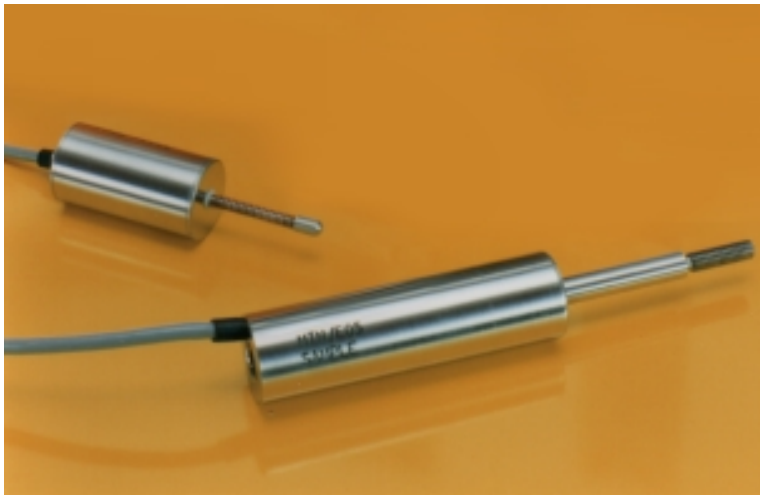


LVDT

Linear Variable Differential Transformer



IE-Series

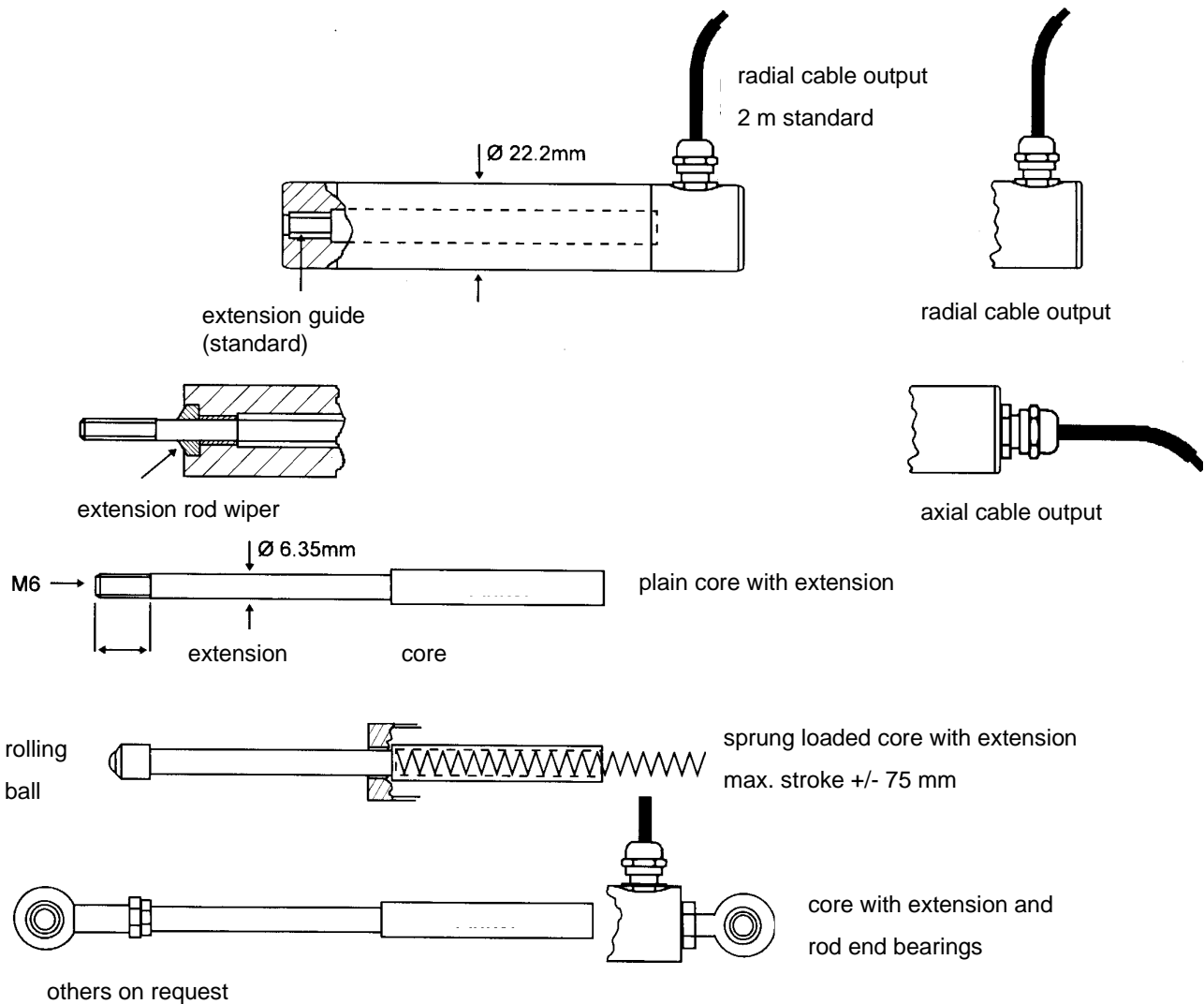
- **Range $\pm 0,50$ mm ... ± 550 mm**
- **Infinite Resolution**
- **Output: AC/DC ($\pm 2,5$ V/ 0...10 V/ 4...20 mA)**
- **Excitation $5 V_{rms}$ at 3 kHz (AC)**
- **Linearity $< \pm 0,5\%$**
- **Repeatability up to $2,5 \mu m$**
- **Extension Rod Wiper**
- **Stainless Steel Housing**
- **Various Mounting Possibilities**
- **Temperature $-30...+150^{\circ}C$ (optional)**
- **Protection Class IP65, IP68 (optional)**

Technical Data

Resolution	nearly infinite, depending on following circuit (ripple) and measurement range.
Range	$\pm 0,50/ \pm 2,50/ \pm 5,00/ \pm 10,00/ \pm 12,50/ \pm 15,00/ \pm 25,00/ \pm 50,00/ \pm 75,00/ \pm 100,00/ \pm 125,00/ \pm 150,00/ \pm 175,00/ \pm 200,00/ \pm 250,00/ \pm 300,00/ \pm 400,00/ \pm 500,00/ \pm 550,00$ mm Note: every LVDT works unidirectional, using zershift.
Linearity	$\leq \pm 0,5\%$ range, others on request.
Output AC (external Electronics)	Excitation $5 V_{rms}$ at 3 kHz Temperature: $-30...+85^{\circ}\text{C}$ (Standard) optional $-30...+150^{\circ}\text{C}$ Frequency Response: 3 dB at 180 Hz
External Electronics	Using the external electronic device 8100 it is possible to adapt LVDT's with smaller housing and an extended temperature range up to 150°C . For critical applications in harsh environments we recommend LVDT's with external electronics. Please see technical details in the data sheets 8100 and 6000 (19" rack, modular system) Output: 0...5 VDC, 0...10 VDC, 4...20 mA
Internal Electronics	Build in electronics. Following outputs are available (others on request). $\pm 2,5$ VDC Supply: 10...30 VDC (to be specified) Current consumption: 35 mA (at 12 VDC) Ripple: max. 30 mV Output Bandwidth: 300 Hz Zero Temperature Coefficient: 0,01% FS/ $^{\circ}\text{C}$ Span Temperature Coefficient: 0,03% FS/ $^{\circ}\text{C}$ Working Range: $-50...+85^{\circ}\text{C}$. 0...10 VDC Supply: 15...30 VDC (to be specified) Current consumption: 35 mA (at 12 VDC) Ripple: max. 30 mV Output Bandwidth: 300 Hz Zero Temperature Coefficient: 0,01% FS/ $^{\circ}\text{C}$ Span Temperature Coefficient: 0,03% FS/ $^{\circ}\text{C}$ Working Range: $-50...+85^{\circ}\text{C}$. 4...20 mA Supply: 14...24 VDC Ripple: max. 0,1% at 20 mA Null: 12 mA at zero set within 0,5% Working Range: $-20...+95^{\circ}\text{C}$.
Type	Plain core with extension front end guided, core with extension and rod end bearings, Sprung loaded core with extension front end guided max. stroke ± 75 mm Extension rod wiper
Housing	Stainless steel
Connection	2000 mm cable output (others on request)
Protection	IP65
Shock	1000g (10 ms)
Vibration	20 g (2 kHz)



Type

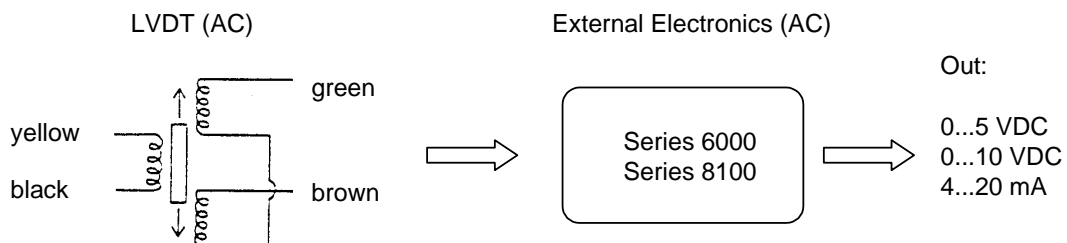


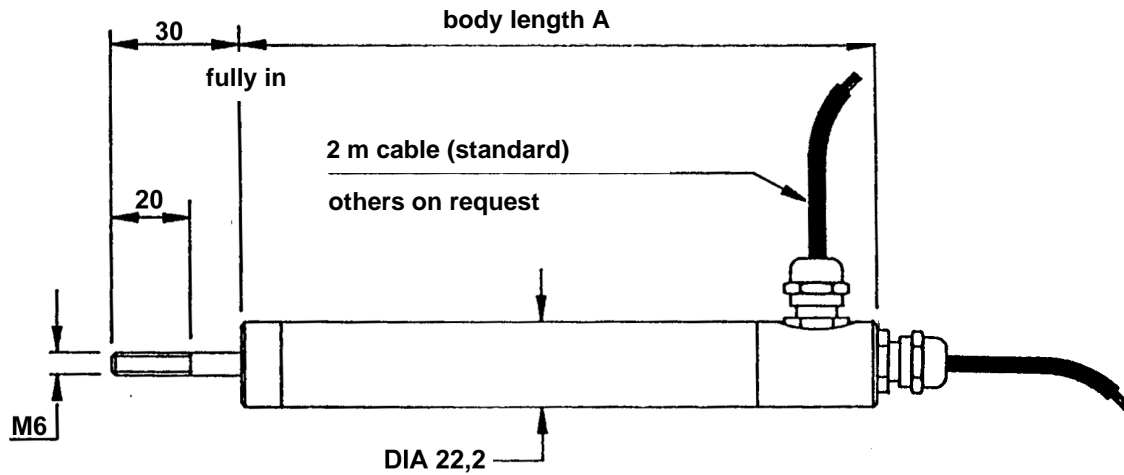
Connection Diagram

Internal Electronics (DC-unipolar and 4...20 mA)

	(3-wire)	(4-wire, IP68 (W))
red	supply	supply
blue	0 Volt COM	0 Volt COM
green	signal	signal COM
yellow		signal

LVDT with external electronics:





+/- 550	1460	1410	430	10	550	1530
+/- 500	1460	1410	390	10	550	1530
+/- 400	1200	1150	460	20	450	1010
+/- 300	970	920	400	5	690	770
+/- 250	860	810	350	10	290	560
+/- 200	750	700	300	10	250	430
+/- 175	665	615	310	2	230	360
+/- 150	610	560	330	5	210	290
+/- 125	550	500	300	2	180	320
+/- 100	500	450	190	5	150	150
+/- 75	440	390	350	20	260	460
+/- 50	370	320	320	2	200	270
+/- 25	285	235	240	5	130	210
+/- 15	225	175	230	20	90	190
+/- 12,5	210	160	300	15	120	190
+/- 10	180	130	280	10	70	170
+/- 5	165	115	80	5	100	110
+/- 2,5	140	90	90	5	180	460
+/- 0,5	130	80	50	20	40	1800
range (mm)	body length A (mm)	body length A (mm)	sensitivity at 3 kHz (mV/V)	null (mV)	primary resistance (Ω)	secondary resistance (Ω)
	internal electronics	external electronics				

internal electronics - technical data

±2,5 VDC
 supply: 10...30 VDC
 current consumption: 35 mA (at 12 VDC)
 ripple: max. 30 mV
 output bandwidth: 300 Hz
 zero temperature coefficient: 0,01% /°C
 span temperature coefficient: 0,03% /°C
 temperature range: -50...+85°C

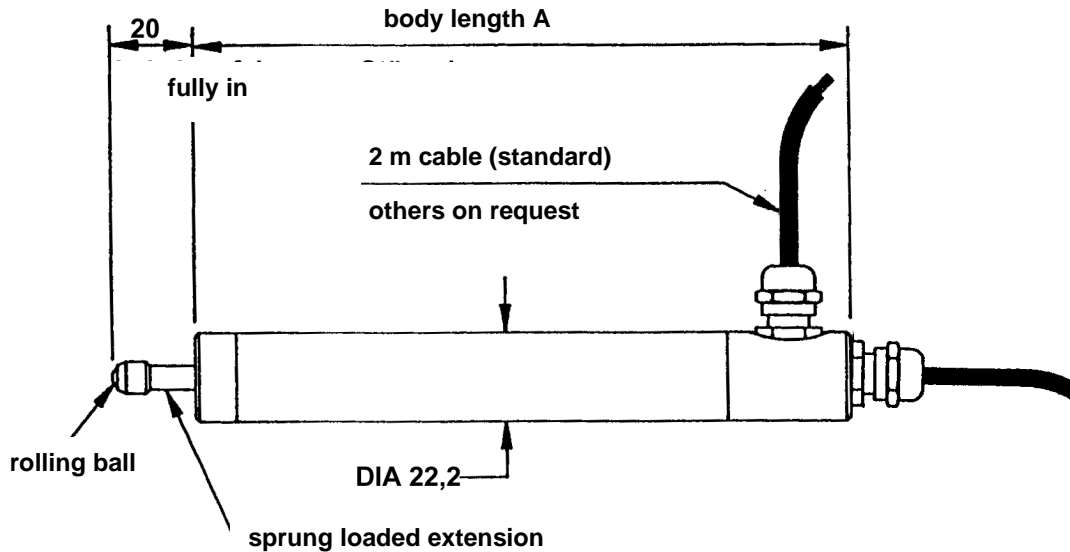
0...10 VDC
 supply: 15...30 VDC
 current consumption: 35 mA (at 15 VDC)
 ripple: max. 30 mV
 output bandwidth: 300 Hz
 zero temperature coefficient: 0,01% /°C
 span temperature coefficient: 0,03% /°C
 temperature range: -50...+85°C

4...20 mA
 supply: 14...24 VDC
 ripple: max. 0,1% at 20 mA
 null: 12 mA ± 0,5%
 temperature range: -20...+95°C

external electronics

Please see technical details in the data sheets 8100 and 6000 (19" rack, modular system). Outputs available:
 0...5 VDC, 0...10 VDC, 4...20mA





+/- 75	440	390	350	20	260	460
+/- 50	370	320	320	2	200	270
+/- 25	285	235	240	5	130	210
+/- 15	225	175	230	20	90	190
+/- 12,5	210	160	300	15	120	190
+/- 10	180	130	280	10	70	170
+/- 5	165	115	80	5	100	110
+/- 2,5	140	90	90	5	180	460
+/- 0,5	130	80	50	20	40	1800
range (mm)	body length A (mm) internal electronics	body length A (mm) external electronics	sensitivity at 3 kHz (mV/V)	null (mV)	primary resistance (Ω)	secondary resistance (Ω)

internal electronics - technical data

±2,5 VDC
 supply: 10...30 VDC
 current consumption: 35 mA (at 12 VDC)
 ripple: max. 30 mV
 output bandwidth: 300 Hz
 zero temperature coefficient: 0,01% /°C
 span temperature coefficient: 0,03% /°C
 temperature range: -50...+85°C

0...10 VDC
 supply: 15...30 VDC
 current consumption: 35 mA (at 15 VDC)
 ripple: max. 30 mV
 output bandwidth: 300 Hz
 zero temperature coefficient: 0,01% /°C
 span temperature coefficient: 0,03% /°C
 temperature range: -50...+85°C

4...20 mA
 supply: 14...24 VDC
 ripple: max. 0,1% at 20 mA
 null: 12 mA ± 0,5%
 temperature range: -20...+95°C

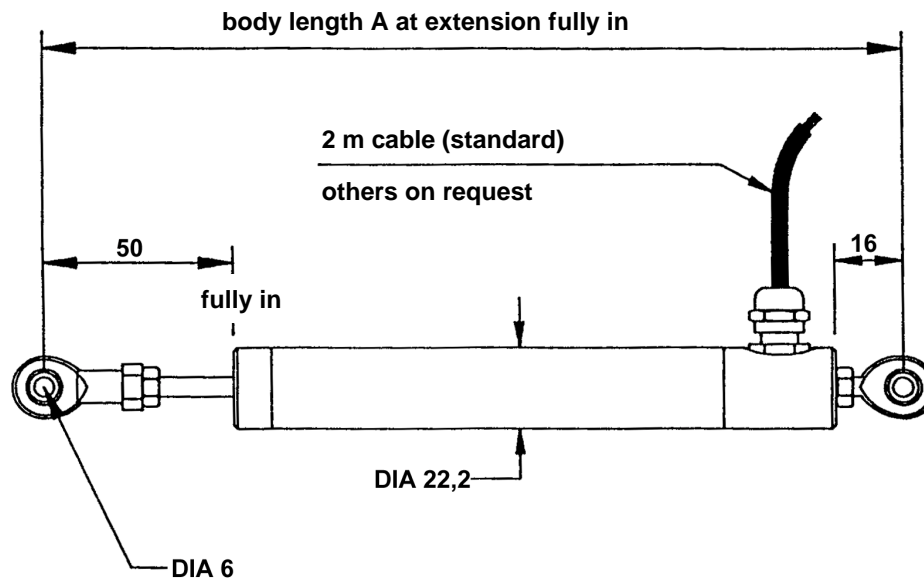
external electronics

Please see technical details in the data sheets 8100 and 6000 (19" rack, modular system). Outputs available: 0...5 VDC, 0...10 VDC, 4...20mA



Dimensions

IE-Series: core with extension and rod end bearings



+/- 550	1526	1476	430	10	550	1530
+/- 500	1526	1476	390	10	550	1530
+/- 400	1266	1216	460	20	450	1010
+/- 300	1036	986	400	5	690	770
+/- 250	926	876	350	10	290	560
+/- 200	816	766	300	10	250	430
+/- 175	731	681	310	2	230	360
+/- 150	676	626	330	5	210	290
+/- 125	616	566	300	2	180	320
+/- 100	566	516	190	5	150	150
+/- 75	506	456	350	20	260	460
+/- 50	436	386	320	2	200	270
+/- 25	351	301	240	5	130	210
+/- 15	291	241	230	20	90	190
+/- 12,5	276	226	300	15	120	190
+/- 10	246	196	280	10	70	170
+/- 5	231	181	80	5	100	110
+/- 2,5	206	166	90	5	180	460
+/- 0,5	196	146	50	20	40	1800
range (mm)	body length A (mm) internal electronics	body length A (mm) external electronics	sensitivity at 3 kHz (mV/V)	null (mV)	primary resistance (Ω)	secondary resistance (Ω)

internal electronics - technical data

±2,5 VDC
 supply: 10...30 VDC
 current consumption: 35 mA (at 12 VDC)
 ripple: max. 30 mV
 output bandwidth: 300 Hz
 zero temperature coefficient: 0,01% /°C
 span temperature coefficient: 0,03% /°C
 temperature range: -50...+85°C

0...10 VDC
 supply: 15...30 VDC
 current consumption: 35 mA (at 15 VDC)
 ripple: max. 30 mV
 output bandwidth: 300 Hz
 zero temperature coefficient: 0,01% /°C
 span temperature coefficient: 0,03% /°C
 temperature range: -50...+85°C

4...20 mA
 supply: 14...24 VDC
 ripple: max. 0,1% at 20 mA
 null: 12 mA ± 0,5%
 temperature range: -20...+95°C

external electronics

Please see technical details in the data sheets 8100 and 6000 (19" rack, modular system). Outputs available:
 0...5 VDC, 0...10 VDC, 4...20mA



Order Code Series IE

<div style="border: 1px solid black; padding: 2px;"> temperature - range: -30...+85°C </div>	external electronics	radial cable exit	IEJ- IEJS- IEJR-	(plain core with extension) (sprung loaded core with extension) (extension with rod end bearings)
		axial cable exit	IEJA- IEJSA-	(plain core with extension) (sprung loaded core with extension)
	internal electronics +/- 2,5 VDC	radial cable exit	IED- IEDS- IEDR-	(plain core with extension) (sprung loaded core with extension) (extension with rod end bearings)
		axial cable exit	IEDA- IEDSA-	(plain core with extension) (sprung loaded core with extension)
	internal electronics 0...10 VDC	radial cable exit	IEU- -10 IEUS- -10 IEUR- -10	(plain core with extension) (sprung loaded core with extension) (extension with rod end bearings)
		axial cable exit	IEUA- -10 IEUSA- -10	(plain core with extension) (sprung loaded core with extension)
	internal electronics 4...20 mA	radial cable exit	IEI- IEIS- IEIR	(plain core with extension) (sprung loaded core with extension) (extension with rod end bearings)
		axial cable exit	IEIA- IEISA-	(plain core with extension) (sprung loaded core with extension)
<div style="border: 1px solid black; padding: 2px;"> temperature- range: -30...+150°C </div>	external electronics	radial cable exit	IEHJ-	(plain core with extension)
		axial cable exit	IEHJA-	(plain core with extension)

Additional option G: extension rod wiper

Additional option W: IP68

We reserve the right to alter the specification without prior notice

For additional information, quotations or technical inquiries please contact
MONITRAN LTD.
we would be happy to assist you

name: _____ phone: _____

company: _____

address: _____

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