Mine Safety and Health Administration Approval and Certification Center 765 Technology Drive Triadelphia, West Virginia 26059



Approval No. 18-A100015-0 A&CC PAR No. 97541

September 17, 2010

Ms. Rebecca Schmidt Fluke Corporation 6920 Seaway Boulevard Everett, WA 98203

Dear Ms. Schmidt:

The review of your application dated October 28, 2009, Company Code No. 281100, for the Model 27II, Model 28II, and Model 28II SI Digital Multimeters is complete.

The design of the Model 27II, Model 28II, and Model 28II SI Digital Multimeters meet the applicable requirements of Title 30 Code of Federal Regulations, Part 18 and is approved as permissible for use in gassy underground mines. We assign Approval No. 18-A100015-0 to the Model 27II, Model 28II, and Model 28II SI Digital Multimeters.

The following apply to Approval No. 18-A100015-0:

- 1. You must build each Model 27II, Model 28II, and Model 28II SI Digital Multimeter bearing Approval No. 18-A100015-0 according to the drawings and specifications on file at the MSHA Approval and Certification Center. A list of these drawings and specifications is enclosed.
- 2. Our approval label information must be legibly reproduced with permanent lettering on a wear resistant material and must be prominently displayed on an exterior surface of the Model 27II, Model 28II, and Model 28II SI Digital Multimeters (see the enclosed official approval label information required for this equipment). All of the approval label information must appear on the approval label.
- 3. You are not permitted to make changes to the design of these Model 27II, Model 28II, and Model 28II SI Digital Multimeters without our approval.
- 4. We may require you to make changes to the design, or to modify the Digital Multimeters in the field, in the interest of safety.
- 5. We have the right to revoke this approval for cause at any time.

- 6. The following requirements apply to these Model 27II, Model 28II, and Model 28II SI Digital Multimeters:
- a. The Model 27II, Model 28II, and Model 28II SI Digital Multimeters are MSHA approved for use with three Energizer P/N E91 or three Duracell P/N MN1500, 1.5 Volt "AA" Alkaline Batteries only. All cells are to be replaced at the same time with identical part number cells in Fresh Air locations only.
- b. The Model 27II, Model 28II, and Model 28II SI Digital Multimeters are not to be used to check electrical blasting circuits.
- c. The Model 27II, Model 28II, and Model 28II SI Digital Multimeters are not to be connected to an electrically energized circuit in an area where permissibility is required.

You will receive an invoice for the cost to process your application.

If you have any comments or questions relative to this letter, please contact Edward S. Vensko at 304-547-2019.

Sincerely,

John P. Faini

Chief, Approval and Certification Center

Enclosures

FLUKE CORPORATION MODEL *

PERMISSIBLE DIGITAL MULTIMETER



APPROVAL NO. 18-A100015-0

TESTED FOR INTRINSIC SAFETY IN METHANE-AIR MIXTURES ONLY

WARNINGS: 1. MSHA APPROVED FOR USE WITH THREE ENERGIZER P/N E91 OR THREE DURACELL P/N REPLACED AT THE SAME TIME WITH IDENTICAL PART NUMBER CELLS IN FRESH AIR MN1500 1.5 VOLT, "AA" ALKALINE BATTERIES ONLY. ALL CELLS ARE TO BE LOCATIONS ONLY.

- 2. THIS MULTIMETER IS NOT TO BE USED TO CHECK ELECTRICAL BLASTING CIRCUITS.
- 3. THIS MULTIMETER IS NOT TO BE CONNECTED TO AN ELECTRICALLY ENERGIZED **CIRCUIT IN AN AREA WHERE PERMISSIBILTY IS REQUIRED.**

*Insert the appropriate Model Number, either 27II, 28II, or 28II SI.

Data Sheet No. 6

By:

ESVensko

Date:

9/16/2010

PAR:

97541

INVESTIGATION NO. IA-23887

DRAWING LIST

Fluke Corporation

Models 27II, 28II, and 28II SI

Digital Multimeters Assembled According to Drawings Nos. 3307768, 3301271, and 3463156

Approval No. 18-A100015-0

<u>Title</u>	Drawing No.	Revision
Final Assembly Fluke 27II	3307768	-
Fluke 27II AVG Multimeter Finished Goods BOM	3307768	12
Fluke 27II PCA (Bill of Materials)	3307698	12
Mask, LCD (Pad Xfer) Fluke-27-2-2502	3400020	010
Case Top, Pad Xfer Fluke-27-2-2501	3441368	005
Final Assembly Fluke 28II	3301271	-
Fluke 28II TRMS AVG Multimeter Finished Goods BOM	3301271	12
Mask, LCD (Pad Xfer) Fluke-28-2-2503	3400047	010
Final Assembly Fluke 28II SI	3463156	-
Fluke 28II SI Finished Goods BOM	3463156	12
Mask, LCD (Pad Xfer) Fluke-28-2-2502 (28II SI Model)	3449870	010

The following two drawings are common to both the Models 28II and 28II SI Multimeters:

Top Case, Pad Xfer Fluke-28-2-2501

3320857

006

Fluke 28II PCA (Bill of Materials)	3307705	012	
The following drawings are common to all three model Multimeters:			
Case, Top Fluke-27-2-2001	3320840	006	
Fluke-2X-2-4001 Main	2X-2-4001	012	
Schematic, Main	2X-2-1001 (Sheets 1-3)	012	
Fluke-Main-2X-2-3001 Main	2X-2-3001 (Sheets 1 and 2)	012	
Spacer, RSOB Fluke-2X-2-2007	3320891	005	
Spring, Detent Fluke-2X-2-2008	3320905	006	
Knob, Rotary Fluke-2X-2-2009	3320922	007	
Holster Fluke-2X-2011	3321048	009	
Keypad Fluke-2X-2-8003	3359962	003	
Door, Battery Fluke-2X-2-2010	3321030	008	
Shield, Top Fluke-2X-2-8001	3371939	006	
Shield, Bottom Fluke-2X-2-8002	3371942	006	
Backlight Fluke 2X-2-8004	3471251	003	
Door, Fuse Access Fluke-2X-2-2014	3400480	_	
Gasket, Case Top Fluke 2X-2-8006	3439079	004	
Gasket, Battery Door Fluke 2X-2-8007	3439087	005	
Cap, Fuse Fluke-2X-2-2015	3440546	005	
Terminal Block, Input Fluke -2X-2013	3378800	006	
Case, Bottom Fluke-2X-2-2004	3808408	-	

3441379

2073898

004

009

Factory Inspection Form: See letter from Thomas Smith, dated April 7, 2010.

Mask

Plate, Top Fluke-2X-2-2016