

# EICT SIGNAL CONDITIONING MODULE

The EICT signal conditioning module has been specifically designed to operate the SLT190 and ICT range of contactless linear position transducers. This module incorporate a high performance circuit that drives the transducer and provides a choice of output signals with zero and span adjustment for simple user configuration. The module can be supplied in a choice of enclosures, with sealing to IP66 or IP68 protection.

## PERFORMANCE

**Supply voltage, unregulated Vdc**  
limited to 13.5 min. on certain ranges - see options table

10 - 60 or  $\pm(10 - 30)$  for standard output voltage range (**EICT** only)  
 10 - 30 or  $\pm(10 - 30)$  for extended output voltage range (**VM** card fitted)  
 10 - 30 or  $\pm(10 - 30)$  for current output (**CM** card fitted) or pulse width modulated output (**PWM** card fitted)

**Supply current** mA

10 maximum (19 with **VM** card fitted, 12.6 plus output current with **CM** card fitted, 13 with **PWM** card fitted)

**Output voltage signal** Vdc

0.5-4.5 See details on page 7 for additional output options

**Output current signal** mA

4-20 See details on page 7 for options

**Output PWM signal**

TTL level compatible signal with a 10-90% duty cycle. See details on page 7

**Output ripple** mVrms

<5

**Output load**  $\Omega$

10k minimum (resistive to 0V line)

**Frequency response** Hz

30 (-3dB) [equivalent to 5ms output lag]

**Line regulation**

<0.001% output span/Volt

**Power on settlement**

Within 0.25% of final output in less than 300 milliseconds

**Output adjustment range**

zero adjustment

-10 to 60% of span

gain adjustment

40 to 110% of span

**Operational temperature** °C

0 to +70

**Storage temperature** °C

-40 to +85

**Temperature stability** ppm/°C

200 (300 if VM card fitted)

**EMC Immunity level**

EN61000-6-2: 10kHz to 1GHz

Threat 100V/m : derangement <0.05% FS (**EICTM** module, adjacent to transducer)

Threat 10V/m : derangement <0.05% FS (**EICT** module, 1m cable)

**Transducer types**

Will only operate Penny+Giles SLT190 and ICT range of transducers

**Mechanical housing**

**EICT** - corrosion resistant plastic enclosure sealed to IP66, with detail to fit rail DIN EN50022 or EN50035 or bulkhead mount via four M5 screws.

**EICTM** - powder coated metal enclosure sealed to IP68 with bulkhead mounting only.

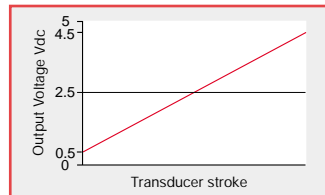
**Weight maximum** g

105 (250 for EICTM)

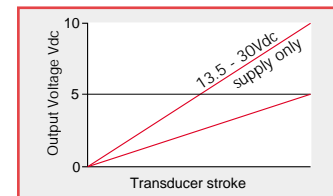
**Maximum recommended distance between transducer and EICT module is 10m.**

## OUTPUT CHARACTERISTICS

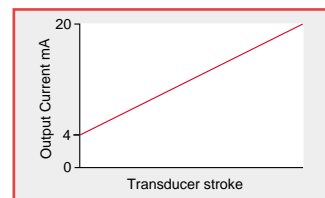
**EICT standard unit**  
10 - 60Vdc supply



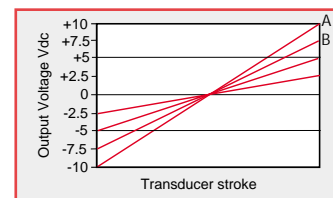
**EICT with VM card fitted**  
10 - 30Vdc supply



**EICT with CM card fitted**  
10 - 30Vdc or  $\pm(10 - 30)$  Vdc supply



**EICT with VM card fitted**  
10 - 30Vdc or  $\pm(10 - 30)$  Vdc supply



Note: A and B outputs only available with a  $\pm(13.5 - 30)$  Vdc supply

### Notes:

- The SLT190 transducer is supplied with a Sensor Calibration Module Card (SCMC) which is calibrated to match the transducer electrical stroke. This card must be inserted into the EICT signal conditioning unit before operation. The EICT is user configurable for input and output options.

Full details on installation and set-up are included in the manual supplied with the EICT module.

## OUTPUT OPTIONS

Output option	Supply voltage range Vdc Single or (Dual) supply	EICT	EICT with VM option card	EICT with CM option card	EICT with PWM option card																													
0.5 - 4.5Vdc	10 - 60 or ±(10 - 30)	✓	N/A	N/A	N/A																													
0 - 5Vdc	10 - 30 or ±(10 - 30)	N/A	✓	N/A	N/A																													
0 - 10Vdc	13.5 - 30 or ±(13.5 - 30)	N/A	✓	N/A	N/A																													
±2.5Vdc	10 - 30 or ±(10 - 30)	N/A	✓	N/A	N/A																													
±5Vdc	10 - 30 or ±(10 - 30)	N/A	✓	N/A </tr <tr> <td>±7.5Vdc</td> <td>13.5 - 30 or ±(13.5 - 30)</td> <td>N/A</td> <td>✓</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>±10Vdc</td> <td>13.5 - 30 or ±(13.5 - 30)</td> <td>N/A</td> <td>✓</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>4 - 20mA</td> <td>10 - 30 or ±(10 - 30)</td> <td>N/A</td> <td>N/A</td> <td>✓</td> <td>N/A</td> </tr> <tr> <td>TTL (10-90%)</td> <td>10 - 30 or ±(10 - 30)</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td>✓</td> </tr> <tr> <td>Slope reversal</td> <td></td> <td>✓</td> <td>✓</td> <td>✓</td> <td>✓</td> </tr>	±7.5Vdc	13.5 - 30 or ±(13.5 - 30)	N/A	✓	N/A	N/A	±10Vdc	13.5 - 30 or ±(13.5 - 30)	N/A	✓	N/A	N/A	4 - 20mA	10 - 30 or ±(10 - 30)	N/A	N/A	✓	N/A	TTL (10-90%)	10 - 30 or ±(10 - 30)	N/A	N/A	N/A	✓	Slope reversal		✓	✓	✓	✓
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Slope reversal		✓	✓	✓	✓																													

### PWM output signal

Output frequencies	Hz
Frequency accuracy	%
Output levels	Vdc
Rise/Fall time	µS
Output range	%

TTL level compatible signal with a 10-90% duty cycle

100, 130, 310, 1000 (user selected)

±10

LOGIC HIGH 4.5 ±0.5

LOGIC LOW <0.4

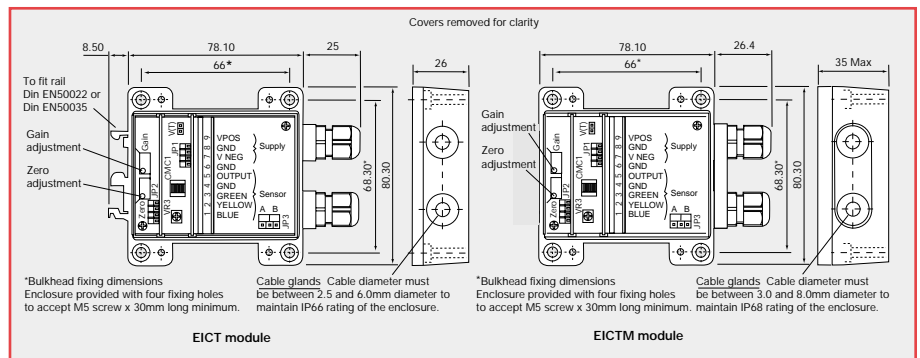
<2 with 1nF. load capacitance

10 (zero) to 90 (span)

Continual development of output options means we are working on additional **EICT** module output options. Please ask for details

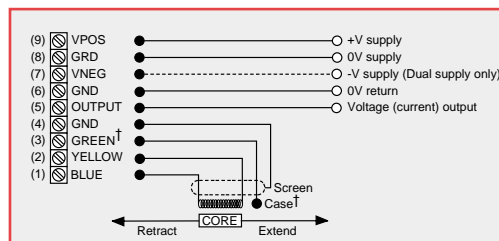
## DIMENSIONS

Note: drawings not to scale



## ELECTRICAL CONNECTIONS

Screw terminals



Misconnection of the supply may cause permanent damage

† The Green wire is internally connected to the transducer case. However, due to the construction of the transducer external moving parts, the Green connection should not be used as a ground connection.

**Note:** refer to the EICT set-up guide for details on how to connect to a split rail power supply.

## AVAILABILITY

Normally available from stock

## ORDERING CODES

**EICT** - module with 0.5 to 4.5Vdc output, IP66 protected plastic housing

**EICTM** - module with 0.5 to 4.5Vdc output, IP68 protected metal housing

## ACCESSORIES order separately

**VM** - voltage module output option card

**CM** - current module output option card

**PWM** - pulse width modulation output option card



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**Penny & Giles**

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