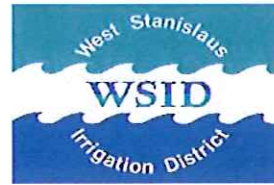


The installation of Accusonic Model 7510 Plus flow meter at the West Stanislaus Irrigation District's diversion off the San Joaquin River was installed in strict conformance with manufacture's standards and the flow meter was properly commissioned with as-built data. Attached is flow meter as-built data, manufactures standards, parameter settings, installation pictures and manufacture's data sheet.

Robert Pierce, PE



West Stanislaus Irrigation District



San Joaquin River Diversion

Measurement Type: Accoustic Meter

Sensor Model: 7510 Plus NEMA 4X Flowmeter

Installation Type: Full Pipe Configuration

Pipe Diameter: 96 Inch

Pipe Area: 50.2655 sq. Ft.

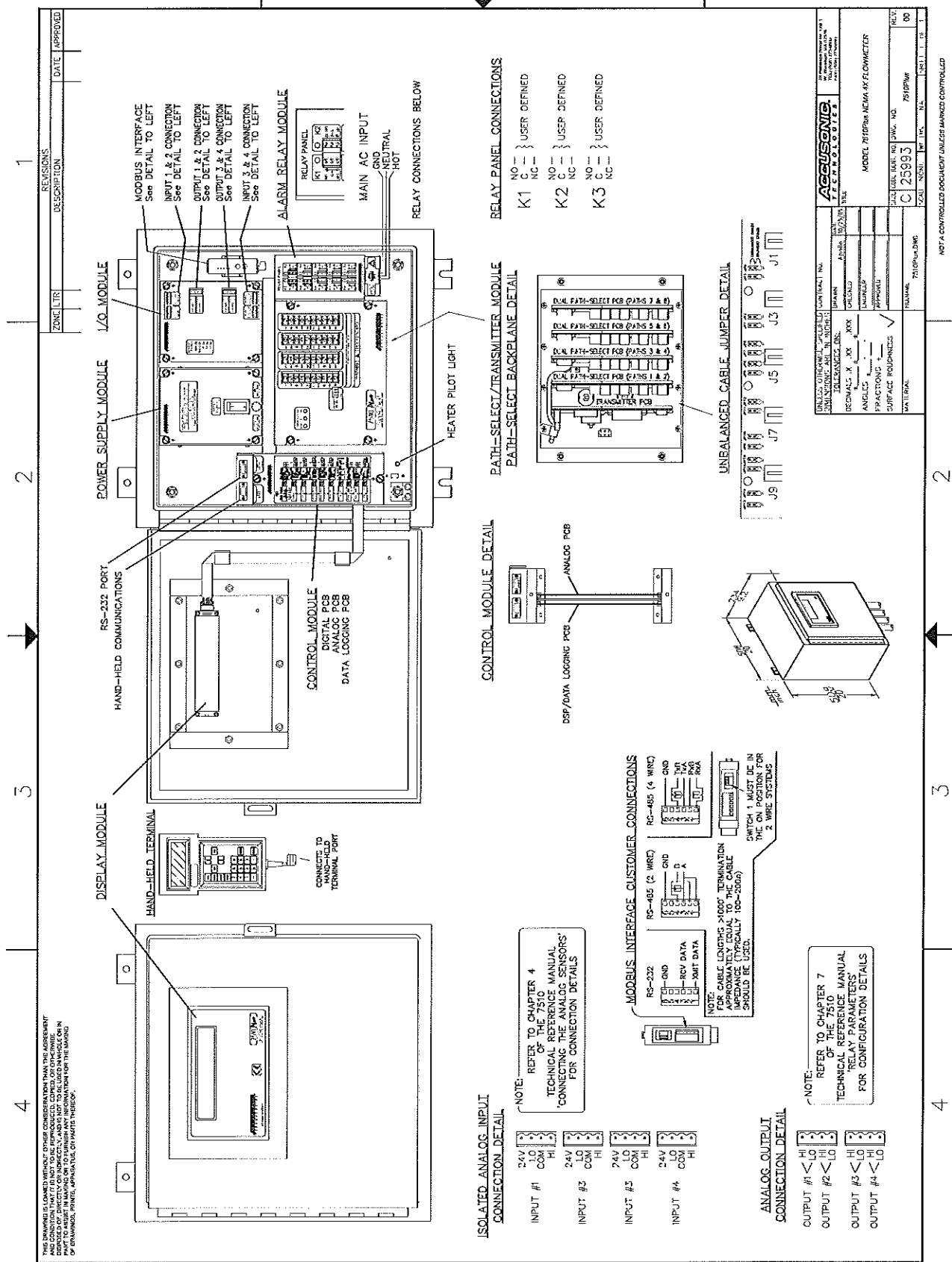
Pipe Material: Reinforced Concrete

Sensor Installation Date: Mar-13

Sensor Comission Date: Aug-13

Installation Vendor: Accusonic Technologies

Path	Path Angle	Path Length, Ft.	Path Weight
1	45.965	6.167	0.1382
2	44.784	10.552	0.3618
3	44.644	10.615	0.3618
4	44.864	6.349	0.1382



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REVISIONS	DATE	APPROVED
1		
2		
3		
4		

ZONE	DESCRIPTION
1	
2	
3	
4	

MOBIUS INTERFACE
See DETAIL TO LEFT

INPUT 1 & 2 CONNECTION
See DETAIL TO LEFT

OUTPUT 1 & 2 CONNECTION
See DETAIL TO LEFT

OUTPUT 3 & 4 CONNECTION
See DETAIL TO LEFT

INPUT 3 & 4 CONNECTION
See DETAIL TO LEFT

RELAY PANEL
K1 K2 K3

MAIN AC INPUT
GND NEUTRAL HOT

RELAY CONNECTIONS BELOW

HEATER PILOT LIGHT

CONTROL MODULE
DIGITAL PCB
ANALOG PCB
DATA LOGGING PCB

PATH-SELECT/TRANSMITTER MODULE
PATH-SELECT BACKPLANE DETAIL

RELAY PANEL CONNECTIONS

K1 NO -- } USER DEFINED
C -- }
NC -- }

K2 NO -- } USER DEFINED
C -- }
NC -- }

K3 NO -- } USER DEFINED
C -- }
NC -- }

UNBALANCED CABLE JUMPER DETAIL

J1 J2 J3 J4 J5 J6 J7 J8 J9

CONTROL MODULE DETAIL

ANALOG PCB

DSP/DATA LOGGING PCB

ISOLATED ANALOG INPUT CONNECTION DETAIL

INPUT #1 24V LO COM HI

INPUT #2 24V LO COM HI

INPUT #3 24V LO COM HI

INPUT #4 24V LO COM HI

NOTE: REFER TO CHAPTER 4 OF THE 7510 TECHNICAL REFERENCE MANUAL "CONNECTING THE ANALOG SENSORS" FOR CONNECTION DETAILS

MOBIUS INTERFACE CUSTOMER CONNECTIONS

RS-232 GND RXV DATA TXV DATA

RS-485 (2 WIRE) GND A B

RS-485 (4 WIRE) GND A B C D

NOTE: FOR CABLE LENGTHS >1000' TERMINATION EQUIVALENT TO THE CABLE IMPEDANCE (TYPICALLY 100-250Ω) SHOULD BE USED.

SWITCH 1 MUST BE IN THE ON POSITION FOR 2 WIRE SYSTEMS

ANALOG OUTPUT CONNECTION DETAIL

OUTPUT #1 HI LO

OUTPUT #2 HI LO

OUTPUT #3 HI LO

OUTPUT #4 HI LO

NOTE: REFER TO CHAPTER 7 OF THE 7510 TECHNICAL REFERENCE MANUAL "RELAY PARAMETERS" FOR CONFIGURATION DETAILS

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES

UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE IN INCHES

MODEL 7510P/7510M K-FLOWMETER

C 25993

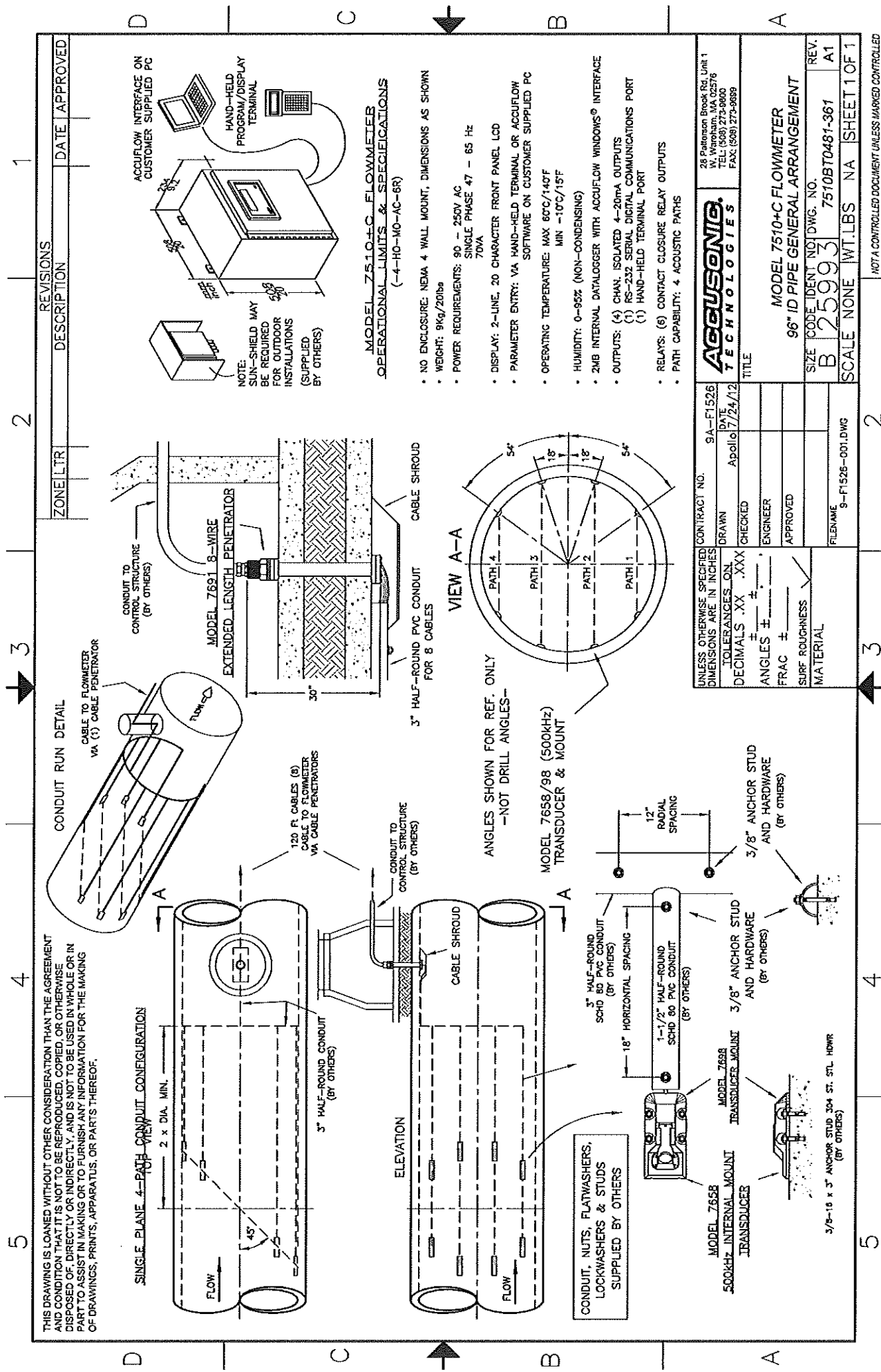
DATE: 10/2/00

DESIGNED BY: JMM

APPROVED BY: JMM

DATE: 10/2/00

NOT A CONTROLLED DOCUMENT UNLESS MARKED OTHERWISE



REVISIONS		DATE	APPROVED
1	DESCRIPTION		
2			
3			
4			
5			

MODEL 7510+C FLOWMETER OPERATIONAL LIMITS & SPECIFICATIONS (-4-HO-MO-AC-6R)	
• NO ENCLOSURE: NEMA 4 WALL MOUNT, DIMENSIONS AS SHOWN	
• WEIGHT: 9kg/20lbs	
• POWER REQUIREMENTS: 90 - 250V AC SINGLE PHASE 47 - 65 Hz 70VA	
• DISPLAY: 2-LINE, 20 CHARACTER FRONT PANEL LCD	
• PARAMETER ENTRY: VIA HAND-HELD TERMINAL OR ACCUFLOW PC SOFTWARE ON CUSTOMER SUPPLIED PC	
• OPERATING TEMPERATURE: MAX 60°C/140°F MIN -10°C/15°F	
• HUMIDITY: 0-95% (NON-CONDENSING)	
• 2MB INTERVAL DATALOGGER WITH ACCUFLOW WINDOWS® INTERFACE	
• OUTPUTS: (4) RS-232 SERIAL DIGITAL COMMUNICATIONS PORT (1) HAND-HELD TERMINAL PORT	
• RELAYS: (6) CONTACT CLOSURE RELAY OUTPUTS	
• PATH CAPABILITY: 4 ACOUSTIC PATHS	

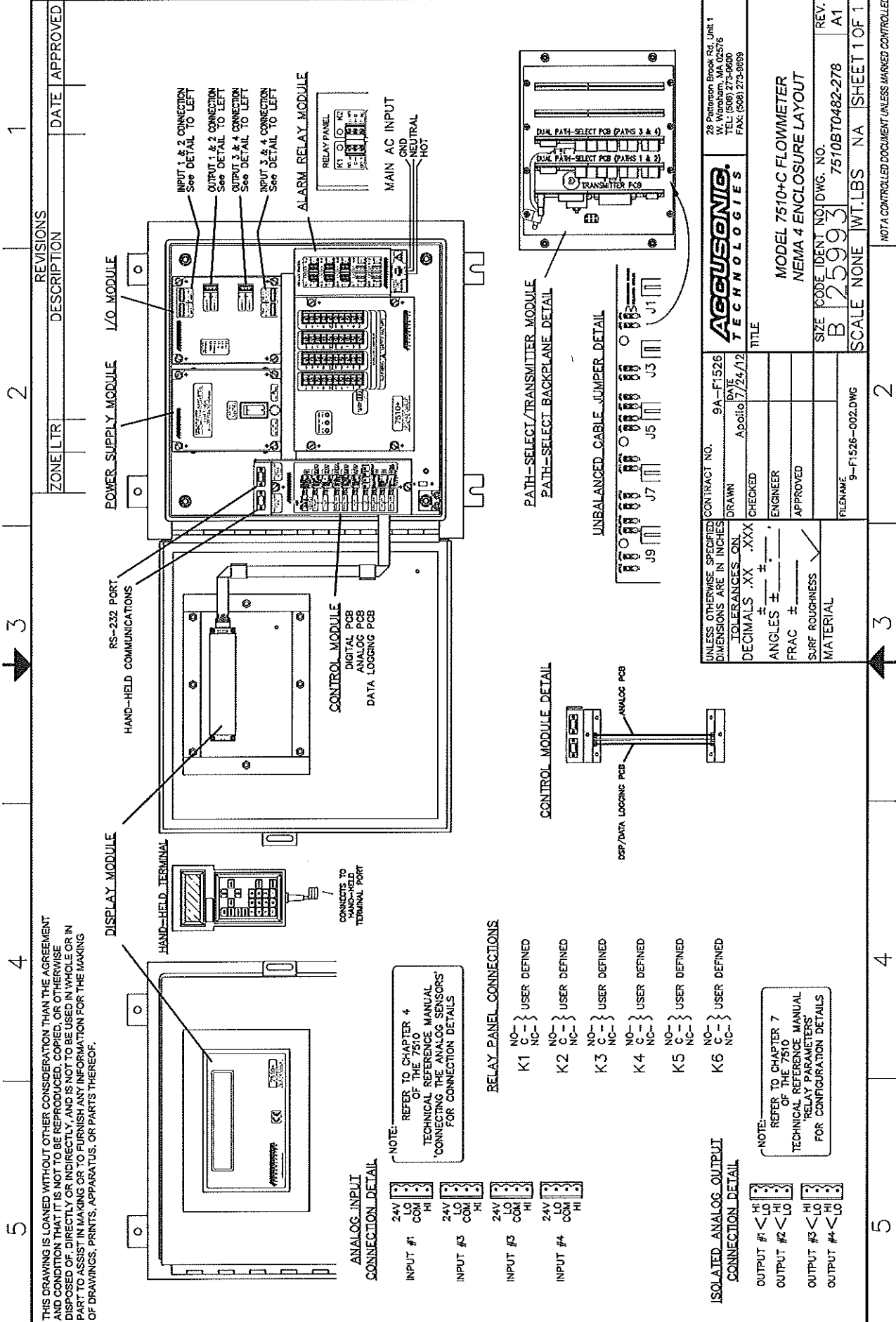
ACCUFLOW INTERFACE ON CUSTOMER SUPPLIED PC	
HAND-HELD PROGRAM/DISPLAY TERMINAL	
NOTE: SUN-SHIELD MAY BE REQUIRED FOR OUTDOOR INSTALLATIONS (SUPPLIED BY OTHERS)	

CONTRACT NO. 9A-F1526	
DATE 7/24/12	
DRAWN Apollo	
CHECKED	
ENGINEER	
APPROVED	
FILENAME 9-F1526-001.DWG	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON DECIMALS .XX .XXX	
ANGLES ±	
FRAC ±	
SURF ROUGHNESS	
MATERIAL	

TITLE	
MODEL 7510+C FLOWMETER	
96" ID PIPE GENERAL ARRANGEMENT	
SIZE CODE IDENT NO. DWG. NO.	
B 25993 7510BT0481-361	
REV. A1	
SCALE NONE WT. LBS NA SHEET 1 OF 1	

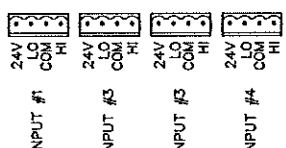
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SINGLE PLANE 4-PATH CONDUIT CONFIGURATION	
2 x DIA. MIN.	
3" HALF-ROUND CONDUIT (BY OTHERS)	
CABLE SHROUD	
CONDUIT TO CONTROL STRUCTURE (BY OTHERS)	
120 FT. CABLES (8) CABLE TO FLOWMETER VIA CABLE PENETRATORS	
CONDUIT RUN DETAIL	
CABLE TO FLOWMETER VIA (1) CABLE PENETRATOR	
MODEL 7658/98 (500KHz) TRANSDUCER & MOUNT	
3" HALF-ROUND PVC CONDUIT FOR 8 CABLES	
CABLE SHROUD	
VIEW A-A	
ANGLES SHOWN FOR REF. ONLY -NOT DRILL ANGLES-	
CONDUIT, NUTS, FLATWASHERS, LOCKWASHERS & STUDS SUPPLIED BY OTHERS	
3" HALF-ROUND SCHD 80 PVC CONDUIT (BY OTHERS)	
18" HORIZONTAL SPACING	
1-1/2" HALF-ROUND SCHD 80 PVC CONDUIT (BY OTHERS)	
12" RADIAL SPACING	
3/8" ANCHOR STUD AND HARDWARE (BY OTHERS)	
MODEL 7658 500KHz INTERNAL MOUNT TRANSDUCER	
MODEL 7658 TRANSDUCER MOUNT	
3/8" ANCHOR STUD 304 ST. STL. HWWR (BY OTHERS)	

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NOTE: REFER TO CHAPTER 4 OF THE 7510 TECHNICAL REFERENCE MANUAL 'CONNECTING THE ANALOG SENSORS' FOR CONNECTION DETAILS

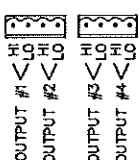
ANALOG INPUT CONNECTION DETAIL



RELAY PANEL CONNECTIONS

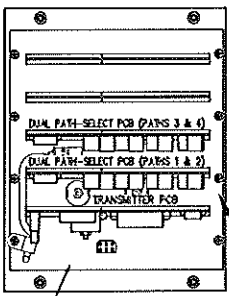
- K1 NO- C- USER DEFINED
- K2 NO- C- USER DEFINED
- K3 NO- C- USER DEFINED
- K4 NO- C- USER DEFINED
- K5 NO- C- USER DEFINED
- K6 NO- C- USER DEFINED

ISOLATED ANALOG OUTPUT CONNECTION DETAIL

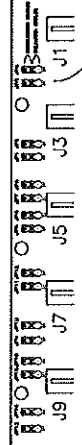


NOTE: REFER TO CHAPTER 7 OF THE 7510 TECHNICAL REFERENCE MANUAL 'RELAY PARAMETERS' FOR CONFIGURATION DETAILS

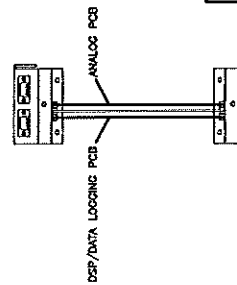
PATH-SELECT/TRANSMITTER MODULE
PATH-SELECT BACKPLANE DETAIL



UNBALANCED CABLE JUMPER DETAIL



CONTROL MODULE DETAIL

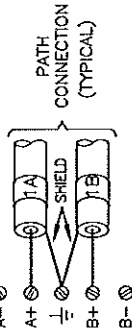
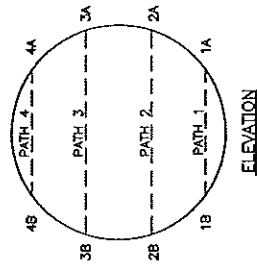


UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES		CONTRACT NO. 9A-F1526	
TOLERANCES ON DECIMALS .XX .XXX		DATE 7/24/12	
ANGLES ±		DRAWN	
FRAC ±		CHECKED	
SURF. FINISH		ENGINEER	
MATERIAL		APPROVED	
FILENAME 9-F1526-002.DWG		TITLE	
SCALE NONE		WT.LBS NA	
REV. A1		REV. A1	
SIZE B 25993		7510BT0482-278	
MODEL 7510+C FLOWMETER		NEMA 4 ENCLOSURE LAYOUT	
28 Padstern Brook Rd. Unit 1 W. Woburn, MA 02576 TEL: (508) 273-9600 FAX: (508) 273-9699		Aggousson Technologies	

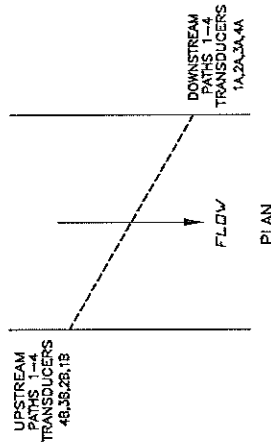
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SINGLE PLANE SINGLE PIPE HOOK-UP CONFIGURATION

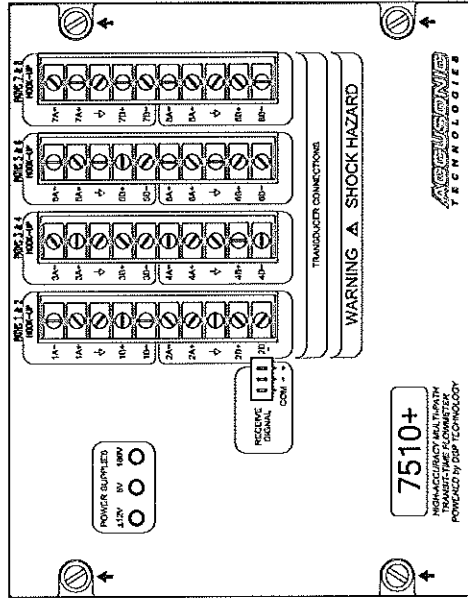


TERMINATION CAN BE DONE USING NUMBER SIX FORKED LUG.
CABLE IS RG-39, OR-62 OR EQUIVALENT.



TERMINAL CONNECTION DETAIL
ON SHEET 2

ZONE	LTR	DESCRIPTION	DATE	APPROVED
1				
2				
3				
4				
5				



TRANSDUCER HOOK-UP PANEL DETAIL

PATH NO.	PATH-SELECT PANEL NO.	CABLE NO.
1	1A+ & 1A- GND	1A
2	1B+ & 1B- GND	1B
3	2A+ & 2A- GND	2A
4	2B+ & 2B- GND	2B
5	3A+ & 3A- GND	3A
6	3B+ & 3B- GND	3B
7	4A+ & 4A- GND	4A
8	4B+ & 4B- GND	4B

Accusonics TECHNOLOGIES 28 Patterson Brook Rd. Unit 1 W. Wareham, MA 02576 TEL: (508) 273-8800 FAX: (508) 273-9559	
CONTRACT NO.	9A-F1526
DRAWN	DATE 7/24/12
CHECKED	ENGINEER
APPROVED	APPROVED
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON DECIMALS .XX .XXX ANGLES ± FRAC ± SURF ROUGHNESS MATERIAL	
MODEL 7510+C FLOWMETER TRANSDUCER HOOK-UP DETAIL SIZE CODE IDENT NO/DWG. NO. B 25993 7510BE0483-278 SCALE NONE WT.LBS NA SHEET 1 OF 2 REV. A1	

NOT A CONTROLLED DOCUMENT UNLESS MARKED CONTROLLED

1	
2	
3	
4	
5	



2

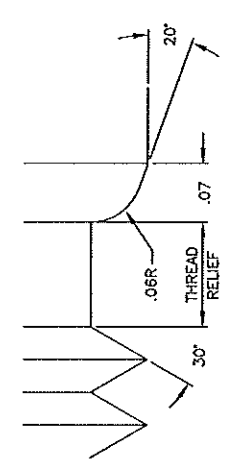
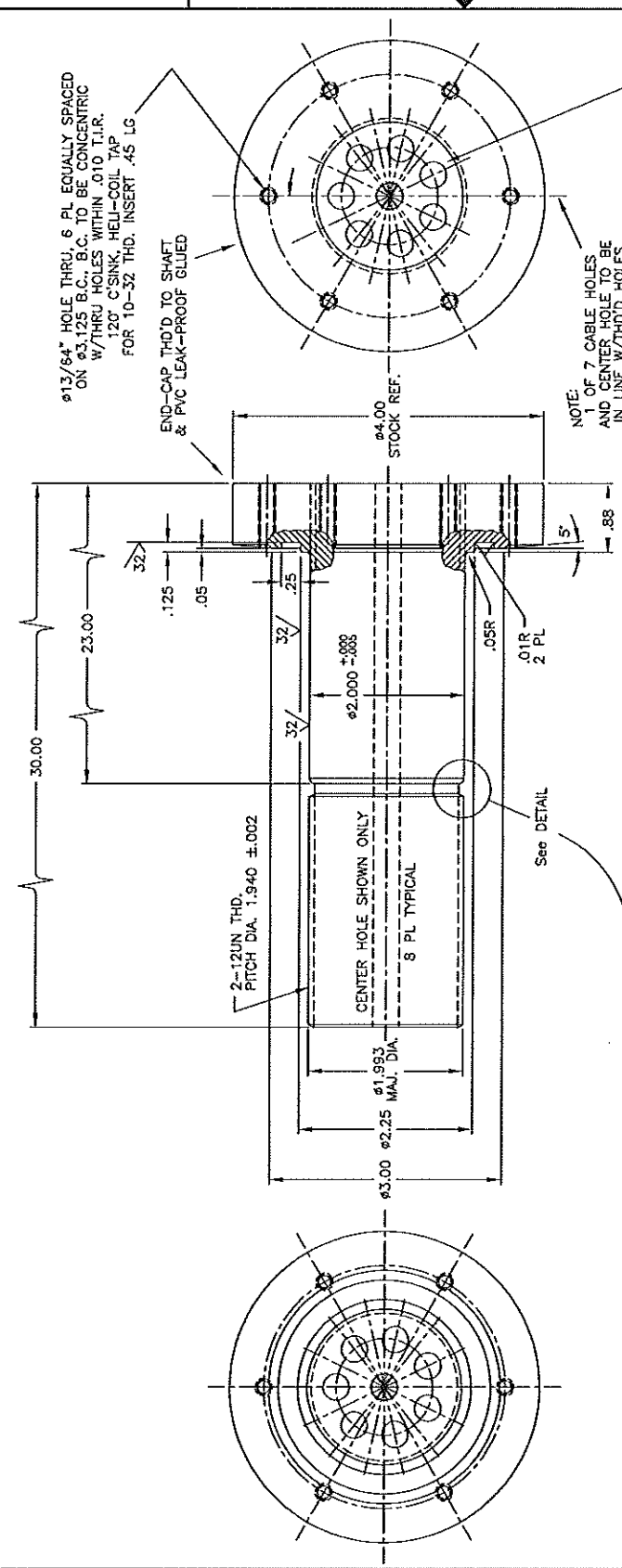
3

Q

1 2 3 4

REVISIONS		DATE	APPROVED
ZONE	DESCRIPTION		
A-2	REVISED TO 2 PART TIE FOR WORKING SHOP DRAWING	4/9/08	

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CORNER RADIUS DETAIL
AT THREAD RELIEF
10X SCALE

NOTE:
1. OF 7 CABLE HOLES
AND CENTER HOLE TO BE
IN LINE W/THD HOLES
ON THIS CL ±.010

*R(.339) DIA. THRU 1 HOLE IN CENTER,
7 HOLES EQUALLY SPACED ON Ø1.250 B.C.,
B.C. TO BE CONCENTRIC W/SHANK O.D. TO
WITHIN .010 T.I.R. BOTH ENDS

Part No: 7891-001242

AGGUSON

7891.0001, INV. PVC EXTENDED SHAFT, 34"

C 25893

7891.0001/1.02

SCALE: NONE

1ST LTR. NA

1ST REV. 1 OF 1

'O'-RING REF. #2-331

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AGGUSONIC
TECHNOLOGIES

Model: 7510+C4H0M0AC6 S/N:1736

Enclosure: NEMA

Job No.: 9A-F1526

Fuse: 5A, 250V

Electronics: 90 - 132 / 180 - 250Va.c.
47 - 63Hz 200VA

Manufacture / Date Code: 13CT13

28 Patterson Brook Road, W. Wareham, MA 02576
Phone: 508-273-9600 / Fax: 508-273-9699

Flow 211.877

Volume 1846

Section Status Good

Section Level 0.000

Temperature 74.492

Integration Pipe

Section Full No

Learn Mode Off

Path Substitution Off

	Path-1	Path-2	Path-3	Path-4	Path-5	Path-6	Path-7	Path-8	Path-9	Path-10
Velocity	4.650	4.561	3.990	3.479						
Gain dB	-4.9	-3.8	-2.9	-4.4						
Gain %	98.1	98.4	103.0	101.0						
S/N	26.0	27.2	26.3	32.6						
Travel Time uS										
Forward	1259.0	2154.0	2166.6	1296.2						
Reverse	1260.7	2156.8	2168.8	1297.3						
Delta Time nS	1663.8	2850.6	2513.2	1306.2						
VSound	4895.0	4895.6	4896.8	4896.2						
Envelope Time uS										
Forward	1259.7	2154.8	2167.5	1296.9						
Reverse	1261.5	2157.7	2169.7	1298.0						
Path Out of Water										
Path Fail										
Path Velocity Error										
Detection Method	ZC	ZC	ZC	ZC						
Level	Level 1	Level 2	Level 3	Level 4						
Status										

Currently Viewing

- Section 1
- Section 2
- Section 3
- Section 4

WSID (Block Bldg)**Flow Meter (STA 48+55)****Parameter Listing****[System1]**

FlowScaling = 1.000000
VolScaling = 43560.000000
RepRate = 1
SysClock = 10.000000
AnalogOutScale = 0.250000
NumAccum = 1
EnglishMetric = 0
DataLogEn = 0
AutoStore = 1
PipeOC = 0
FlowAvgPeriod = 1
DisplayUnits = 5
DetectionMethod = 0
Firmware = 17.4

[Section1]

PipeArea = 50.200100
BottomFrict = 0.500000
MinSubmersion = 0.000000
TopWeight = 0.000000
LowFlowCutoff = 0.500000
TempCorrection = 0.000000
Manning_n = 0.010000
ManningSlope = 0.010000
ManningMax = 10.000000
LevelManualVal = 0.000000
SurchargeLevel = 0.000000
LevelLow = 0.000000
SectionVolume = 0.000000
LayerWidth1 = 10.000000
LayerWidth2 = 10.000000
LayerWidth3 = 10.000000
LayerWidth4 = 10.000000
LayerWidth5 = 10.000000
LayerWidth6 = 10.000000
LayerWidth7 = 10.000000
LayerWidth8 = 10.000000

LayerElevation1 = 10.000000
LayerElevation2 = 10.000000
LayerElevation3 = 10.000000
LayerElevation4 = 10.000000
LayerElevation5 = 10.000000
LayerElevation6 = 10.000000
LayerElevation7 = 10.000000
LayerElevation8 = 10.000000
PathEnable = 15
LevelEnable = 1
MinGoodPaths = 3
TrapPipeIntegration = 0
LearnPathChk = 0
LevelManual = 0
Layers = 2
MaxVelocityChange = 10.000000
MaxVelocity = 30.000000
MaxBadMeasures = 10

[Section2]

PipeArea = -50.200100
BottomFrict = 0.500000
MinSubmersion = 0.200000
TopWeight = 0.000000
LowFlowCutoff = 0.500000
TempCorrection = 0.000000
Manning_n = 0.010000
ManningSlope = 0.010000
ManningMax = 10.000000
LevelManualVal = 0.000000
SurchargeLevel = 0.000000
LevelLow = 0.000000
SectionVolume = 0.000000
LayerWidth1 = 10.000000
LayerWidth2 = 10.000000
LayerWidth3 = 10.000000
LayerWidth4 = 10.000000

LayerWidth5 = 10.000000
LayerWidth6 = 10.000000
LayerWidth7 = 10.000000
LayerWidth8 = 10.000000
LayerElevation1 = 10.000000
LayerElevation2 = 10.000000
LayerElevation3 = 10.000000
LayerElevation4 = 10.000000
LayerElevation5 = 10.000000
LayerElevation6 = 10.000000
LayerElevation7 = 10.000000
LayerElevation8 = 10.000000
PathEnable = 15
LevelEnable = 2
MinGoodPaths = 3
TrapPipeIntegration = 0
LearnPathChk = 0
LevelManual = 0
Layers = 2
MaxVelocityChange = 15.000000
MaxVelocity = 30.000000
MaxBadMeasures = 10

[Path1]

Angle = 44.084000
Length = 6.453000
Weight = 0.138200
Elevation = 1.000000
SigDelay = 6.000000
Freq = 500000.000000
MaxVelocity = 30.000000
MaxVelocityChange = 10.000000
MaxBadMeasures = 10

[Path2]

Angle = 45.466000

Length = 10.568000
Weight = 0.361800
Elevation = 1.000000
SigDelay = 6.000000
Freq = 500000.000000
MaxVelocity = 30.000000
MaxVelocityChange =
10.000000
MaxBadMeasures = 10

[Path3]

Angle = 45.528999
Length = 10.401000
Weight = 0.361800
Elevation = 1.000000
SigDelay = 6.000000
Freq = 500000.000000
MaxVelocity = 30.000000
MaxVelocityChange =
10.000000
MaxBadMeasures = 10

[Path4]

Angle = 45.799000
Length = 6.089000
Weight = 0.138200
Elevation = 1.000000
SigDelay = 6.000000
Freq = 500000.000000
MaxVelocity = 30.000000
MaxVelocityChange =
10.000000
MaxBadMeasures = 10

[Output1]

MA4 = 8.000000
MA20 = 300.000000
ManualOutputValue =
0.000000
Variable = 0
ManualOutputEnable = 0
OutErr = 0

Section = 1
HoldOnError = 0

[Output2]

MA4 = 8.000000
MA20 = 100.000000
ManualOutputValue =
0.000000
Variable = 0
ManualOutputEnable = 0
OutErr = 0
Section = 2
HoldOnError = 0

[Level1]

MA4 = 0.000000
MA20 = 5.000000
Resistor = 100.000000
Min_mA = 0.000000
Level Filter = 0

[Level2]

MA4 = 0.000000
MA20 = 5.000000
Resistor = 100.000000
Min_mA = 0.000000
Level Filter = 0

[Relay1]

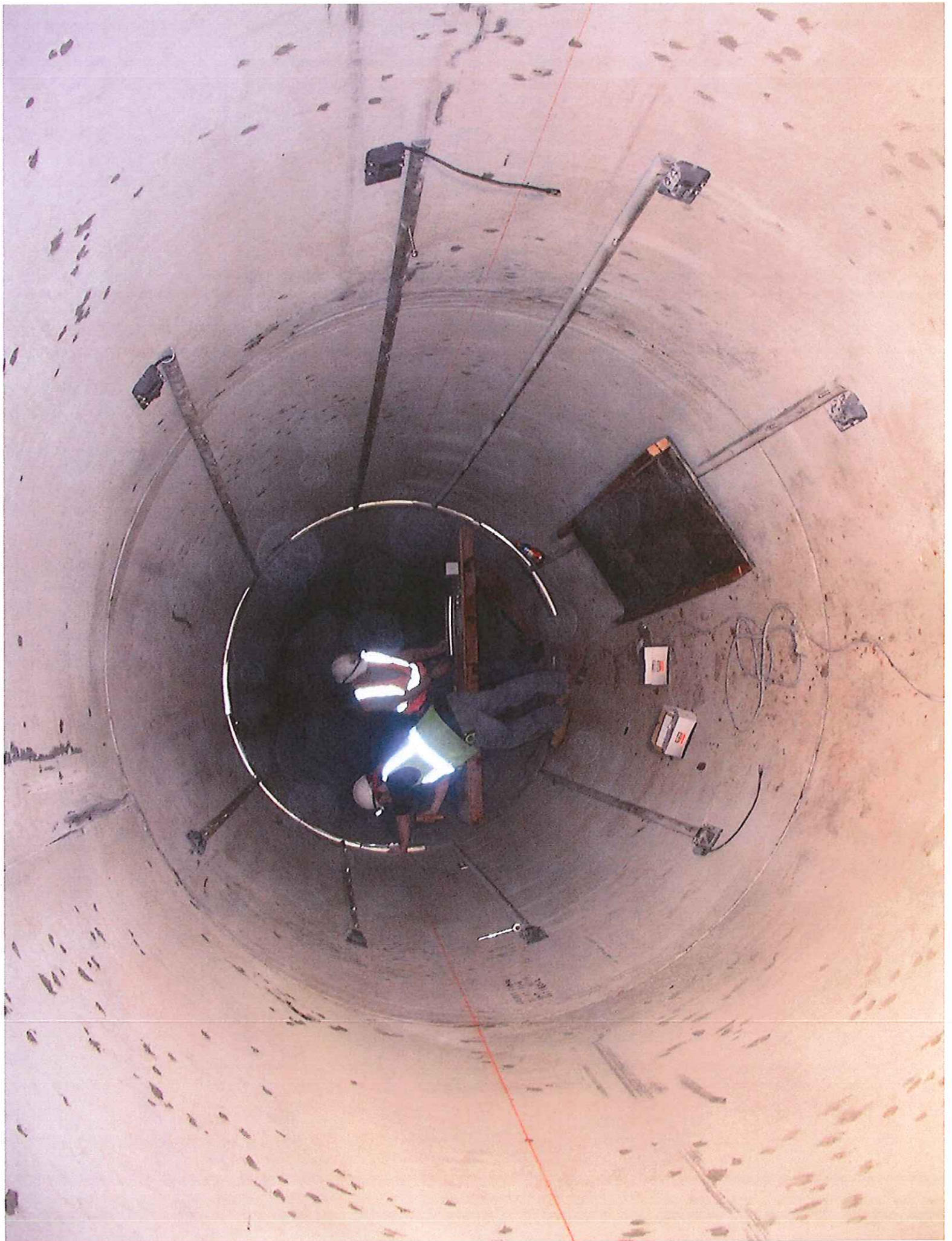
Threshold = 0.000000
Type = 0
Section = 1
Delay = 1
Polarity = 0

[Relay2]

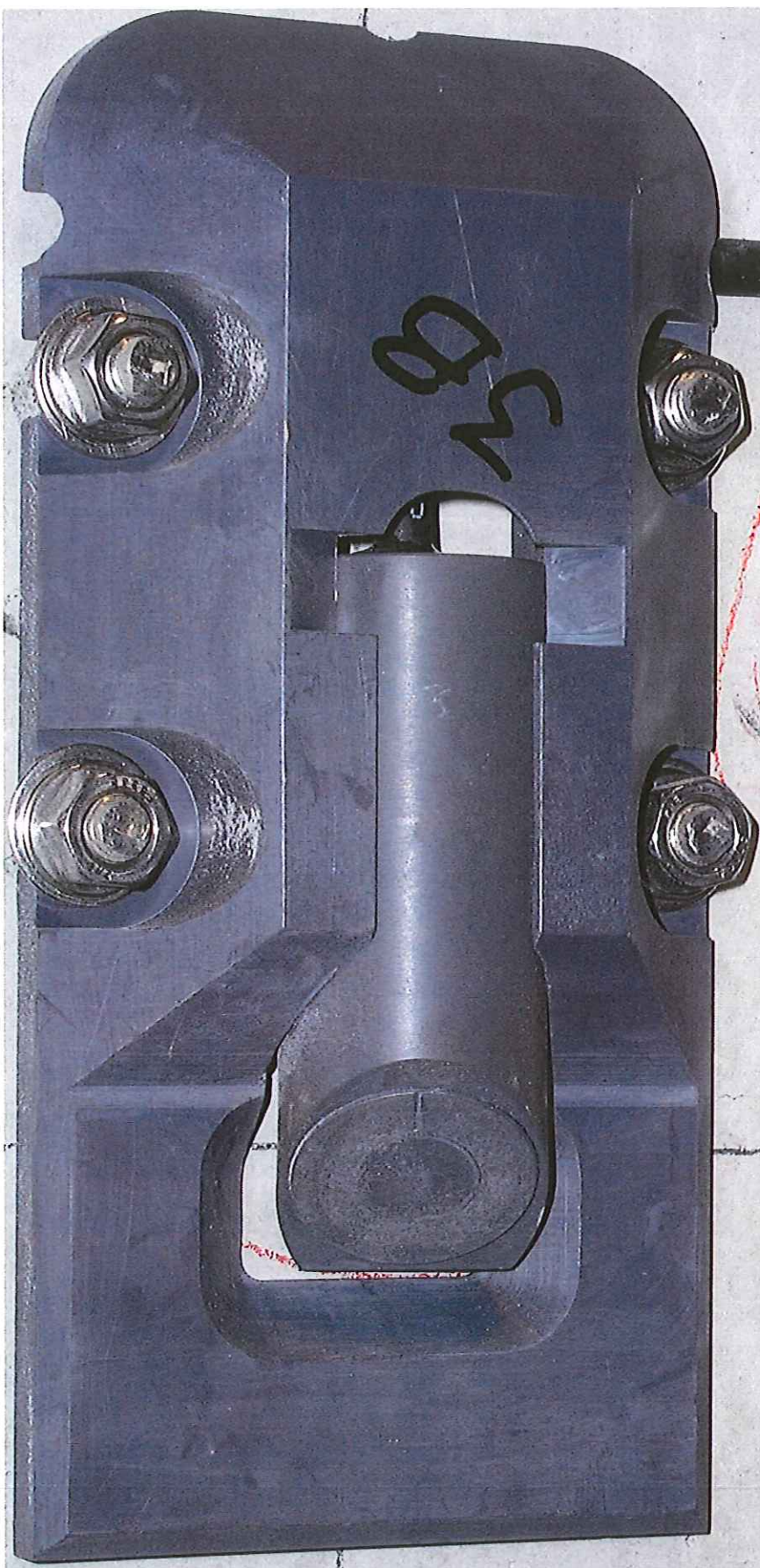
Threshold = 0.000000
Type = 0
Section = 1
Delay = 1
Polarity = 0

[Relay3]

Threshold = 0.000000
Type = 0
Section = 1
Delay = 1
Polarity = 0







83

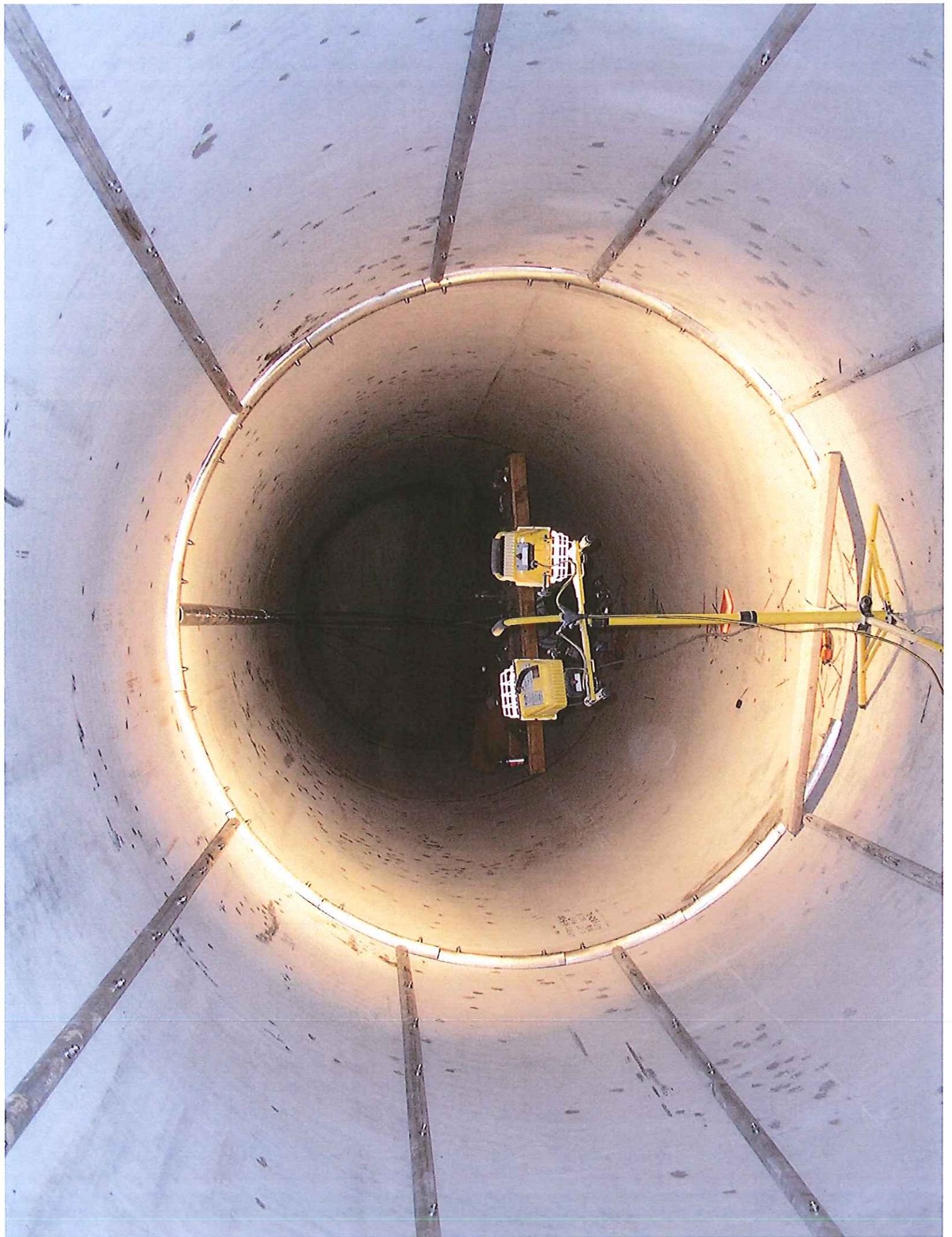


3B











Model 7510+ Multiple-Path Transit-Time Flowmeter



SYSTEM DESCRIPTION

The Accusonic Model 7510+ provides accurate, reliable flow measurement for applications ranging from full pipes to partially full or surcharged pipes, open channels, streams, and rivers. The 7510+ has the ability to measure up to 8 paths in the same measurement section, assuring superior performance even in the presence of severely distorted flow profiles. Additionally, the 7510+ can measure flow in up to 4 separate pipes and/or channels simultaneously.

The Model 7510+ can be fully integrated into a complete flowmeter network system via the Accusonic Model 7700 Master Control Unit. Further information on the Model 7700 may be obtained in the Model 7700 Network Flowmeter System data sheet.

The complete offering of Accusonic transducers is available for use with the 7510+, including designs for hazardous area installations, exposed pipes of all materials, buried or encased pipes, and pipes and channels that cannot be dewatered.

UNIQUE FEATURES

Flexibility: Measurable pipe and channel sizes can range from 8 inches (200 mm) to 600 feet (180 m). This versatility allows customers to utilize one meter technology for a wide variety of applications, thus providing a common platform for maintenance, inventory, and training.

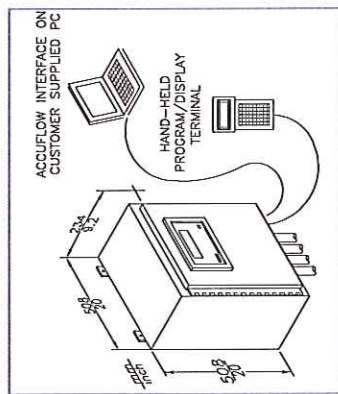
Accuracy: Utilizing multiple chordal path transit-time technology, the 7510+ provides accurate flow measurement ($\pm 0.5\%$ for full pipes and $\pm 2.0\%$ for partially full pipes and open channels) even in the presence of flow profile distortions and cross flow. No other flow measurement technology can offer this level of performance over the range of pipe/channel sizes and under such challenging operating conditions.

Economy: The 7510+ is configurable to measure up to 4 separate pipes and/or channels simultaneously, thus significantly reducing the cost per measurement. This feature, combined with the meter's high performance and minimal maintenance requirements, provides the 7510+ with a lower cost of ownership and greater value than comparable flow measurement technologies.

About Accusonic

Accusonic Technologies, a division of ADS[®] LLC, designs and manufactures ultrasonic transit-time flow measurement systems that are renowned for their precise accuracy and reliability in difficult operating environments. Accusonic flowmeter systems can be found in hydroelectric plants, thermal power plants, water and wastewater treatment facilities, sewage collection systems, and other types of water flow conveyance pipelines and channels. With over 35 years of experience and over 3000 systems installed worldwide, Accusonic offers a full range of services including installation, system integration, turbine performance testing services, and field training.

SYSTEM SPECIFICATIONS

**Measurement Options:**

- Open Channel
- Pipe Flowing Full
- Pipe Flowing Partially Full to Surcharged

Number of Acoustic Paths: 1 – 8**Number of Pipes or Channels:** 1 – 4

(The total number of acoustic paths in all pipes and channels cannot exceed 8 for a single console)

Accuracy:

- $\pm 0.5\%$ Full Pipe Applications
- $\pm 2.0\%$ Partially Full Pipe/Open Channel Applications (typical)

Repeatability:

- $\pm 0.2\%$ Full Pipe Applications
- $\pm 0.5\%$ Partially Full Pipe/Open Channel Applications (typical)

Outputs:

- (4) Isolated 4 – 20 mA with 750 ohm max impedance load
- Optional 3, 6, or 9 Relay Outputs 7.0 A @ 110 VAC or 5.0 A @ 24 VDC
- (2) RS-232 Ports
- Optional Modbus Slave RS-485 or RS-232 RTU Mode only
- Optional Ethernet

Inputs:

- (4) 4 – 20 mA 100 ohm input impedance for water level inputs. 24 VDC loop power available

Software Interface:

AccuFlow™ Windows-based software allows for easy flowmeter setup and configuration via notebook PC

Datalogger:

2 MB internal storage of measured and calculated variables

Display Options:

- 2 line X 20 character LCD display
- Hand-held Program / Display Terminal

Diagnostics:

- Signal Travel Times
- Sonic Velocity
- Signal Gains
- Signal to Noise Ratio
- Error Messages

Power Requirement:

- 90 – 250 VAC, 47–65 HZ
- 100 – 300 VDC, 12, 24 VDC
- 26 to 35 watts power consumption (200 watts with optional heater)

Enclosure:

NEMA 4 (IP65) wall or post mounted

Environmental Conditions:

- Storage: 0 to 150 deg. F (-18 to 65 deg. C) 0 to 95% RH
- Operation: 15 to 140 deg. F (-10 to 60 deg. C) 0 to 95% RH
- Operational range can be increased with optional heater to: -15 to 140 deg. F (-26 to 60 deg. C)

Enclosure Dimensions:

- 20" h x 20" w x 9.2" d (508 x 508 x 234 mm)
- 60 lb. (27 kg)

Hazardous Area Locations:

Optional Class 1, Divisions 1 & 2, Groups C & D
ATEX Zone 0 & 1

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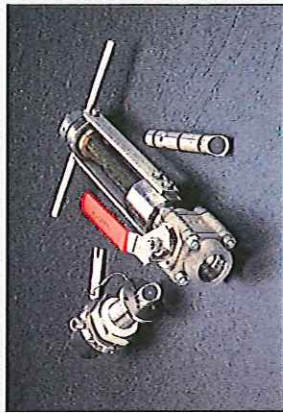
An IDIX Water & Wastewater Business

28 Patterson Brook Road, West Wareham, MA 02576, USA • Tel: +1 508-273-9600 • Fax: +1 508-273-9699 • Email: accusonic@idixcorp.com

Model 7601/7641 Feedthrough Transducer Assembly

About Accusonic

Accusonic® Technologies, a division of ADS® LLC, designs and manufactures ultrasonic transit-time flow measurement systems that are renowned for their precise accuracy and reliability in difficult operating environments. Accusonic flowmeter systems can be found in hydroelectric plants, thermal power plants, water and wastewater treatment facilities, sewage collection systems, and other types of water flow conveyance pipelines and channels. With over 35 years of experience and over 3000 systems installed worldwide, Accusonic offers a full range of services including installation, system integration, turbine performance testing services, and field training.

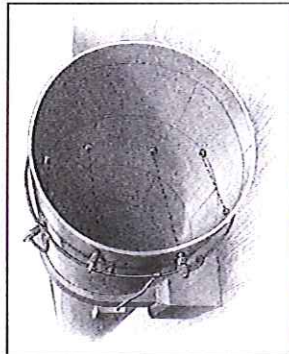


The Model 7601/7641 is a 316 stainless steel transducer and feedthrough assembly designed for low to medium pressure, indoor or outdoor applications. The assembly allows for the removal of the entire transducer for repair, replacement, or cleaning, without dewatering the pipe.

The Model 7601/7641 assembly is installed in a dewatered pipe from the inside out. Installation is performed by accurately determining transducer locations, drilling holes in the pipe for penetration of the feedthroughs, and measuring the as-built transducer locations.

The feedthrough assembly is sealed on the pipe using an O-ring inner seal and an outer packing. No welding is required.

A Model 7642 Jacking Mechanism is used for removal or insertion of the 7601 transducer under pressurized conditions.



Typical 4-path installation of Accusonic Model 7601/7641 Transducer Assembly

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HARDWARE

DESIGN SPECIFICATIONS

Operational Frequency:

1 MHz
2.5 - 24 ft. (0.75 m - 7.50 m)

Pipe Diameter:

450 psi (31 bar)

Maximum Service Pressure:

32 to 122 F (0 to 50 C) Operating

Temperature Limits:

14 to 122 F (-10 to 50 C) Storage

Construction Material:

316 SS

DIMENSIONAL DATA

Feedthrough Diameter:

1.50 in. (38 mm)

Maximum Pipe Wall Thickness:

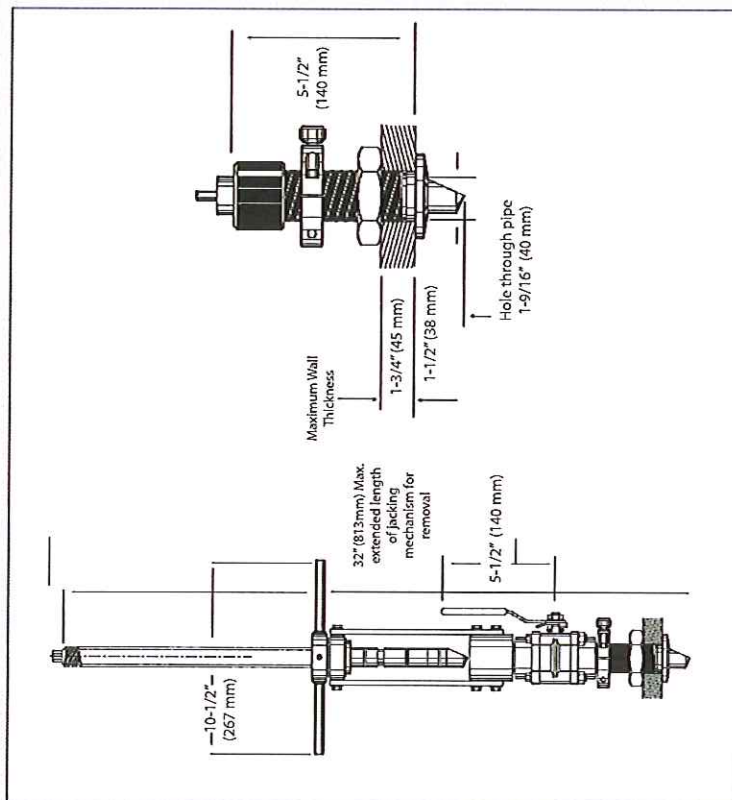
1.75 in. (45 mm)

Clearance Required for Transducer

Removal/Replacement:

36 in. (915 mm) radial clearance from outer pipe wall

Contact Accusonic Technologies for information on transducers recommended for specialized applications.



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www.accusonic.com

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Specifications subject to change without notice.

ACC-Trans-7601-7641-03-04-11