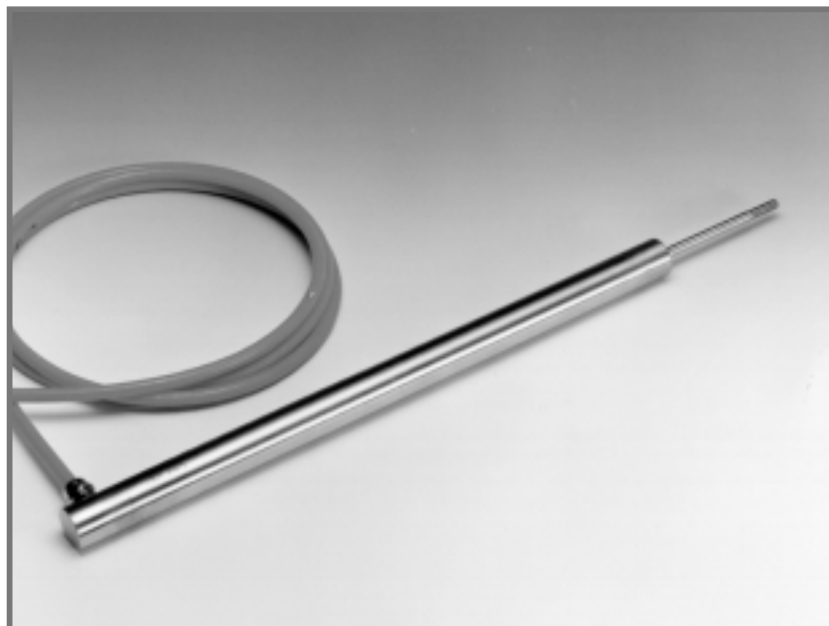


Industrial Series LVDT

DISPLACEMENT TRANSDUCER

AML/IE
Series



- Ranges $\pm 0.5\text{mm}$ to $\pm 550\text{mm}$
- Robust Stainless Steel Construction
- Guided Core as Standard
- Sealed to IP65 (IP68 optional)
- Armoured Cable
- Simple Installation
- Wide Variety of Different Outputs; mVac, 0-5vdc, 0-10vdc, 4-20mA, $\pm 2.5\text{vdc}$

Options Available

Environmental sealing to IP68.

Extension Rod Wiper.

Axial Cable Exit.

Longer cable lengths available on request.

Integral bayonet lock connector.

Improved Linearity on DC versions.

Higher temperature versions (consult factory).

Custom design versions available (consult factory).

DESCRIPTION

The AML/IE series of Industrial LVDT Displacement Transducers can be AC or DC powered and are widely used in Industrial applications where a rugged construction and excellent environmental sealing are essential. The AML/IE has been widely used in Process Plants, Paper Mills and Industrial Test rigs.

They are of robust construction, manufactured from stainless steel, sealed to IP65 (IP68 optional) and with armoured cable. Supplied in a variety of packaging formats they enable engineers to select quickly and precisely, the product required for a particular application.

The AML/IE is supported with a versatile range of instrumentation to enable engineers to implement the sensor with the minimum of fuss within a system. Supporting instrumentation includes trip amplifiers, indicators, PC interfaces, rack systems, etc.

Transducer Specialists...

APPLIED MEASUREMENTS LIMITED

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SPECIFICATION

| CHARACTERISTICS | AML/IE--- | AML/IEJ--- | AML/IEU--- | AML/IEU--- -10 | AML/IEI--- | AML/IED--- | UNITS |
|-------------------------------|--|------------|------------|--------------------------|-------------|-----------------|------------------------------------|
| Stroke Measurement Range: | $\pm 0.5, \pm 2.5, \pm 5, \pm 10, \pm 12.5, \pm 15, \pm 25, \pm 50, \pm 75, \pm 100, \pm 125, \pm 150, \pm 175, \pm 200, \pm 250, \pm 300, \pm 400, \pm 500, \pm 550$ (maximum stroke is ± 75 for Sprung Loaded Core & Extension - Option S) | | | | | | millimetres |
| Signal Output: | See Table Below | | 0-5volt | 0-10volt | 4-20mA | ± 2.5 volt | |
| No. of Wires | 6 | 4 | 3 | 3 | 3 | 4 | |
| Supply Voltage (unregulated): | 2 to 5Vrms @ 1 to 5kHz | | 10-30Vdc | 14-30Vdc | 14-24Vdc | 12Vdc regulated | |
| Supply Current: | - | | 35mA @ 15V | 35mA @ 15V | - | 35mA @ 12V | |
| Max. Loop Resistance: | - | | - | - | 300 @ 30V | - | ohms |
| Max. Output Sink Current: | - | | 0.5 | 1 | - | 0.1 | milliamps |
| Non-Linearity: | <0.50 | | | | | | $\pm\%$ Stroke Range |
| Repeatability: | <0.10 | | | | | | $\pm\%$ Stroke Range |
| Output Bandwidth: | 180 | | 300 | 300 | 300 | 300 | Hz |
| Output Ripple: | - | | 30mV max. | 30mV max. | 0.1% @ 20mA | 30mV max. | |
| Operating Temperature Range: | AML/E & E _J : -30 to +85 Std. / -30 to +150 Opt. | | | 0 to +70 on DC/DC models | | | $^{\circ}$ C |
| Zero Temperature Coefficient: | <0.020 | | <0.010 | | | | $\pm\%$ Stroke Range/ $^{\circ}$ C |
| Span Temperature Coefficient: | <0.020 | | <0.030 | | | | $\pm\%$ Stroke Range/ $^{\circ}$ C |
| Vibration Resistance: | 20g up to 2kHz | | | | | | |
| Shock Resistance: | 1000g for 10milliseconds | | | | | | |
| Construction Material: | Stainless Steel (core and case) | | | | | | |
| Connections: | 2 metre long screened cable exiting radially (axial exit optional - request option A) | | | | | | |
| Environmental Sealing: | IP65 (IP68 optional) | | | | | | |

Dimensions for AC Units (AML/IE & AML/IEI) only

| STROKE (mm) | Core Extension | | | AML/IE & IEJ Output Sensitivity @ 3kHz (mV/V) |
|-------------|----------------|----------|----------|---|
| | STANDARD | OPTION S | OPTION R | |
| ± 0.5 | 80 | 80 | 146 | 50 |
| ± 2.5 | 90 | 90 | 166 | 90 |
| ± 5 | 115 | 115 | 181 | 80 |
| ± 10 | 130 | 130 | 196 | 280 |
| ± 12.5 | 160 | 160 | 226 | 300 |
| ± 15 | 175 | 175 | 241 | 230 |
| ± 25 | 235 | 235 | 301 | 240 |
| ± 50 | 320 | 320 | 386 | 320 |
| ± 75 | 390 | 390 | 456 | 350 |
| ± 100 | 450 | n/a | 516 | 190 |
| ± 125 | 500 | n/a | 566 | 300 |
| ± 150 | 560 | n/a | 626 | 330 |
| ± 175 | 615 | n/a | 681 | 310 |
| ± 200 | 700 | n/a | 766 | 300 |
| ± 250 | 810 | n/a | 876 | 350 |
| ± 300 | 920 | n/a | 986 | 400 |
| ± 400 | 1150 | n/a | 1216 | 460 |
| ± 500 | 1410 | n/a | 1476 | 390 |
| ± 550 | 1410 | n/a | 1476 | 430 |

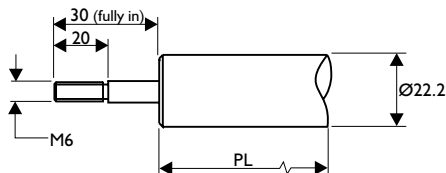
Dimensions for DC units only

(Models: AML/IEU, AML/IEU-10, AML/IEI & AML/IED)

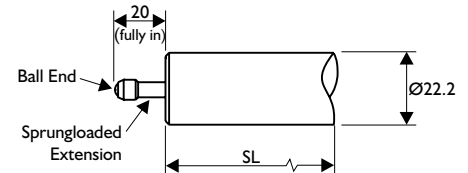
| STROKE (mm) | Core Extension | | |
|-------------|----------------|----------|----------|
| | STANDARD | OPTION S | OPTION R |
| ± 0.5 | 130 | 130 | 196 |
| ± 2.5 | 140 | 140 | 206 |
| ± 5 | 165 | 165 | 231 |
| ± 10 | 180 | 180 | 246 |
| ± 12.5 | 210 | 210 | 276 |
| ± 15 | 225 | 225 | 291 |
| ± 25 | 285 | 285 | 351 |
| ± 50 | 370 | 370 | 436 |
| ± 75 | 440 | 440 | 506 |
| ± 100 | 500 | n/a | 566 |
| ± 125 | 550 | n/a | 616 |
| ± 150 | 610 | n/a | 676 |
| ± 175 | 665 | n/a | 731 |
| ± 200 | 750 | n/a | 816 |
| ± 250 | 860 | n/a | 926 |
| ± 300 | 970 | n/a | 1036 |
| ± 400 | 1200 | n/a | 1266 |
| ± 500 | 1460 | n/a | 1526 |
| ± 550 | 1460 | n/a | 1526 |

All dimensions in mm

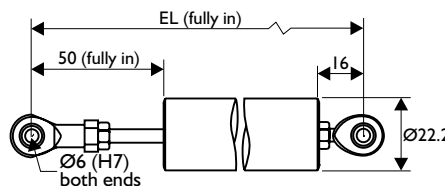
STANDARD Plain Core & Extension



OPTION S Sprung Loaded Core & Extension



OPTION R Guided Core & Extension with Rod End Bearings



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Continuous product development may result in minor changes to published specifications.

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