

Intelligent Distribution for Dewatering 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

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.



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

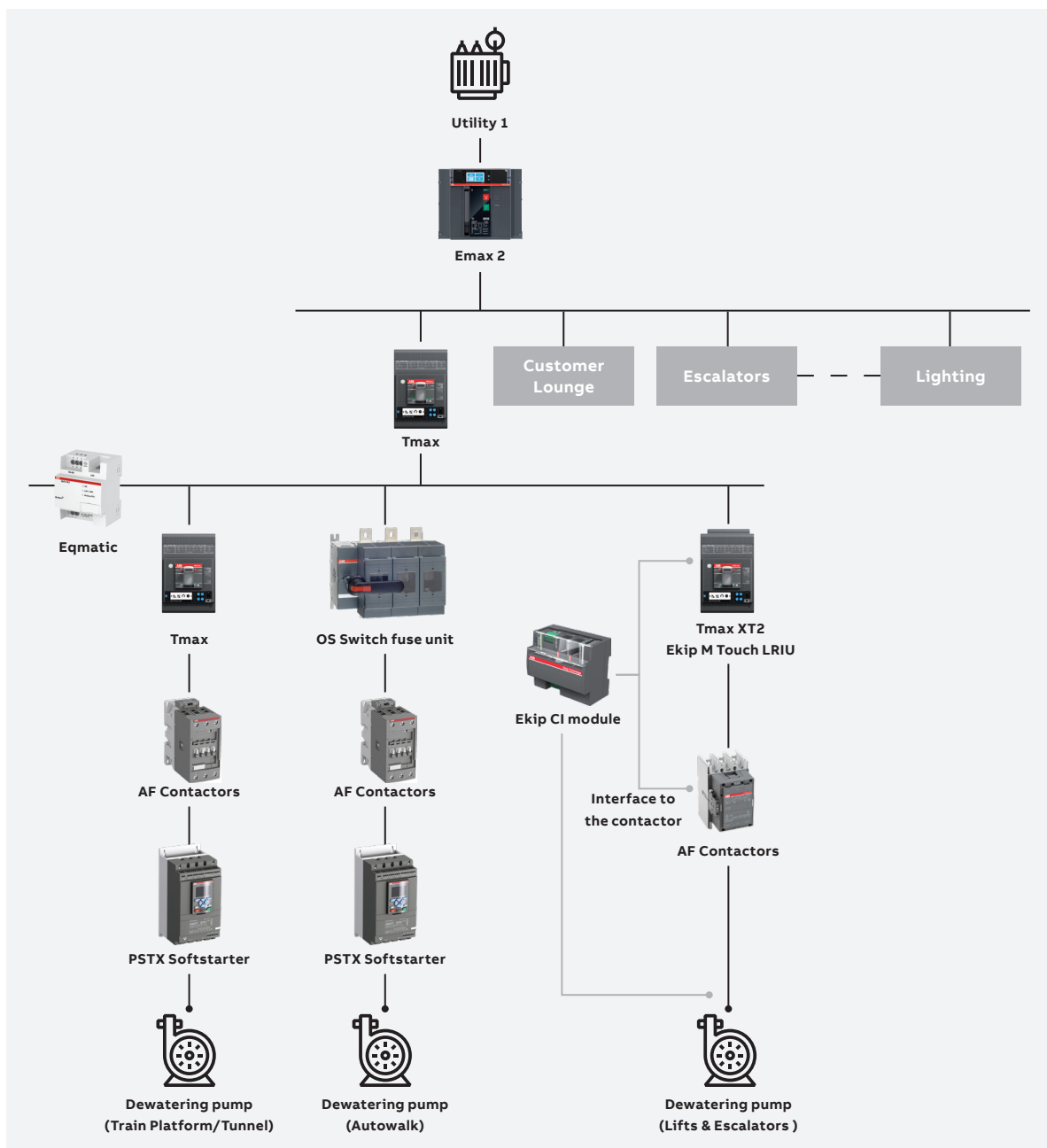
Ready for complex integration, also when several systems are involved; BMS, SCADA or facility management with 3rd party integration.

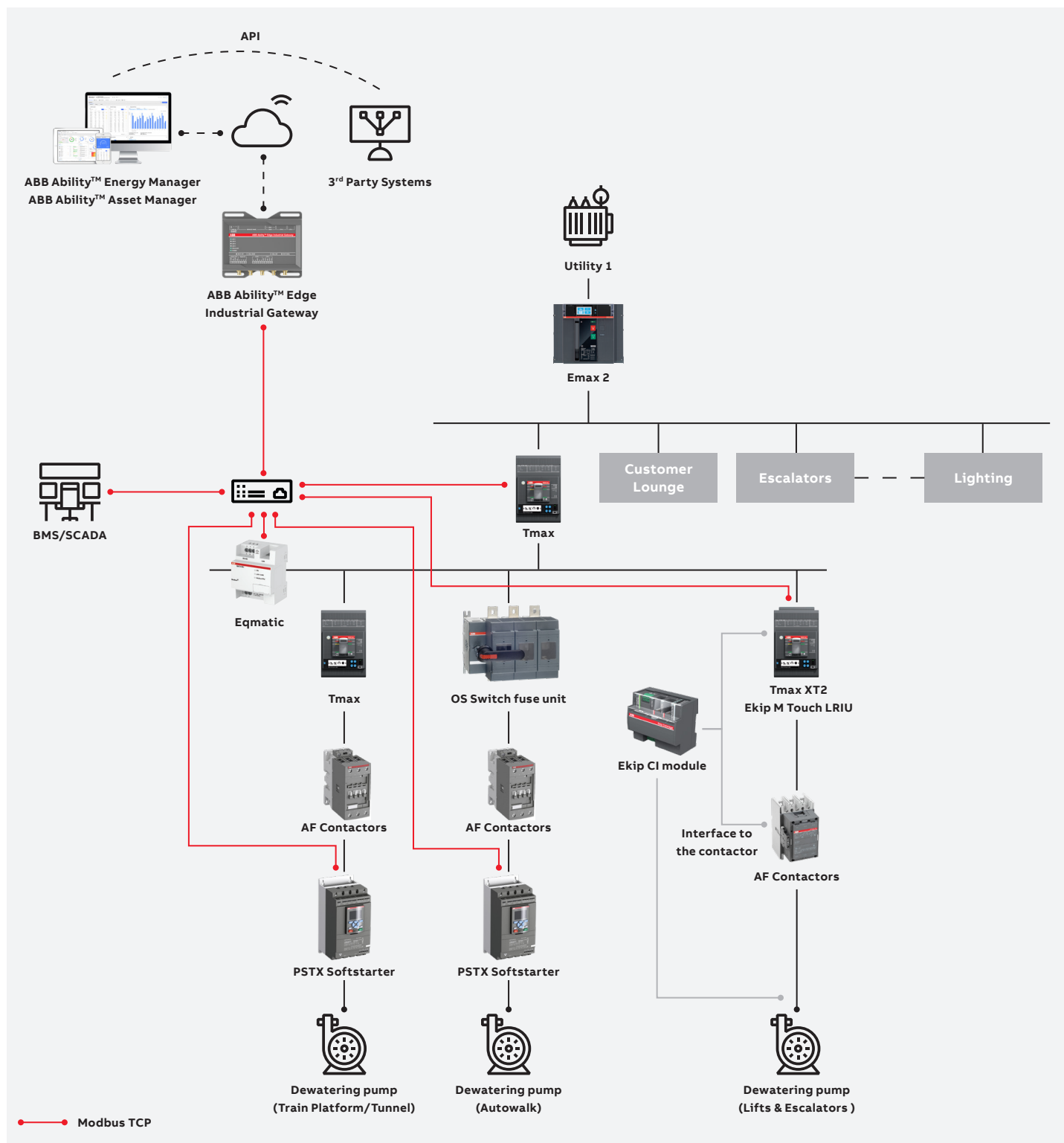


Dewatering Pump

Typically, passenger stations also require dewatering pumps to prevent flooding and allow water to be rapidly pumped from platforms, tunnels, escalators or elevators following leaks or heavy rain.

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





Main Components



[PSTX Soft Starter](#)



[AF Contactors](#)



[Manual Operated Switch Fuses](#)



[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	13 connected devices
Pumps	2 Dewatering Autowalk Pump 11 KW (Soft Starting) 1 Dewatering Platform Pump 75 KW (Soft Starting) 2 Dewatering Lifts/Escalators Pump 11 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 250 A	1SDA068178R1	1	Incoming breaker (XT4N 250 Breaking part)
	1SDA100329R1	1	Ekip Touch Measuring
	1SDA105177R1	1	Ekip Com Modbus TCP
OS Switch Fuse 32 A	1SCA115189R1001	2	Switch Fuse-Front Operated-Direct mounted handle
AF Contactors	1SBL277001R1300	2	AF30 Control voltage range (100-250 V 50/60 Hz and DC)
PSTX Soft Starter	1SFA898103R7000	2	For the autowalk dewatering pump (Connects to BMS/SCADA)
	1SFA899300R1008	2	Modbus TCP communication module
Tmax XT MCCB 3P 125 A	1SDA066808R1	1	For the platform dewatering pump (no monitoring)
AF Contactors	1SFL487002R1311	1	AF190 Control voltage range (100-250 V 50/60 Hz and DC)
PSTX Soft Starter	1SFA898111R7000	1	For the platform dewatering pump (Connects to BMS/SCADA)
	1SFA899300R1008	1	Modbus TCP communication module
Tmax XT MCCB 3P 25 A	1SDA068163R1	2	For escalators/lifts dewatering pump (XT2N Breaking part)
	1SDA067352R1	2	Ekip M-LIU In=25A
	1SDA105205R1	2	Ekip CI
	1SDA105177R1	2	Ekip Com Modbus TCP
AF Contactors	1SBL277001R1300	2	AF30 Control voltage range (100-250 V 50/60 Hz and DC)
EQmatic Energy Analyzer	2CDG110228R0011	1	For 5 water meters 3 rd party
ABB Ability™	1SDA116751R1	1	Edge Industrial Gateway (Cloud view)
	2CDG120082R0011	2	8 Ports Fast Ethernet Switch
	ABB Ability Marketplace™	1	Energy Manager (Watching Edition - 5 Devices - 1 Year)
		5	1 Extra Device For ABB Ability
		1	Multi-utility metering add on (1 Year subscription)

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




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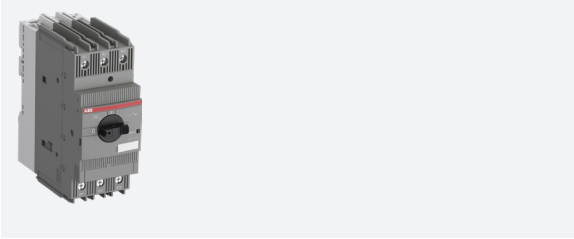
AF Contactors:




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Manual Motor Starter:







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ABB Ability™ Edge Industrial Gateway:




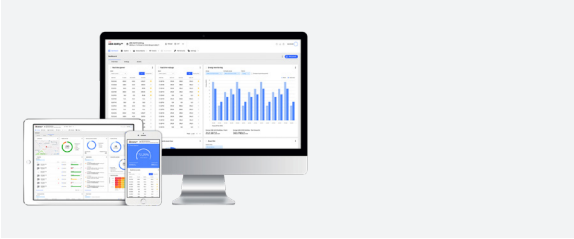

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ABB Ability™ Energy Manager:




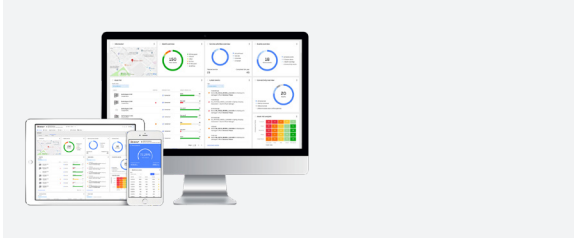


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ABB Ability™ Asset Manager:




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



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