

Intelligent Distribution for Emergency Lighting in Passenger Station



With over 70 years' experience and global presence in more than 100 countries, ABB helps to keep the world moving with new, innovative and sustainable solutions targeted on creating a low-carbon rail industry able to operate with maximum efficiency, reliability and safety.

What is intelligent distribution?

Intelligent distribution means leveraging on new digital technologies to transform traditional electrical installations into smart connected architecture for 24/7 comprehensive monitoring, insights and analysis. The aim is to improve energy consumption and asset performance targeted on sustainability, energy efficiency, cost savings and continuous operation.

Why you need intelligent distribution

Reliability is a major concern in the rail industry. Last year, reliability issues increased by 64% causing delays amounting to 8612 hours in the UK alone. And as the demand is growing for rail as a sustainable form of transportation, ABB intelligent distribution applications offer solutions able to ensure safe, smooth rail operation, maximize energy efficiency, reduce carbon footprint, minimize running costs and downtime while ensuring 24/7 continuous service.

Main benefits

Energy Efficiency

Maximizes energy efficiency up to 30%, reduces carbon footprint and complies with LEED & ISO 50001 certification requirements.



Multi-site Analysis

Monitors and analyzes multiple passenger stations simultaneously with insights to benchmark station performance and take action to improve critical rail facilities.



Reliability

Maximizes reliability and avoids downtime thanks to 24/7 real time monitoring, smart analytics, predictive maintenance and instantaneous alerts.



Flexibility

Modular, scalable solutions that can be applied to both greenfield and brownfield installations.



Integrable

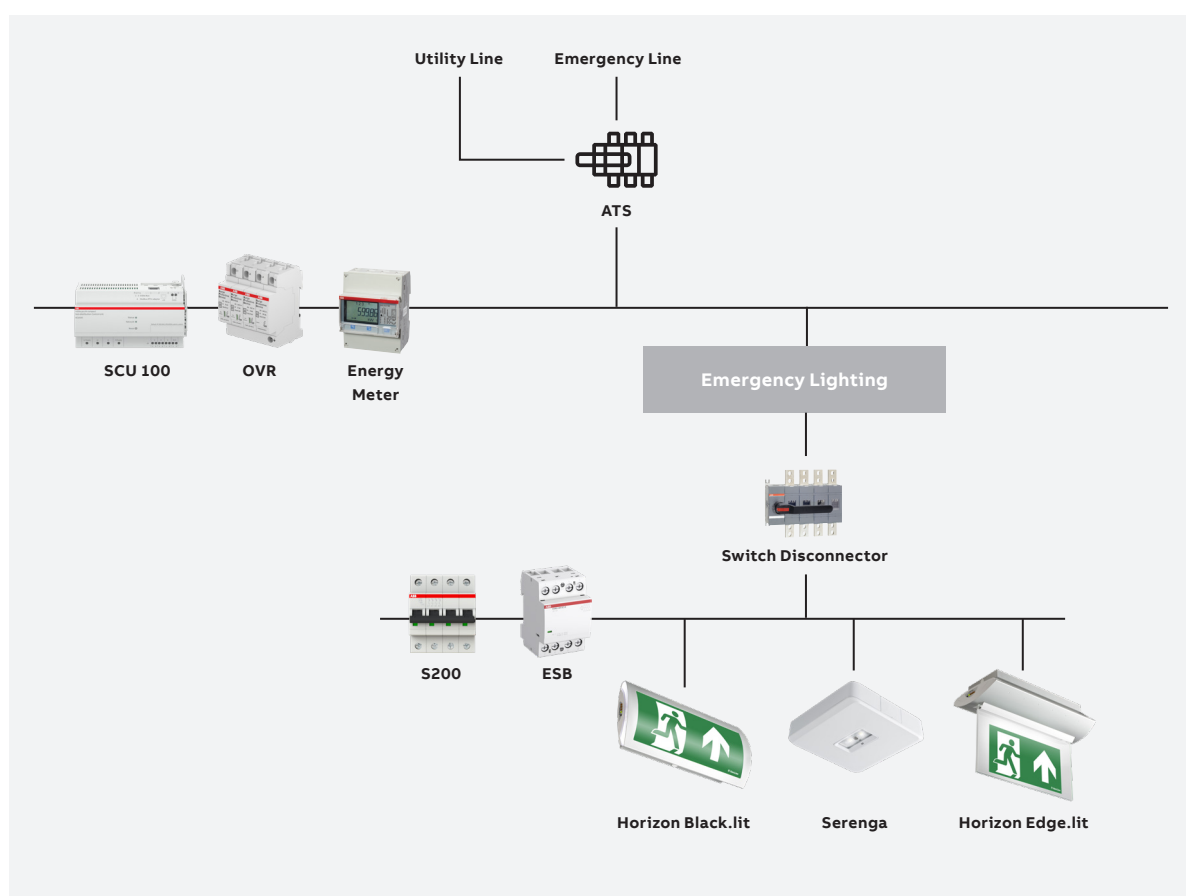
Ready for complex integration, also when several systems are involved; BMS, SCADA or facility management with 3rd party integration.



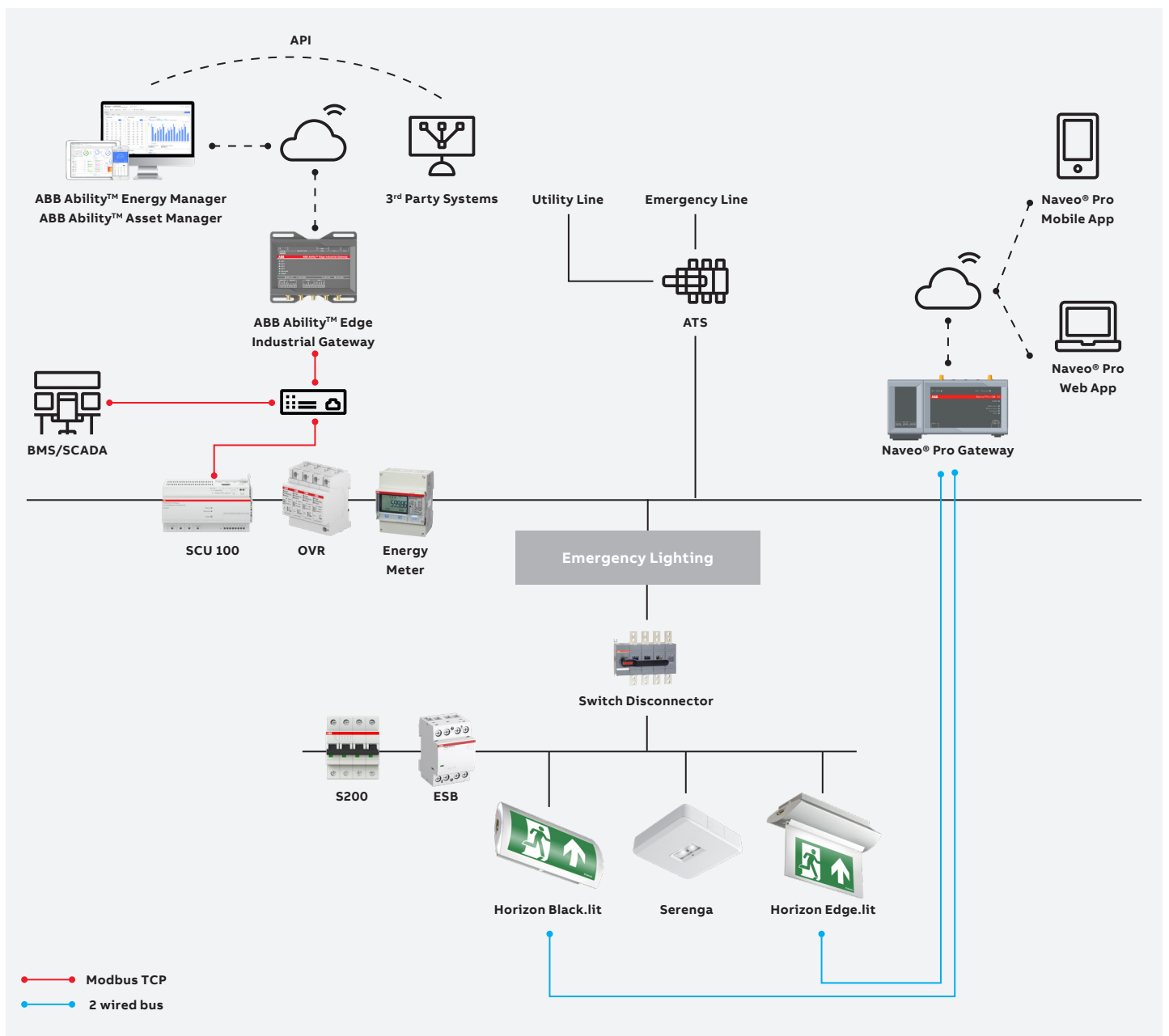
Emergency Lighting

Emergency lighting is crucial for safety in every passenger station. It provides automatic lighting in evacuation scenarios created by abnormal conditions such as fire outbreaks or the absence of main power. ABB offers reliable solutions for escape route lighting, escape route safety signs, anti-panic lighting and high-risk area lighting. System pro M Compact® InSite enables the status of the emergency lighting panel and energy consumption

to be monitored and shares the data with ABB Ability™ Energy Manager & ABB Ability™ Asset Manager, BMS or SCADA. You can not only monitor but also control your emergency lighting directly with the Naveo®Pro mobile application or web interface. The single-line diagram, communication architecture and main components of a typical emergency lighting system are illustrated in the example below.



Note : Maintained emergency lighting system.



Main Components



[System Pro M Compact® InSite](#)



[S200 Miniature Circuit Breaker](#)



[ABB Energy Meter](#)



[Naveo®Pro](#)



[Horizon Emergency Lighting](#)



[Serenga2 Emergency Lighting](#)



[ABB Ability™ Edge Industrial Gateway](#)



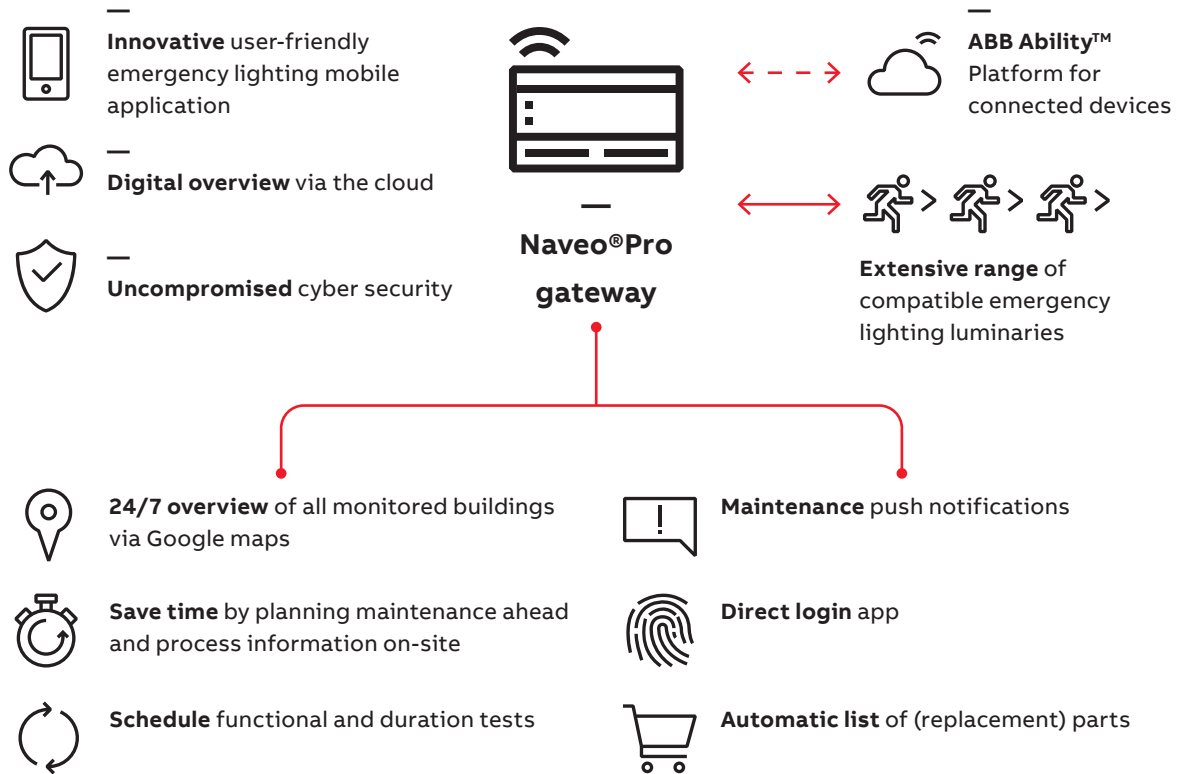
[ABB Ability™ Energy Manager](#)



[ABB Ability™ Asset Manager](#)

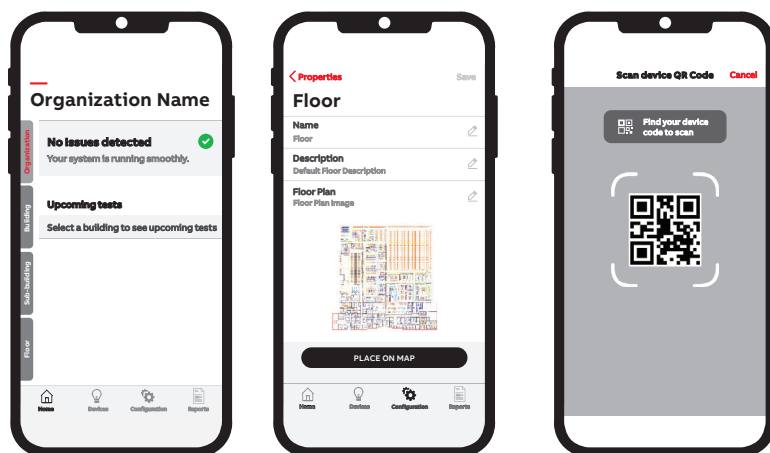
Naveo®Pro

Control your emergency lighting system



The Naveo®Pro smart monitoring system provides a digital overview via the cloud, giving instant information to assist resource planning and enhance building safety. This information can be processed directly using a mobile device, tablet or PC.

It gives a 24/7 overview of all monitored buildings via Google maps, status alerts, an automatic list of emergency lighting luminaires, documentation for increased availability and building safety, and enables data-driven planning for inspection, maintenance and installation.



[Naveo®Pro - the smart emergency lighting solution - YouTube](#)



[Naveo®Pro app overview - YouTube](#)

Main Components



[ABB MyLearning](#)

(Commissioning and configuration of a Naveo®Pro gateway and addressable emergency lighting luminaires)

Bill of materials

Considered Parameters	
Standard	IEC
Monitoring System	ABB Ability™ Energy Manager, In addition to Naveo®Pro.
Communication Protocol	Modbus TCP
Measuring Points	3 connected device, with 18 current sensors (for 18x1P MCBs)
Emergency Luminaires Connectivity	Direct communication between the luminaries and Naveo®Pro gateway via 2 wired bus.
Network switch	Ethernet 8 Ports Switch requires 110 - 240V AC power supply
IoT Gateway	ABB Ability™ Edge industrial gateway requires power supply with nominal input 12 or 24 V DC and maximum current 2 A (15 W maximum consumption)

Product	Part Number	Quantity	Description
System Pro M Compact® InSite	2CDS251001R0164	18	Outgoings distributed equally for each phase
	2CCG000242R0001	1	SCU100 Sub-distribution Control Unit
	2CCG000243R0001	2	INS105 Flat Cable 5 m
	2CCG000244R0001	1	INS135 Connector set (35pcs)
	2CCG000245R0001	4	DM11 Digital Input Module
	2CCA880221R0001	18	CMS-121CA Current Sensor (10-40 A)
OVR QuickSafe®	2CTB803873R5600	2	Surge Protection Device SPD Class II
Energy Meter	2CMA105931R1000	1	ABB Energy Meter Silver B23 312-500
Horizon Back-Lit	CTOH3L261	56	LED Exit Sign
	XEN2H	5	Arrow Down Legend
	XEN30HS	15	Arrow Left Legend
	XEN60HS	15	Arrow Right Legend
	XEN50HS	21	Arrow Up Legend
Horizon Edge-lit	CTOZD3LS61	35	LED Exit Sign
	XEN20HS	5	Arrow Down Legend
	XEN3H	5	Arrow Left Legend
	XEN6H	5	Arrow Right Legend
	XEN5H	20	Arrow Up Legend
Serenga2	CTSR2-DEA-M3	10	Emergency Escape Route (Recessed)
	CTSR2-SEM3-BC1	15	Emergency Escape Route (Surface Mount)
	CTSR2-DSB-M3	10	Emergency Spot Light (Recessed)
	CTSR2-DAD-M3	10	Anti Panic (Light Recessed)
	CTSR2-SAM3-EF1	10	Anti Panic Light (Surface Mount)
Naveo®Pro	51000040	1	Naveo®Pro Gateway
	758740	1	Naveo®Pro Gateway Mounting Plate
	51000047	1	Naveo®Pro Wireless BT + Ipad 4G
	-	1	Web App (Naveo®Pro - Login (abb.com))
	-	1	Mobile App (App Store / Google Play)
ABB Ability™	1SDA116751R1	1	Edge Industrial Gateway (Cloud view)
	2CDG120082R0011	1	8 Ports Fast Ethernet Switch
	ABB Ability Marketplace™	1	Energy Manager (Watching Edition - 5 Devices - 1 Year)

Note : [ABB Ability Marketplace™](#) one-stop online portal for ABB Ability™ solutions subscriptions and services

APPLICATION FINDER

We've made it simpler for you to set up your project!
Click here to find the reference architecture that best fits your needs and download the Bill of Materials.







Product offering



System Pro M Compact® InSite:





WEB PAGE

CATALOG


S200 MCB:





WEB PAGE

CATALOG



Energy Meter:




WEB PAGE

Naveo®Pro:




WEB PAGE

BROCHURE


Horizon:




WEB PAGE

CATALOG

Serenga 2:





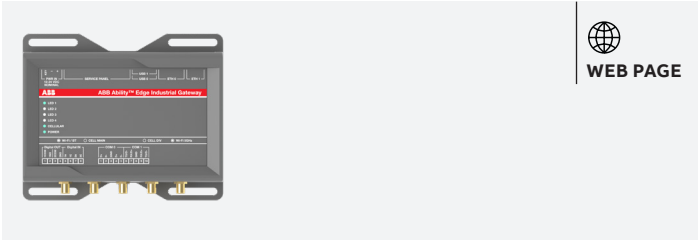
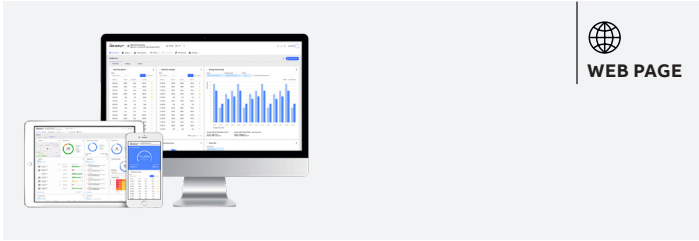

WEB PAGE

CATALOG

ABB Ability™ Edge Industrial Gateway:



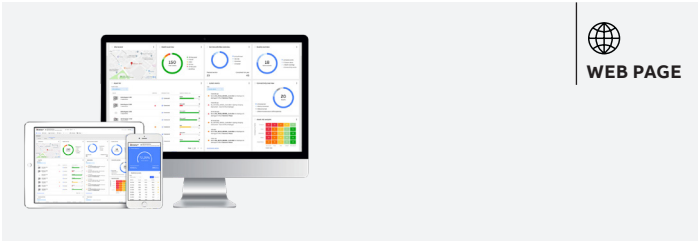
 WEB PAGE

ABB Ability™ Energy Manager:



 WEB PAGE

ABB Ability™ Asset Manager:



 WEB PAGE

To discover more

APPLICATION FINDER



Find the reference architecture tailored to your needs and speed up your project thanks to our new Application Finder Tool!



CONTACT US



Do you have a similar project and are you searching for the right Application configuration? Contact us and talk to our experts!



RATE US



Your opinion matters! Let us know if you found the document useful and how can we improve!



ABB S.p.A.
Electrification Business Area
Smart Power Division
5, Via Pescaria
I-24123 Bergamo - Italy
Phone: +39 035 395.111

new.abb.com/low-voltage

We reserve the right to make technical changes and modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB AG declines all and every liability for potential errors or possible lack of information in this document.

We reserve all rights to this document and to the subject matter and illustrations contained therein. All reproduction, disclosure to third parties or utilization of these contents – in whole or in part – is forbidden without the prior written consent of ABB AG. Copyright© 2023 ABB
All rights reserved