

Accessories for Opticon

# PE Range ESL



Display Solutions



≡ OPTICON

<b>PE Range Overview</b>	<b>3</b>
The Rails	5
The Cables	7
The Labels	7
The Basestation	9
The Accessories	10
NFC Tools	10

## Introduction

To create a distinctive business environment Opticon offers both e-paper and colored digital signage solutions. Opticon's wireless Electronic Shelf Label (ESL) system is based on a radio architecture and e-paper label that provides advantages in performance, cost and power consumption.

Our ESLs are suitable for industries such as retail, fashion, catering, mobile shops, jewelry, home appliances, pharmacy, industry, warehouse and room signage. The benefits of digital signage are that information can be presented more easily, prices can be adjusted instantly, and the signs can adapt to the context and audience, even interactively. Opticon's solutions aim to dramatically impact how companies operate their businesses providing a superior platform that can improve profitability and enable new customer-facing applications, promotions and loyalty programs.

What diversifies our ESL solutions is the added value of NFC, LED indicators and sound feedback. This enables you to use customer loyalty cards, payment and even pick-to-display solutions. The LED can be used as an indicator for a certain action, to attract attention or to find a product in a warehouse. When you develop a custom-made application, you can add even more functionalities to the Opticon Powered ESL-range (PE-Range) that gives your customer control of their shopping experience.

Opticon took the batteries out of the ESL to create a slimmer fit, making the shelf look neat and the store stands out in the crowd. The dedicated power rail supplies continuous power, which makes the PE-range a carefree solution by not having to swap batteries in due time. This smart design taps into modern society and the customer's wishes. The PE-range creates the 'wow-experience' we are all looking for.

# PE Range Overview

The PE Range ESL Solution can be used in a variety of different settings: from retail stores to catering and even warehouse applications. Because the PE Range is such a versatile solution the application possibilities are almost endless. Read more about it in the brochure 'Cashier Less Shopping' or contact our local teams who can help you find the right solution for your application.

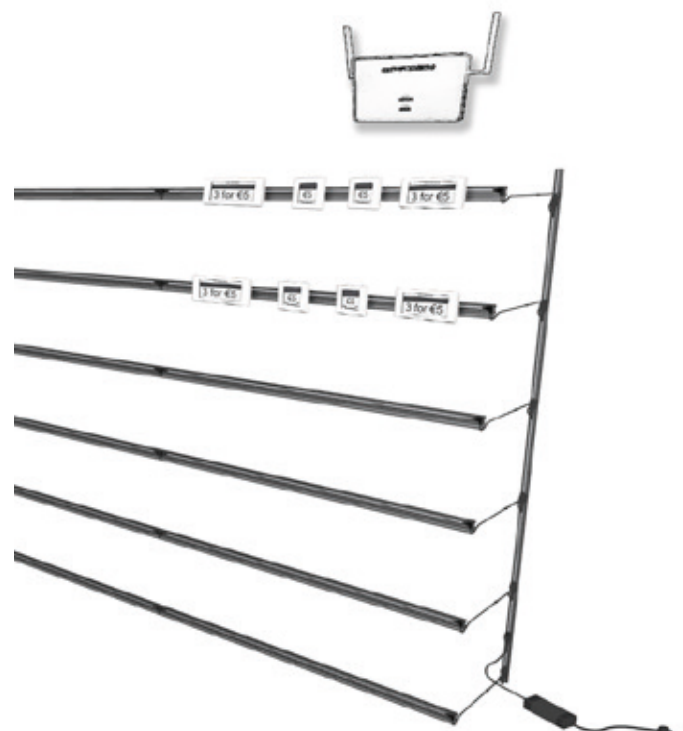
To get a better understanding of the lay-out of the PE solution we look at a retail application. In this installation, common 'Tegometall' retail shelves are used, but it is applicable for many other types of shelves. The complete solution of the PE-range is shown in the following image.



Taking a closer look at the different elements that create the PE range solution, we distinguish five groups. Firstly, we have the rails that deliver continuous power to the ESLs.

Secondly, the cables that are used to connect the power supply and de rails together. The third element in the PE solution are the labels themselves.

To interact with different databases and provide the ESLs with content we need the base station. Lastly, we have a few accessories to complete the PE range solution.





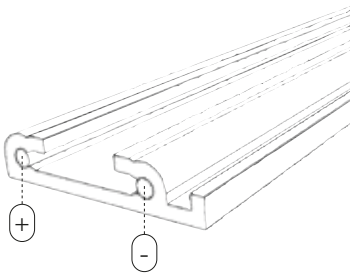


## PowerRail Tape White

1

Mounting: Self adhesive  
Length: 1000 mm  
Width: 25 mm  
Color: White

Other rails with different mounting options can be produced depending on request.



PowerRail-1030 tape 1m white 14299

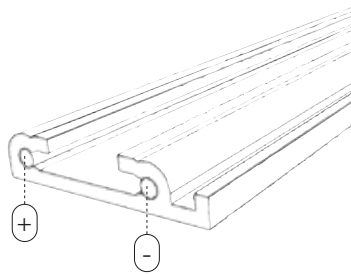


## PowerRail Tape Grey (Blk)

1

Mounting: Self adhesive  
Length: 1000 mm (3750mm in black)  
Width: 25 mm  
Color: Grey, Black

Other rails with different mounting options can be produced depending on request.



PowerRail-1010 tape 1m grey 14282  
PowerRail-1010 tape 3.75m black 14564

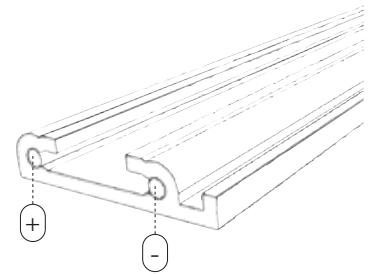


## PowerRail Wanzl Grey

1

Mounting: Wanzl Clip  
Length: 1000 mm  
Width: 25 mm  
Color: Grey

Other rails with different mounting options can be produced depending on request.



PowerRail-1020 Wanzl 1m grey 14283

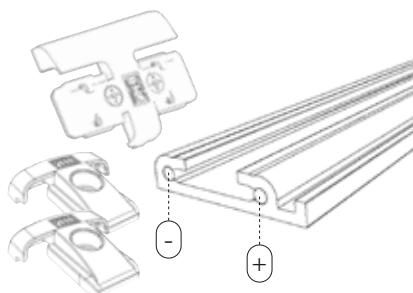


## PowerRail Back Kit

2

Delivers power from the power supply to the front PowerRail via 14448 and 14387.

Set consists of:  
2x 900 mm magnetic Power Rail Grey  
1x Bridge Unit (14390)  
2x End Cap (14389)



PowerRail back end - kit 14503

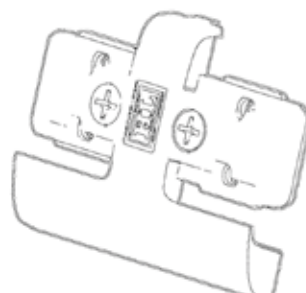


## PowerRail Bridge Unit

3

Connects two or more PowerRails together.

Set consists of:  
1x Bridge Unit  
2x Retaining Screws



PowerRail bridge unit 14390

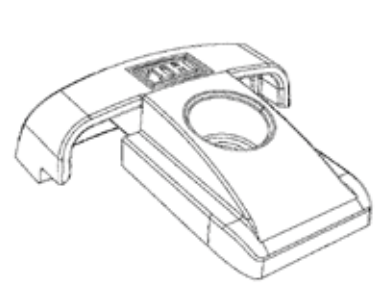


## PowerRail End Cap

4

Terminates a PowerRail in a safe a neat manner.

Set consists of:  
1x End Unit  
1x Retaining Screw



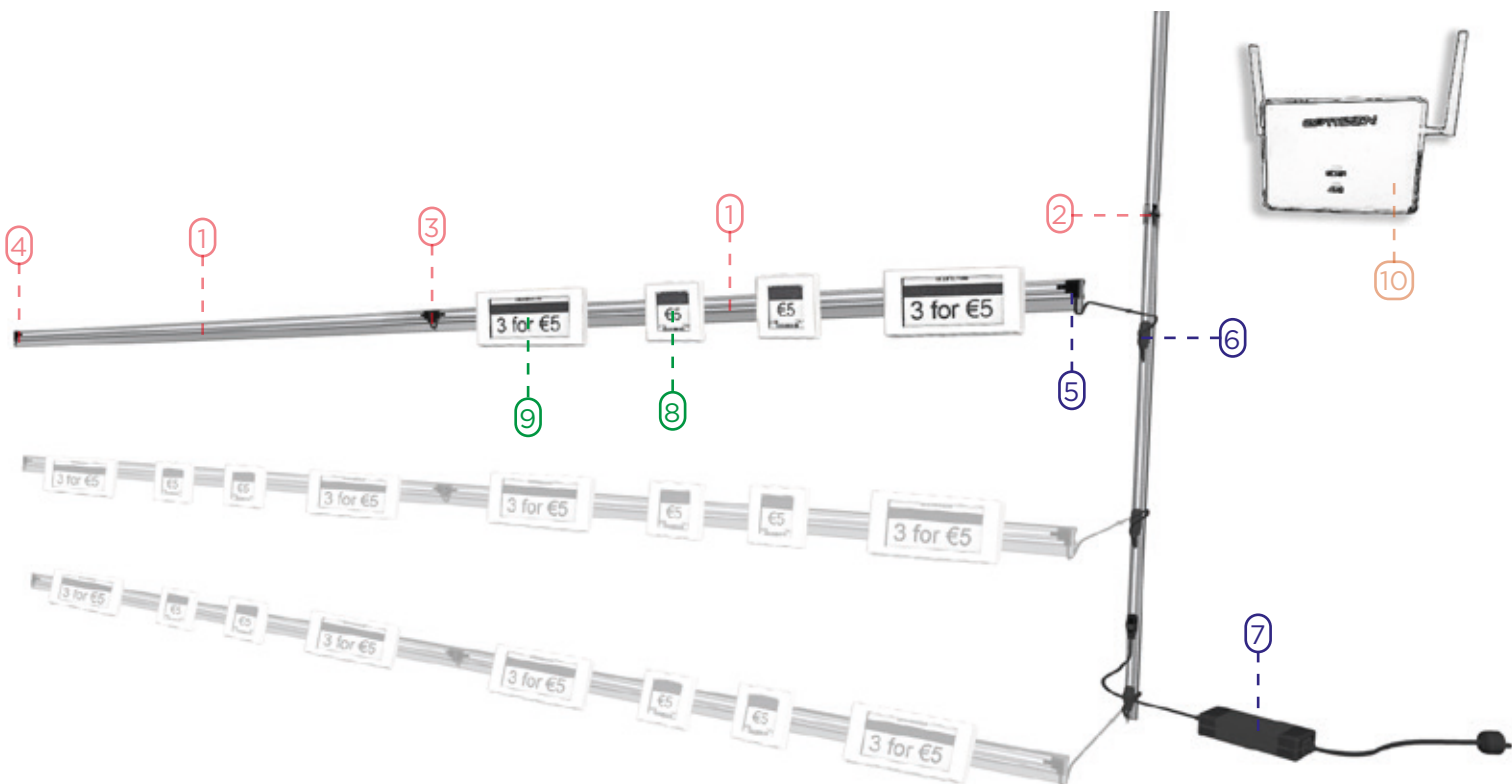
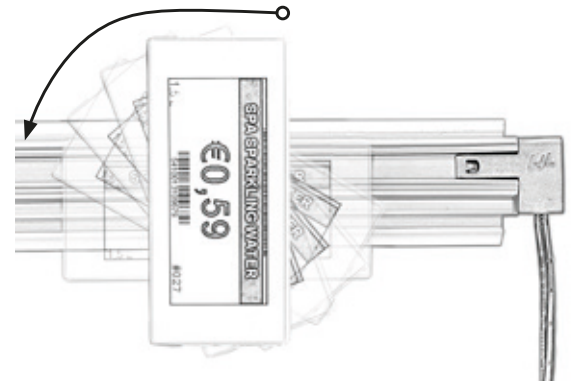
PowerRail end cap 14389

## The Cables and Labels

The second element within the PE solution consists of the required cables. These elements are indicated with blue numbers 5 till 7 in the image below and on the next page. The Power supply delivers (7) the power to the PowerRail Back Kit (2). From there the power is transferred to the front PowerRail (1) with the Connector Cable (6) and Plug for PowerRail (5).

The Connector Cable (6) uses a bayonet style of connector to attach to the PowerRail Back Kit (2). The other end connects (++) / (-) to the Plug for PowerRail (5). This Plug for PowerRail connects to the right side of the PowerRail (1).

Now the PE-152 (8) and/or PE-292 (9) ESLs can be connected to the front PowerRail (1). You attach the ESL's to the PowerRail by aligning the ESL at an angle of 90 degrees clockwise. Press the notch at the back of the ESL into the rail and rotate 90 degrees counterclockwise (See image to the right for a representation of this action). Now the ESL is aligned with the PowerRail. The ESL gives a visual confirmation when it receives power for the first time.



The image above shows these Cables and ESLs in the example application. Many other configurations are possible. Contact a local Opticon representative for more information. The next page describes the products with their specifications and article codes.



# The Cables



## Plug for PowerRail

5

Connection cable for PowerRail (Right).  
Use together with Connector Cable (14387)

Length: 150 mm  
Color: Black



Plug Right Male 150mm  
Plug Left Female 150mm

14448  
14449



## Connector Cable

6

Connector cable for PowerRail.  
Use together with Connector Cable (14448) and Back Kit (14503).

Length: 650 mm  
Color: Black



Connector cable 650mm

14387

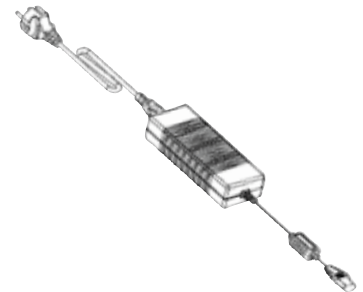


## PowerSupply

7

PowerSupply for PowerRail Back Kit (14503). Do not use directly onto front PowerRail (1). Euro cable (10999) not incl.

Output voltage: 12V  
Output current: 8A  
Supports: up to 100x PE-292  
Color: Black



Power sup 12V/8A back end rail

14414

# The Labels



## PE-152

8

Display: e-paper b/w  
Size: 1.5 inch  
Number of dots: 152 x 152  
Pixel pitch: 140 dpi

Power: Over rail  
Operating voltage: 5-12V

Radio protocol: IEEE 802.15.4  
LED, NFC and sound feedback

PE-152 14302  
PE-152 NFC A, B & F 14692  
PE-152 BWR \* 14739



## PE-292

9

Display: e-paper b/w  
Size: 2.9 inch  
Number of dots: 296 x 128  
Pixel pitch: 111 dpi

Power: Over rail  
Operating voltage: 5-12V

Radio protocol: IEEE 802.15.4  
LED, NFC and sound feedback

PE-292 14156  
PE-292 NFC A, B & F 14690  
PE-292 BWR \* 14709  
PE-292 Low Temp \* 14571



## RE-294

9

Display: e-paper b/w  
Size: 2.9 inch  
Number of dots: 296 x 128  
Pixel pitch: 111 dpi

Power: Over rail & Battery  
Operating voltage: 5-12V

Radio protocol: IEEE 802.15.4  
LED, NFC and sound feedback

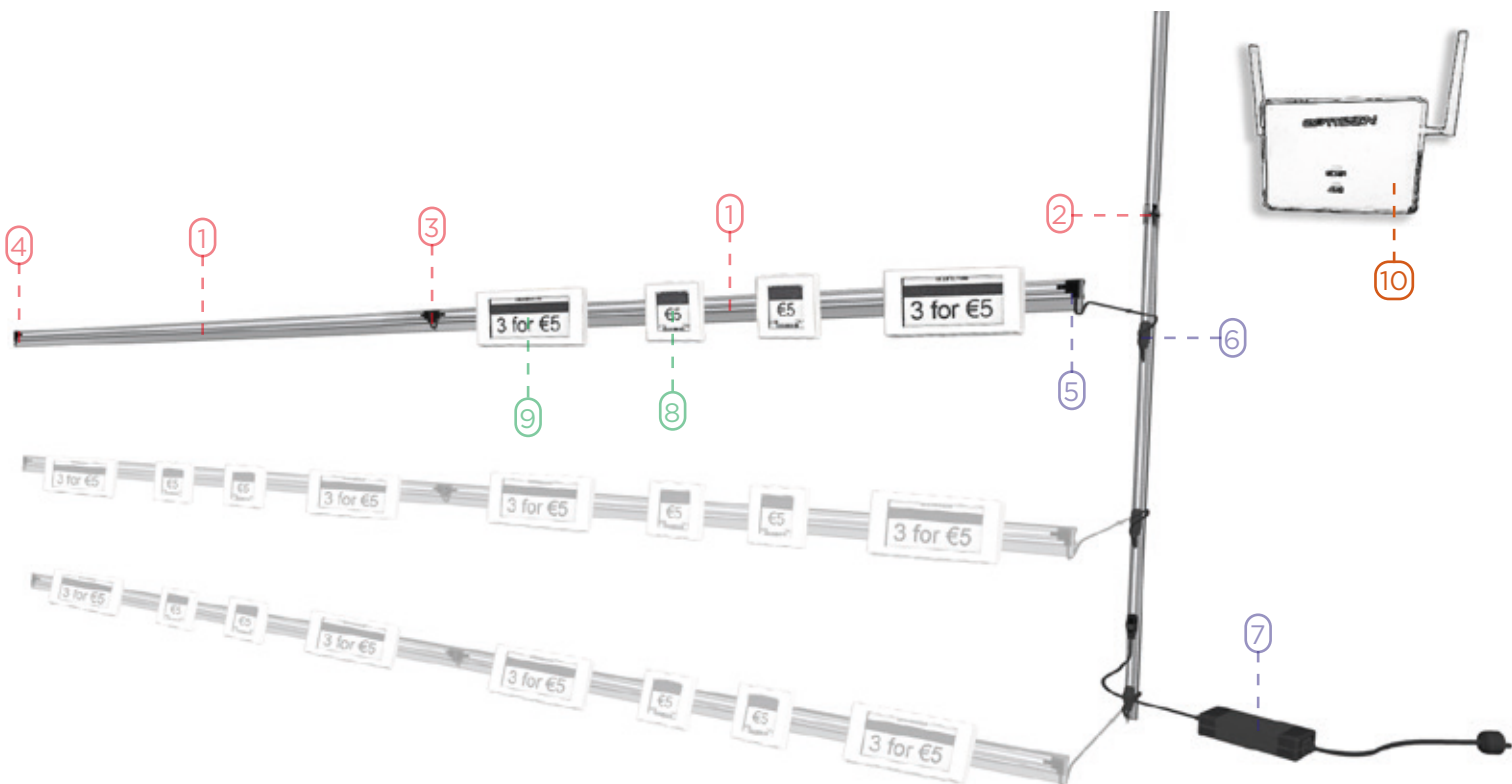
RE-294 14603  
RE-294 NFC A, B & F \* 14716

# The Basestation and Accessories

From small retail to multi-store business, implementation of the Base Station is very simple. All e-paper labels are connected to the same network and content management system, which is connected to the back-office system. One EBS-40 base station can load 2,500 ESLs per station and has a 25-meter indoor radius.

The ESL Server software runs on the Base Station and can be used to provide the ESLs with content. There are different types of solutions that the ESL Server Software will support: CSV-file solution, SQL solution, CSV / SQL hybrid solution, External content management solution and a SQL API. You can download the latest version from [www.opticon.com](http://www.opticon.com).

Use the EBS Power Supply to provide the Base Station with 6V power. You can use the EBS Ethernet cable to connect the Base Station to your existing network. A demo set of 5 NFC cards with Opticon Print are available. You can program these cards with the NFC Reader.







## EBS-50

10

Smart ESL base station  
Communicates with your wireless ESLs, hosts the ESL Server Application and can even host its own database server. The EBS-50 is a combination of a Linux microcomputer and a Base Station.

Integrated Linux computer (no separate PC or server required)  
Easy installation, configuration and software updates

2-port Ethernet switch (daisy chain EBS-40s for more radio coverage)  
Power-over-Ethernet (PoE) support

Dual band Wi-Fi support (by USB dongle; configurable as Wi-Fi access point and client)  
Bi-directional 802.15.4 based radio communication

EBS-50

14828



## EBS-40

10

ESL Base Station  
The base station provides a connection between the Electronic Shelf Label server and the Electronic Shelf labels so you can easily update them whenever you want.

Size: : 145.1 x 110.1 x 32.4 mm (wxhxd) without antenna's  
Cpu: Cortex M4 32-bit, 120 MHz  
ROM: 512 kB Internal RAM: 256 kB  
External RAM: 8 MB

>10.000 image updates per hour  
Max. Load: Up to 2500 ESLs  
Range: Typical 25 meter indoor; 100 meter open-field  
Protocol: IEEE 802.15.4 based Encryption: none (default); 256-bit aes encryption (on request)

EBS-40

13665



## ESL Server Software

10

The server software makes it possible to connect any smart device on the same network as the EBS-50 to use its browser to reach the ESL Server Web Interface and manage the labels. No mouse, keyboard or monitor is required.

Integration with 3rd party software possible using a secured REST-API  
Supports almost all major database formats (CSV, MySQL, MS-SQL, Oracle, ODBC, etc.)  
Support of secure (external) database connections  
Secure communication (SSL, HTTPS, VPN, AES)  
Web based ESL server application (works on any device with a browser)  
Customizable dashboard (based on roles and user privileges)

ESL Web Server - 1 year  
ESL Web Server - 2 year  
ESL Web Server - 3 year

14923  
14924  
14925



## ESL Cloud Dashboard

10

You can see the statuses of all your EBS-50's on a centralized overview page. Simply instruct your EBS-50 to send its local system status (as seen on the dashboard landing page) to the Cloud Dashboard.

Upload to the cloud for remote multi-store monitoring

ESL Cloud Dashboard - 1 Year  
ESL Cloud Dashboard - 2 Year  
ESL Cloud Dashboard - 3 Year

14926  
14927  
14928



## Legacy ESL Server

10

There are a Several different types of solutions that the ESL Server Software will support:

CSV-file solution  
SQL solution  
CSV / SQL hybrid solution  
External content management solution  
SQL API



# The Accessories



EBS-50 PowerSupply

10

Power Supply  
Output voltage: 12.0V  
Output current: 1.0A



EBS-40 PowerSupply

10

Power Supply  
Output voltage: 6.0V  
Output current: 2.0A  
  
With swappable power plugs:  
EU Plug  
US Plug  
UK Plug



EBS Ethernet Cable

10

Ethernet cable to connect the Base Station to an existing network.  
  
Length: 1000 mm  
Color: Black

Power Supply 12V/1A 14845

Power Supply 6.0V 2.0A 10991

Ethernet Cable 1m Black 12607

# NFC Tools



NFC cards

5 cards incl. Opticon Print for testing purposes. Can be programmed with NFC Reader (14388).

NFC 5 cards incl. Opticon print 14286



NFC Reader

Size: 98.0 x 65.0 x 12.8 mm (lwxhx)  
USB 2.0 Full Speed Interface  
CCID Compliance  
Read/write speed up to 424 kbps  
Reading distance of up to 50 mm  
Built-in anti-collision feature

Supports ISO 14443 Type A and B cards, MF1, FeliCa, and all 4 types of NFC (ISO/IEC 18092) tags

Application Programming Interface:  
Supports PC/SC, CT-API (through wrapper on top of PC/SC)

User-controllable LED & Buzzer  
Supports Android OS 3.1 and above

NFC reader 14388



#### **Contact details headquarters**

Opticon Sensors Europe B.V.  
Hoofddorp / The Netherlands  
Tel: +31 (0)23-5692700 / E-mail: sales@opticon.com

Opto Electronics Co., Ltd  
Tokyo / Japan  
Tel: +81 (0)48-4461183 / E-mail: sales@opto.co.jp

Opticon Inc.  
Renton / United States of America  
Tel: +1 425 651-2120 / E-mail: sales@opticonusa.com

#### **Contact details regional offices**

Please check our website [www.opticon.com](http://www.opticon.com) for contact details of our regional offices.

Copyright Opticon. All rights reserved. This information is subject to change without prior notice.  
For availability contact your local representative.