

SmartWire-DT Panel Wiring Solutions

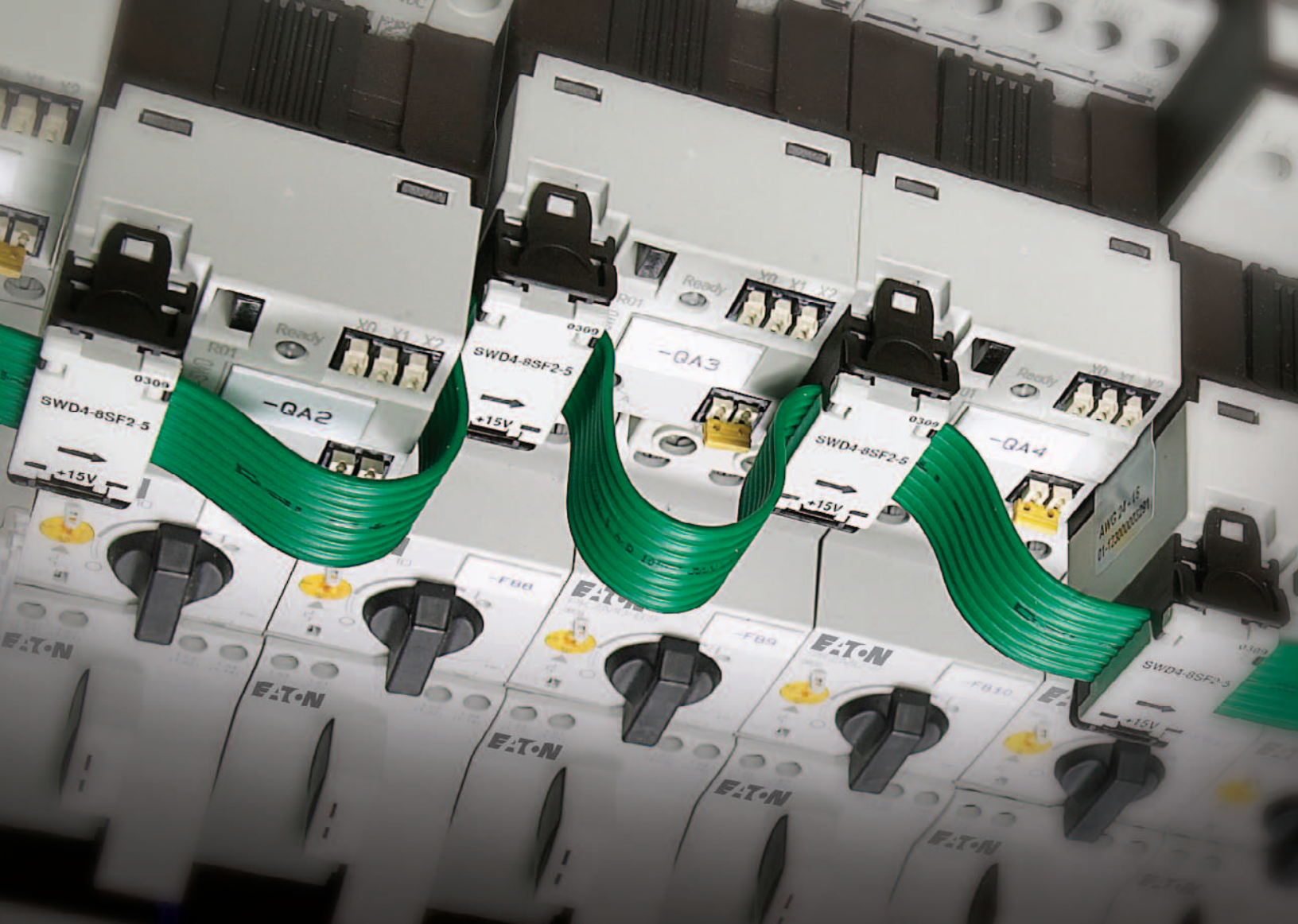
Revolutionizing  
control wiring



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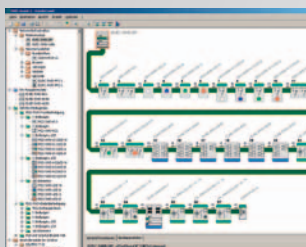


# SmartWire-DT Changing the way panels are wired.

## Reduce cost throughout the value chain.

SmartWire-DT™ reduces wiring time and effort, which in turn reduces costs. From design through construction to commissioning and system expansion, SmartWire-DT creates value at every step. SmartWire-DT works with third-party PLC controllers and industry-standard networks to connect motor starters and pilot devices without conventional point-to-point wiring.

## Efficient planning and engineering



## Fault-free mounting and wiring



# Improve productivity. Increase profitability.

SmartWire-DT helps you to optimize the functionality and cost of your control panels with a wiring solution that revolutionizes the way you build panels.

SmartWire-DT reduces panel complexity by replacing traditional control wiring with a single, durable cable. It's a unique, cost-effective panel wiring solution that simplifies device installation, connects to standard networks and streamlines commissioning.



**Faster quality control checking and commissioning**



**More reliable operation**



**Easier maintenance with built-in diagnostics**



**Faster and simpler system expansion**



# SmartWire-DT. Stop wiring. Start connecting.

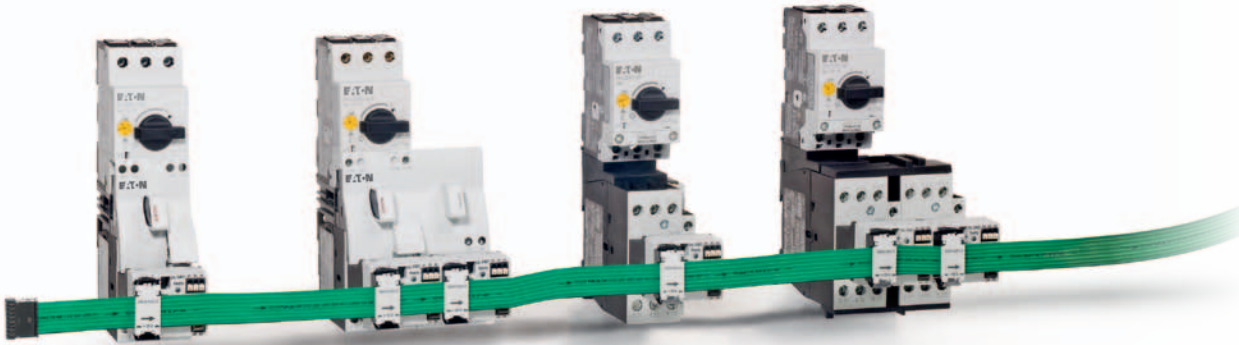
Your gateway to standardized control.

Gateways are the start of the SmartWire-DT network and connect as nodes to Ethernet/IP, Modbus® TCP, PROFIBUS®-DP and CANopen networks.



Your line to easy installation.

Up to 99 devices can be connected to a SmartWire-DT gateway, up to a maximum length of 2,000 feet.



Your connection to savings.

SmartWire-DT means simplified connectivity—the flat green cable connects pilot devices with just a click.



### The flat cable

Flexible, durable, and 600V rated, the eight-conductor flat cable is the “central nervous system” that connects devices on the SmartWire-DT network.



### The device plug

The device plug employs insulated displacement connections to connect to the flat cable—eliminating conventional wire stripping and debris.



### The flat plug

Flat plugs “dress” the ends of the flat cable for connection to the gateway or terminating resistor. They can also be used with the coupling accessory to splice or split the flat cable between the panel and door mounted devices.



### Input/Output modules

Digital and analog I/O modules allow you to connect a host of other devices to the SmartWire-DT network.



### XT contactor modules

SmartWire-DT contactor modules fit and lock into the top of standard **XT** contactors with two prongs that directly connect to the coil terminals. The PKE-SWD-32 contactor module includes connection to the electronic XTPE MMPs for monitoring motor current data on the SmartWire-DT network.



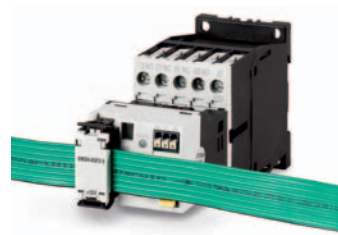
### Across-the-line and reversing starters

Connect non-reversing and reversing starters up to 20 hp at 480V (25 hp at 600V). Contactor coils are powered directly from the 24 Vdc carried on the flat cable. Electrical and mechanical interlocking of the contactors is still possible.



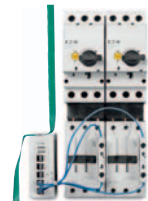
### Contactors and relays

In addition to **XT** frame B and C contactors, SmartWire-DT modules can be used with XTRE control relays as interposing relays for larger motor loads—up to 1200 hp at 460V.



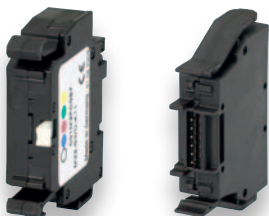
### Control of AC voltage loads

If 120 Vac control voltage is required for contactor coils, they can still be integrated into the SmartWire-DT network using the input/output modules. Using the digital inputs of the modules, the contactor switch position and/or the switch position of the motor-protective circuit-breaker can also be monitored.



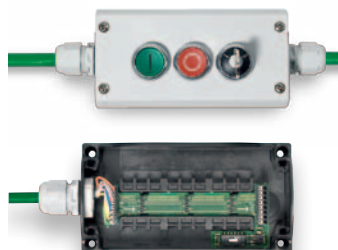
### M22 pilot device modules

M22 pilot device modules are available in front mount for door mounted devices and base mount for use in control stations.



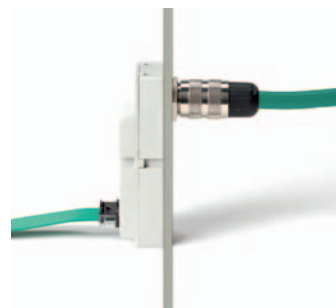
### Pushbutton control stations

M22 control stations are available in 1, 2, 3, 4, and 6 elements making remote controls easy to connect back to the main control panel using the round cable and quick disconnect IP67 connectors.



### Control panel to peripherals

Cabinet cable adapter sockets and plugs interconnect the flat cable to the round cable when fitted with IP67 connector plugs or sockets—allowing for quick connection to external control stations.



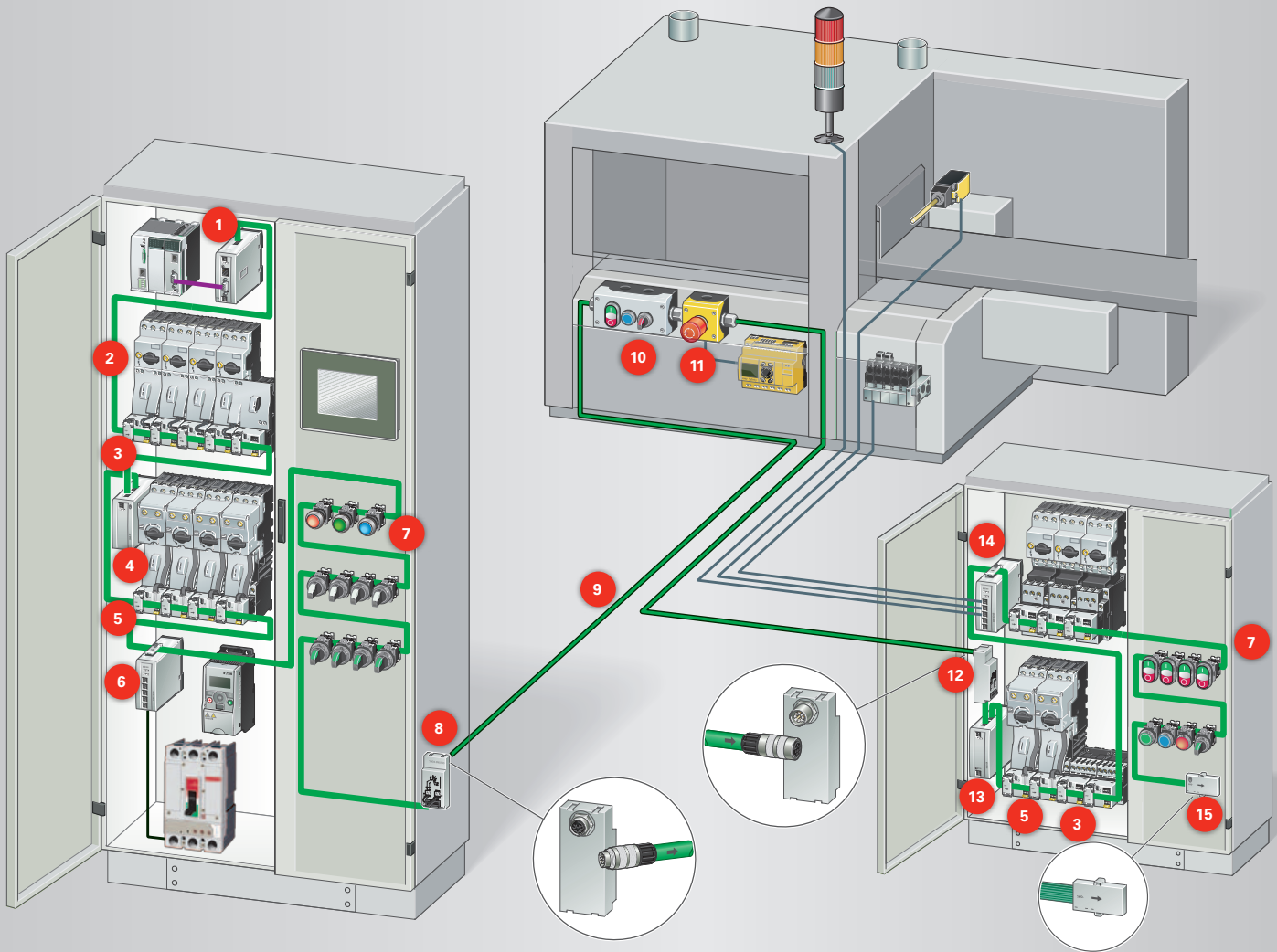
### Emergency-stops

Emergency-stop switches can be connected and monitored on the SmartWire-DT network but need to be hard-wired to disconnect the 24 Vdc control power to conform with EN 954-1 Safety Category 1 or Safety Category 3 requirements.



# SmartWire-DT changes everything.

- Connects to third-party PLCs with fieldbus polling masters or I/O scanner cards
- Connects to devices inside and outside the main control panel
- Supports a 2,000 foot long network and up to 99 nodes per gateway
- 600V rated flat cable can be mixed with power conductors in the panel wiring duct
- Mechanically designed to fit on high density layouts of combination motor controllers on the panel, or door-mounted pilot devices
- Connects directly to motor loads up to 20 hp at 480V (25 hp at 600V)
- Includes 24 Vdc control voltage for direct connection and power to contactor coils
- Easy startup, commissioning, and troubleshooting



- |                                                                       |                                                                                  |                                                                   |
|-----------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1. Gateway to PLC fieldbus network                                    | 5. Modules for <b>XT</b> contactors with XTPE electronic manual motor protectors | 11. Emergency stop control station                                |
| 2. Flat cable                                                         | 6. Digital I/O module                                                            | 12. Cabinet cable adapter plug                                    |
| 3. Modules for <b>XT</b> contactors with XTPR manual motor protectors | 7. Modules for M22 pilot devices                                                 | 13. Power feed module 2 (optional 15 Vdc and 24 Vdc power feeder) |
| 4. Power feed module 1 (optional 24 Vdc power feeder)                 | 8. Cabinet cable adapter socket                                                  | 14. Digital I/O module (for connection of sensors and actuators)  |
|                                                                       | 9. Round cable                                                                   | 15. Terminating resistor                                          |
|                                                                       | 10. Pilot device control station                                                 |                                                                   |

# Optimize your control panel operations.

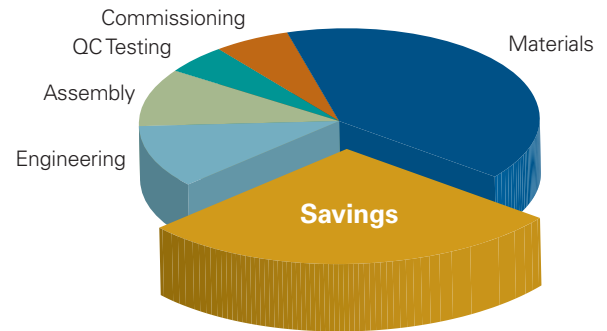
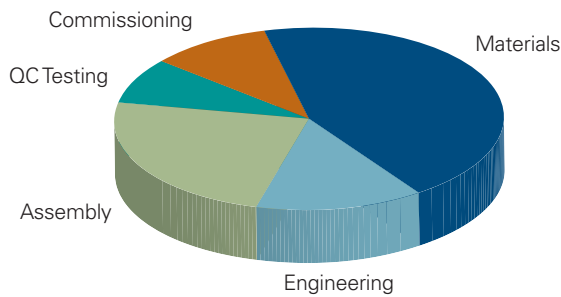
- Reduce engineering design time
- Reduce labor assembly time
- Reduce quality assurance checking time
- Reduce commissioning time



Conventional Control Panel

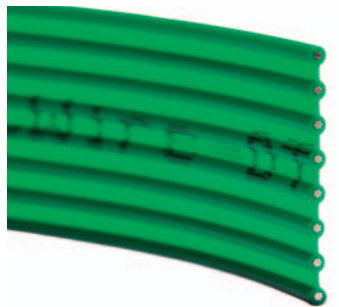


SmartWire-DT Control Panel



Results shown are for typical control panels using PLC controls with 100 I/O points. To see if SmartWire-DT is a fit for your applications, please check the SmartWire-DT product application guide and value calculator at [www.Eaton.com/SmartWireDT](http://www.Eaton.com/SmartWireDT).

## SmartWire-DT.



<b>+24 Vdc</b>	Contactor control voltage
<b>Earth</b>	Contactor control voltage
<b>GND</b>	Ground for device supply voltage and data
<b>Data B</b>	
<b>Data A</b>	
<b>GND</b>	Ground for device supply voltage and data
<b>SEL</b>	Node selector line
<b>+15 Vdc</b>	Device supply voltage

<b>Network Type</b>	RS485
<b>Network Protocol</b>	SmartWire-DT
<b>Maximum Number of Nodes</b>	99 with CANopen or Ethernet; 58 with PROFIBUS-DP
<b>Types of Nodes</b>	Contactors, control relays, pushbuttons, pilot devices, selector switches, input/out modules
<b>Maximum Length</b>	2,000 feet (600 m)
<b>Maximum Current</b>	2A
<b>Voltage of Network</b>	15 Vdc
<b>Addressing</b>	Automatically assigned
<b>Approvals</b>	UL®, CE, CSA®

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Our focus is on delivering the right solution for the application. But, decision makers demand more than just innovative products. They turn to Eaton for an unwavering commitment to personal support that makes customer success a top priority. For more information, **visit [www.eaton.com/electrical](http://www.eaton.com/electrical)**.

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