

Model 1854-A2A
Termination Panel
INSTRUCTION MANUAL

February, 1992

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Lockport, Illinois
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*****SPECIAL OPTION*****

Model 1854-S001

Termination Panels

February, 1991

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Model 1854-S001

*****SPECIAL OPTION*****

Model 1854-S001

The Model 1854-S001 is the same as the Model 1854-A2A except that a lug connection to support an external +24 volt power supply was added.

MLH:rem(WP)
February 26, 1991

*****SPECIAL OPTION*****

Model 1854-S004

Termination Panel

August, 1989

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Model 1854-S004
(Rev. Aug. 1989)

*****SPECIAL OPTION*****

The Model 1854-S004 is the same as the Model 1854-A2A except that the 249 Ω resistors on each channel have been replaced with 124 Ω resistors, and the 384 Ω current limiting resistors on each channel have been replaced with shorting straps.

The correct schematic diagram for this option is #032189-C-5492.

MLH:rem(WP\MLH)

August, 1989

*****SPECIAL OPTION*****

Model 1854-S005

Termination Panel

December, 1991

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Model 1854-S005

*****SPECIAL OPTION*****

Model 1854-S005

The Model 1854-S005 is a dual 16-channel Termination Panel. Each of the dual sections have 16 isolated BNC connectors wired to 1 AMPHENOL micro-ribbon 57-10500 50-contact plug. The mating connector to this plug is the AMPHENOL 57-20500 receptacle.

The Model 1854-S005 requires 3.5" of rack space.

JRH:rem

December 23, 1991

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32-channel Termination Panel

1U-high panel with terminations for 32 2-wire channels

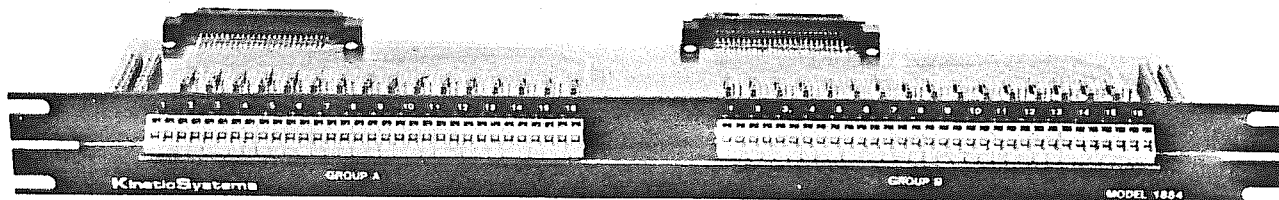
1854

Features

- 32 channels of I/O terminations with 19-inch rack mounting
- Dependable cage clamp connections to field wiring
- Choice of termination options for analog input signals

Typical Applications

- Field wiring terminations
- Module I/O termination
- General-purpose patch panel



General Description *(Product specifications and descriptions subject to change without notice.)*

The 1854 Termination Panel provides a convenient method for field termination of module I/O signals. Arranged for 19-inch relay-rack mounting, the panel permits termination of 32 channels of I/O signals and occupies only 4.45 centimeters (1 $\frac{1}{4}$ inches) of rack height. The 32 channels are divided into two groups of 16 channels for mating with modules such as the 3512, 3514, and 3516.

The 1854 panel uses 64 Wago® stainless steel, cage clamp springs to receive the field wiring. Each spring accepts a single solid or stranded conductor in wire sizes ranging from AWG 24 to AWG 14. The springs feature constant contact resistance, are vibration proof, and are easy to use. Each of these terminals is wired to a contact on a 50-contact ribbon connector. This connector mates with a 5950-Z1B ribbon connector, or with the 5853-Series or 5855-Bxyz cables. If the 5853-Exyz cable (with socket on one end and plug on the other) is used, modules with an -Axyz suffix (50-contact ribbon connector) can be connected directly to the 1854 panel. For modules with 50-pin "D" connectors, the 5853-Jxyz cable should be used. The 5855-Bxyz cable should be used with the 3516 ADC module. The mating connectors or the I/O cables must be ordered separately. Two connectors or cables are required to terminate all 32 channels on the panel.

For analog input signals destined for the 3512, 3514 16-channel ADC module or for the 3516 32-channel ADC module, the 1854 accommodates three different signal types. In its simplest form, the 1854 passes a differential voltage to each channel of the A/D module. By relocating option jumper straps on the panel, the 1854 accepts a voltage derived from a passive 4 - 20 milliampere current loop by passing the loop signal through a 249 ohm, 1% resistor (i.e., the full-scale input signal to the A/D module is 4.98 volts). The third option provides connections for an active 4 - 20 milliampere current loop. The power for the current loop must be generated in the transmitting device. The transmitter must be isolated from ground so that the current loop signal can be referenced to module ground. The type of input signal is selectable on a channel by channel basis. The 1854 is 4.45 cm (1.75") high x 48.26 cm (19") wide x 11.43 cm (4.5") deep.

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Ordering Information

Model 1854-A2A 32-channel Rack Termination Panel

Related Products

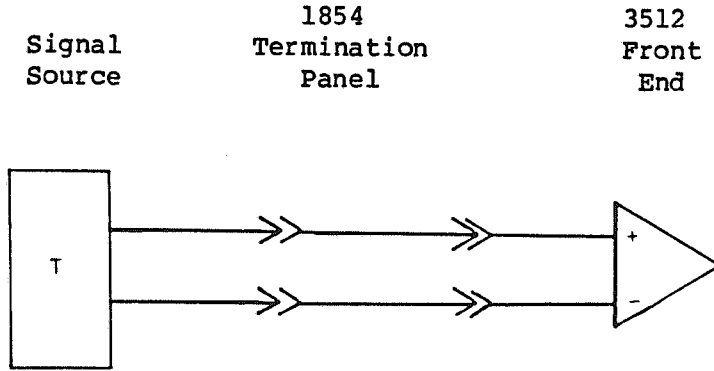
Model 5950-Z1B Ribbon Connector (two required for 32-channels)
Model 5853-Series Cable Assemblies (two required for 32-channels)
Model 5855-B20J Cable Assembly (two required for 32 channels)

Model 1854-A2A

CHANNEL CONFIGURATIONS

The Model 1854 can be used in the following applications:

1. To connect differential voltage signals to Analog-to-Digital converter modules such as the Model 3512. In such a configuration, the Model 1854 appears as a straight through path to the signals:

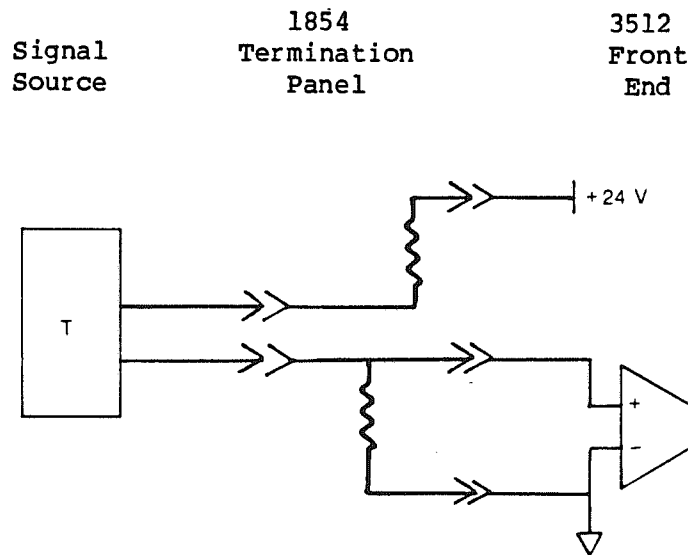


2. To connect powered current loop transmitters to Analog-to-Digital converter modules (passive current loop operation). In this configuration, the Model 1854 puts a 250 ohm precision resistor across the input signal lines to convert the current value to a measurable voltage:



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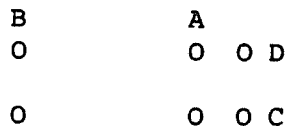
- To connect current loop transmitters requiring a power source to Analog-to-Digital converter modules (active current loop operation). In this configuration, the power for the current loop is provided by the converter module:



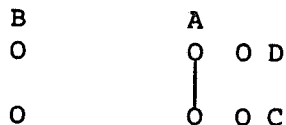
The Model 1854 is arranged so that each channel of the termination can be configured for any of the applications listed above. Thus, a mixture of differential voltage signals, and active and passive current loops can be attached to the same converter modules through the Model 1854.

OPTION STRAPPING

Each channel of the Model 1854 has a set of six option posts which are used to strap that channel for the appropriate input signal type. These option posts look like the following:

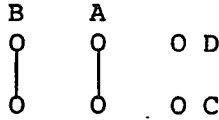


For a differential voltage signal, the two posts labeled "A" are jumpered together. That is, the strapping pattern look like the following:

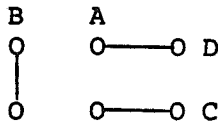


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For a passive current loop signal, the "A" and "B" posts are jumpered together as follows:



For an active current loop signal, the "B", "C" and "D" posts are interconnected in the following manner:



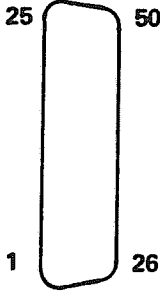
Additional blank posts are provided for storing any unused jumper straps.

CONNECTION OF FIELD WIRING TO THE MODEL 1854

The Model 1854 is capable of accommodating up to thirty-two input signals. These 32 inputs are broken up into two groups of sixteen signals, one group each per Model 3512 (or Model 3514) Analog-to-Digital converter. On the front panel of the Model 1854, each input channel is marked with its channel number (1-16) and a polarity designator (+ or -) for each of the signal lines on that channel. When the input signal is a differential voltage or a passive current loop source, the signal should be connected such that the positive leg of the signal is tied to the terminal marked + and the negative or return leg of the signal tied to the terminal marked -.

When used in active current loop applications, the power (and ground path) for the current loop is provided, through the Model 1854, by the converter module. In these applications, the power for the transmitter is connected to the terminal marked + on the Model 1854 front panel, and the regulated current signal is brought back to the - terminal on the Model 1854.

The power for the active current loop signals is derived from the +24 volt power on the Model 3512 or 3514 converter modules. Approximately 12 volts is available to supply the transmitter at 20 milliamperes.



FACE VIEW

GROUP A
Pin/Wire List

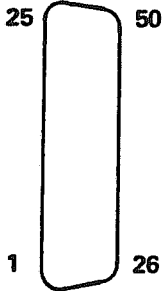
50 PIN RIBBON CONN.

PIN NO.

25	Digital Ground
24	
23	+24 V
22	
21	
20	
19	
18	
17	
16	I/O 16 Positive
15	I/O 15 Positive
14	I/O 14 Positive
13	I/O 13 Positive
12	I/O 12 Positive
11	I/O 11 Positive
10	I/O 10 Positive
9	I/O 9 Positive
8	I/O 8 Positive
7	I/O 7 Positive
6	I/O 6 Positive
5	I/O 5 Positive
4	I/O 4 Positive
3	I/O 3 Positive
2	I/O 2 Positive
1	I/O 1 Positive

PIN NO.

50	Digital Ground
49	
48	+24 V
47	
46	
45	
44	
43	
42	
41	I/O 16 Negative
40	I/O 15 Negative
39	I/O 14 Negative
38	I/O 13 Negative
37	I/O 12 Negative
36	I/O 11 Negative
35	I/O 10 Negative
34	I/O 9 Negative
33	I/O 8 Negative
32	I/O 7 Negative
31	I/O 6 Negative
30	I/O 5 Negative
29	I/O 4 Negative
28	I/O 3 Negative
27	I/O 2 Negative
26	I/O 1 Negative



FACE VIEW

GROUP B
Pin/Wire List

50 PIN RIBBON CONN.

PIN NO.

25	Digital Ground
24	
23	+24 V
22	
21	
20	
19	
18	
17	
16	I/O 16 Positive
15	I/O 15 Positive
14	I/O 14 Positive
13	I/O 13 Positive
12	I/O 12 Positive
11	I/O 11 Positive
10	I/O 10 Positive
9	I/O 9 Positive
8	I/O 8 Positive
7	I/O 7 Positive
6	I/O 6 Positive
5	I/O 5 Positive
4	I/O 4 Positive
3	I/O 3 Positive
2	I/O 2 Positive
1	I/O 1 Positive

PIN NO.

50	Digital Ground
49	
48	+24 V
47	
46	
45	
44	
43	
42	
41	I/O 16 Negative
40	I/O 15 Negative
39	I/O 14 Negative
38	I/O 13 Negative
37	I/O 12 Negative
36	I/O 11 Negative
35	I/O 10 Negative
34	I/O 9 Negative
33	I/O 8 Negative
32	I/O 7 Negative
31	I/O 6 Negative
30	I/O 5 Negative
29	I/O 4 Negative
28	I/O 3 Negative
27	I/O 2 Negative
26	I/O 1 Negative

WARRANTY

KineticSystems Company, LLC warrants its standard hardware products to be free of defects in workmanship and materials for a period of one year from the date of shipment to the original end user. Software products manufactured by KineticSystems are warranted to conform to the Software Product Description (SPD) applicable at the time of purchase for a period of ninety days from the date of shipment to the original end user. Products purchased for resale by KineticSystems carry the original equipment manufacturer's warranty.

KineticSystems will, at its option, either repair or replace products that prove to be defective in materials or workmanship during the warranty period.

Transportation charges for shipping products to KineticSystems shall be prepaid by the purchaser, while charges for returning the repaired warranty product to the purchaser, if located in the United States, shall be paid by KineticSystems. Return shipment will be made by UPS, where available, unless the purchaser requests a premium method of shipment at their expense. The selected carrier shall not be construed to be the agent of KineticSystems, nor will KineticSystems assume any liability in connection with the services provided by the carrier.

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1. Contact KineticSystems and discuss the problem with a Technical Service Engineer.
2. Obtain a Return Authorization (RA) Number.
3. Initiate a purchase order for the estimated repair charge if the product is out of warranty.
4. Include a description of the problem and your technical contact person with the product.
5. Ship the product prepaid with the RA Number marked on the outside of the package to:

KineticSystems Company, LLC
Repair Service Center
900 North State Street
Lockport, IL 60441

Telephone: (815) 838-0005
Facsimile: (815) 838-4424
Email: tech-serv@kscorp.com