with filter turned on)
Output ripple	50uApeak-to-peak (15uApeak-to-peak with filter turned on)
Input impedance	100k Ohms
Temperature coefficient (zero)	±0.005% F.S. /°C (typical)
Temperature coefficient (span)	±0.015% F.S. /°C (typical)
Approximate zero adjustment range	±8mA
Operating temperature range	-20°C to 85°C maximum
Total weight	550g
Cable gland cable size	3.0mm to 6.5mm

# S7M 115/230V ac powered LVDT transducer amplifier.

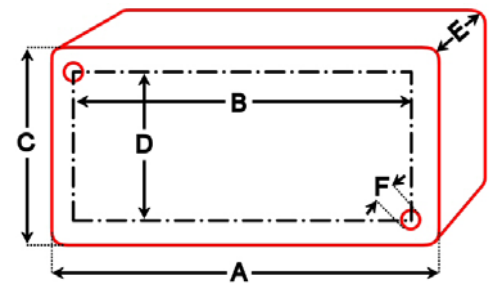


- A = 220mm
- B = 204mm
- C = 120mm
- D = 82mm
- E = 81mm
- F = 6mm

Drawing shows base of box

Compatible with	Any standard RDP LVDT (without integral electronics) LIN & PY When fitted with two 1k Ohm bridge completion resistors ( Does not provide analogue voltage linearisation for PY) Most LVDTs from any manufacturer
Supply voltage	230V or 115V ac, 2.5VA, 50/60Hz
Transducer excitation	5V, 5kHz (1kHz to 10kHz with component change), 100mA
Output details	±10V / 4-20mA (loop resistance 0 Ohms to 600 Ohms)
Amplifier gain range	0.15 to 200
Signal input range	20mV (minimum) to 20V
Linearity error	±0.1% F.S. maximum
Electrical output bandwidth	0 to 500Hz
Output ripple	5mV peak-to-peak typical
Input impedance	±100k Ohms
Temperature coefficient (zero)	±0.002% F.S. /°C typical
Temperature coefficient (span)	±0.004% F.S. /°C (typical)
Approximate zero adjustment range	±10V
Operating temperature range	-10°C to 50°C
Total weight	1.8kg
Cable gland cable size (x2)	3.0mm to 6.0mm
Cable gland cable size (x1)	5mm to 10mm

# S7DC dc powered strain gauge transducer amplifier.

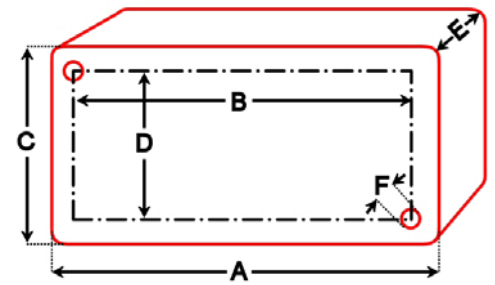


- A = 98mm
- B = 86mm
- C = 64mm
- D = 36mm
- E = 36mm
- F = 4mm

Drawing shows base of box

Compatible with	Most full bridge strain gauge transducers
Supply voltage (single, must be floating)	10V to 36V dc, 30mA (plus transducer and output load)
Supply voltage (dual)	±5V to ±18V dc, 30mA (plus transducer and output load)
Transducer excitation	3V to 10V , 100mA
Output details	±3V to ±10V / 4-20mA (loop resistance 0 Ohms to 800 Ohms) (may be affected by supply voltage)
Amplifier gain range	1 to 1250
Signal input range	4mV to 10V
Linearity error	±0.02% F.S.
Electrical output bandwidth	0 to 5kHz (20Hz with filter turned on)
Output ripple	10mV / 30uA
Input impedance	>10M Ohms
Temperature coefficient (zero)	±0.002% F.S. /°C (typical)
Temperature coefficient (span)	±0.003% F.S. /°C (typical)
Approximate zero adjustment range	±2V
Operating temperature range	-40°C to 85°C maximum
Total weight	260g
Cable gland cable size	3.0mm to 6.5mm

# S7MZ 115/230V ac powered strain gauge transducer amplifier.



- A = 220mm
- B = 204mm
- C = 120mm
- D = 82mm
- E = 81mm
- F = 6mm

Drawing shows base of box

Compatible with	Most full bridge strain gauge transducers
Supply voltage	230V or 115V ac, 2.5VA, 50/60Hz
Transducer excitation	5V, 5kHz (1kHz to 10kHz with component change), 100mA
Output details	$\pm 10V$ / 4-20mA (loop resistance 0 Ohms to 600 Ohms)
Amplifier gain range	5 to 7000
Signal input range	1.5mV to 600mv
Linearity error	$\pm 0.1\%$ F.S.
Electrical output bandwidth	0 to 500Hz
Output ripple	5mV
Input impedance	$\pm 1G$ Ohms
Temperature coefficient (zero)	$\pm 0.00\%$ F.S. /°C typical
Temperature coefficient (span)	$\pm 0.00\%$ F.S. /°C (typical)
Approximate zero adjustment range	$\pm 10V$
Operating temperature range	-10°C to 50°C
Total weight	1.8kg
Cable gland cable size (x2)	3.0mm to 6.0mm
Cable gland cable size (x1)	5mm to 10mm

All dimensions and specifications are nominal.

Due to our policy of on-going development, specifications may change without notice. Any modification may affect some or all of the specifications for our equipment.

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