

Intelligent Distribution for Fire Fighting Pumps 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

In passenger stations, which are used daily by large groups of people, fire safety is crucial. Therefore, the stations are typically equipped with fire alarm and fire fighting systems. A critical part of the fire fighting system is the motor control center (MCC) for the fire and jockey pumps, monitoring the MCC can maximize safety and reliability. ABB intelligent distribution application is the way to ensure safe smooth rail operations, maximize energy efficiency, reliability and security.

Main benefits

Energy Efficiency

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



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

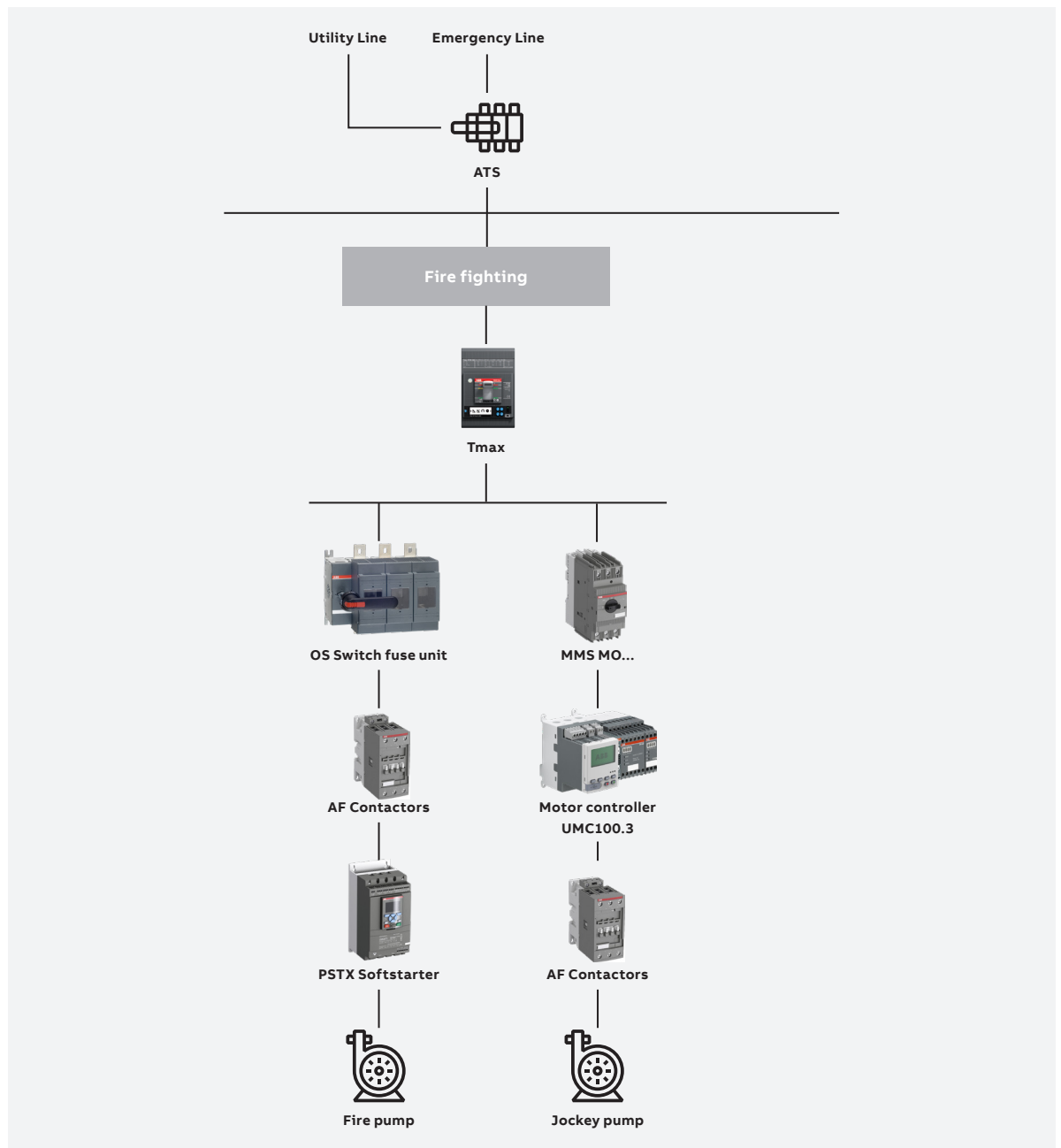
Ready for complex integration, also when several systems are involved; BMS, SCADA or facility management with 3rd party integration.



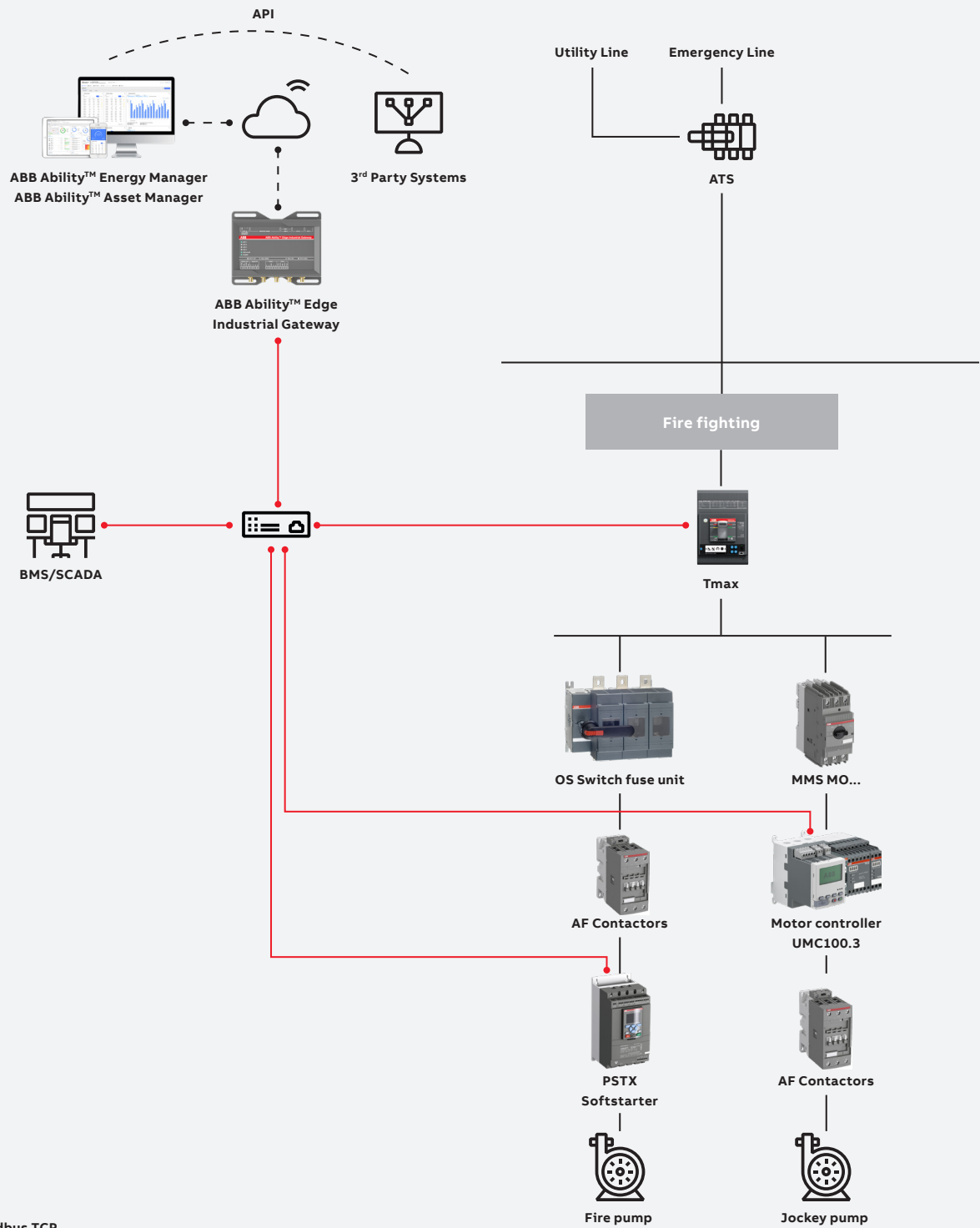
Fire Fighting Pump

Fire safety is crucial in passenger stations, which are used daily by large groups of people. So much so, the stations are typically equipped with fire alarms and fire fighting systems. The motor control center (MCC) for the fire and jockey pumps is a critical part of a

fire-fighting system, thus monitoring the MCC can maximize safety and reliability. The digital architecture can be connected to ABB Ability™ Energy Manager & ABB Ability™ Asset Manager, BMS, SCADA or 3rd party systems via API.



Note: Installation of a manual DOL bypass (with contactor and overload relay) for the fire and jockey pumps is recommended to provide support in the case of maintenance.



Main Components



[PSTX Soft Starter](#)



[UMC100.3 Motor Controller](#)



[Manual Motor Starter](#)



[ABB Ability™ Edge Industrial Gateway](#)



[ABB Ability™ Energy Manager](#)



[ABB Ability™ Asset Manager](#)



Bill of materials

Considered Parameters	
Standard	IEC
Monitoring System	ABB Ability™ Energy Manager,
Communication Protocol	Modbus TCP
Measuring Points	4 connected devices
Pumps	1 Fire pump 45 KW (Soft starting) 1 Jockey pump 8 KW (Direct Online Starting)
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
Tmax XT MCCB 4P 160 A	1SDA068168R1	1	Incoming breaker (XT2N 160 Breaking part)
	1SDA100157R1	1	Ekip Touch Measuring LSIG
	1SDA105177R1	1	Ekip Com Modbus TCP
OS Switch Fuse	1SCA115399R1001	1	Switch Fuse-Front Operated-Direct mounted handle
AF Contactors	1SBL397001R1300	1	Control voltage range (100-250 V 50/60 Hz and DC)
PSTX Soft Starter	1SFA898107R7000	1	For the fire fighting pump (Connects to BMS/SCADA)
	1SFA899300R1008	1	Modbus TCP communication module
Manual Motor Starter	1SAM350000R1014	1	Manual Motor Starter
UMC100.3 Motor Controller	1SAJ530000R1100	1	For the jockey pump - Uses a 110...240 V AC/DC (Connects to BMS/SCADA/ABB Ability)
	1SAJ260000R0100	1	Modbus TCP communication module
AF Contactors	1SBL277001R1300	1	Control voltage range (100-250 V 50/60 Hz and DC)
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.
It's recommended to install a manual DOL bypass (with contactor and overload relay) for the fire and jockey pumps, this is to support in case of maintenance.
For Tmax XT MCCB with communication modules, it should be supplied by means of a galvanically isolated 24V DC auxiliary voltage with the following characteristics (tolerance ±10% , maximum wave ±5%, maximum surge current 10A for 5ms and maximum rated power 4W @24V).


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.



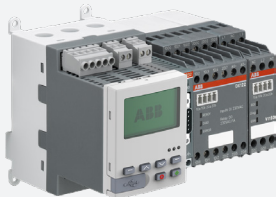
Product offering



PSTX:





WEB PAGE

CATALOG

UMC100.3:




WEB PAGE

CATALOG

Manual Motor Starter:





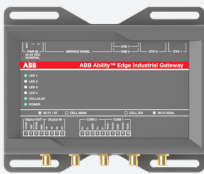

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CATALOG

ABB Ability™ Edge Industrial Gateway:






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ABB Ability™ Energy Manager:







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ABB Ability™ Asset Manager:




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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!



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