

**/AK- 04 for
LR4100E, LR4200E Series
Recorders**

Product Registration

Thank you for purchasing YOKOGAWA products.

YOKOGAWA provides registered users with a variety of information and services. Please allow us to serve you best by completing the product registration form accessible from our homepage.

<http://www.yokogawa.com/ns/reg/>

CONTENTS

1. GENERAL	3
1.1 General	3
1.2 Specifications	3
2. OPERATION	4
2.1 Wiring	4
2.2 Setting	6

1. GENERAL

1.1 General

The /AK-04 built-in alarm is an optional function for the LR4100 and LR4200 Recorders.

High, low, delta high and delta low limit two level per channel alarms are standard functions, making two level alarm detection, for example high and high-high limits, possible.

Up to four outputs can be accepted using this optional function.

In addition, FAIL and CHART END outputs are also provided for in this option.

1.2 Specifications

Number of levels: Two levels/channel

Type: High, Low, Delta High and Delta Low

Number of outputs: Four built-in points

Contact capacity: 24V AC/DC, 1A

Others: Includes FAIL and CHART END outputs



CAUTION

The maximum input voltage to the external input terminal must not exceed the -24V to 24V range. If voltages which exceed these values are applied, the circuit might be damaged.

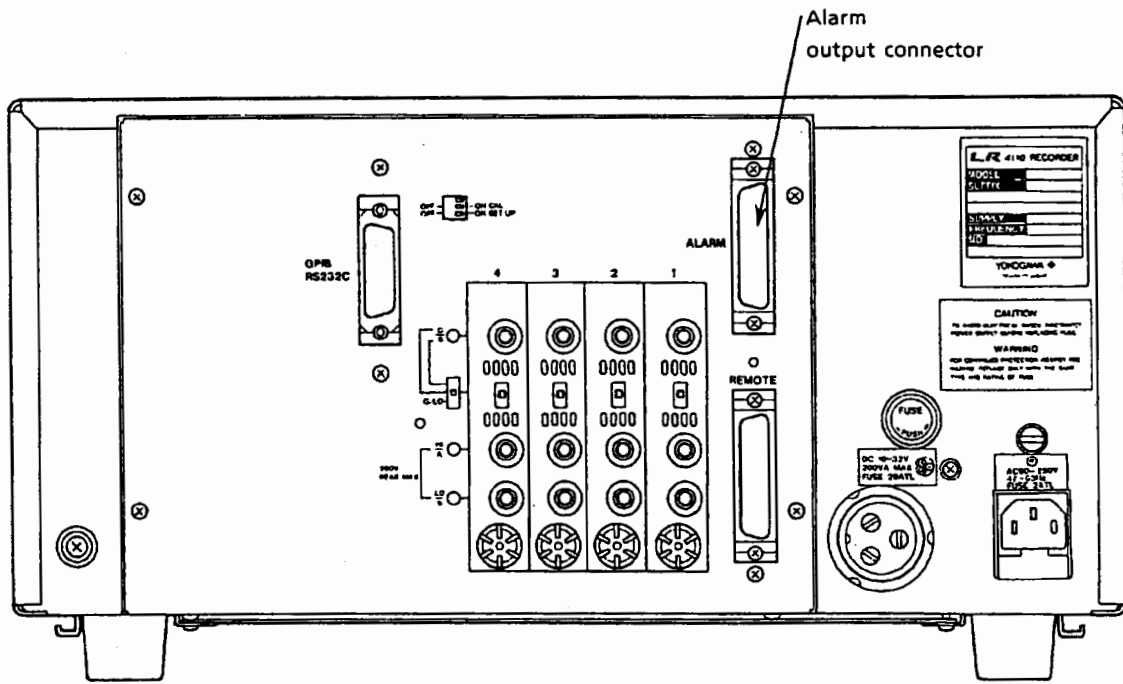
Accessories:

Alarm output connector (36 pins); AMPHENOL 57-30360, part number A 9026 KC

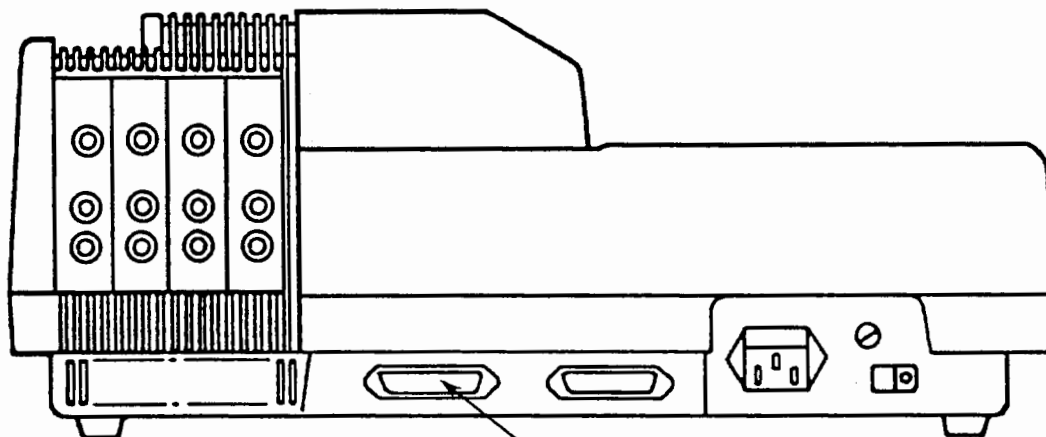
2. OPERATION

2.1 Wiring

(1) Figure 2.1 shows the output connector layout.



(LR 4100)



(LR 4200)

Figure 2.1 Output Connector layout.

- (2) Connector pin numbers for alarm outputs, FAIL and CHART END in each channel are shown in table 2.1

Table 2.1 Alarm Output Connector

Pin No.	Contents	Pin No.	Contents
1		19	
2	NO } Relay number 1	20	NO } CHART END
3	C } Relay number 1	21	C } CHART END
4	NC } Relay number 1	22	NC } CHART END
5		23	
6	NO } Relay number 2	24	NO } FAIL
7	C } Relay number 2	25	C } FAIL
8	NC } Relay number 2	26	NC } FAIL
9		27	
10	NO } Relay number 3	28	
11	C } Relay number 3	29	
12	NC } Relay number 3	30	
13		31	
14	NO } Relay number 4	32	
15	C } Relay number 4	33	
16	NC } Relay number 4	34	
17		35	
18		36	

2.2 Setting

Setting Item

- (1) CH: Channel number
- (2) L1 or L2: level 1 or level 2
- (3) MODE: H (high limit) or L (low limit)
- (4) VAL: alarm set value
- (5) RLY: relay number (1 to 4)

Restrictions

The alarm setting is automatically switched OFF when the corresponding channel RANGE is altered. Therefore, set the alarm after setting the RANGE.

Setting Example

- (1) CH: 4
- (2) L1 or L2: L1
- (3) MODE: H
- (4) VAL: 1.000 V
- (5) RLY: 1

[Key Operation]

[Setting Panel]

[Description]


AUX

F1

```

AUX

↓ ALM  TAG  RCD  MSG
↓ CLK

```

When AUX key is pressed, AUX mode is set and the menu is displayed at the bottom of the panel. Press F1 key to obtain the alarm (ALM) setting panel.


F4

```

4CH(-5.500~5.500)

L1 MODE:OFF

L2 MODE:OFF

1CH  2CH  3CH  4CH

```

Press F4 key to select 4CH. Range where alarm can be set is displayed within () after the CH number.


F1

```

4CH(-5.500~5.500)







L1 MODE:OFF

L2 MODE:OFF

      H    L  OFF

```

Press F1 key to set alarm mode of L1 (level 1) to H.


1^y

0.[']

N0#

N0#

N0#


```

4CH(-5.500~5.500)
L1 MODE:H
  VAL:0.000V
  RLY:OFF
L2 MODE:OFF

+  →  del

```

Set alarm high limit value to 1.000 V with the ALPHANUMERIC key. Upon completion, press the cursor key.

[Key Operation]

[Setting Panel]

[Description]



```

4CH(-5.500~5.500)
L1 MODE:H
  VAL:1.000V
  RLY:OFF
L2 MODE:OFF

↓ OFF    1    2    3

↓    4

```

Press F2 key to select output relay number (1).




```

4CH(-5.500~5.500)
L1 MODE:H
  VAL:1.000V
  RLY:1
L2 MODE:OFF

```

L2 (level 2) should remain OFF.
When ENTRY key is pressed once the alarm setting is set.
When setting is completed, press ENTRY key.

Notes :

1. Alarm detection is executed every second. Therefore, the maximum alarm delay period is one second.
2. Alarm ON/OFF may occur when the measured value fluctuates beyond and below the alarm set point value. Alarm hysteresis must be set to avoid this from occurring. For details, refer to Recorder Manual IM 3711-01E or IM 3721 - 01E, Section 6.4.14 SET UP mode.