

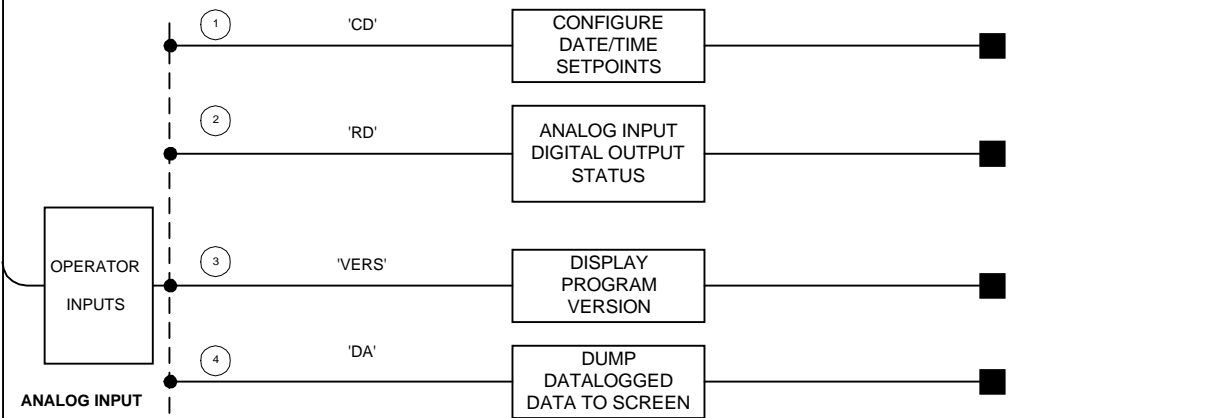
Algorithms

Field-Equipment

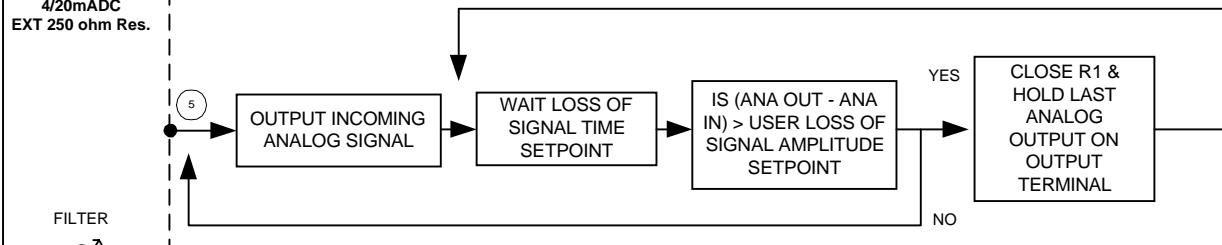
Monitor/Control Signals

(Input Terminals)

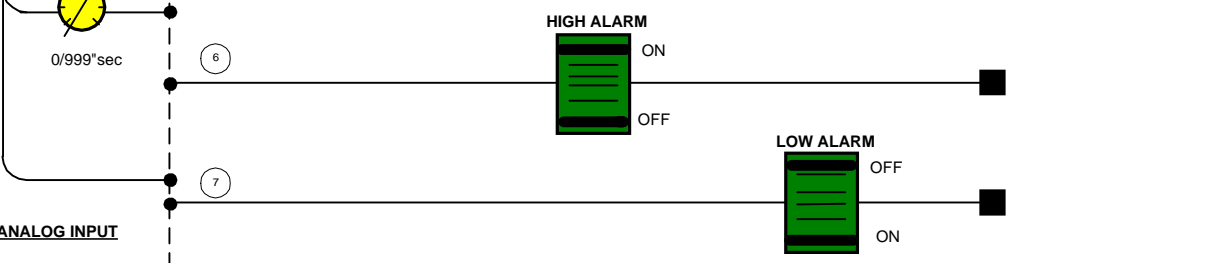
(Output Terminals)



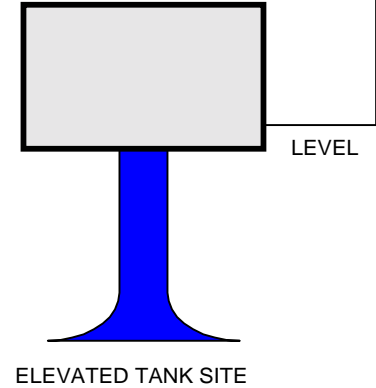
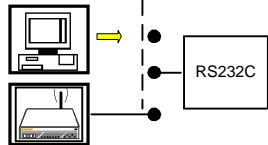
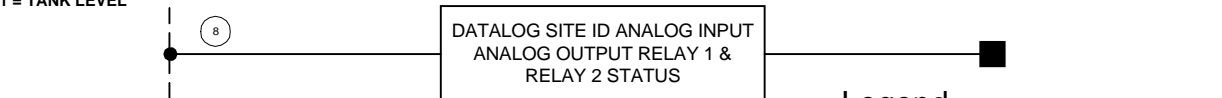
ANALOG INPUT
4/20mADC
EXT 250 ohm Res.



FILTER
0/999"sec



ANALOG INPUT
A1 = TANK LEVEL



ANALOG OUTPUT (5)
A1 = TANK LEVEL SIGNAL

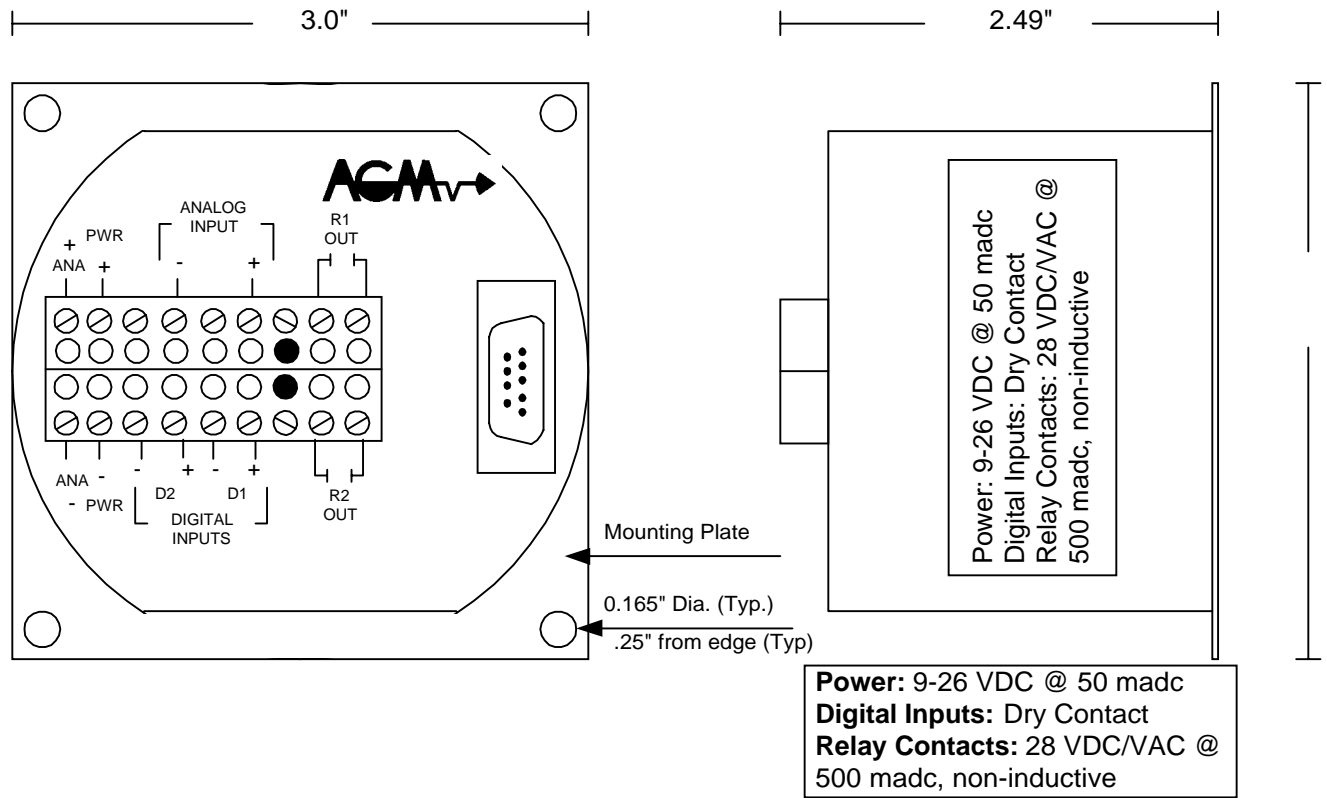
RELAY OUTPUTS (6) (7)
R2 = COMMON LEVEL ALARM
R1 = LOSS OF SIGNAL ALARM (5)

Legend

- (x) = Algorithm Number
- () = Wiring Table Designations. Refer to Page 2 of WSD (Figure 2) drawing for physical layout/connection location.
- = Begin Algorithm
- = End Algorithm

| | | | |
|--|------|-----------------|--------|
| AGM Electronics, Inc. Tucson, Arizona Knowledge Map LOSS OF SIGNAL DETECTOR AGM ELECTRONICS | | | |
| Signature | Date | PRO-000000-0000 | Rev |
| JG | XXXX | Ref SP42 | NC |
| Checked By | RF | SO# XXXX | Sheet |
| Cust Approval | | XXXX | 1 of 4 |

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Data Handler Operations

The Data Handler (SPM 9000-D2I) is designed to accept an analog input and provide an analog output. The output equals the input, except in the case of input signal loss. The Data Handler compares output to input at a user specified time interval. If the amplitude change is greater than the user setpoint, the last analog output is held across the output terminals. It will be held until the alarm clears. The Data Handler also contains hi/low alarm setpoints and a datalogging feature.

Active Commands

| Command | Description | Results |
|---------|----------------------|---------------------------------|
| VERS | Data handler version | Display Version of Data Handler |
| CD | Configure Data | Enable Configure Routines |
| DA | Dump all | Dump logged data to screen |
| RD | Display Status | Displays in/out status |

| | | | | |
|---------------|-----------|-------------|-----------------|--------|
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Front Panel Notes
LOSS OF SIGNAL DETECTOR
AGM ELECTRONICS

To access the DH configuration, first connect the DH puk to your computer's serial communication port using a straight through RS232 cable. Then start a terminal program. You can use any terminal program that supports serial ASCII communications or you can use the SCADA program supplied with this shipment. The communications parameters for this DH puk is set at 1200 baud, no parity, 8 data bits and 1 stop bit.

To start configuration enter "\$1CD" without the quotes and followed by a carriage return (Enter Key). The DH puk will respond with the following. To change any settings, enter the new setting after the prompt. To keep the current setting, enter a carriage return only. If you make an error while entering the new value, use the backspace key to back up and reenter the correct value.

Input Filter Delay (5 sec): This message is used to set the input filter delay in seconds. This value must be greater then the scan rate delay.

Datalogging Delay (900 sec): Enter the data logging interval in seconds. A record will be stored to memory at the end of each time interval.

I/O Scan for Loss of Signal Delay (1 sec): Enter the interval in seconds that the output will be compared to the input for loss of signal. This value must be less then the filter delay setpoint.

Loss of Signal Amplitude (40.00): Enter the loss of signal amplitude (in engineering units) that corresponds to a loss of signal.

Hold Output Delay (600 sec): Enter the time delay that the output will hold the last value before it detected a loss of signal.

Date : MM/DD/YY : This message will display the current date as seen from the data handler. If different than the actual date then enter it as it is formatted above (i.e. MM/DD/YY, example 03/13/90).

Time : HH:MM:SS : This message will display the current time as seen from the data handler. If different than the actual time then enter it as it is formatted above (i.e. HH:MM:SS, example 01:30:00). Please note this is a 24 hour clock so midnight is 23:59:59. Hit <CR> to complete the step.

CallInp (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 enter "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 data logging when the input is at full scale. This will complete the calibration process.

Zero Output (0.0000): This number is used by the D/A converter to generate the zero scale analog output.

Full Output (3320): This number is used by the D/A converter to generate the full scale analog output.

High Alarm On/Off (98.75, 97.00): Enter the high alarm on/off setpoints in engineering units.

Low Alarm On/Off (20.62, 22.00): Enter the low alarm on/off setpoints in engineering units.

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Config:-1: This entry is used to set addressing mode and specific RS232 line protocols.

Addr:-1: If addressing is used, enter the units address. Valid addresses are integers between 0 and 255.

Baud:-1: The puk can operate at 300 or 1200 or 9600 baud. The default (-1) is 1200 baud, an entry of (3) is 300 baud and (96) is 9600 baud.

Date fmt(3): This entry defines the amount of date information stored with each data point. Enter a number, 0-3 from the table below to set the date format. Memory allocation is also listed, the input reading uses 2 bytes per record. 0 = No date information recorded. 1 = Day of month only recorded (add 2 bytes per record). 2 = Month/Day recorded (add 4 bytes per record). 3 = Month/Day/Year recorded (add 6 bytes per record)

Time fmt(3): This entry is used to configure what time information will be stored with each datapoint. 0 = No time information recorded. 1 = Minutes only recorded (add 2 bytes per record). 1 = Minutes only recorded (add 2 bytes per record). 2 = Hour:Minute recorded (add 4 bytes per record). 3 = Hour:Minute:Second recorded (add 6 bytes per record).

Prec.(62): This entry is used to set display precision. To disable this function enter "0". This will reset the display to the default values. (i.e. 66). The most significant byte is the maimum field width and the least significant byte is the number of digits displayed to the right of the decimal.

<EOT>

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| Checked By | RF | XXXX | SO# XXXX | Sheet | |
| Cust Approval | | __/__/__ | XXXX | 4 of 4 | |