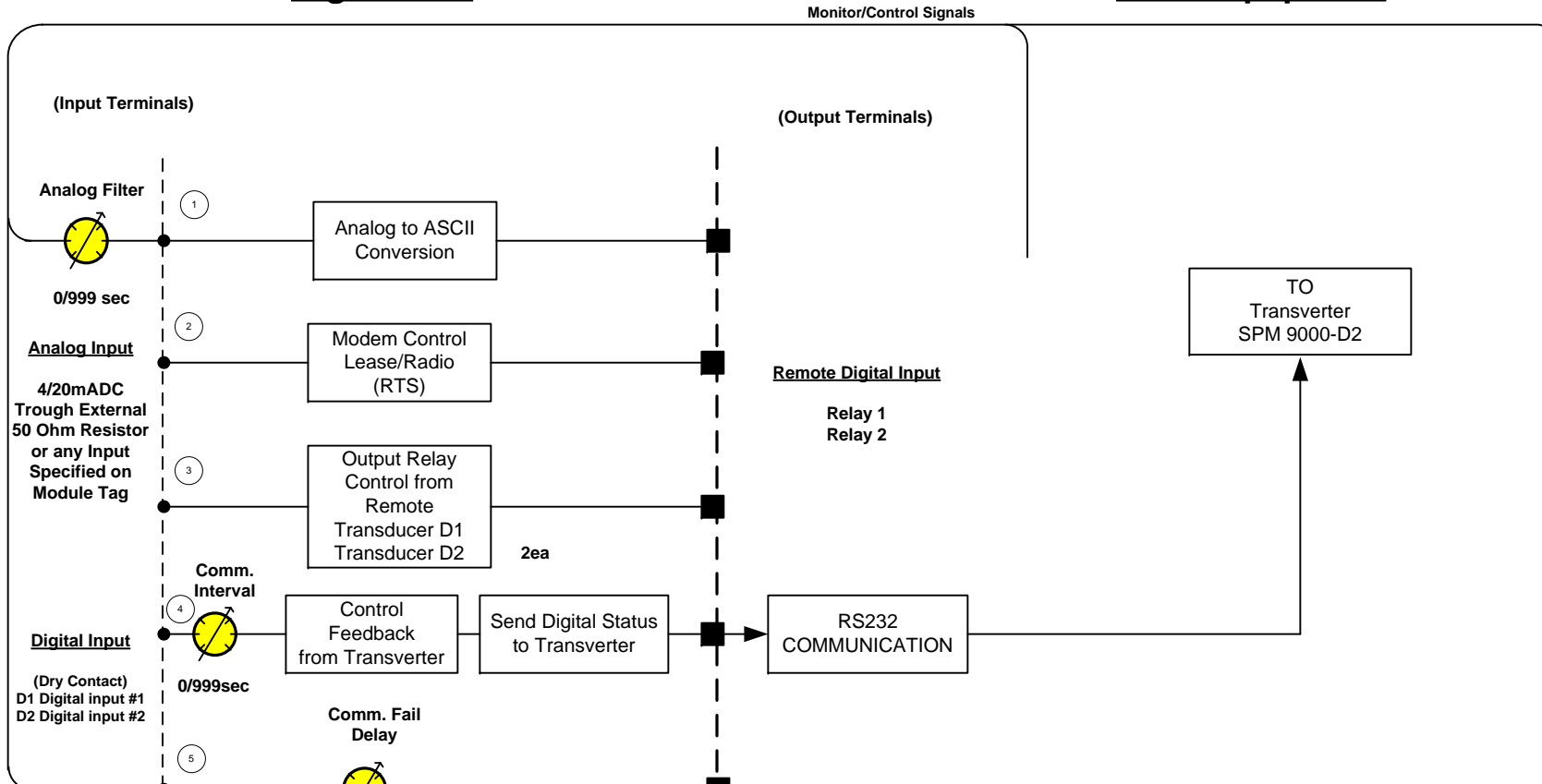


# Algorithms

# Field-Equipment



## WARNING

For SCADA overall system design must incorporate other safeguards in addition to the ICS for operating conditions hazardous to personnel, equipment, or property; such as the use of "deadman" or "suresafe interlocks" and red tag access etc.

### VOCABULARY LIST

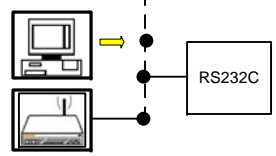
- DATATRAN
- TRANSVERTER
- DATE/TIME
- DATA LOGGING

Rev A - 1/16/2017 - Doubled L and D Connect Delay

- ### Legend
- (x) = Algorithm Number
  - ( ) = Begin Algorithm
  - ( ) = End Algorithm

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Knowledge Map  
AGM ELECTRONICS  
DATATRAN

Signature	Date	PRO-000000-0000	Rev
Drawn By	JG	XXXX	A
Checked By	RF	XXXX	
Cust Approval		SO# XXXX	Sheet
		XXXXKM	1 of 3



To Access the super puk configuration, type ' SCADA' from the drive/directory installed with the software provided in this shipment. You can use any terminal program that supports serial ASCII communications and use the same active commands. The terminal program provided herewith contains help notes on the super puk configurations. This program defaults to serial port COM:1.

**L=Lease Line, D=Dialup Phone lines, R=Radio**

**Analog Filter ( sec):** Enter the analog input filter delay in seconds. This value is used for the averaging of the analog input, to prevent bounce or erroneous readings. TYPICAL = 5 seconds.

**Transmission Interval ( sec):** Enter the communication interval delay in seconds. At each interval the analog and digital information will be transferred between the two SPM units. TYPICAL: L=10, D=30, R=20.

**Comm Fail Delay ( sec):** Enter the communication fail delay in seconds. This value is used to control the analog output if communication are stopped or in error. If the communications are not continue for the lenth of the fail delay the analog output will be set to the Initial analog value, until communications is restored. TYPICAL: L=300, D=300, R=300.

**Connect Delay ( sec):** Enter the delay between connection and the start of data transmission. TYPICAL: L=40, D=60, R=1.

**Modem Init String:** : Enter an initialization string when a modem is used. The string can be 25 charters long and contain any type of charter. TYPICAL: L=ATX1D, D=ATE0V0DT(phone #), R=(none).

**Callnp (N) :** The default is "N". If carriage return is pressed, the configuration will continue with the next line allowing changes of the engineering units without physically putting in the 0% and 100% analog signal levels. If a "Y" is entered, the actual relationship between the physical input and engineering units will be changed. This requires applying the raw input signals to the analog input. If you do not have a means to enter the raw signals at this time do not reply "Y".

**ZeroInp(0.0000) :** This message will be displayed to prompt you to set the zero scale engineering units.

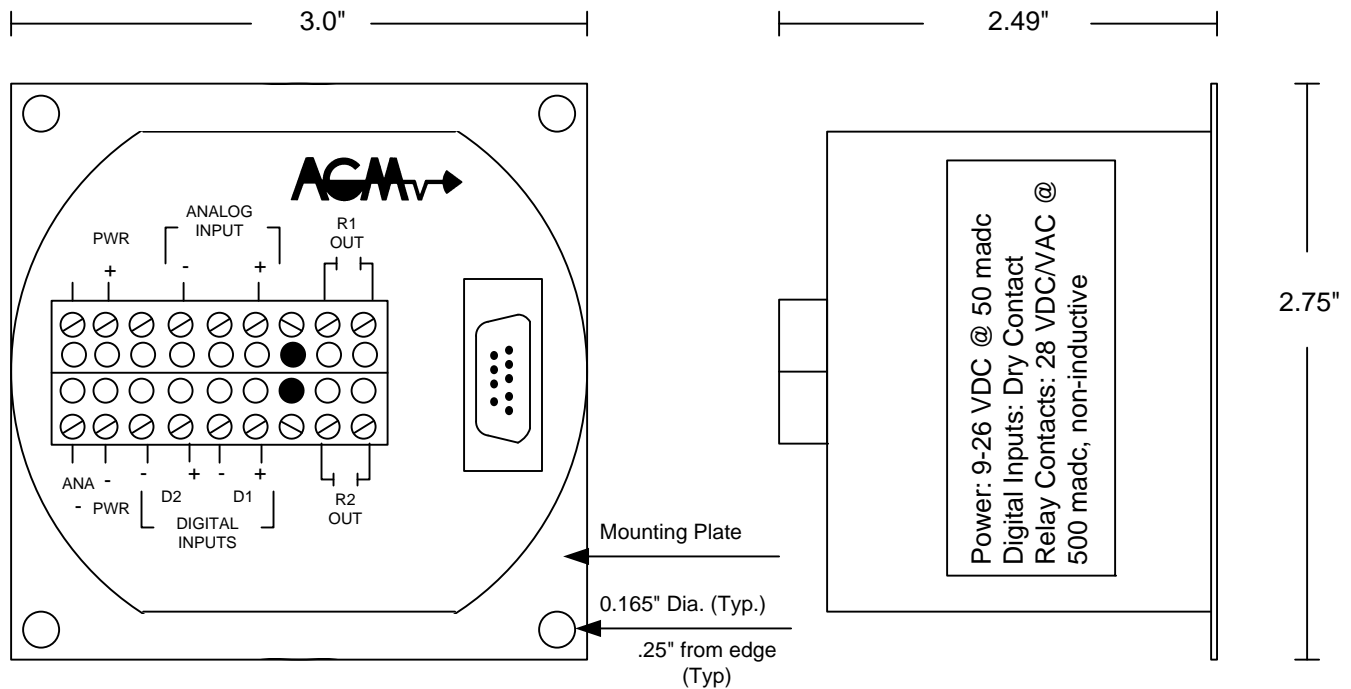
**FullInp(100.0000) :** Enter in the desired value for datalogging when the input is at full scale. This will complete the calibration process.

**Radio Communications ? (N):** The default is NO. If "Y" is entered the RTS delay will need to be answered. POWER MUST BE RESET in order for the new configuration to take effect.

**RTSdly: X1.7msec:** Enter the RTS delay used in radio communications. This value should be set to zero if a radio modem is not used. The entered value is multiplied by 1.7 msec. The maximum entry for RTS delay is 255 (255 x 1.7 = 433.5 msec).

	Signature	Date	PRO-0000000-0000	Rev
<i>Drawn By</i>	JG	XXXX	Ref SP24	A
<i>Checked By</i>	RF	XXXX	SO# XXXX	Sheet
<i>Cust Approval</i>		__/__/__	XXXX	3 of 3

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Front Panel Notes AGM ELECTRONICS, INC DATATRAN



REFER TO WSD 30083-1

### Data Handler Operations

The Data Handler (SPM 9000-D2N) is designed to transfer one analog and two digital contact to a remote 'TRANSVERTER' model SPM 9000-D2I for current and (V) for voltage output. The communication carrier is a lease line modem or radio modem and requires a transparent communication channel. The analog input is averaged over a customer selectable time delay and transmitted to the TRANSVERTER' based on an adjustable communication interval. Two digital inputs will be transferred to two digital outputs on the opposite side at each communication interval. A communication fault will become active whenever the communication channel is interrupted. During setup the operator can request the status of the analog and digital inuts and the digital outputs. The setpoints and calibration are operator adjustable through the RS232C communication port

#### Active Commands

Command	Description	Results
\$1 VERS	Data handler version	Display Version of Data Handler
\$1 CD	Configure Data	Enable Configure Routines
\$1 RD	Read Data Format 1=Close, 0=Open	Displays analog input and output 'IN= Analog input = Filtered analog D1 = 1 or 0 = Local digital input #1 D2 = 1 or 0 = Local digital input #2 R1 = 1 or 0 = Remote digital input #1 R2 = 1 or 0 = Remote digital input #2



	Signature	Date	PRO-000000-0000	Rev
Drawn By	JG	XXXX	Ref SP24	A
Checked By	RF	XXXX	SO# XXXX	Sheet
Cust Approval		__/__/__	XXXX	2 of 3

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