

### Reliability Equals Profit


The reliability of our Model 1478 Defender® Missing Ply™ Detector Technology is unparalleled in the industry. Regardless of the application, machine or surroundings, our sensors will not quit. Our technology does not require operational intervention, adjustments, re-calibration and monitoring, unlike ultrasonic and photo electrics. Our technology is not designed as the "Quick Fix", but is a committed investment that ensures cost effective quality assurance and control that translates into a much higher ROI and increased profitability.

### Simple, Quick and Effective

Easy to set up and operate, and harmonious with logic systems and programmable controllers, the Model 1478 Defender® Missing Ply™ Detector Technology can be easily integrated on any application that calls for the detection of missing plies, as well as splices, metal chips and web breaks. Modular in design, our missing ply detector requires no operational intervention complicated setup procedures or constant tweaking.

#### Benefits Gained

- *Eliminates damage to embossers and perforating rolls*
- *Eliminates roll wrap ups*
- *Monitors the entire multi-web (ply) makeup at one convenient point as they leave the embossing station*
- *One sensor, one job, multi webs – no need for complicated sensor arrangements, installations and integration.*

 MODEL	<b>1478</b> <sup>TM</sup>
<b>TECHNICAL SPECIFICATIONS</b>	
<b>Defects Types Detected:</b>	Missing Plies Splices (Joints)
<b>Material Compatibility:</b>	Multi-ply Non-Metallic Material
<b>Web Thickness:</b>	0.25" Max. (5.08 mm Max.)
<b>Gap Width:</b>	0.25" (6.35 mm)
<b>Maximum Web Speed:</b>	No limitations
<b>Electronic Alarm Output:</b>	
Pulse Outputs:	1
Voltage:	24V (± 3 V)
Direction:	Positive Going
Duration:	1ms, 10ms, 100 ms
<b>Ambient Temperature:</b>	40 to 160° F (4 to 70° C)
<b>Dimensions:</b>	6.0" X 7.5" X 4.37" (15.24 cm X 19.05 cm x 11.1 cm)
<b>Power:</b>	24VDC
<b>Weight:</b>	10 lbs./ 4.53 kilogram
Specifications are subject to change without notice.	
Note: If you web speed is less than 30 fpm, specialized circuitry may have to be applied. Additional fees may be applied.	

### Unaffected by Conditions

Unaffected by web width, grade changes, number of webs or plies, material color, machine speed, and printed surfaces, our missing ply detection technology is truly plug and play. Maintenance free; you will save time and money since our missing ply detection technology is self-calibrating to any process for which the sensor is applied too. Available as an all in one unit or custom oriented to the application, the standard for missing ply detection is clear; the standard is the Model 1478 Defender® Missing Ply™ Detector Technology. Both a signal contact closure and a signal digital pulse output are included with each unit to facilitate interfacing to control production equipment such as sheeter gates, coating head applicators, presses, laminators, treaters, audio/visual alarms as well as automatic marking systems.

### R.K.B. OPTO-ELECTRONICS, INC.

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## Ensure Product Superiority

For most multi web (ply) processes, conventional photocells, ultrasonic, resistive and inductive sensors face many difficulties in reliable detection. Issues such as basis weight variations all too often create either false signals, or in most cases, no signal at all.

- Coaters
- Extrusion
- Laminators
- Rotogravure
- Slitters
- UV Flexo Press
- Embossers

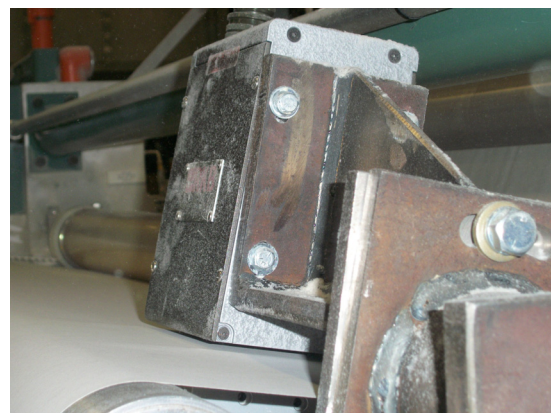


Many conventional approaches use two, three and even more sensors in an attempt to achieve what "ONE" Model 1478 Defender® Missing Ply™ Detector sensor provides. While false signals are bothersome, the absences of a signal is damaging and can cost tens of thousands of dollars in erratic machine performance, product quality, customer complaints, and damage to sensitive components.



## Innovative Solution for Pioneering Industries

This innovative sensing solution is applicable to industries that convert plies of nonconductive materials such as multi-ply films, multi-ply tissue, multi-ply fibrous materials, multi-ply laminates, PTFE-based ply material, multi-ply flexible material, multi-ply pressure-sensitive material, multi-ply paper sack, and multi-ply medical materials as well as many other consumer and industrial products. The Model 1478 Defender® Missing Ply™ Detector Technology uses state-of-the-art capacitive, non-contact sensing technologies. Immune to grade changes, material color, type of material and machine speed, the Model 1478 Defender® Missing Ply™ Detector Technology will never miss an absent ply, splice, or web break.



## Call RKB

Call us to discuss your applications and to learn more about the industry's most complete line of web inspection related products



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