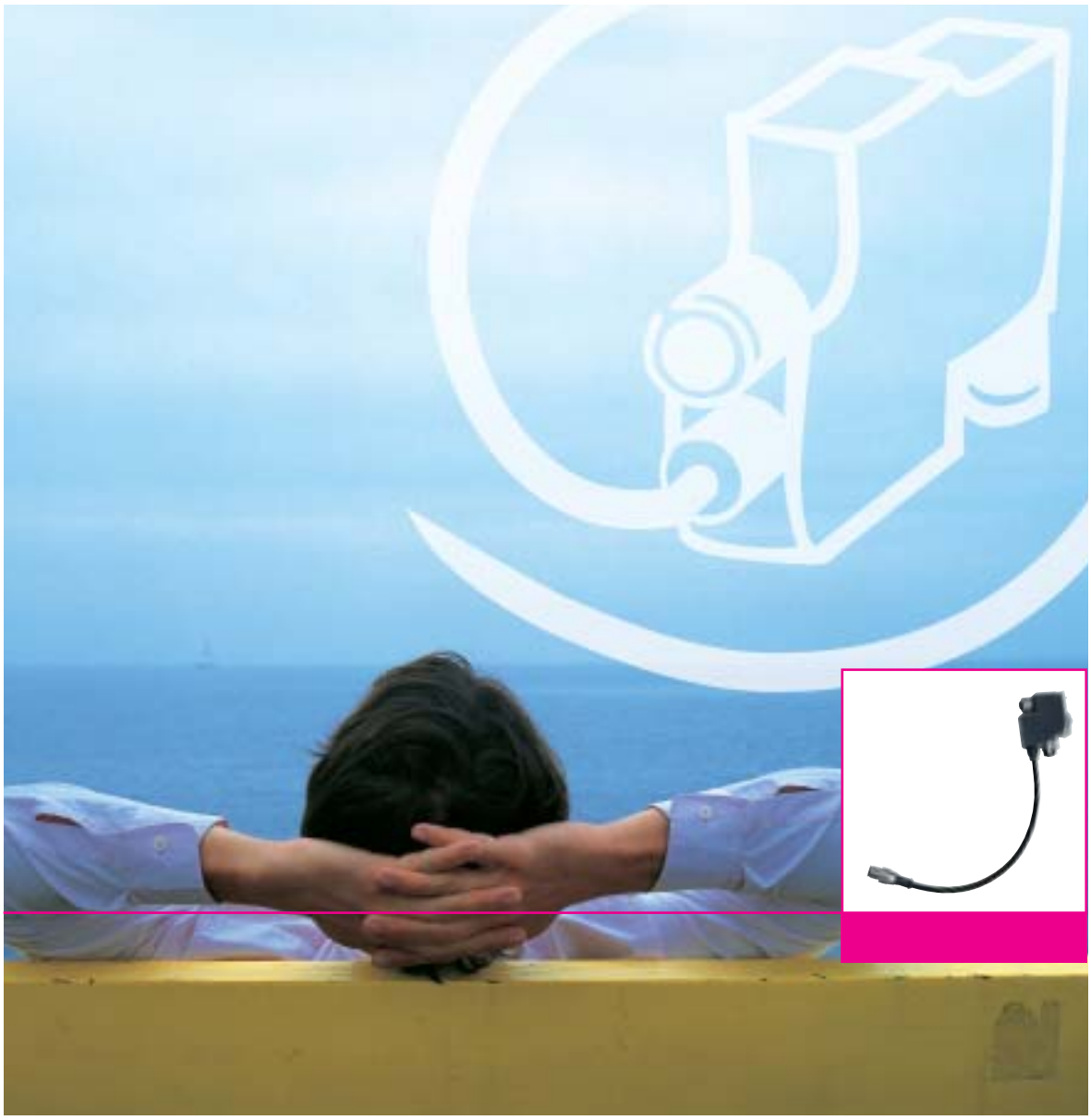
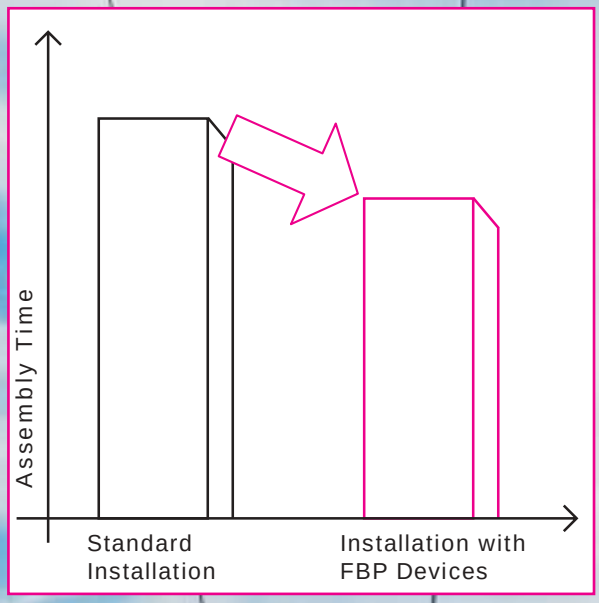
Simple handling of control gear and automation components

The convenient FieldBusPlug product system

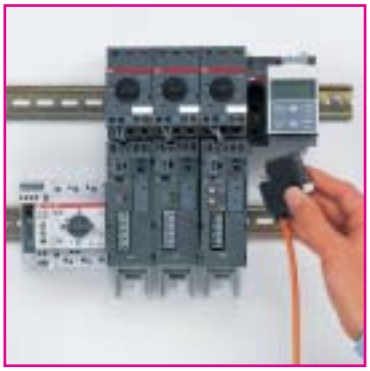


Building on the tried and tested



Decentralised automation structures with their known advantages have firmly established themselves in the machinery manufacturing and in the production industry of today. Does it really end at decentralised I/O devices?
A further more important step leading to a reduction in the processing time and costs will soon follow: The trend today is moving away from the classical switching technology devices towards function modules with substantially extended abilities. These are fitted with communication interfaces for connection to a field bus system which also considerably minimises the conventional wiring costs. Due to the wide range of simplifications with respect to the handling of these devices, the number of networkable function modules in the control cabinet and in the field will increase rapidly.

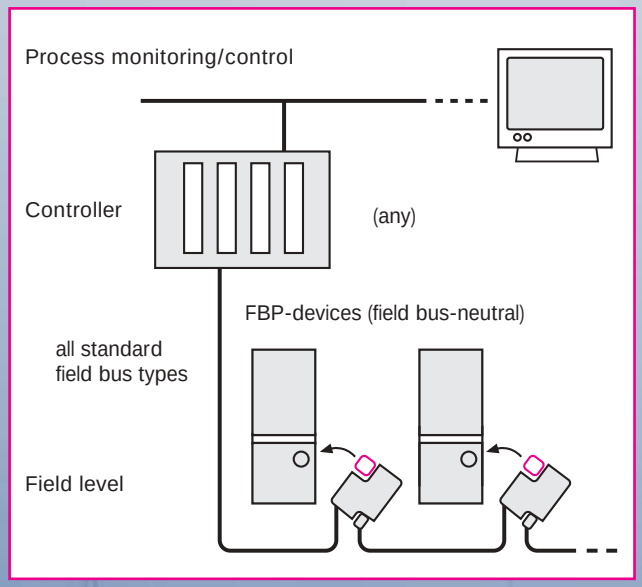
Recognising need for action



Due to the many different bus systems in use, the number of modules capable of communication of the same function is inevitably rising. These often only differ in being fitted with different field buses for communication.
This is where a new solution approach by ABB starts.

Continue simplifying

ABB provides an innovative device range of control gear and automation components based on a new type of field bus plug system, the FieldBusPlug.
This product range simply and cost-effectively connects switching devices to any field buses with common automation systems (PLC).
Field bus-specific cables make the connection to the respective field bus. In the basic version, these consist of a neutral plug, a cable and a plug with a field-specific interface. The switching devices are bus-neutral, i.e. they can be connected simply via the plug (FieldBusPlug) irrespective of the selected field bus type.



Installation principle

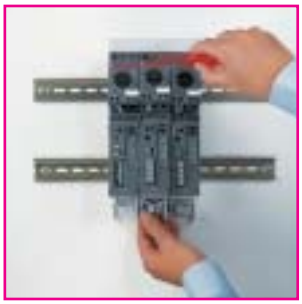
The convenient open concept...

This system represent a real step forwards with respect to its performance and handling and assembly advantages. Protecting, switching and controlling as well as recording and exchanging data are enabled by the new installation concept using the FieldBusPlug – irrespective of the field bus type used and are therefore capable of changes at the last second.

Connection to the bus by plug connection

The low number of variants makes allocation easier and reduces the time required for the planning through to the completed installation. Even complex processes can be simply and reliably controlled because the most important motor programs, for example, are already integrated and can be modified quickly in devices for motor circuits, depending on the module type.

.... with advantages for many installation applications

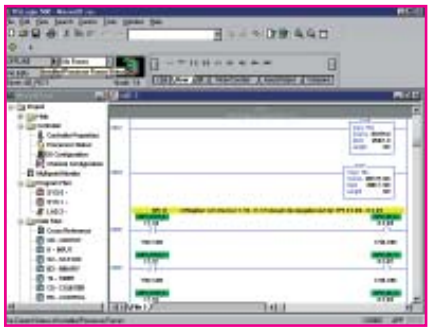


Device change without detaching the comb-shaped bar

The FBP system clearly facilitates manufacturers and operators of machines and systems. At all stages of the project: from project planning and assembly through to commissioning and operation. And another advantage: the plug installation also allows gradual integration into already existing systems, with less planning and scheduling time and complete cost control.

An overview of the advantages:

> Reduced project planning time required for system
> Reduced assembly and commissioning times
> Reduced wiring costs
> Faults avoided due to prefabricated devices and plug technology.
> Higher system availability due to preventive diagnostic functions and shorter service times
> Less installation space required
> Increased flexibility in the installation



Simple engineering through functional modules

These factors therefore lead to a higher product quality. It has never before been so achievable.

Systematic problem solutions

The FBP system brings a completely new momentum into the concept of machines and systems. Everything fits together perfectly here: practical modules, modern connection technology for communication via the bus and easy programming of the functions, even with integrated diagnosis if required. That is the ease of operation required by practical users.

Product range on the basis of motor circuits

Universal Motor Controller UMC22-FBP

Size	70 x 90 x 80 mm
Assembly	Top-hat section and screw fastening
Power supply	Lead throughs max 25 mm^2
Supply voltage	via bus plug or external connection 24 V DC
Protection class	IP 20
Area of application	adjustable 0.2 .. 63 A (control unit, field bus)
Integrated I/O functions	6 digital inputs, 3 digital relay outputs Integrated control functions Integrated motor control functions (Microcontr.) Direct start, reverse start, star-delta start, actuator, others
Motor protection functions	Setting of the start-up and reversal times via a control panel, fault acknowledgement via control panel or bus, selectable disconnection of the outputs for errors, PLC or bus. Overload monitoring / phase failure
Diagnosis on device	LED: Supply voltage, trip, device failure of phase failure Recognition, counting of switching cycles and data transfer to the automation device (not for AS-i) Optional operation device.

Motorstarter Direct MSD11-FBP

Size	45 x 260 x 110 (135) mm
Assembly	Top-hat section, available with 1 or 2 rails (distance 125 mm), which increases vibration resistance
Optional assembly	Woehner, Rittal rail system adaptor
Power supply	Comb-shaped bar or cable
Control voltage supply	Bus plug or switchable to external
Motor connection	Plug connection at front (plug in accessory package) L1, L2, L3, PE
Protection class	IP 20
Nominal current setting range	11
Area of application	0.1...12 A
Short-circuit strength I_{CS}	10 ... 50 kA
Operating voltage U_e	415 V AC
Control voltage	24 V DC (+30%-20%) via FBP
Diagnosis on device	LED control voltage LED switching position of the contactors LED bus connection

Motorstarter Reverse MSR22-FBP

Size	45 x 260 x 110 (135) mm
Assembly	Top-hat section, available with 1 or 2 rails (distance 125 mm), which increases vibration resistance
Optional assembly	Woehner, Rittal rail system adaptor
Power supply	Comb-shaped bar or cable
Control voltage supply	Bus plug or external connection
Motor connection	Plug connection at front (plug in accessory package) L1, L2, L3, PE
Protection class	IP 20
Nominal current setting range	11
Area of application	0.1...12 A
Short-circuit strength I_{CS}	10 ... 50 kA
Operating voltage U_e	415 V AC
Control voltage	24 V DC (+30%-20%) via FBP
Diagnosis on device	LED control voltage LED switching position of the contactors LED bus connection

Motorstarter Fieldbus Interface MFI21-FBP

Size	36 (90) x 90 x 80 mm
Assembly	Top-hat section or screw fastening
Supply voltage	Bus plug or external connection 24 V DC
Protection class	IP 20
Application type	Mechanical coupling to MS 325 with integrated sensing of the MS 325 position
Integrated I/O functions	1 digital input (mechanical from MS 325) 3 digital inputs 24 V DC 3 digital relay outputs
Integrated control functions	Direct start, reverse start, star-delta start Potentiometer for setting reversal time Selectable disconnection of the outputs in the event of failure of the PLC or field bus
Diagnosis on device	LED control voltage, device errors, bus errors Counting of switching cycles and data transfer to the automation device (not for AS-i)

The future has already started

The FBP device program is being continuously expanded. For example, I/O devices, button combinations and on-site motor starters with protection class IP 65 are in the course of preparation. Standard sensors (PNP, NO) fitted with M12 plugs can be connected directly to the FieldBusPlug by means of inductive or capacitive sensor technology.

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