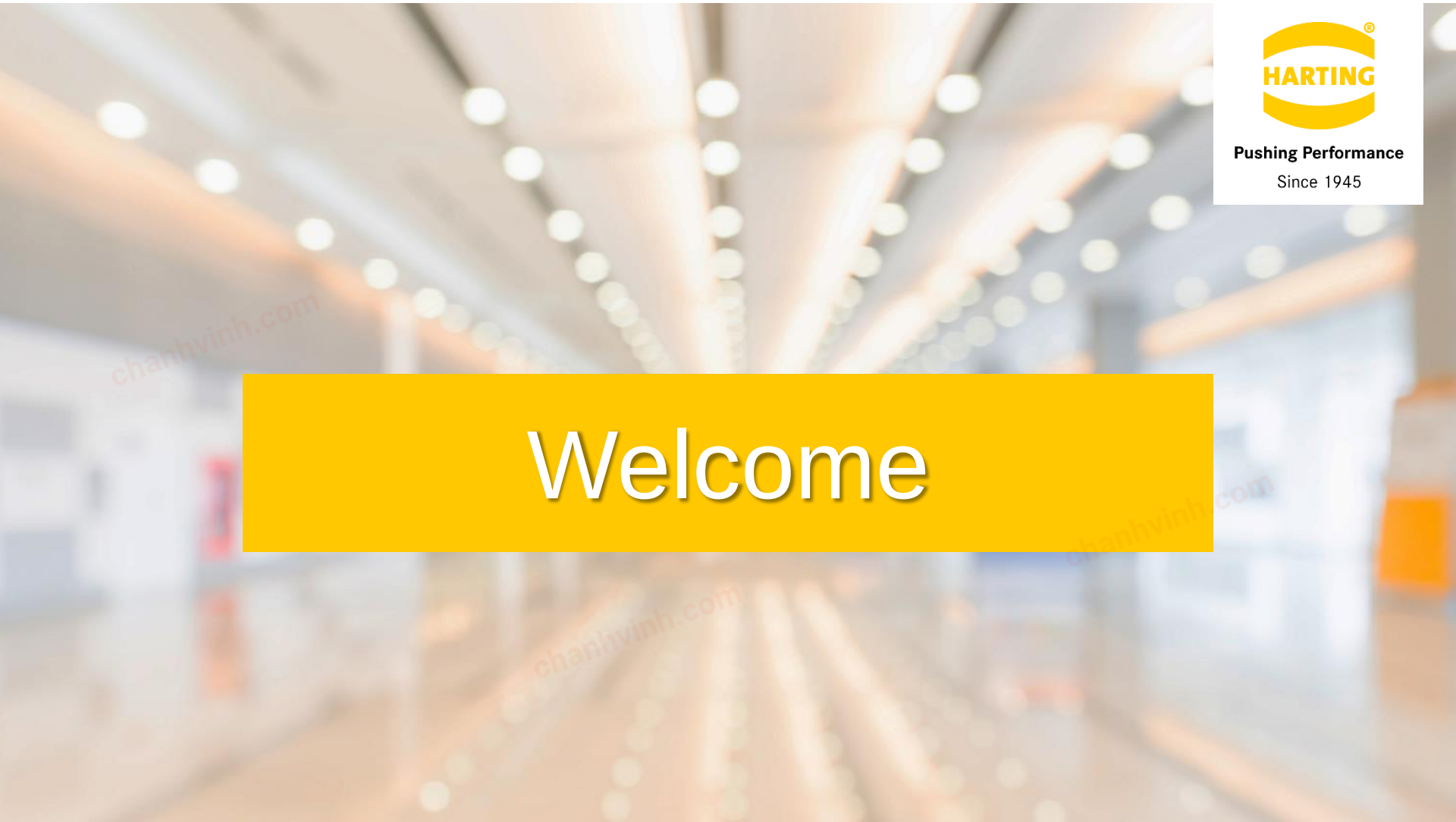
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Pushing Performance
Since 1945



Han® Protect

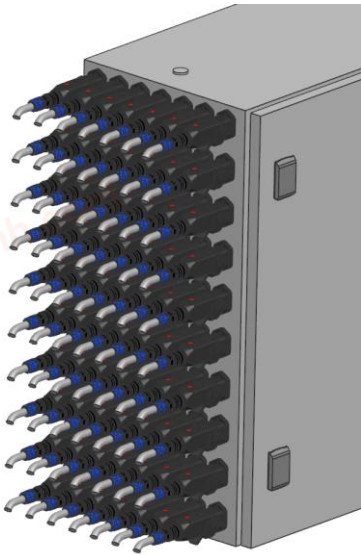
Fused Connector

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Han® Protect



- adapts M12 A-coded 5 pin connector
- Visual indication of blown fuses outside of cabinet
- Holds one 5x20mm standard fuse
- toolless fuse removal
- replace fused terminal block in PLC cabinets
- connected to outside of PLC cabinet



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Reasons For Fusing





best choice:
Fuse

- **high switching capacity**
- **cheap**
- **small**





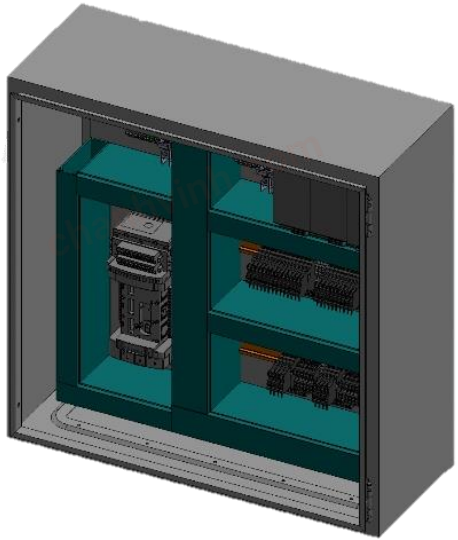
best choice:
Circuit Breaker

- **precise**
- **no replacement necessary**
- **constant performance over aging**

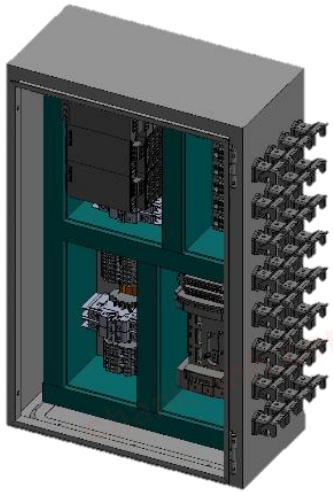
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Space Saving

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reduce cabinet size by up to 30%



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Time Saving In Troubleshooting

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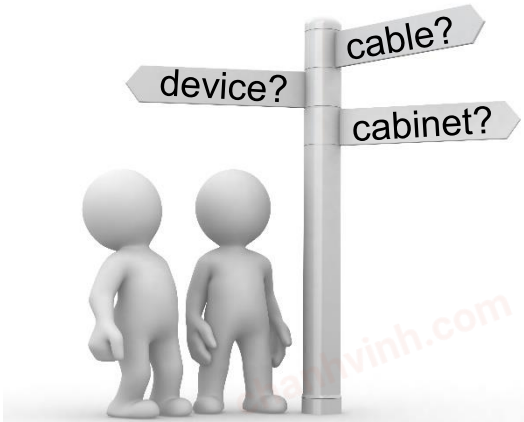
With Han® Protect



1 worker replacing the broken fuse

1 minute

Without Han® Protect



2 electricians searching for the point of failure

2*times 12 minutes = 24 minutes

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Customer Benefits

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Han® Protect…

- saves space
- is a Plug & Play solution
- simplifies troubleshooting
- reduces TOTEX



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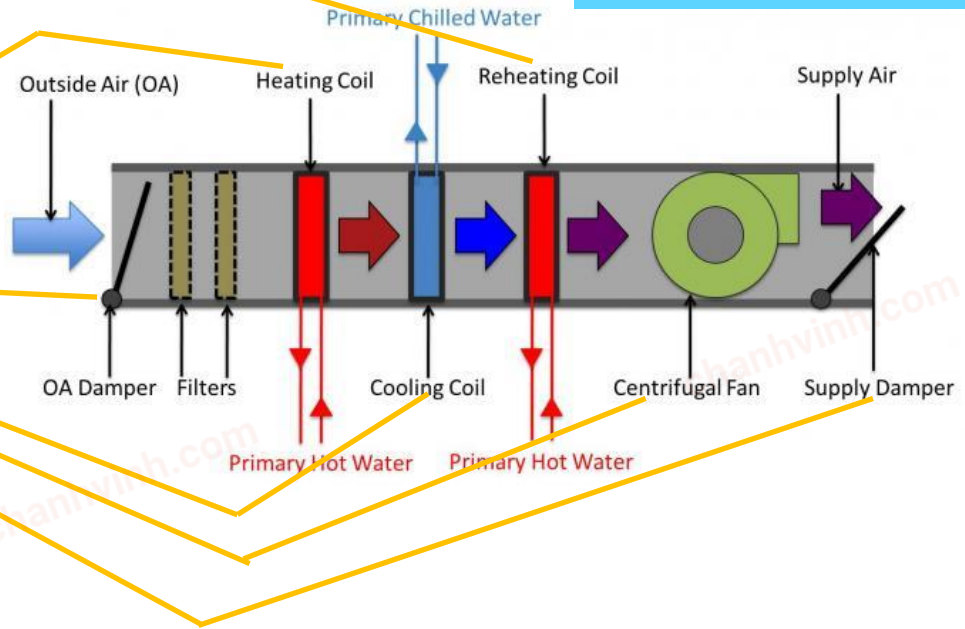
Example: HVAC Application

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BMS PLC cabinet

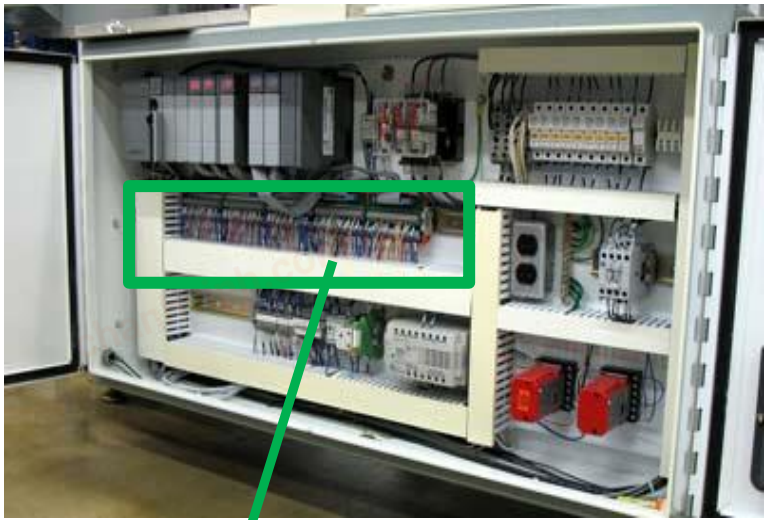


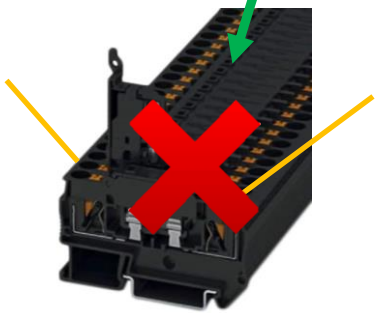
Air Handling Unit



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Old Solution





Control Cabinet Fusing

Green box is **fused terminal blocks**, which protects PLC from bad circuits

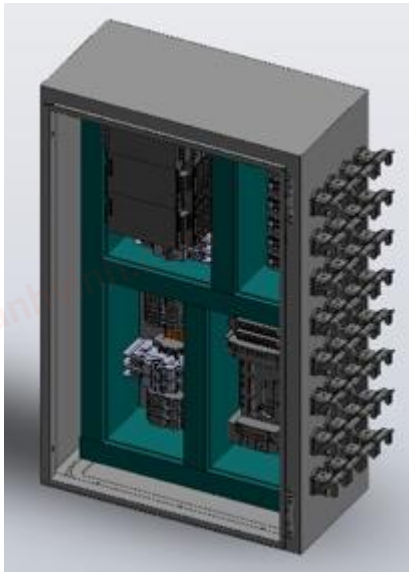
Fused terminal blocks are **expensive**

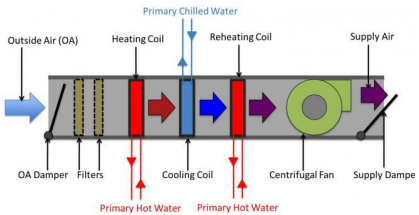
Fused terminal blocks take up a **lot of room** in the cabinet

What if we could remove the fused terminal blocks?

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New Solution







Main Benefits

- **eliminate expensive** fuse terminal blocks
- **standardize** cabinets – “plug and play”
- **reduce cabinet size**
- **Eliminate** wiring **errors**
- Speed to service – **visible** from outside the cabinet
- fuse for **replacement** can be stocked on-site

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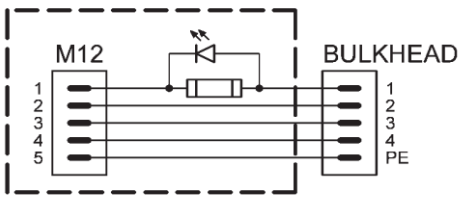


Technical Characteristics

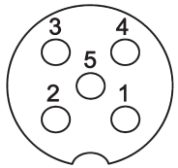
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three variants to fuse line 1, 2 or 4

	Han® Protect 3A M12 4/1 Fused	Han® Protect 3A M12 4/2 Fused	Han® Protect 3A M12 4/4 Fused
Fused line	1 brown	2 white	4 black
Coupler			
Part number	10 81 007 1141	10 81 007 1142	10 81 007 1144
Bulkhead Mounted Housing (HBM)			
Part number	10 81 007 0301	10 81 007 0302	10 81 007 0304
Contacts	4 + PE	4 + PE	4 + PE
Rated current / Rated voltage	4 A / 24 V	4 A / 24 V	4 A / 24 V
Termination	M12 A-Coded	M12 A-Coded	M12 A-Coded
Fuse holder size	5 x 20 mm	5 x 20 mm	5 x 20 mm
Cable length	0.76 m	0.76 m	0.76 m



wiring of fused line 1



contact face acc. to IEC 61076-2-101

- shock and vibration: **Cat. 1B** (acc. to IEC 61373)
- IP protection: **IP54** (acc. to IEC 60529)
- limiting temperature: **-25°C…+70°C**
- mating cycles: **≥100**
- Rating: **4A/24V** (acc. to IEC 61984)
- UL rating: **1A/24V** (acc. to UL2238)
  (general use only; 4A pending)

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Where Should We Look At?

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Everywhere there's control!

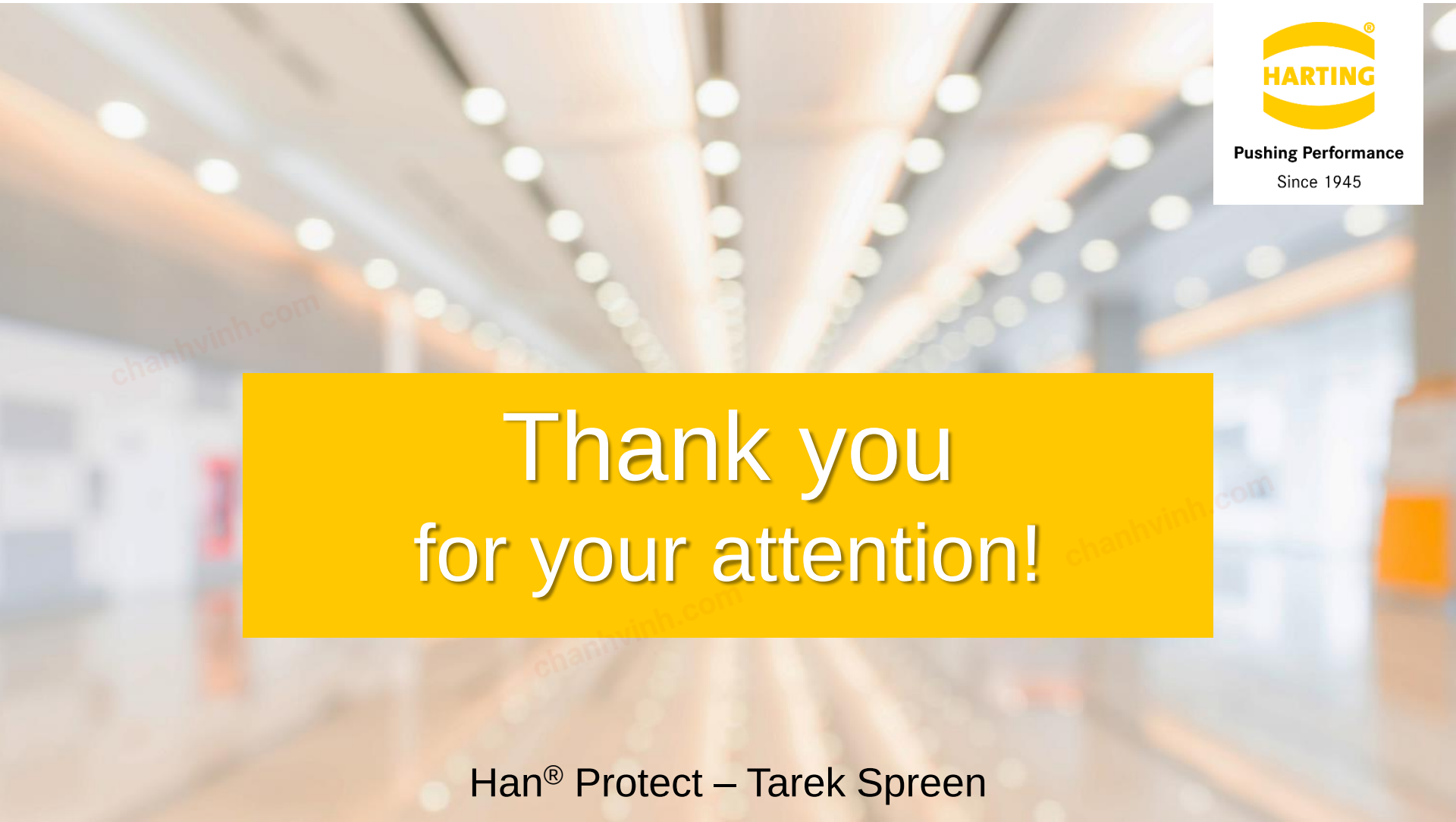
- **Robotics**
- **Automation**
- **Building Automation**
- **ILCS**

➢ All of these applications require control cabinets

➢ All control cabinets require short-circuit protection

- ✓ **I/O signals**
- ✓ **up to 5 wires per device**
- ✓ **use of fuses preferred**
- ✓ **Voltage up to 24V**
- ✓ **Current up to 4A**

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Thank you
for your attention!

Han® Protect – Tarek Spreen