

EA002

**2 / 10 / 50 TURN
30A (1500A SIMULATED)
CLAMP COIL ADAPTER**



SPECIFICATIONS

| | |
|------------------------------|--|
| Warm Up Time | Double the time since last used up to 20 minutes maximum |
| Standard Interface | Transmille Adapter Interface (9 Pin Female 'D' Type connector) |
| Temperature Performance | Storage : -5°C to +60°C Operation : 0°C to +50°C |
| Relative Humidity | Operation : <80% to 30°C, <70% to 40°C, <40% to 50°C Storage : <95%, non-condensing |
| Altitude | Operation : 3000m (10,000ft) Maximum Transit : 12000m (40,000ft) Maximum |
| Coil Configuration | 2 Turn (LHS) : 10 Turn (RHS) : 50 Turn (Centre) |
| Coil Type | High Accuracy Balanced Configuration |
| Min. Internal Jaw Dimensions | 10mm (2 & 10 Turn) : 25mm (50 Turn) |
| Maximum Current | 30A |
| Maximum RMS Voltage | 4V |
| Frequency Range | DC to 400Hz |
| Construction | Loose wound coil (for heat dissipation) in moulded enclosure |
| Durability | Fully enclosed coil for maximum protection from mechanical damage |
| Connections | 2 Turn Coil Input 1x Yellow Safety Terminal 10 Turn Coil Input 1x Yellow Safety Terminal 50 Turn Coil Input 1x Yellow Safety Terminal Coil Common Input 1x Blue Safety Terminal |
| Dimensions | 28cm x 12cm x 6cm |
| Warranty Period | 1 Year (Parts & Labour) |
| Recommended Service Interval | 1 Year |
| Supplied Connections | 1x Yellow Connection Lead : 1x Blue Connection Lead |

| 2 Turn Coil Accuracy (Input 0 to 30A : Freq. DC - 30Hz to 60Hz : Effective Output 0 to 60A) | | | | | | | | |
|--|-------------|---------|--------------|---------|-------------|---------|-------------|---------|
| | 90 Day Rel. | | 180 Day Rel. | | 1 Year Rel. | | 2 Year Rel. | |
| | % | A | % | A | % | A | % | A |
| Effective accuracy - Coil only (wound clamps) | 0.35 | + 0.008 | 0.35 | + 0.008 | 0.35 | + 0.008 | 0.35 | + 0.008 |
| Effective accuracy - Coil only (hall effect clamps) | 0.48 | + 0.07 | 0.48 | + 0.07 | 0.48 | + 0.07 | 0.48 | + 0.07 |
| Total uncertainty with 3050 (All clamps) | 0.51 | + 0.09 | 0.51 | + 0.09 | 0.52 | + 0.09 | 0.56 | + 0.10 |
| Total uncertainty with 3041 (wound clamps) | 0.36 | + 0.028 | 0.36 | + 0.028 | 0.36 | + 0.028 | 0.38 | + 0.036 |
| Total uncertainty with 3041 (hall effect clamps) | 0.49 | + 0.090 | 0.49 | + 0.090 | 0.49 | + 0.090 | 0.50 | + 0.098 |
| Total uncertainty with 3010 calibrator (wound clamps) | 0.36 | + 0.010 | 0.36 | + 0.010 | 0.36 | + 0.010 | 0.37 | + 0.010 |
| Total uncertainty with 3010 (hall effect clamps) | 0.48 | + 0.072 | 0.49 | + 0.072 | 0.49 | + 0.072 | 0.49 | + 0.072 |

| 10 Turn Coil Accuracy (Input 0 to 30A : Freq. DC - 30Hz to 60Hz : Effective Output 0 to 300A) | | | | | | | | |
|--|-------------|---------|--------------|---------|-------------|---------|-------------|---------|
| | 90 Day Rel. | | 180 Day Rel. | | 1 Year Rel. | | 2 Year Rel. | |
| | % | A | % | A | % | A | % | A |
| Effective accuracy - Coil only (wound clamps) | 0.41 | + 0.01 | 0.41 | + 0.01 | 0.41 | + 0.01 | 0.41 | + 0.01 |
| Effective accuracy - Coil only (hall effect clamps) | 0.59 | + 0.11 | 0.59 | + 0.11 | 0.59 | + 0.11 | 0.59 | + 0.11 |
| Total uncertainty with 3050 (All clamps) | 0.61 | + 0.13 | 0.62 | + 0.13 | 0.62 | + 0.13 | 0.65 | + 0.14 |
| Total uncertainty with 3041 (wound clamps) | 0.42 | + 0.03 | 0.42 | + 0.03 | 0.42 | + 0.03 | 0.43 | + 0.04 |
| Total uncertainty with 3041 (hall effect clamps) | 0.60 | + 0.13 | 0.60 | + 0.13 | 0.60 | + 0.13 | 0.61 | + 0.14 |
| Total uncertainty with 3010 calibrator (wound clamps) | 0.41 | + 0.012 | 0.42 | + 0.012 | 0.42 | + 0.012 | 0.42 | + 0.012 |
| Total uncertainty with 3010 (hall effect clamps) | 0.59 | + 0.112 | 0.59 | + 0.112 | 0.60 | + 0.112 | 0.60 | + 0.112 |

| 50 Turn Coil Accuracy (Input 0 to 30A : Freq. DC - 30Hz to 60Hz : Effective Output 0 to 1500A) | | | | | | | | |
|---|-------------|---------|--------------|---------|-------------|---------|-------------|---------|
| | 90 Day Rel. | | 180 Day Rel. | | 1 Year Rel. | | 2 Year Rel. | |
| | % | A | % | A | % | A | % | A |
| Effective accuracy - Coil only (wound clamps) | 0.24 | + 0.04 | 0.24 | + 0.04 | 0.24 | + 0.04 | 0.24 | + 0.04 |
| Effective accuracy - Coil only (hall effect clamps) | 0.45 | + 0.42 | 0.45 | + 0.42 | 0.45 | + 0.42 | 0.45 | + 0.42 |
| Total uncertainty with 3050 (All clamps) | 0.48 | + 0.44 | 0.48 | + 0.44 | 0.49 | + 0.44 | 0.53 | + 0.45 |
| Total uncertainty with 3041 (wound clamps) | 0.25 | + 0.06 | 0.26 | + 0.06 | 0.26 | + 0.06 | 0.28 | + 0.07 |
| Total uncertainty with 3041 (hall effect clamps) | 0.46 | + 0.44 | 0.46 | + 0.44 | 0.46 | + 0.44 | 0.47 | + 0.45 |
| Total uncertainty with 3010 calibrator (wound clamps) | 0.25 | + 0.042 | 0.25 | + 0.042 | 0.25 | + 0.042 | 0.26 | + 0.042 |
| Total uncertainty with 3010 (hall effect clamps) | 0.45 | + 0.42 | 0.46 | + 0.42 | 0.46 | + 0.42 | 0.46 | + 0.42 |

Accuracy is dependant on proper alignment of the clamp meter within the coil

Certain clamp meters have alignment marks which should be aligned with the centre of the coil.

Certain types of clamp meter may have additional errors, or be outside the range which can be driven by the 3041/3010A directly

**Uncertainty calculated as the square root of the square of coil accuracy + square of calibrator accuracy
using empirical data obtained for both wound & hall effect instruments from a wide range of manufacturers
Clamp coil adaptor is supplied complete with workstation incorporating alignment marks**

| DC Resistance | |
|-----------------------|-------|
| At Coil | 0.14Ω |
| With Connection Leads | 0.18Ω |

| Duty Cycle | |
|------------|-----------------------|
| 10A | Continuous |
| 20A | 2mins on ~ 5mins off |
| 30A | 30secs on ~ 5mins off |

| Inductance | |
|---|-------|
| Coil Only | 120uH |
| Coil with typical clamp meter on 50 Turn coil | 200uH |
| Coil with typical clamp meter on 10 Turn coil | 50uH |
| Coil with typical clamp meter on 2 Turn coil | 5uH |

Specifications apply at TCal ± 5°C

Outside this range an allowance of 0.18 x 1 Year Spec. per °C should be added.