3386 Cermet Trimming Potentiometers

Product features

• 3/8-inch single-turn cermet trimmer; top- and side-adjust styles.

• HV2/HV3: sealed high-voltage focus-control variants.

• OT1: four-terminal center-tapped offset-adjustment variant.

Styles: Standard: A/B/C/H/J/S/P/F/K/M/R/T/U/V/Y/G/W/X; HV2/HV3: N/U; OT1: P

Variant parameters are specified separately. Select the corresponding ordering suffix.



Electrical characteristics

Parameter	3386	3386-HV2 / HV3	3386-OT1
Resistance range	10 Ω-2 MΩ	2.5 MΩ / 5 MΩ	100 Ω-1 MΩ
Resistance tolerance	±10%; tighter tolerance available	±20%	±20%
Minimum / end resistance	≤2 Ω	—	≤2 Ω
Contact resistance variation	2% or 3 Ω max., whichever is greater	≤2%	—
Voltage adjustability	±0.05%	±0.05%	±0.025%
Resistance adjustability	±0.15%	±0.15%	—
Voltage output variation	—	—	±0.25%
Resolution	Infinite	Infinite	—
Insulation resistance	≥1000 MΩ at 500 VDC	≥1000 MΩ at 1 kVDC	≥1000 MΩ at 500 VDC
Dielectric strength	900 VAC at sea level; 350 VAC at 70000 ft	≥1.5 kVAC at 5000 ft	900 VAC at sea level; 350 VAC at 70000 ft
Electrical travel	280° nominal	280° nominal	280° nominal
Center-tap resistance	—	—	≤2 Ω
Center-tap electrical center	—	—	±5%
Center-tap dead band	—	—	6° ±4°

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Environmental characteristics

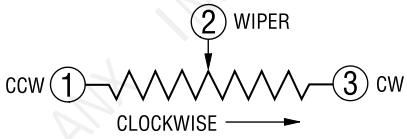
Parameter	3386	3386-HV2 / HV3	3386-OT1
Rated power / voltage limit	0.5 W at 85°C; 0 W at 125°C; max. 300 V	HV2: ≤1000 VDC at 85°C; HV3: ≤600 VDC at 85°C; 0 W at 125°C	0.5 W at 85°C; 0 W at 150°C
Operating temperature	-55°C to +125°C	-55°C to +125°C	-55°C to +150°C
Temperature coefficient	±100 ppm/°C	±400 ppm/°C	—
Temperature stability	—	—	ΔVR ±0.5% max.
Seal test	85°C Fluorinert	85°C Fluorinert	85°C Fluorinert
Humidity	MIL-STD-202 Method 103, 96 h; ΔTR 2%; IR 10 MΩ	MIL-STD-202 Method 103, 240 h; IR ≥100 MΩ	MIL-STD-202 Method 103, 96 h; ΔTR ±2%; IR ≥10 MΩ
Vibration	30 G; ΔTR 1%; ΔVR 1%	30 G; no discontinuity	30 G; ΔTR ±1%
Shock	100 G; ΔTR 1%; ΔVR 1%	100 G; no discontinuity	100 G; ΔTR ±1%
Load life	1000 h at 70°C / 0.5 W; ΔTR 3%; CRV 1% or 1 Ω, whichever is greater	1000 h at 60°C / 90% RH; HV2: 1 kVDC, HV3: 600 VDC; ΔTR ≤3%	1000 h; ΔTR ±3%
Rotational life	200 cycles; ΔTR 4%; CRV 1% or 1 Ω, whichever is greater	≥200 cycles	200 cycles; ΔTR ±4%
Voltage breakdown	—	≥1.5 kV at 5000 ft	—

Physical characteristics

Parameter	3386	3386-HV2 / HV3	3386-OT1
Mechanical angle	310° nominal	310° nominal	310° nominal
Torque	5.0 oz-in max.	5.0 oz-in max.	5.0 oz-in max.
Stop / end-stop strength	≥15.0 oz-in	≥15.0 oz-in	≥15.0 oz-in
Terminals	Solderable pins	Solderable pins	Solderable pins
Weight	0.03 oz	0.04 oz	0.03 oz
Wiper setting	50% of actual TR, ±10%	—	—
Flammability	UL 94V-0	UL 94V-0	UL 94V-0
Adjustment tool	H-90	H-90	H-90

TR: total resistance; CRV: contact resistance variation; VR: voltage ratio. TRS/VRS indicate shifts in total resistance/voltage ratio. —: not specified for that construction.

HV2 / HV3 terminal circuit



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Standard resistance values and codes

3386

Resistance	Code	Resistance	Code	Resistance	Code
10 Ω	100	20 Ω	200	50 Ω	500
100 Ω	101	200 Ω	201	500 Ω	501
1 kΩ	102	2 kΩ	202	5 kΩ	502
10 kΩ	103	20 kΩ	203	25 kΩ	253
50 kΩ	503	100 kΩ	104	200 kΩ	204
250 kΩ	254	500 kΩ	504	1 MΩ	105
2 MΩ	205				

3386-HV2/HV3

Resistance	Code	Resistance	Code	Resistance	Code
2.5 MΩ	255	5 MΩ	505		

3386-OT1

Resistance	Code	Resistance	Code	Resistance	Code
100 Ω	101	200 Ω	201	500 Ω	501
1 kΩ	102	2 kΩ	202	5 kΩ	502
10 kΩ	103	20 kΩ	203	50 kΩ	503
100 kΩ	104	200 kΩ	204	500 kΩ	504
1 MΩ	105				

Selected drawing dimensions • mm

Style	Shown outline values	Lead / pad spacing	Other drawing values
Standard / HV N,U / OT1 P	9.53; 9.53	2.54	5.97 ±0.89

Drawing reference values only; use the individual outline views. Units: mm (inches in parentheses). Individual tolerances apply.

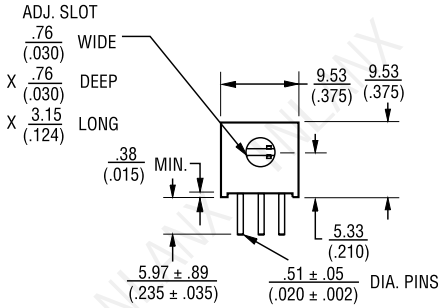
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Outline and mounting dimensions

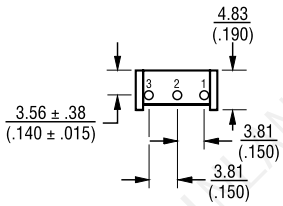
Unless otherwise noted: ±0.25 mm (±0.010 in).

A / B / C / H / J / S / W / X

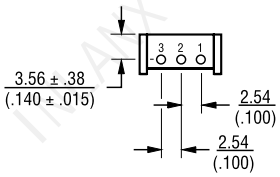
Common Dimensions
Side Adjust



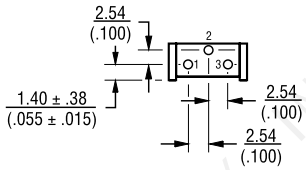
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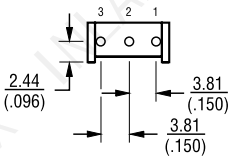
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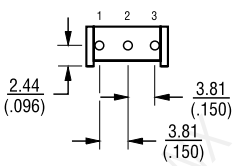
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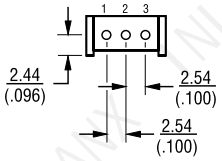
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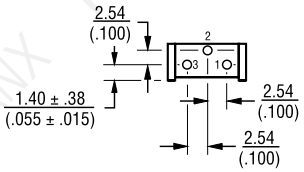
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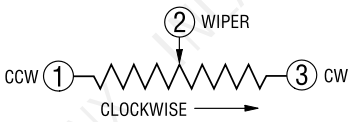
3386W



3386X



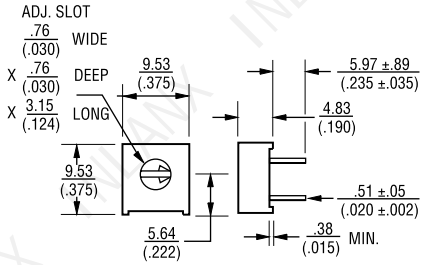
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TOLERANCES: ±.25/(±.010) EXCEPT WHERE NOTED



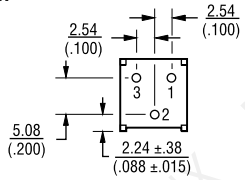
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P / F / K / M / R / T / U / Y / V / G

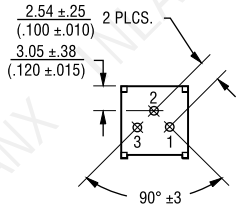
Common Dimensions
Top Adjust



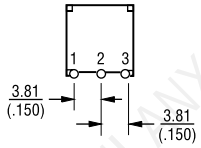
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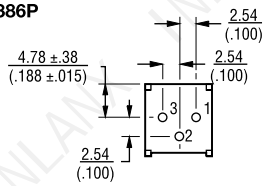
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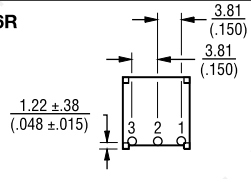
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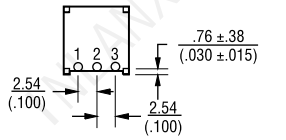
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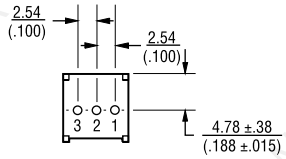
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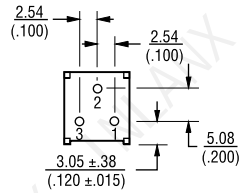
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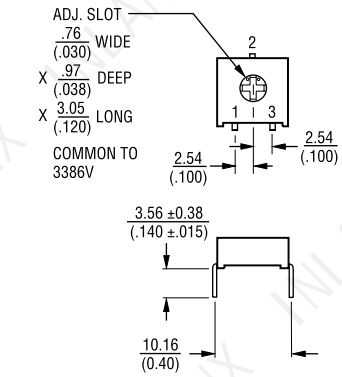
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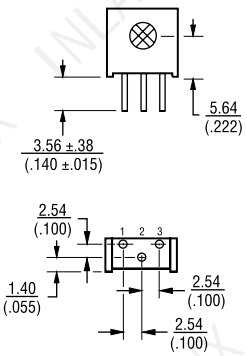
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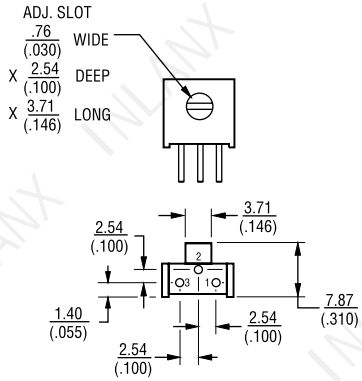
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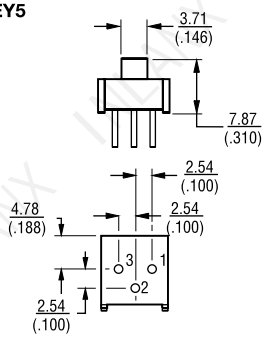
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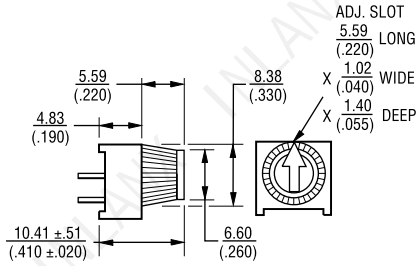
3386H-EY5
3386X-EY5 – SHOWN



3386P-EY5



The Model 3386 is available with a knob for finger adjustment. Add suffix letter “T” to order code for F, P and X terminal styles.

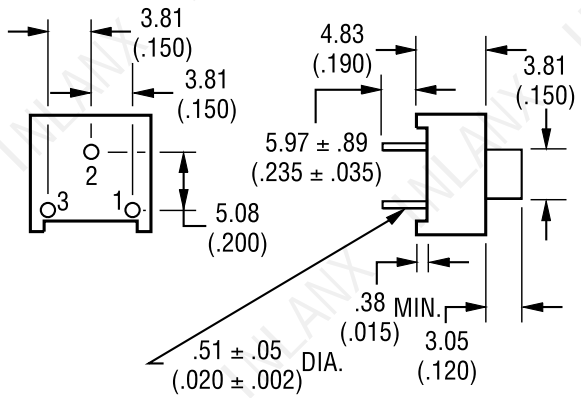


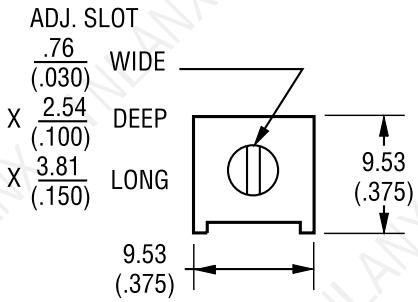
DIMENSIONS: MM/(INCHES)
TOLERANCES: ±.25/(±.010) EXCEPT WHERE NOTED

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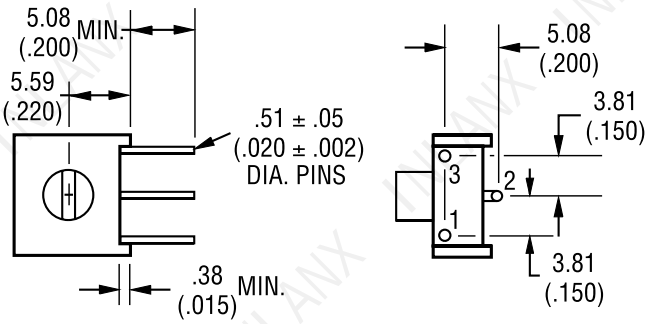
HV2 / HV3 N / U

3386N
Common Dimensions



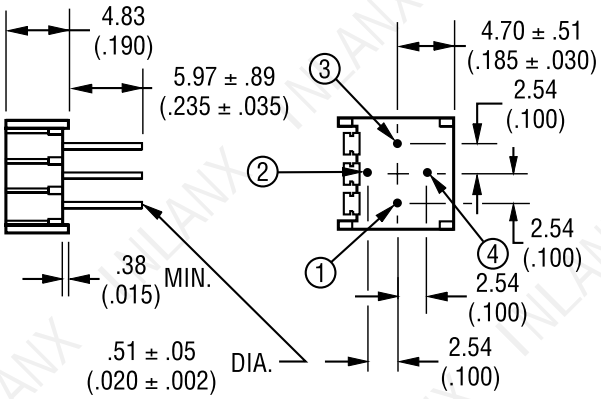


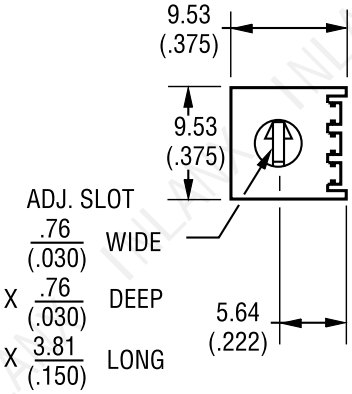
3386U



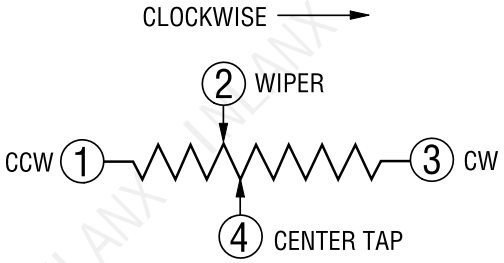
OT1 P and center tap

3386P-OT1





DIMENSIONS: MM/(INCHES)
TOLERANCES: ±.25/(±.010) EXCEPT WHERE NOTED

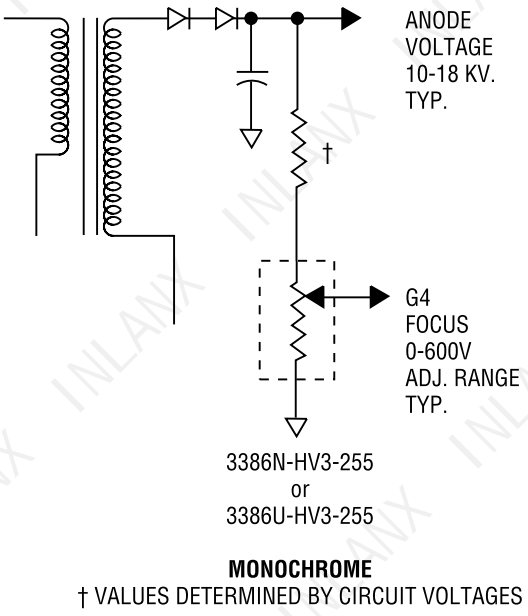


3386 Cermet Trimming Potentiometers

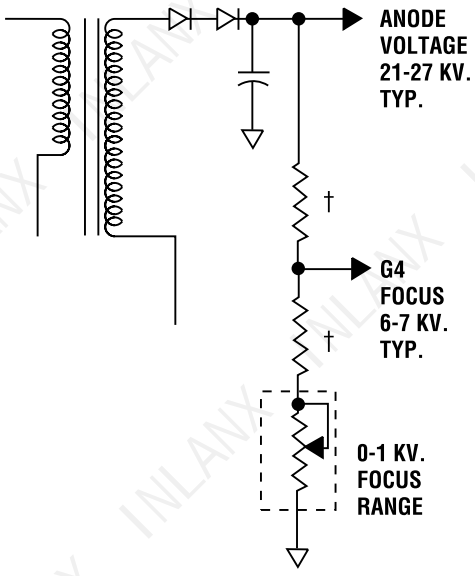
Terminal and application circuits

HV2 / HV3 focus-control circuits

Typical Focus Control Circuits

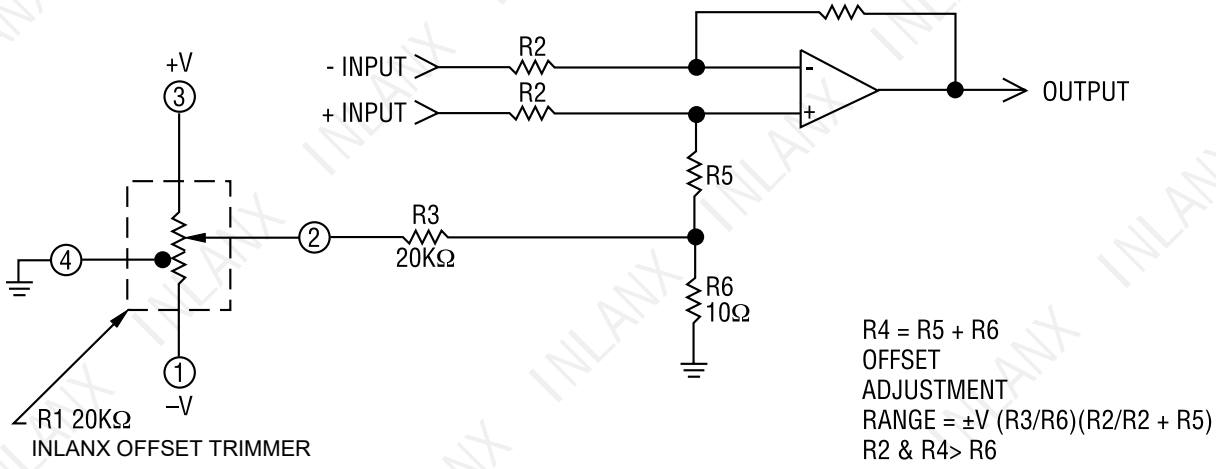


MONOCHROME
† VALUES DETERMINED BY CIRCUIT VOLTAGES



COLOR

OT1 offset-adjustment circuit



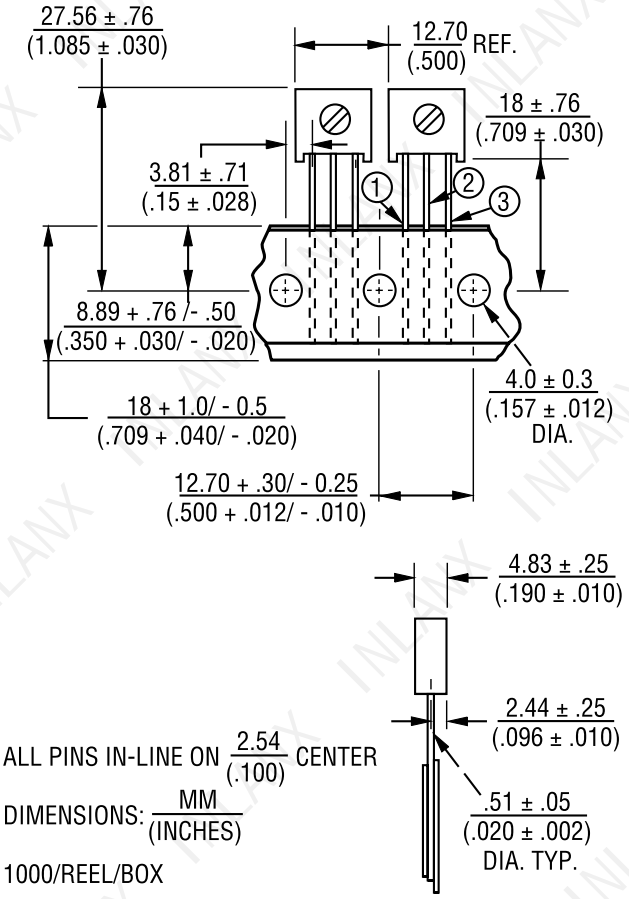
R4 = R5 + R6
OFFSET
ADJUSTMENT
RANGE = ±V (R3/R6)(R2/R2 + R5)
R2 & R4> R6

3386 Cermet Trimming Potentiometers

Packaging dimensions

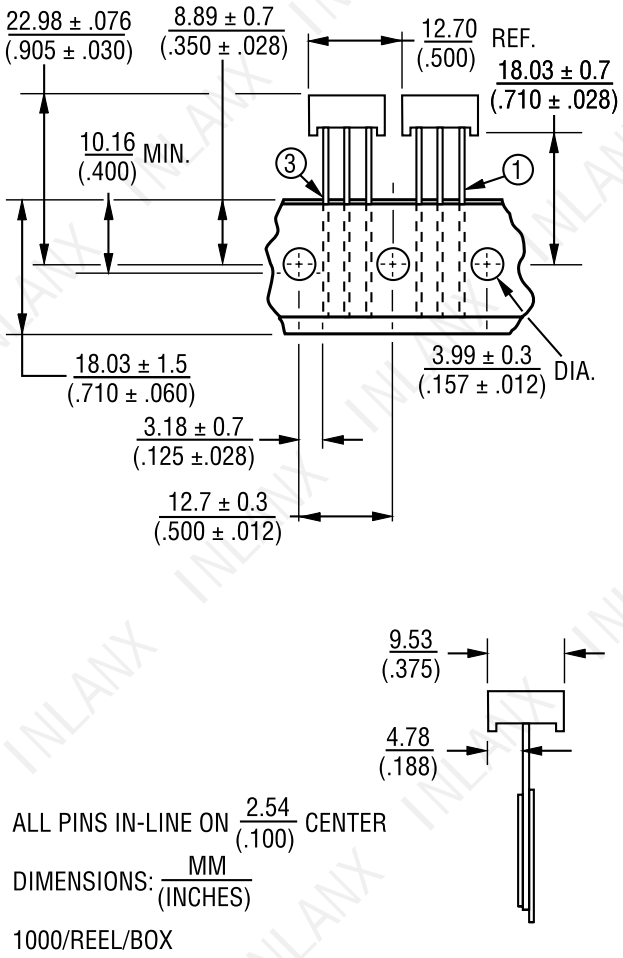
W / U tape and reel

SIDE ADJUST
3386W-1



Meets EIA Specification 468.

TOP ADJUST
3386U-1



Meets EIA Specification 468.

Packaging and ordering

Standard / HV: 50 pcs/tube. OT1: 50 pcs/tube or tray. Standard W and U support R tape/reel or A ammo pack. Optional shaft/knob styles must follow their individual drawings.

Standard: INLANX - 3386 P - 1 - 103 [LF]. High voltage: INLANX - 3386 N - HV2 - 505 [T] LF; HV2 = 1000 VDC, HV3 = 600 VDC; 255 = 2.5 MΩ, 505 = 5 MΩ; T = red knob. OT1: INLANX - 3386 P - OT1 - 103 LF. LF: 100% tin; blank: 90% tin / 10% lead. EY5: extended shaft. T: optional finger-adjust knob for F, P and X styles; follow the individual drawings.