



Document No.	D0JBC516
Rev. 0	Date : 2012. 07. 16

SPECIFICATION

SH-7109A MOMENT LIMITER



0	ISSUED FOR REVIEW	K.S.H	K.G		12.07.16
REV.	ISSUE OR REVISION DESCRIPTION	ORIG. BY	CHKD. BY	APPD. BY	DATE

1 . 개 요

본 SYSTEM은 LOAD CELL & RADIUS DETECTOR로부터 하중과 RADIUS 신호를 검출하여 DIGITAL SIGNAL로 변환시킨다.

이 DIGITAL SIGNAL DATA를 MICRO COMPUTER에 입력시켜 PROGRAM에 의하여 현재의 중량, 제한하중, 작업반경을 숫자표시기로 나타내고 ALARM 및 LIMIT SIGNAL을 출력시킨다.

JIB BOOM의 각도에 따라 작업 반경에 따른 제한 하중을 자동으로 나타내어주며 초과될 경우 경보 및 차단을 시켜주는 장치이다.

따라서 본 SYSTEM은 과부하에 의한 전복사고를 사전에 방지하고 기계 및 전동력 설비를 보호하는 역할을 하는 중요한 안전 장치이다.

2 . SPECIFICATION

2-1> CONTROLLER

- ① Model no. : SH-7109A
- ② Q'ty : 1EA
- ③ Crane capacity : 30/3T
- ④ Rated input voltage : AC 220V $\pm$ 10%, 60Hz 1Ph
- ⑤ Power consumption : APPROX.30W
- ⑥ Usage temperature range : $-20^{\circ}\text{C} \sim +40^{\circ}\text{C}$
- ⑦ Storage temperature range : $-30^{\circ}\text{C} \sim +50^{\circ}\text{C}$
- ⑧ Humidity : Less than 95%RH
- ⑨ Signal Output

◦ RELAY OUTPUT (250V 3A)

	Kinds	Type		Contact	Act.	Remark
		M	L			
MAIN	ALARM	●		1a,1b	95%	Range: 80~130%
	OVER	●		1a,1b	100%	Range: 80~130%
	SIG1		●	1a,1b	20Ton(ex)	Adjustable
AUX	ALARM	●		1a,1b	95%	Range: 80~130%
	OVER	●		1a,1b	100%	Range: 80~130%
	SIG1		●	1a,1b	10Ton(ex)	Adjustable

※ M=RATED MOMENT, L=RATED LOAD

※ 모든 SIGNAL은 현장에서 조정 가능

◦ 4~20mA OUTPUT

- MAIN 4~20mA OUTPUT
- AUX 4~20mA OUTPUT
- RADIUS 4~20mA OUTPUT

- ⑩ System accuracy : $\pm 2\%$ of full scale
- ⑪ Overload detection time : Within 1Sec
- ⑫ Malfunction prevention :

Crane malfunctioning resulting from instantaneous Moment and Load upon immediate operation is prevented.

2-2> MONITOR

- ❶ Model no.: SH-7109A5F
- ❷ Q'ty : 1EA
- ❸ Rated input voltage : DC 5V
- ❹ Usage temperature range : $-10^{\circ}\text{C} \sim +60^{\circ}\text{C}$
- ❺ Storage temperature range : $-30^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- ❻ Humidity of the environment in use : less than 95% Rh
- ❼ Display type : 7-SEGMENT FND type
- ❽ Display :
 - Main weight 4 digit (xxx.x)
 - Main limit weight 4 digit (xxx.x)
 - Aux weight 4 digit (xxx.x)
 - Aux limit weight 4 digit (xxx.x)
 - Radius 4 digit (xxx.x) Select boom angle 4 digit (xxx.x)
- ❾ Lamp
 - Main Alarm yellow color led
 - Main Over red color led
 - Aux Alarm yellow color led
 - Aux Over red color led
 - Radius select green color led
 - Angle select green color led
- ❿ Key
 - Main Auto zero push button
 - Aux Auto zero push button
 - Angle/Radius push button
- ⓫ Cable : 10pin to 10pin SRCN connector cable 5M

2-3> ANGLE DETECTOR

POTENTIO-METER에 추(PENDULUM)를 부착하여 중력을 이용한 각도 검출기 입니다.

- ❶ Model No. : SH-AD3
- ❷ Q'ty : 1EA
- ❸ Installation : side of main boom
- ❹ Application : Angle detection
- ❺ Detection : Potentio-meter
- ❻ Use temperature : $-20^{\circ}\text{C} \sim +85^{\circ}\text{C}$
- ❼ Humidity : 95% RH
- ❽ Rated voltage : DC +5V
- ❾ Output : APPROX. $0 \sim 90^{\circ} \rightarrow \text{DC } 2.5 \sim 3.75\text{V}$
- ❿ Material : Al alloy
- ⓫ Dimension : $\varnothing 142 \times 62(\text{D})$
- ⓬ Protection : IP 67

2-4> 4~20mA CONVERTER

- ❶ MODEL NO. : SBCA-1
- ❷ 수 량 : 1EA
- ❸ 인 가 전 원 : AC110/220V, 50/60Hz 단상
- ❹ 소 비 전 력 : APPROX. 20W
- ❺ 사 용 온 도 : $-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$
- ❻ 보 존 온 도 : $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$
- ❼ 사 용 습 도 : 95% RH 이하
- ❽ 신 호 출 력 : 4-20mA
- ❾ PROTECTION : IP 65

2-5> MAIN LOAD CELL

- ❶ Model :
- ❷ Q'ty :
- ❸ Rated capacity :
- ❹ Rated output : 1.5mV/V
- ❺ Non linearity : 0.2% R.O
- ❻ Zero balance : $\pm 1\%$ R.O
- ❼ Temp. Range, Compensated : $-15^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- ❽ Temp. Range, Safe : $-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$
- ❾ Terminal resistance : $350\Omega \pm 5\Omega$ (Input)
 $350\Omega \pm 5\Omega$ (Output)
- ❿ Insulation resistance : 1000M Ω 이상
- ⓫ Excitation recommended : 15V
- ⓬ Excitation max : 20V
- ⓭ Safe over load : 150% R.C
- ⓮ Maximum over load : 300% R.C

2-6> AUX LOAD CELL

- ① Model :
- ② Q'ty :
- ③ Rated capacity :
- ④ Rated output : 1.5mV/V
- ⑤ Non linearity : 0.2% R.O
- ⑥ Zero balance : $\pm 1\%$ R.O
- ⑦ Temp. Range, Compensated : $-15^{\circ}\text{C} \sim +70^{\circ}\text{C}$
- ⑧ Temp. Range, Safe : $-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$
- ⑨ Terminal resistance : $350\Omega \pm 5\Omega$ (Input)
 $350\Omega \pm 5\Omega$ (Output)
- ⑩ Insulation resistance : 1000M Ω 이상
- ⑪ Excitation recommended : 15V
- ⑫ Excitation max : 20V
- ⑬ Safe over load : 150% R.C
- ⑭ Maximum over load : 300% R