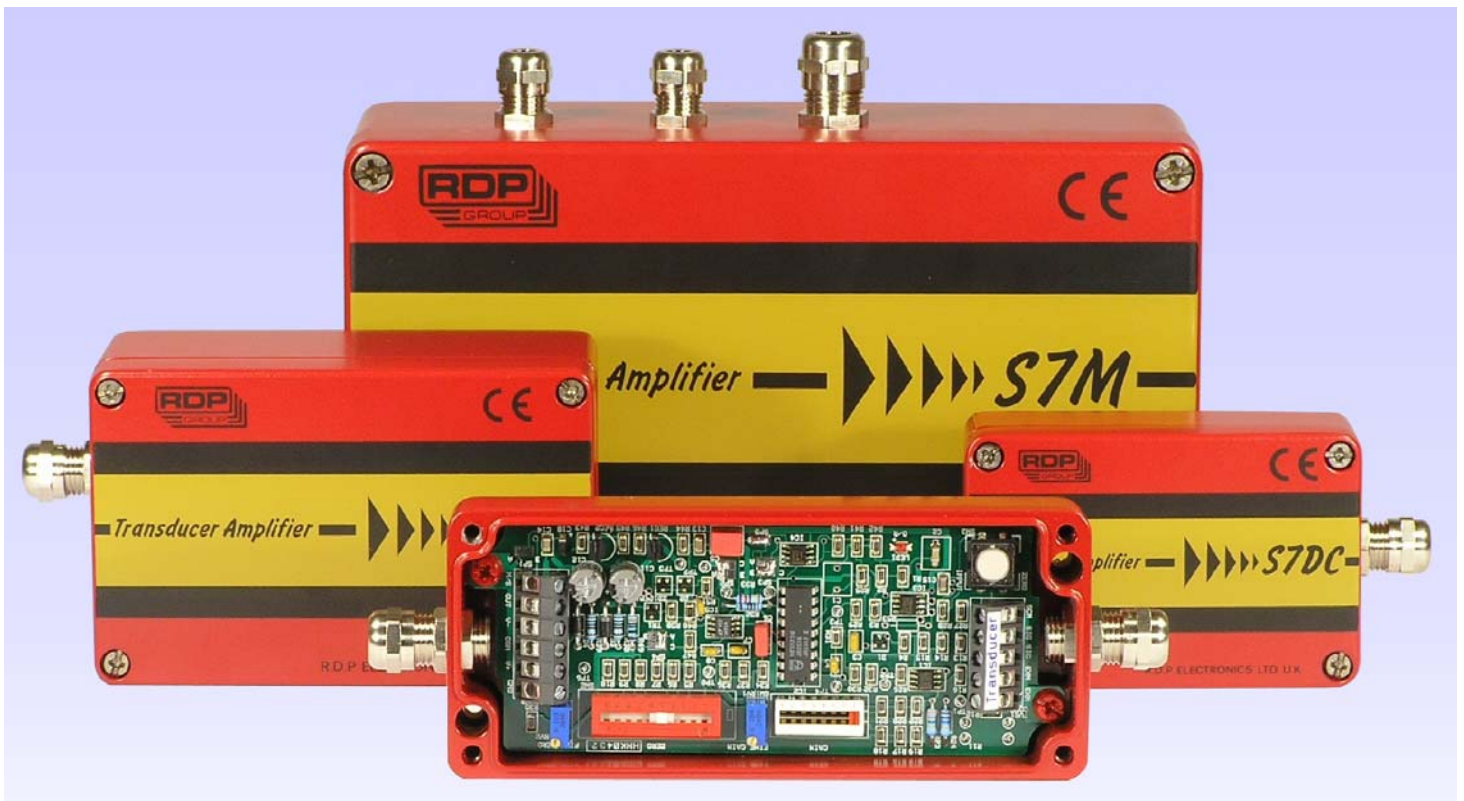


S7 In-Line Signal Conditioning Amplifiers

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



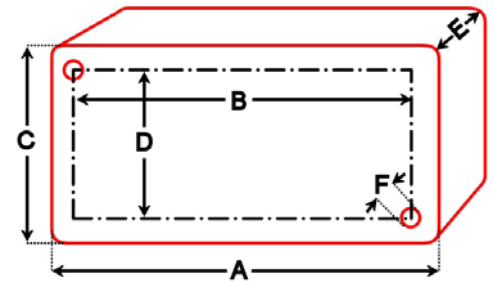
Signal conditioning is required where the output of a transducer needs to be boosted or changed into a form suitable for the monitor or logging device which will be used. These amplifiers are suitable for LVDT transducers, strain gauge sensors and some internally amplified transducers.

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.

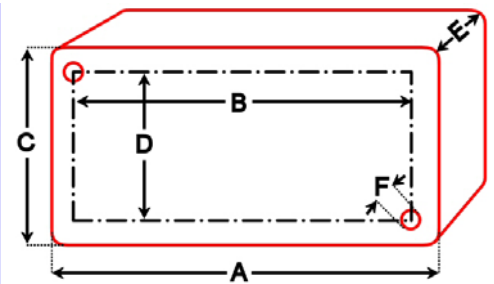
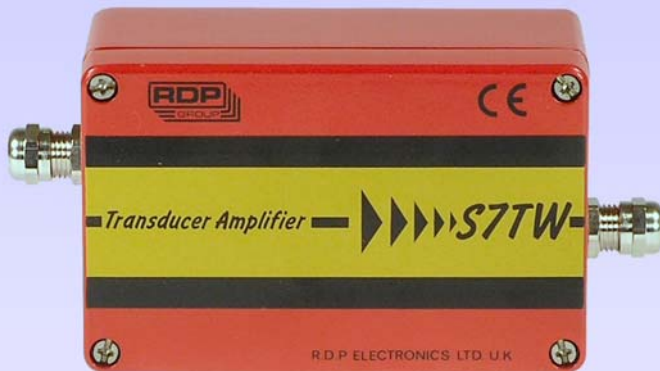


| | | |
|---|---|-------|
| A | = | 3.86" |
| B | = | 3.39" |
| C | = | 2.52" |
| D | = | 1.42" |
| E | = | 1.42" |
| F | = | 0.16" |

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) | ±0.003% F.S. /°F minimum |
| Temperature coefficient (span) | ±0.006% F.S. /°F minimum |
| Approximate zero adjustment range | ±5V |
| Operating temperature range | 14°F to 140°F |
| Total weight | 9.2oz |
| Cable gland cable size | 0.12" to 0.26" |

S7TW 4-20mA loop powered LVDT transducer amplifier.

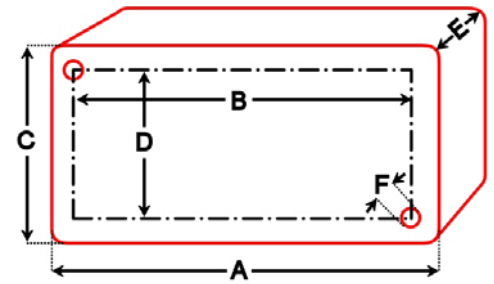


| | | |
|---|---|-------|
| A | = | 4.92" |
| B | = | 4.45" |
| C | = | 3.15" |
| D | = | 2.05" |
| E | = | 2.24" |
| F | = | 0.16" |

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) | ±0.003% F.S. /°F (typical) |
| Temperature coefficient (span) | ±0.008% F.S. /°F (typical) |
| Approximate zero adjustment range | ±8mA |
| Operating temperature range | -4°F to 185°F maximum |
| Total weight | 1.2lb |
| Cable gland cable size | 0.12" to 0.26" |

S7M 115/230V ac powered LVDT transducer amplifier.

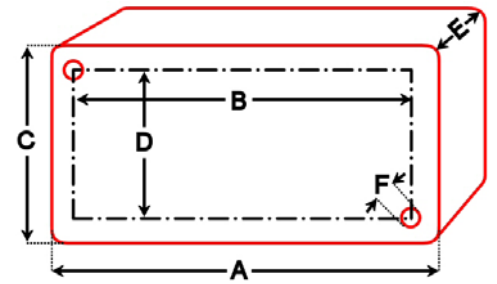


- A = 8.66"
- B = 8.03"
- C = 4.72"
- D = 3.23"
- E = 3.19"
- F = 0.24"

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) | ±0.001% F.S. /°F typical |
| Temperature coefficient (span) | ±0.002% F.S. /°F (typical) |
| Approximate zero adjustment range | ±10V |
| Operating temperature range | 14°F to 122°F |
| Total weight | 4.0lb |
| Cable gland cable size (x2) | 0.12" to 0.24" |
| Cable gland cable size (x1) | 0.20" to 0.39" |

S7DC dc powered strain gauge transducer amplifier.

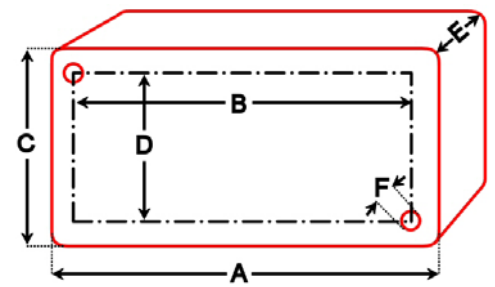


- A = 3.86"
- B = 3.39"
- C = 2.52"
- D = 1.42"
- E = 1.42"
- F = 0.16"

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) | ±0.001% F.S. /°F (typical) |
| Temperature coefficient (span) | ±0.002% F.S. /°F (typical) |
| Approximate zero adjustment range | ±2V |
| Operating temperature range | -40°F to 185°F maximum |
| Total weight | 9oz |
| Cable gland cable size | 0.12" to 0.26" |

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



- A = 8.66"
- B = 8.03"
- C = 4.72"
- D = 3.23"
- E = 3.19"
- F = 0.24"

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 | ±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 | ±0.1% F.S. |
| Electrical output bandwidth | 0 to 500Hz |
| Output ripple | 5mV |
| Input impedance | ±1G Ohms |
| Temperature coefficient (zero) | ±0.001% F.S. /°F typical |
| Temperature coefficient (span) | ±0.002% F.S. /°F (typical) |
| Approximate zero adjustment range | ±10V |
| Operating temperature range | 14°F to 122°F |
| Total weight | 4.0lb |
| Cable gland cable size (x2) | 0.12" to 0.24" |
| Cable gland cable size (x1) | 0.20" to 0.39" |

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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