

## KL-MCTDS5 Multi-Screwdriver Rundown Evaluation System

Each system controls up to 5 screwdrivers

Driver torques: 0.02 - 50 Nm (0.2 - 442 in-lbs)

Real time data collection using included Data Acquisition Software

Error-proofing through evaluation of:

- Screwdriver power (current) draw
- Driver output shaft rotation
- Time window verification
- Clutch monitoring



## BENEFITS OF THE KL-MCDTS5 SYSTEM

- Works with Kilews precise shut-off clutch drivers for excellent torque repeatability
- Low maintenance, cost effective brushless screwdrivers available in ESD or non-ESD
- Screwdriver power supply for 32/40VDC tools is built into the KL-MCTDS5 Controller
- Capable of connecting up to 5 BNK Series Electric Screwdrivers
- One screwdriver operates at a time; programming allows the drivers to be sequenced to suit the required assembly process
- Up to 99 programs can be entered into the system
- Features include batch count, slow start, auto reverse time, auto stop time

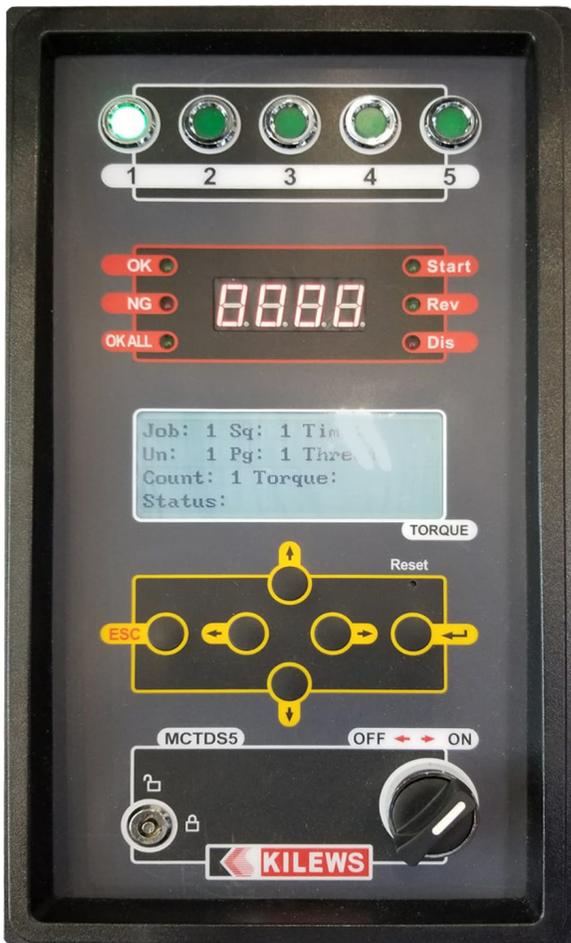


## ADVANCED ERROR-PROOFING METHODOLOGY

- Programmable time window to define minimum/maximum allowable time to install fastener
- Evaluation of the screwdriver's electric motor current draw during each rundown to ensure that the output torque is consistent. A representative torque value is displayed for each rundown.
- Monitoring of motor output rotation as a secondary indicator of proper joint assembly.
- Real time data logging of each rundown using included DAS software installed on a PC. Each data entry is date and time stamped and can be stored in Excel file format for recall at a later time.
- User programmable limits for acceptable variances of each of the monitored parameters.
- Optional bar code reader integration for cross-referencing to assembled product or for inputting external commands through use of barcode scanning.
- Extended I/O and auto-learning capabilities.

## OPERATING PRINCIPLE OF KL-MCTDS5 TORQUE EVALUATION

- For each rundown, the brushless motor of the electric screwdriver exhibits a specific current draw profile which varies with the repeatability of the clutch (torque setting), the consistency of the mechanical drive, the tool's reaction to the joint being fastened, and the input of the operator holding the tool.
- If all of these variables remain consistent, then the motor load will mirror this consistency. If the output load varies, then the motor load will reflect this variation.
- The MCTDS5 System displays this motor current characteristic as a representative torque value. Each driver is 'aligned' at the factory using a Kilews KTM Torque Tester before shipment. During the alignment process, the tool stores torque vs. motor current characteristics based on results using the KTM tester and its rundown joint. This alignment is performed multiple times at steps throughout the entire torque range of the screwdriver.
- When the tool is used in production, the controller displays a representative torque value for each rundown based on evaluating the motor load and referencing it to the stored alignment characteristics. Due to varying joint types and operating conditions, this value is a representative torque value and may differ from the actual torque applied by the tool to the assembly. An offset function is available in the program to fine tune the displayed value.



## KL-MCTDS INPUTS/OUTPUTS

### INPUTS:

- REMOTE START
- REMOTE REVERSE
- DISABLE
- CONFIRM
- CLEAR
- GATE
- RETURN SEQ

### OUTPUTS:

- START
- BRAKE
- REVERSE
- OK
- NG
- OK ALL

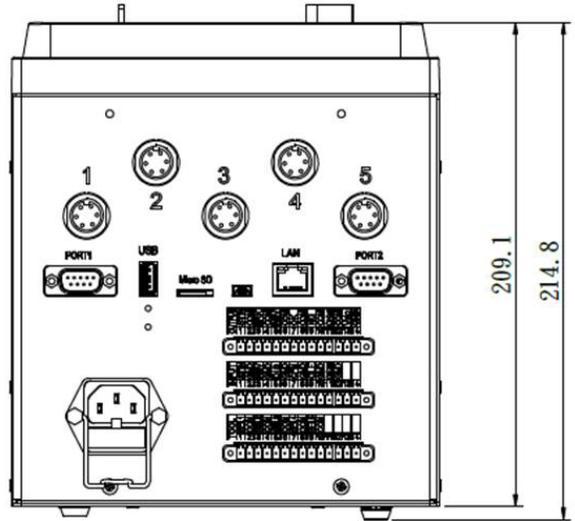
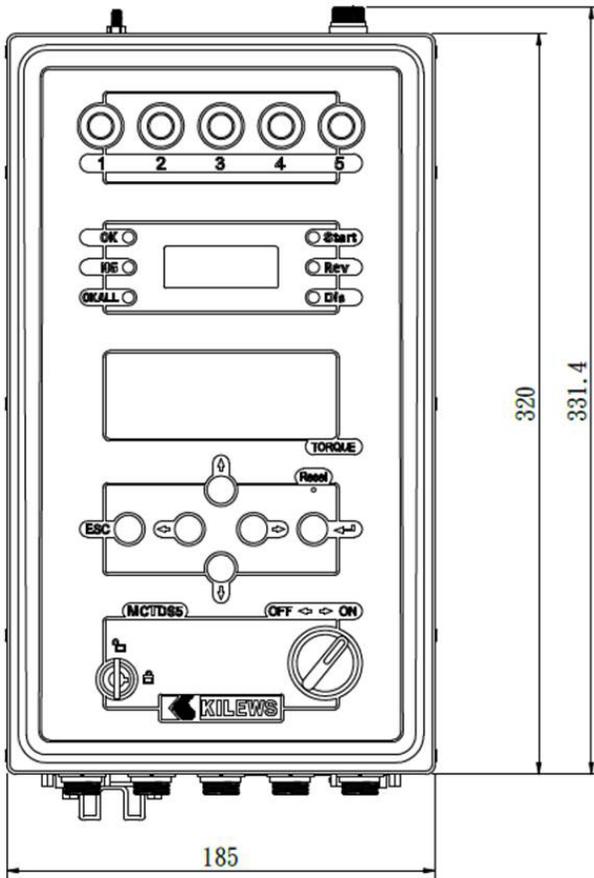
## KL-MCTDS RUNDOWN EVALUATION

### RUNDOWN IS ONLY ACCEPTED AS OK IF:

1. DRIVER'S CLUTCH ACTIVATES PROPERLY
2. RUNDOWN OCCURS WITHIN THE PRE-DEFINED TIME WINDOW
3. REPRESENTATIVE TORQUE VALUE FALLS WITHIN THE PRE-SET LIMITS
4. OUTPUT SHAFT REVOLUTIONS IS WITHIN THE PRE-SET ACCEPTANCE LIMITS

### Compatible Brushless Screwdrivers for CTDS/MCTDS5:

Driver series	Torque range (Nm)	Torque range (in-lbs)	Body Style	Start Types
SKD-BNK203/207/210	0.02 - 0.98 Nm	0.2 - 8.7 in-lbs	Inline	Lever
SKD-BNK512/517/519	0.15 - 1.86 Nm	1.3 - 16.5 in-lbs	Inline	Lever or Push
SKD-BNK830/850	0.98 - 4.9 Nm	8.7 - 43.4 in-lbs	Inline	Lever or Push
SKD-TBNK20/25/30/50	0.3 - 5 Nm	2.6 - 44.3 in-lbs	Pistol	Trigger
SKD-BNK960/990/9120	2 - 12 Nm	18 - 106 in-lbs	Inline	Lever or Push
SKD-RBNK60/90/120/180	2 - 18 Nm	18 - 159 in-lbs	Inline	Lever or Push
SKD-TBNK60/90/120/180	2 - 18 Nm	18 - 159 in-lbs	Pistol	Trigger
SKD-RBNK250/350/500	8 - 50 Nm	71 - 442 in-lbs	Inline	Lever or Push



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