

SEKONIC

Light Meter

Operating Manual

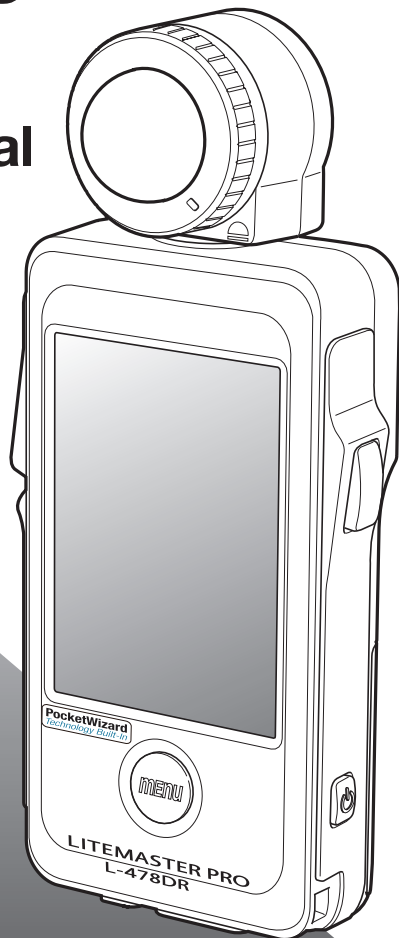
LITEMASTER PRO

L-478DR

L-478DR-A

L-478DR-U

 **PocketWizard**[®]



This manual is specific for PocketWizard[®] operation. Please read the operating manual and safety precaution carefully to fully understand the features of this product before use and keep it for future use.

Keep the operating manual in a safe place.

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1 About PocketWizard Wireless Technology.

1-1. How to use L-478DR Series with PocketWizard Wireless Technology

Plug-in external or built-in PocketWizard receivers are required to work with the PocketWizard wireless technology. Radio triggering enables a single photographer to easily trigger and control flash units.

The radio transmitter built into the L-478DR Series is only compatible with PocketWizard products as well as flash brands that have PocketWizard radio receivers built into. Please read the instruction manuals provided with these products for details about using them. Please go to www.pocketwizard.com to learn more about their products and compatibilities.

<Standard System>

PocketWizard Standard system provides simple triggering and do not allow power control. The feature 32 channels: Channels 1-16 fire single trigger signals; Channels 17-32 have four zones (A, B, C, D) which enable triggering four separate flashes on each channel.

<ControlTL System>

When used with ControlTL receivers, the L-478DR Series is capable of controlling the power level of the compatible flashes connected.

The ControlTL system features 20 channels for FCC&IC version or 3 channels for CE version, and three zones (A, B, C) allowing control of three separate flashes on each channel.

<Radio Frequency>

To comply with local broadcast regulations, Sekonic wireless systems sold in the various markets around the world are designed to operate at different frequencies. Sekonic meters have built-in transmitting antennas that are specifically tuned for their market area. When purchasing and/or installing a transmitter module or using the meter with a receiver, be sure that the meter and receiver are designed to be used in your location and use the same frequency.

- USA/North American market frequencies (FCC & Canada IC): 344.0 to 354.0MHz
- European and other market frequencies (CE, NCC or OFCA): 433.42 to 434.42MHz

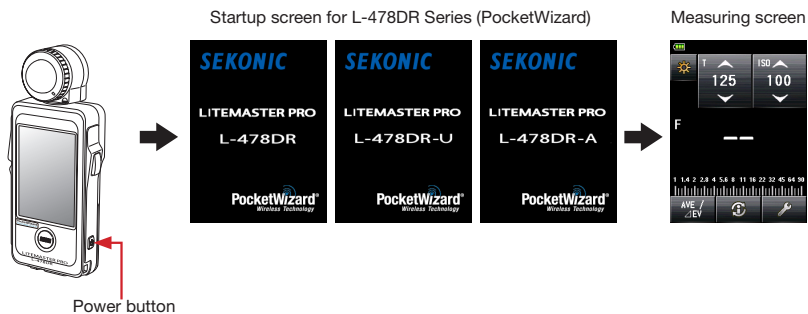
! Note

● Successful radio triggering depends on several factors. Please read these setup steps before using the L-478DR Series to radio trigger flash units.

1. It is the best to position the meter in sight of the radio receiver (or flash head).
2. Position the radio receiver so that it is away from large metallic objects, concrete, or containers of water (like people).
3. Secure the radio receiver to the flash using hook-and-loop-type attachment tape or the threaded socket on the radio. Make sure the radio's antenna is above the flash body or generator pack. Do not allow the receiver antenna to contact metal objects.
4. Sometimes, conditions do not allow radio reception. These could include strong local radio interference or being near objects that block or absorb the signal. Repositioning the radio, even slightly, can reestablish contact. Alternatively, check to see if the radio receiver is behind objects that absorb or block radio waves, such as concrete, metal or low hill.
5. Operation is the best when the meter to receiver distance is within 30 meters.

1-2. Turning the Power ON

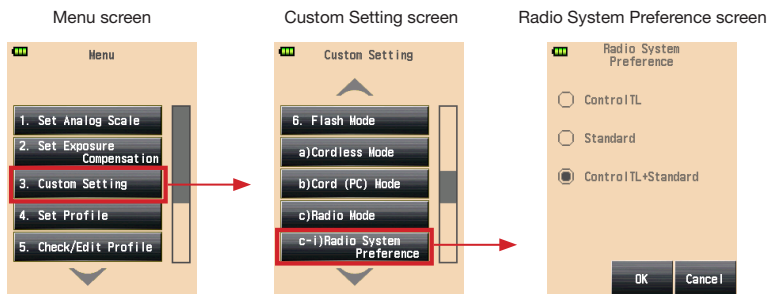
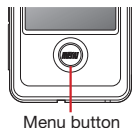
Press and hold the Power button for about 1 second to start up the meter. The startup screen will be displayed, followed by the Measuring screen.



1-3. Setting Radio Flash Mode in Custom Setting

Make sure “6) Flash Mode” is switched ON and “c) Radio Mode” is switched ON, and select “c-i) Radio System Preference”, either Standard and/or ControlTL.

- 1) Press the Menu button on the meter to open the Menu screen.
- 2) Touch **[3. Custom Setting]** and select **[c-i) Radio System Preference]** under **[6. Flash Mode]** in the displayed Menu screen.
- 3) Touch the radio button to select which system you want to use.



- 4) Touch **[OK]** to complete the setting and return to the Custom Setting screen. (Touch **[Cancel]** to return to the Custom Setting screen without change.)
- 5) Press the Menu button at the Custom Setting screen to return to the top of Menu screen. Press the Menu button again to return to the Measuring screen.
- 6) In the Radio Flash mode, the Measuring screen shows the setting of Standard and/or ControlTL indication along with channel number and zones selected.

STD 1	Standard System, Channel (1 to 16)
STD 32 ABCD	Standard System, Channel (17 to 32) and Zones
CTL 1 ABC	ControlTL System, Channel and Zones

Measuring screen
(Radio Triggering screen)




! Note

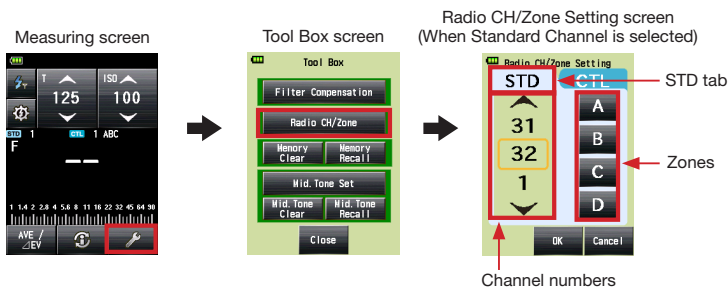
- Set both the meter and plug-in external or built-in PocketWizard receivers to the same system (Standard and/or ControlTL).

2 Measuring

2-1. Selecting the Channel and Zones

2-1-1. How to set in Standard System

- 1) Touch the Tool Box icon () at the bottom right of the Measuring screen to display the Tool Box screen.
- 2) Touch the **[Radio CH/Zone]** to display the Radio CH/Zone Setting screen.
- 3) Touch the STD tab for Standard Channel and Zones selection.
- 4) Touch the arrows ▲/▼ or slide your finger over the screen to select Channel from 1 to 32. When the channel number from 17 to 32 is selected, Zones (A, B, C, D) appear.
- 5) Touch one or more Zones (A, B, C, D) to select the flash units you want to use.
* Zones to use can be selected from Power Control Screen as well.
- 6) Touch **[OK]** to confirm settings and return to the Measuring screen. (Touch **[Cancel]** to go back to the Measuring screen without change.)



Note

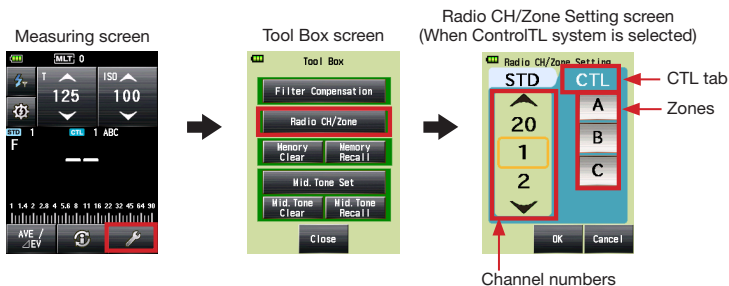
- Set both the meter and plug-in external or built-in PocketWizard receivers to the same Standard system.

Reference

- The last selected Zones in either Power Control screen or Radio CH/Zone Setting screen in Tool Box are activated in Measuring screen.

2-1-2. How to set in ControlTL System

- 1) Touch the Tool Box icon (🔧) at the bottom of the bottom right of the Measuring screen to display the Tool Box screen. Then touch **[Radio CH/Zone]** to display the Radio CH/Zone Setting screen.
- 2) Touch the **[Radio CH/Zone]** to display the Radio CH/Zone Setting screen.
- 3) Touch the CTL tab for ControlTL Channel and Zones selection.
- 4) Touch the arrows ▲/▼ or slide your finger over the screen to select Channel from 1 to 20 for FCC & IC, or from 1 to 3 for CE version.
- 5) Touch one or more Zones (A, B, C) to select the flash units you want to use.
* Zones to use can be selected from Power Control screen as well.
- 6) Touch **[OK]** to confirm settings and then return to the Measuring screen. (Touch **[Cancel]** to cancel settings to go back to the Measuring screen without change).



! Note

- Set both the meter and plug-in external or built-in PocketWizard receivers to the same ControlTL system.

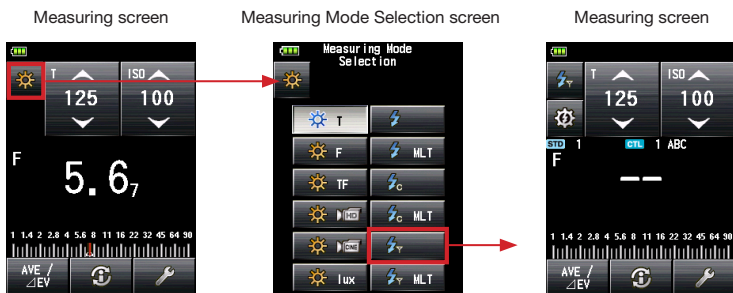
Reference

- The last selected Zones in either Power Control screen or Radio CH/Zone Setting screen in Tool Box are activated in Measuring screen.

2-2. Measuring in Radio Flash Mode

2-2-1. How to use Radio Triggering

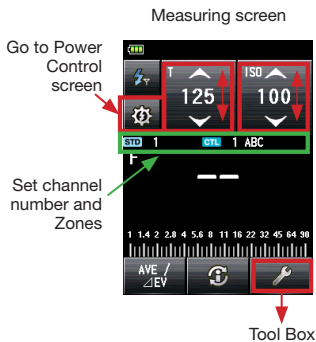
- 1) Touch the Measuring Mode icon (☀️) at the top left of the Measuring screen and then select the Radio Flash Mode (⚡️).



- 2) Set ISO sensitivity on the ISO icon.
- 3) Set shutter speed on the T (shutter speed) icon.
- 4) Make sure that the channel and Zones are the same for the meter and receivers in use.
* Select the Zone to trigger from the Flash Power Control screen (See below) or Tool Box.
- 5) Press the Measuring button to trigger the flash units. The measured value (f-stop) is displayed.

! Note

- When firing the flash, if the flash brightness is 8EV lower than the ambient light, the meter may fail to detect the flash light. In this case, make measurements using the Cord (PC) Flash Mode (See L-478 Series Common Operating Manual for details).
- Rapid start fluorescent lamps and special lighting are sometimes mistaken for flash, and accidentally measured. In this case, make measurements using the Cord (PC) Flash Mode (See L-478 Series Common Operating Manual for details).
- The waveform of a flash bulb has a slight slope and there is a possibility that the light meter cannot recognize the flashbulb in Cordless Flash Mode. In this case, make measurements using the Cord (PC) Flash Mode (See L-478 Series Common Operating Manual for details).



Measuring screen (After Measurement)



2-2-2. How to use Flash Power Control

Power Control function is available with ControlTL system only. Make sure that plug-in external or built-in PocketWizard receivers and flash units are compatible with the function of flash power control.

- 1) Touch the Measuring mode icon at the top left of the Measuring screen and then select the Radio Flash Mode (2-1).
- 2) Touch the Power Control icon (⚙️) on the Measuring screen to display the Power Control screen.
- 3) Select one or more Zones (A to C) (4) and the Power Bar (2) will be activated.
- 4) Press the Measuring button to trigger the flash units for the selected Zones, and the measured value is displayed at the top of the bar (1) and the "F Total" box at the bottom right of the screen (6).
- 5) Move the slider or touch the [+] or [-] buttons (2) to change the power of flash. Set power level is displayed in the area above the slider (1).
* Up to +/- 3 step of value (f stop) can be controlled.
- 6) Press the Measuring button for measurement to confirm that the flash power is set to desired value.
- 7) Repeat 3) to 6) above for other Zones until each flash unit's brightness is set to proper value for the effect you want.
- 8) Select all Zone buttons you want to use, and press the Measuring button. Measured value of each Zone (3) will not change. The F-number for the measured brightness of all lights will be displayed in the "F Total" box (6).
- 9) Standard system radios can be used along with ControlTL system radios to trigger non-power control flashes at the same time. When a Standard channel number is set from 1 to 16, (CL) (classic channel) button appears (5). When a channel number from 17 to 32 is selected, the Zones (A to D) will appear at the right of the screen (7). Touch (CL) or Zones (A to D) to toggle them on or off.

* Press Modeling Lamp ON (🔦) or OFF (🚫) if necessary after selecting the desired Zones.

* To set ISO sensitivity and shutter speed, press the Radio Flash Mode icon (2-1) to go back to the Measuring screen.

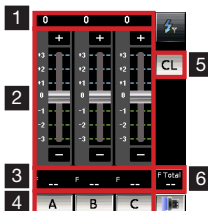
Reference

- The last selected zones in either Power Control screen or Radio CH/Zone Setting screen in Tool Box are activated in Measuring screen.

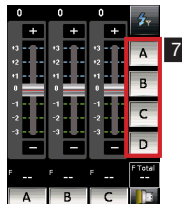
Measuring screen



Power Control screen (ControlTL+ Standard CH17 to 32)



Power Control screen (ControlTL+ Standard CH1 to 16)

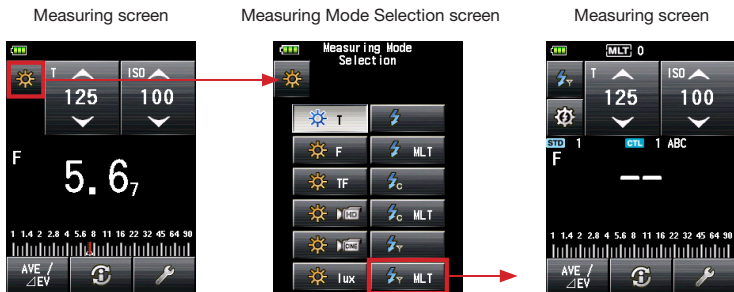


Power Control screen (After Measurement)



2-3. Measuring in Radio Multiple (Cumulative) Flash Mode

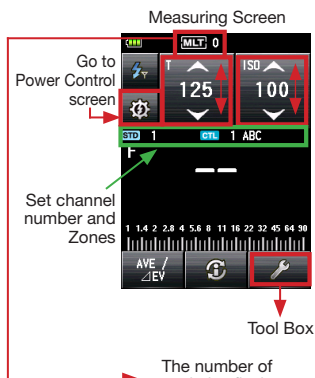
- 1) Touch the Measuring mode icon (☀️) at the top left of the Measuring screen and then select the Radio Multiple (Cumulative) Flash Mode (⚡️-MLT).



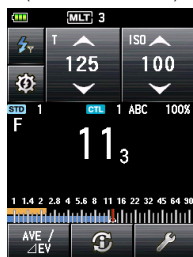
- 2) Set ISO sensitivity on the ISO icon.
- 3) Set shutter speed on the T (shutter speed) icon.
- 4) Make sure that the channel and Zones are the same for the meter and receivers.
 - * Select the Zones to trigger from the Power Control screen (See below) or Tool Box. Then return to the Measuring Screen to take the flash measurement.

- 5) Press the Measuring button to trigger the flash units. The measured value (f-stop) is displayed.
- 6) Repeat 5) above until you get the accumulated measured value (f-stop) you want to use. The number of cumulative flashes is displayed at the top of screen.

* It is not possible to take cumulative flash measurements while the meter displays the Power Control screen. Be sure to set the meter to display the main Measuring screen when taking cumulative flash measurements. The measured value will be cleared when going from the Measuring screen to the Power Control screen when in Radio Multi (Cumulative) Flash Mode.



Measuring screen (After Measurement)



! Note

- When firing the flash, if the flash brightness is 8EV lower than the ambient light, the meter may fail to detect the flash light. In this case, make measurements using the Cord (PC) Flash Mode (See L-478 Series Common Operating Manual for details).
- Rapid start fluorescent lamps and special lighting are sometimes mistaken for flash, and accidentally measured. In this case, make measurements using the Cord (PC) Flash Mode (See L-478 Series Common Operating Manual for details).
- The waveform of a flash bulb has a slight slope and there is a possibility that the light meter cannot recognize the flashbulb in Cordless Flash Mode. In this case, make measurements using the Cord (PC) Flash Mode (See L-478 Series Common Operating Manual for details).

3 Functions

3-1. Custom Setting Function

This enables quick and easy setup of individual meter preference.

For other Custom Setting, please refer to the L-478 Series Common Operating Manual. Custom Setting specific to L-478DR Series for PocketWizard is as follows.

3-1-1. Custom Setting Function List

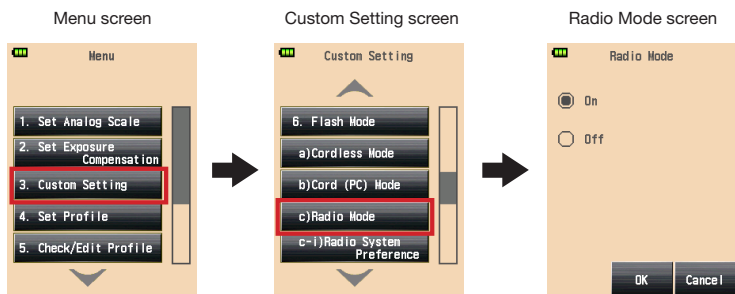
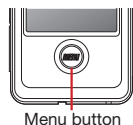
Setting No.	Custom Setting Name	Item			Default Setting
6	Flash Mode*1,	On	Off	-	On
c)	Radio Mode*1,*2	On	Off	-	On
c-i)	Radio System Preference*2	ControlTL	Standard	ControlTL + Standard	ControlTL + Standard

*1. When Flash Mode is set "Off", the sub setting of all flash modes: a) Cordless Mode to d) Multiple (Cumu.) Flash Mode cannot be selected.

*2. When Radio Mode is set to "Off", the sub setting of c-i) Radio System Preference cannot be selected.

3-1-2. How to enter Custom Setting

- 1) Press the Menu button on the meter to open the Menu screen.
- 2) Touch **[3. Custom Setting]** and select **[c)Radio Mode]** under **[6. Flash Mode]** in the displayed Menu screen.
- 3) Touch the radio button to select On or Off.



- 4) Touch **[OK]** to complete the setting and return to the Custom Setting screen. (Touch **[Cancel]** to return to the Custom Setting screen without change.)
- 5) Press the Menu button at the Custom Setting screen to return to the Menu screen. Press the Menu button again to return to the Measuring screen.

4 Specifications

Radio wave frequency:

Regulation	Radio System	Channel Number	Frequency
FCC&IC	Standard	CH1 ~ 16	344.04MHz
		CH17 ~ 32	346.5 ~ 354.0MHz
	ControlTL	CH1 ~ 4	340.0 ~ 346.0MHz
		CH5 ~ 20	341.5 ~ 351.0MHz
CE	Standard	CH1 ~ 16	433.62MHz
		CH17 ~ 32	434.22MHz
	ControlTL	CH1 ~ 3	433.42 ~ 434.42MHz

Zone: Standard System: A to D (after CH 17)

ControlTL System: A to C (all channel)

Radio triggering range: 30 meter (100 feet)



! Note

- The working distance of the radio triggering system can vary with the orientation and location of the meter and receivers.

5 Legal Requirements

■ Legal Requirements

This product complies with the following legal requirements.

Destination	Standard		Details
Europe	CE 	SAFETY	EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011
		EMC	EMS: EN55024:2010 EMI : EN55022:2010
		Wireless	R&TTE Directive 1999/5/EC EN300 220-2 V2.3.1 (2010-02) EN301 489-1 V1.9.2 (2011-09) EN301 489-3 V1.4.1 (2002-08) EN62479:2010
		Environmental	WEEE, RoHS, REACH
North America	FCC (US) 	EMC	FCC Part15 SubpartB ClassB
		Wireless	FCC Part15 SubpartC
	IC (Canada)	EMC	ICES-003
		Wireless	RSS-210 Issue8

FCC & IC compliance information

Warning

- Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note

- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant.

To Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communication.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determine by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- * Reorient or relocate the receiving antenna.
- * Increase the separation between the equipment and receiver.
- * Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC rules and also with RSS-210 of Industry Canada. Operation is subject to the following two condition: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Model	FCC ID Number	IC Number	Note
L-478DR	PFK-478-01	3916A-478001	The approval of this rule is obtained with radio transmitter module.


SEKONIC

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MANUFACTURERS

EC DECLARATION OF CONFORMITY

Product identification	
Product	: Digital Light Meter
Brand	: SEKONIC
Type	: L-478 Series (L-478DR, L-478D)
Explanation of product	: Device for use in determining the optimum exposure of a photographic subject. The reading is given in digital form. And device is capable wireless flash triggering with an radio circuit.
Means of conformity	
The product is in conformity with the essential requirements of the R & TTE Directive 1999/5/EC.	
Test carried out by (EMI, EMC)	Japan Quality Assurance Organization KITA-KANSAI Testing Center SAITO EMC Branch 7-3-10, Saito-asagi, Ibaraki-shi, Osaka 567-0085, Japan
(Safety)	Japan Quality Assurance Organization Safety & EMC Center 21-25, Kinuta 1-chome, Setagaya-ku, Tokyo 157-8573, Japan
Standards used	
(EMI)	: EN 55022 : 2010 / ETSI EN 300 220-2 V2.3.1(2010-02) EN62479 : 2010
(EMC)	: EN 55024 : 2010 / ETSI EN 301 489-1 V1.9.2(2011-09) ETSI EN 301 489-3 V1.4.1(2002-08)
(Safety)	: IEC60950-1:2005,(2nd Edition)/ A1:2009 and / or EN60950-1:2006, 2nd Edition/A11:2009/A1:2010/A12:2011
Test report number (EMI, EMC)	: KL80120145 / KL80120146 / KL80120147 / KL80120148 / KL80120149
(Safety)	: 351-120028
Manufacturer	
: SEKONIC CORPORATION 7-24-14, Oizumi-Gakuen-Cho, Nerima-ku, Tokyo 178-8686 Japan	
Function	: Total Quality Management Dept. Manager
Signature	:  (YOSHIYUKI TANAKA)
Date of issue	: August 1, 2012
Number	: LAA0645

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