DIGITAL WEIGHT COMPUTER MODEL TR-1-NK

STANDARD OPERATION FEATURES   (MINI295-LBKG-REM SOFTWARE)
     This unit has the pounds to kilogram conversion feature
     If this feature is enabled, be sure that all calibration is done in pounds.
  A second output has been added to provide data to a remote computer or display
     Separate from a printer.

ZERO BUTTON:
 To bring the scale to a zero balance reading, press the ZERO
button. The button will not activate if the MOTION lamp is
on.
     NOTE: On battery powered units, hold this button to turn the power
          OFF.

  · : Lb/Kg CONVERSION
     Push to change between lb and kg display modes. Each time the button
     is pushed, the tare weight will be automatically cleared.
     NOTE: This is the power ON button for battery powered units

GROSS NET:
 Press the GROSS/NET button to switch between the GROSS
weight display mode and the NET weight display mode. The lamp
will light to indicate which mode is being displayed.

PRINT:
 To activate an optional printer, press the PRINT button.
The printer data output will become active when the weight is
not in motion or in an overload condition.

TARE:
 This button is used to input a TARE weight value. This
value is taken automatically taken as the GROSS weight value.

     When the weight is stable (no motion), press the TARE
     button, and hold for one display update. If the gross
     weight was not a negative value, the tare weight now
     equals the gross weight and the display will show a NET
     weight of zero.

MODEL TR-1-NK CALIBRATION INSTRUCTIONS

Parameter Entry:

1. Open the indicator to access the CAL button.
2. Press the CAL button until the display shows------
3. Press and release the NET/GROSS button.
4. The display will show 00--nn (The 00 denotes parameter
   number 0 and the nn may be any 2 digit number representing
   the current value set for parameter number 0.
5. To change the value of this parameter, use the PRINT
   button to go up or use the TARE button to go down.
6. To cycle to the next parameter, press the NET/GROSS button
8. Continue steps 5 and 6 for all parameters desired.
9. When finished, press the CAL. button again to flash
   ------ and return to the weight display mode.

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                            Parameter List:
# 0 = LB/KG enable & startup mode.
        Set to 0 to disable the lb to kg conversion
        Set to 1 to startup in POUNDS mode
        Set to 2 to startup in KILOGRAM mode
# 1 = Sample rate / Update rate.
      The sample rate can be set for the desired operation.
      Note that having the continuous data output turned on by
      parameter 9, will slow down the displayed update rate.
    Set this to a value between 1 and 7.
      1 is the slowest and most stable update rate
      7 is the fastest update and can be used when batching
        or setpoints are being used.
# 2 = The displayed graduation size. Set at 05 if a
      graduation size of 5 is required.
      Valid settings are from 01 to 50
      NOTE: Graduation size of 1 can only be used up to 14,000
            Graduation size of 10 can only be used up to 140,000
# 3 = The overload trip-point in hundreds of graduations +1%
      If the scale is to be  2,500 by a graduation of 1, then
      a setting of 25 would cause the overload to activate at
      2,525.
        Set to 99 if no overload point is desired.
        Set to 00 for a 10,000 graduation overload.
# 4 = The motion detection window setting. Set this to the
      number of graduations that will be allowed as a no-
      motion condition.
      For units with battery, this parameter sets the auto-shutoff time period.
# 5 = Zero tracking amount. This parameter is set to the
      number of graduations allowed to be auto-zeroed, when
      the weight is not in motion and is equal or under this
      setting.
# 6 = The decimal point position. ie, 02 will cause 0.00
# 7 = Relay options: Set to 01 to turn ON the solid state
                      relay when it reaches the low limit and
                      turn OFF when it reaches the high limit.
                      Set to 00 for opposite operation.
# 8 = Second remote continuous output enable.
      00 = No remote data output
      01 = Gross weight only remote continuous output
# 9 = Optional / Printer OR Continuous data output
        wire cable direct to main board or ask for data
        output kit. (contains terminal block and strain
        relief for enclosure.
      00= Printer output of displayed weight only to
          EPSON TM295 or other epson printer.
      01= Same as 00 without the EPSON format codes
      02= Printer output of gross tare and net with EPSON
          printer codes.
      03= Printer output of gross tare and net without
          EPSON format codes.
      04= ELTRON form recall TARA for displayed weight print
      05= ELTRON form recall TARAGTN for gr/tr/nt print
      10= Continuous output of displayed weight. 11 is same with a startup delay
      12= Continuous output of gross tare and net
      20= Continuous output of GROSS weight only
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NOTE: IF THE LB/KG CONVERSION IS ENABLED, THEN ASSURE THAT ALL CALIBRATION IS DONE IN POUNDS

Major Test Weight Calibration:

 This procedure is done to set the initial calibration.

1. Open the unit to access the CAL button.
2. Press the CAL button until the display shows. ------
3. Press and release the TARE button.
4. The display will be in the calibrate mode.
5. Assure there is no weight on the scale and press ZERO
   to remove the dead load.
6. When the display is zeroed, load the known weight on the
   scale.
7. Press the * button to reset the calibration to the starting point.
8. Press the PRINT button to increase and TARE to decrease
   until the display is as close to the correct weight as you can get it.
   (Note: the display will jump in large amounts in the beginning and by
    pressing the NET/GROSS button, causes it to jump in lesser increments.)
9. If the display is showing the correct weight, go to step 11
10. Press and release the NET/GROSS button to flash ------ to step down to a
    lesser increment, then go to step #8.

11. If the display is showing the correct weight, press the
    CAL button to flash ------ and exit to the normal weigh
    mode.

Minor Calibration Adjustment

 This procedure is done to make minor adjustments to the
calibration.
NOTE: This can be done with the known weight already on the
      scale

1. Open the unit to access the CAL button.
2. Press the CAL button until the display shows. ------
3. Press and release the TARE button.
4. The unit is now in the calibration mode.
5. If the test weight is not on the scale and the weight
   reading is not zero, then press the ZERO button to zero
   off the dead load.
6. Put the known weight on the scale if necessary.
7. The display will show the gross weight.
8. To make minor corrections:
    Hold in the PRINT button to go UP
    Hold in the TARE button to go DOWN.
9. When the weight is correct, press the CAL button again to
   flash ------ and return to the normal weigh mode.

                    LOAD CELL CONNECTION
ASSURE THAT THE LOAD CELL SIGNAL IS POSITIVE. A NEGATIVE
SIGNAL WILL NOT REGISTER.

          LOAD CELL TERMINAL   (BACK VIEW LEFT HAND SIDE)
                                   COLOR CODE   ALTERNATE
     PIN 1 = NEG EXCITATION   BLACK   BLACK
     PIN 2 = POSITIVE EXCITATION   GREEN   RED
     PIN 3 = POSITIVE SIGNAL   RED   GREEN
     PIN 4 = NEGATIVE SIGNAL   WHITE   WHITE
     PIN 5   = SHIELD   REVERSE SIGNAL LINES IF
                                  SCALE OPERATES BACKWARDS

DATA OUTPUT CONNECTION

     *** STANDARD OUTPUTS ***
         (DB9P CONECTOR)
   PIN 5 ---- DATA GROUND
      3 ---- DATA OUTPUT   Terminal block 1 Gnd
                                           2 Main port set by parameter 9
                                           3 Second port set by parameter 8
PRINTER OUTPUT:
Set parameter number 9 for the printer type or continuous
data output.
Set for single line of displayed weight or gr/tr/nt
NOTE: For ELTRON printers, use the "Create-a-Label" program
to setup the label. Then name the label TARA or TARAGTN and
set parameter 9 accordingly. A sample format of these two
labels can be sent via email or on diskete upon request.

Baud rate 9600
8 data bits 1 stop bit no parity

In continuous output mode, the data string starts with the
addition of a STX (Start of text) character at the beginning

Slave indicator output OPTION:
  If a slave model RM-SE is attached, it can read the gross
or net weight from the main indicator. Be sure to set the
slave parameter #8 accordingly. (for example, disable the
slave tare through parameter 8 if it will be receiving NET
weight)
Terminal #1 ground
Terminal #2 data
The data stream is a combination of binary and ascii data and
is not easily read by a computer.

Second continuous data output enabled by parameter #8
Data sent on this port is continuous at 9600 baud 8 data 1 stop no parity
The data stream is
STX / Sign or Space / 5 to 7 weight digits depending on dead zero and decimal
point setting /L for lb or K for kg / G for gross / M of motion or a space / CR
/LF
Terminal #1 ground
Terminal #3 data