

CLEVELAND-KIDDER® Ultra



Performance Benefits

Versatility and precision describe the Cleveland-Kidder Ultra Tension Indicator. Models are offered for all styles of Ultra tension transducers.

A multitude of displays are available. Either easy to read analog or LED digital displays are offered. A 0-100% analog display is standard but the scale can be customized for any range of values. A large 0.56 inch digit LED display is standard but an extra large 1.5 inch high LED display is also available.

The Cleveland-Kidder Tension Indicator directly accepts 50/60HZ, 86-264 VAC single phase input power. No switches or jumpers are required for operation at 120 or 240VAC. 24VDC can also be brought directly into the amplifier.

Many applications require that tension be displayed locally and also input to a remote device such as a drive or PLC. An accessory 0-10VDC or 4-20-ma output is offered as either non-isolated or isolated for interfacing to the remote device.

All components are mounted on the inside of the hinged enclosure door. This makes them easily accessible for initial set-up and service.

The Indicator is state of the art, high precision technology. It incorporates Cleveland -Kidder's latest Ultra DIN rail amplifier for signal conditioning. This amplifier incorporates the latest surface mount component technology.

Cleveland-Kidder Ultra Transducers and Indicators provide the ultimate in precision and tension range. The Ultra system features immunity from electrical noise and a 40:1 tension range. High switching frequencies from variable frequency drives and other modern electrical components create electrical noise. This noise often interferes with the tension signal resulting in an inaccurate reading. The Ultra system eliminates this noise by utilizing common mode noise rejection technology. In addition, the Ultra provides a higher tension signal which results in finer signal resolution and the ability to measure tension over a wider range.

TENSION INDICATOR

ULTRALINE*

Indicates the precise tension value. For use with Cleveland -Kidder Ultra model tension transducers.

- Easy to read analog or LED digital displays
- State of the art technology - incorporates Cleveland-Kidder's latest Ultra DIN rail amplifier for signal conditioning
- Components easily accessible for set-up and service
- Customized analog scales available
- Extra large character (1.5 inch high) digital display available
- Dual displays available for simultaneously displaying both left and right tension
- Directly accepts 50/60HZ, 86-264 VAC, single phase input power
- Accepts 24VDC input power
- Accessory 0-10 VDC or 4-20ma tension output provided for remote devices
- Switch selectable damping for meters
- All CE components



HOW TO ORDER

Step 1: Confirm that you have CMC Ultra transducers. Ultra is a full bridge design. For more information refer to the data sheet or manual for the Ultra amplifier which can be found on the Cleveland-Kidder Web site (www.clevelandkidder.com). Contact CMC if you are not sure which design you have.

Step 2: Determine the type of display you require. Many customers prefer the analog display because the needle position provides a visual point of reference. Some customers prefer a digital display since it provides a finer resolution in some cases. However, damping (a standard indicator feature) may be necessary to prevent the flickering of digits.

The standard analog meter is provided with a 0-100% scale. This is selected for most applications since relative tension set points are easily discernable. Some customers prefer to display the actual tension value. For these situations contact CMC to customize the scale for your application.

Scale customization is not required for a digital meter. The values displayed are unit less and calibrated at set-up.

Step 3: Order by part number from Table A. The Basic Analog Meter offering is MWI-13491-1. The Basic Digital Meter offering is MWI-13491-3. Indicators can be supplied with isolated outputs, dual displays, or extra large characters. Contact CMC if custom indicators are required.

TABLE A- ULTRA SERIES INDICATORS - FOR USE WITH ULTRA SERIES TRANSDUCERS

Description	Part Number	Additional Information
Basic Analog Display - 0-100% Scale	MWI-13491-1	Accessory 0-10VDC and 4-20 ma non-isolated tension outputs are provided for use with remote devices. Uses Basic Ultra Amplifier (Part Number MWI-13262). Contact CMC if custom scale is required.
Analog Display - 0-100% Scale -Isolated Outputs	MWI-13491-2	Accessory 0-10VDC or 4-20 ma isolated tension outputs are provided for use with remote devices. Uses Isolated Ultra Amplifier (Part Number MWI-13261). Contact CMC if custom scale is required.
Basic Digital Display	MWI-13491-3	Accessory 0-10VDC and 4-20 ma non-isolated tension outputs are provided for use with remote devices. Uses Basic Ultra Amplifier (Part Number MWI-13262).
Digital Display-Isolated Outputs	MWI-13491-4	Accessory 0-10VDC or 4-20 ma isolated tension outputs are provided for use with remote devices. Uses Isolated Ultra Amplifier (Part Number MWI-13261).
Dual Digital Display	MWI-13491-5	Dual Meter- Required if left or right transducers need to be displayed individually or sum of two pairs needs to be displayed in one enclosure. Accessory 0-10VDC and 4-20 ma isolated outputs are provided for use with remote devices. Uses two Isolated Ultra Amplifiers (Part Number MWI-13261).
Extra Large Digital Display - 1.5 Inch high digits	Consult CMC	Accessory 0-10VDC and 4-20 ma non-isolated tension outputs are provided for use with remote devices. Uses Basic Ultra Amplifier (Part Number MWI-13462).

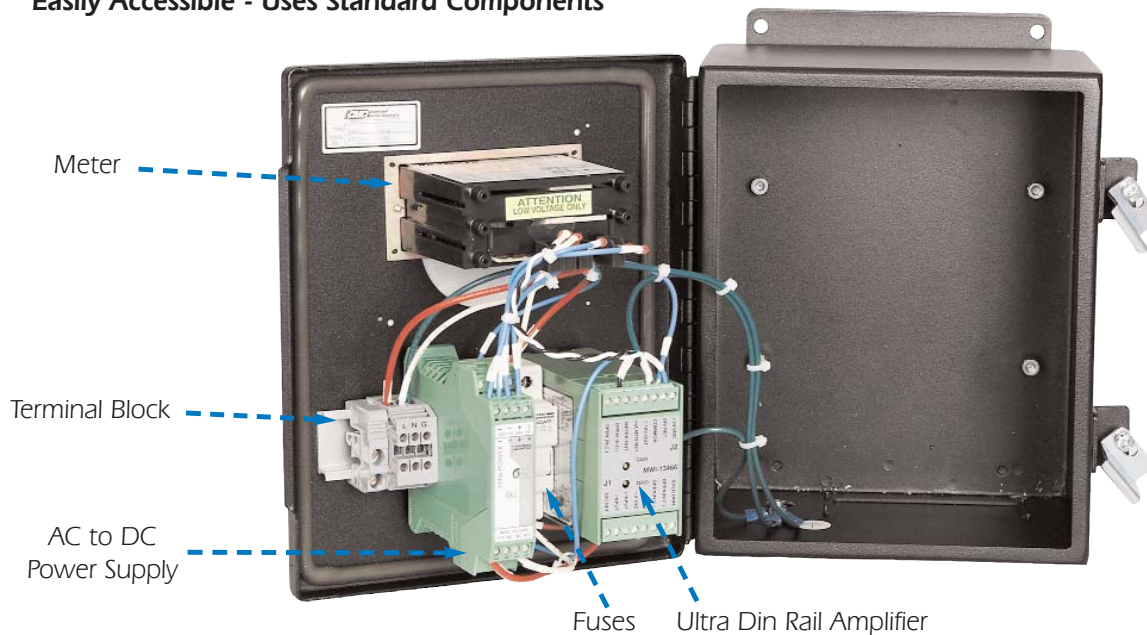
INDUSTRIAL PRODUCTS DIVISION

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www.clevelandkidder.com



Easily Accessible - Uses Standard Components



Meter

Terminal Block

AC to DC
Power Supply

Fuses

Ultra Din Rail Amplifier

SPECIFICATIONS - ULTRA SERIES INDICATORS

Input Voltage	50/60 HZ, 86-264 VAC Alternatively 24 VDC can be brought directly into the amplifier
Input Power Requirements	Ranges from 120 milliamps to 180 milliamps. Depends on the specific model being ordered. Refer to the appropriate Ultra DIN rail amplifier data sheet or manual for the specific value.
Transducer Excitation	5.0 or 10.0 VDC For use with CMC's Ultra(full bridge)transducers
Amplifier Specifications	CMC's Ultra DIN rail amplifiers are supplied as an Indicator component. Refer to the amplifier data sheet or manual for these specifications.
Enclosure	NEMA 12
Weight	11.4 lbs.
Operating Temperature	0 to 55 degrees C 32 to 132 degrees F
Humidity	Non-Condensing 85 % at 55 degrees C 85% at 132 degrees F
Altitude	1000 meters 3300 feet
Damping	Switch Selectable - 0.3 Hz or 3.7 Hz
Displays	Analog - 4.5 inch meter - 0-100% scale standard - Custom scales available Digital - 3.5 digit display - 0.56 inch high digits -red LED Large Digital - 5 digit display - 1.5 inch high digits - red LED

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CMC Cleveland
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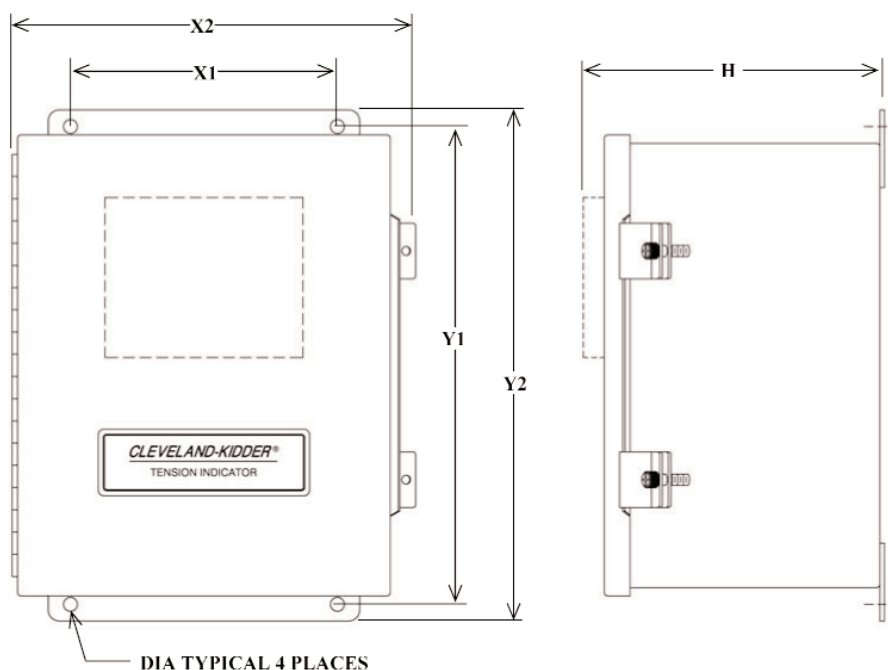
TENSION INDICATOR

CLEVELAND-KIDDER® Ultra



Extra Large LED Display

DIMENSIONS - ULTRA Series Indicator



DIM	Models: MWI-13491-[1-4]	Models: MWI-13491-[5]
X1	6.00" (152mm)	10.00" (254mm)
X2	9.07" (231mm)	13.07" (332mm)
Y1	10.75" (273mm)	12.75" (324mm)
Y2	11.5" (293mm)	13.5" (343mm)
H*	7.00" (178mm)	7.00" (178mm)
DIA	0.31" (8mm) Diameter	0.31" (8mm) Diameter

* max dimension shown, meter faceplate thickness varies with model type

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