Telefast Pre-wired system

Modicon ABE7 IP20 connection sub-bases

Modicon ABE9 IP67 passive splitter boxes

Catalog

April 2019

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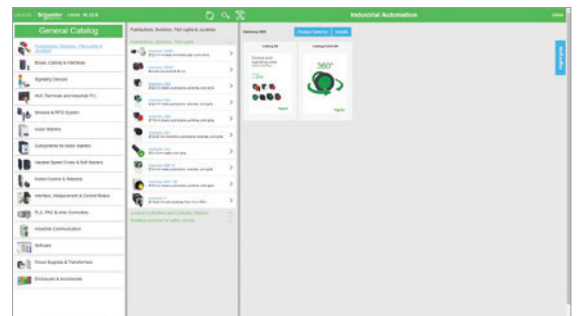
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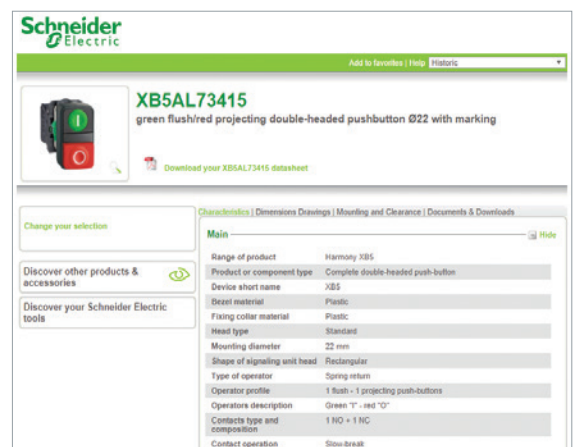
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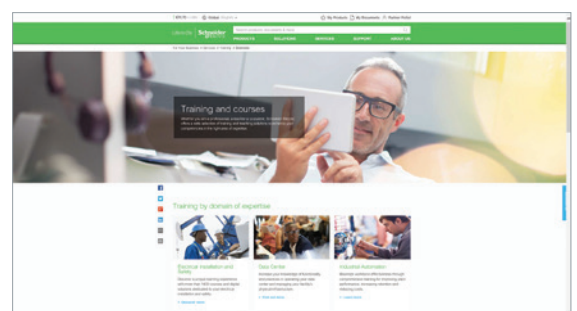> Download Digi-Cat with this link

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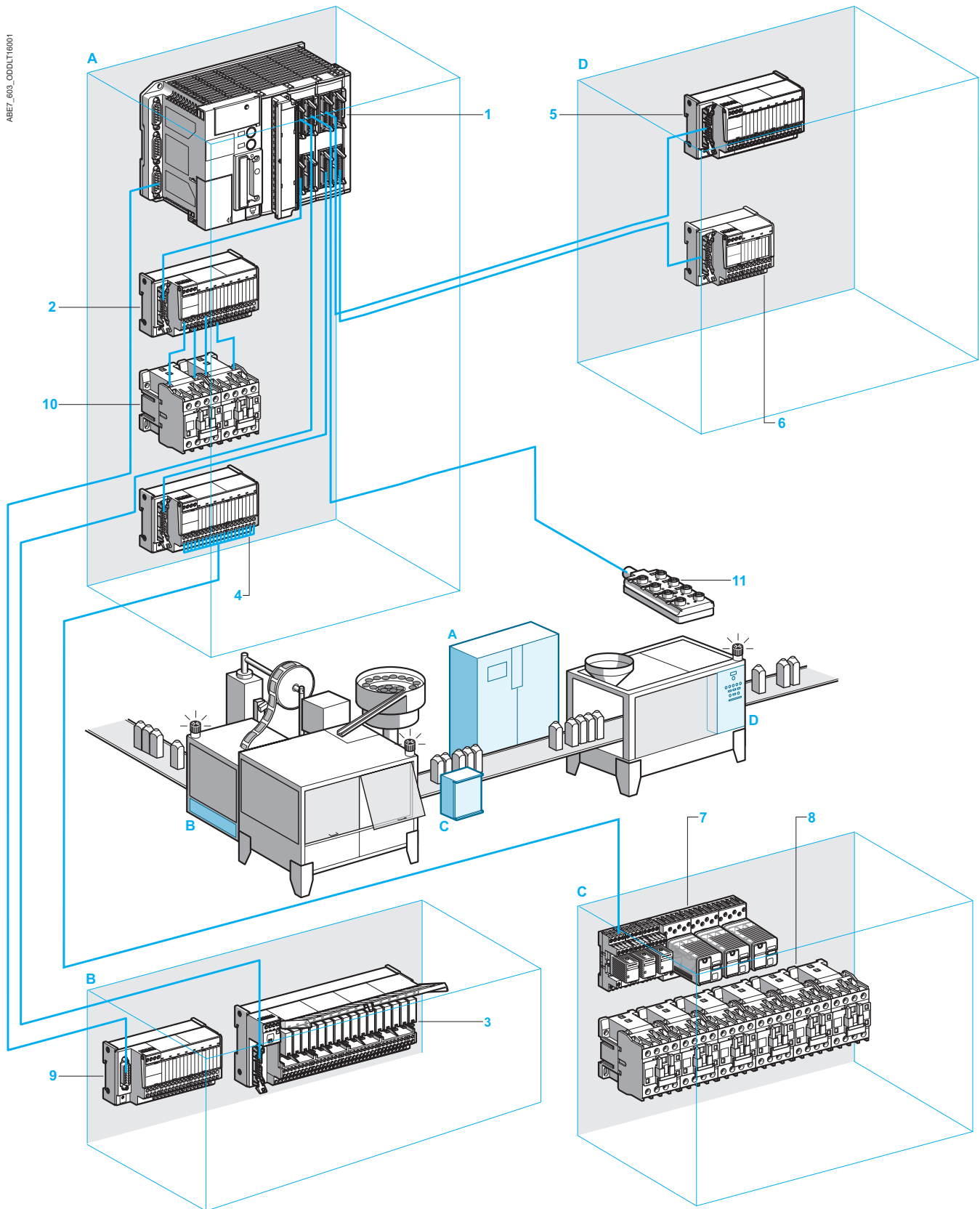
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General content

Telefast Pre-wired System

■ **Modicon ABE7 connection sub-bases for**
> **Modicon M221 Book logic controllers,**
> **Modicon TM3 I/O expansion modules,**
> **Modicon X80 I/O expansion modules,**
> **Modicon Premium automation platforms,**
> **Modicon Quantum automation platforms,**
> **Allen Bradley and Siemens automation platforms,**
> **Modicon TSX Micro Compact/modular PLC**

■ **Modicon ABE7 connection sub-bases for**
> **Twido controllers (modular bases),**
> **Modicon TM2 I/O expansion modules,**
> **Magelis XBTGC HMI controllers,**
> **Modicon STB (Distributed I/O solution)**

■ **Modicon ABE9 IP 67 passive splitter boxes**

■ **Index**

ABE7_603_ODDLT16001

Telefast Pre-wired System
Modicon ABE7 connection sub-bases

General presentation

The Telefast system is a set of products for rapid connection of I/O modules (24 V ⎓ discrete, analog, and counter) to operative parts. It acts as a substitute for screw terminal blocks, remotely locating and partly eliminating the single-wire connection. The Telefast system only connects to channels that have HE 10 and SUB-D connectors or to standard terminal blocks with a cabled connector. It consists of connecting cables and interface sub-bases.
The relay and connection functions, with or without polarity distribution, considerably reduce wiring time and eliminate the risk of error.

Connections between the PLC and the operative part

Connection between the PLC and Telefast sub-bases

Telefast sub-bases connect directly via cables onto all discrete I/O modules equipped with HE 10 connectors **1**.
I/O modules not equipped with HE 10 connectors are connected to Telefast sub-bases by means of a cabled connector, which consists of a cable with conductors (AWG 22/0.34 mm² c.s.a.) connected to the standard terminal block at one end and to the HE 10 connectors at the other. These cabled connectors are available in 1.5 and 3 m *(4.92 and 9.84 ft)* lengths.

Connection between Telefast sub-bases and the operative part

The Telefast range is suitable for several types of connection found in control system devices.

■ **Connection of I/O located in the PLC cabinet A or nearby B**
Some sub-bases **2** enable two wires (signal and common) or three wires (signal, 24 V, 0 V) to be connected directly from sensors or preactuators when these **10** are installed in the same enclosure or very close by. They effectively eliminate all intermediate terminal blocks.
Other versions offer the possibility of adapting the voltage or current via plug-in relay sub-bases **3**, or of connecting analog signals **9**.
In cases where size is of prime importance **D**, fixed relay sub-bases **ABE7R16S111 5** (125 mm *(4.92 in.)* long) and passive sub-bases **ABE7H16R50 6** (84 mm *(3.31 in.)* long) reduce the required surface area by about 50% compared with standard products.

■ **Connection of I/O located outside the PLC cabinet C**
These sub-bases **4** fulfill the same function as traditional terminal blocks and connect connector leads from sensors or preactuators **7, 8**.

■ **IP67 dust and damp-proof connections for enclosures and cabinets**
8-channel versions offer, in addition, the possibility of directly connecting **Modicon ABE9** dust and damp proof splitter boxes (see page 58) **11** for 8 sensors.
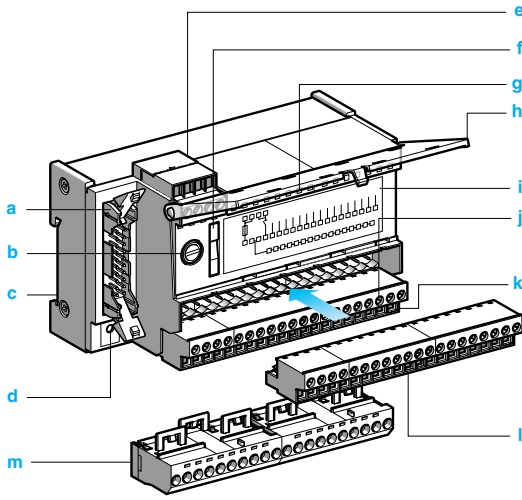
Description of a Telefast® 2 connection sub-base

All connection sub-bases in the Telefast family have a standardized design and offer the common functions described below.
Some of these functions are optional*.

a 20-way HE10 connector
b 24 V $=$ power supply circuit fuse
c DIN rail mounted
d 24 V $=$ display LED
e 24 V $=$ power supply terminal block *(1)*
f Blade type isolator on $=$ 0 V
g Channel indication LED*
h User label-holder/cover
i Wiring diagram
j Test point for ⌀ 2.3 mm *(0.09 in.)* plug
k Upper terminal block *(1)*
l Lower terminal block *(1)*, offset by ½ step*
m Additional snap-on terminal block equipped with 20 screw or spring terminals*

(1) Removable screw or spring type, according to reference, at 5.08 mm (0.2 in.) intervals.

Passive connection sub-bases

Designed to simplify I/O connection to a PLC within a control panel, the range of passive sub-bases has the same functions as traditional terminal blocks to which they add, depending on the models: compact size, connection of proximity sensor commons (3-wire and type 2), LED indication, protected and isolated channels. For high sales volume products, screw or spring connections are available (references ending with E).

Terminal block sub-bases

ABE7H●●R11/R10: These products can be used to connect inputs or outputs. The commons are made on the device and brought into the sub-base by a single wire. The output terminals are on a single row.
The signal state for each channel can be indicated via an LED (**R11**) or not (**R10**).
An ABE7BV20 terminal block can be added.
ABE7H20E●●●: These **economy** products are supplied with a direct connection cable for TSX Micro, Premium, or other PLCs using splitter sub-bases (**H20E**). The cable is available in various lengths. The output terminals are on 2 rows.

Compact sub-bases

ABE7H●●R50: These products fulfill the same functions as the sub-bases above but they are almost half the size.
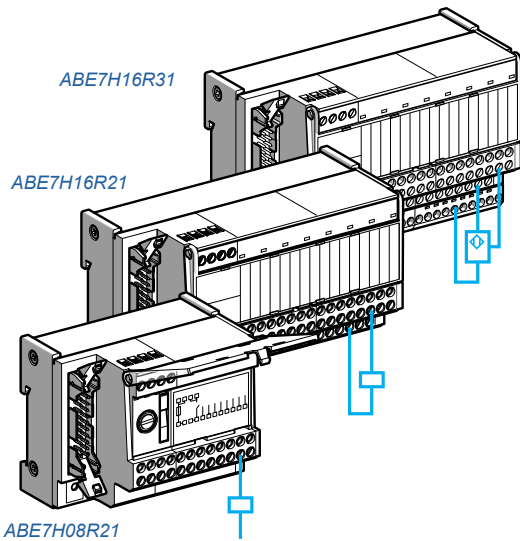The output terminals are on 2 rows.
ABE7H16C1●: These are **miniature** products. The signal state for each channel can be indicated via an LED (**C11**) or not (**C10**). The output terminals are on a single row.
An ABE7BV20 terminal block can be added.

Universal sub-bases

ABE7H●●R21/R20: These sub-bases are used to connect I/O and all the commons. The potential (0 V or 24 V $=$), distributed over the row of screw terminals that allow the commons to be connected, is selected via a jumper. Both wires from the sensor or actuator can be connected to the sub-base. The output terminals are on 2 rows. The signal state for each channel can be indicated via an LED (**R21**) or not (**R20**).
ABE7H16C21/CM21: These are **miniature** products. The signal state for each channel can be indicated via an LED. Reference **CM21** has 2 common connections that allow both the inputs and the outputs to be connected at the same time, with a 0 or 24 V common, depending on the customer's wiring. The output terminals are on 2 rows.

ABE7H16R31

ABE7H16R21

ABE7H08R21

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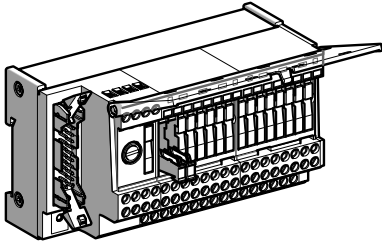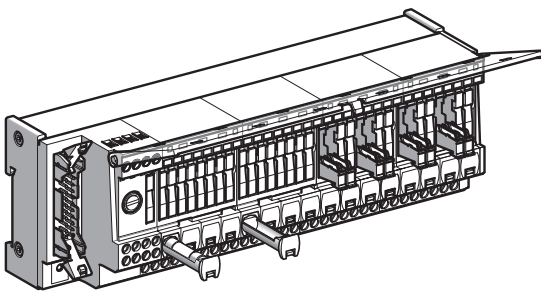
ABE7H16S21

ABE7H16S43
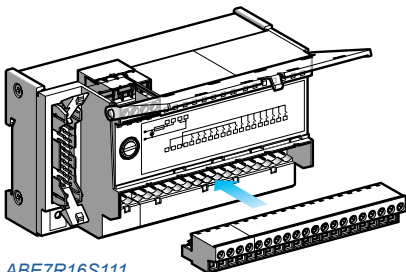
ABE7R16S111

Passive connection sub-bases (continued)

Sub-bases for 2-wire sensors

ABE7H16R23: This product is identical to the ABE7H16R21 sub-bases but, in addition, enables connection of 2-wire type 2 sensors on the TSX Micro and Premium PLCs, and NUM numerical controllers. The output terminals are on 2 rows.

Sub-bases for 3-wire sensors

ABE7H16R31: The 24 V $=$ and 0 V signals are brought into the sub-base for each channel. The output terminals are on 3 rows. This function can also be achieved by adding an ABE7BV20 add-on terminal block to the ABE7H16R21/R20 sub-bases. The signal state for each channel can be indicated via an LED (**R31**) or not (**R30**).
ABE7H16C31: These are **miniature** products. They also enable connection of inputs equipped with 3-wire proximity sensors. The output terminals are on 3 rows.

Sub-bases with isolator for each channel

ABE7H●●S21: These products have the same function as the ABE7H16R21 universal sub-base.
They also have a blade isolator for each channel.

Sub-bases with isolator and protection for each channel

ABE7H16S43: These products are used exclusively for connecting 24 V $=$ **inputs**.
Both wires are brought to the screw terminals on a single row.
Each channel has 2 blade isolators, attached together, to isolate the signal and its 24 V $=$ power supply.
The 24 V $=$ power supply to each channel is protected by a 5 x 20 fuse. A red LED indicates if the fuse has blown.
ABE7H16F43: These products are designed for connecting 24 V $=$ **outputs**.
Both wires are brought to the screw terminals on a single row.
Each channel has 2 blade isolators, attached together, to isolate the signal and its 0 V common.

Electromechanical relay output sub-bases

Relay output sub-bases are designed to adapt both current and voltage signals. They also have the following functions, depending on the model: various contact combinations (1 NO, 1 C/O, 2 C/O), common potentials, channel protection by 5 x 20 fuse.
There are 3 ranges of sub-bases: fixed relay, plug-in relay, and high-performance. For high sales volume products, screw or spring connections are available (references ending with E).

Sub-bases with fixed relays and removable terminal blocks

ABE7R●●S21●: These products are equipped with a fixed relay with integral NO contact, 10 mm *(0.39 in.)* wide. Their 5 A Ith characteristic must be derated according to the duty cycles used and the number of operations required.
They are available in 8 and 16-channel module formats. All the terminal blocks are removable.
ABE7R●●S111: Almost 50% smaller than the standard sub-bases, these products have a fixed relay with integral NO contact, 5 mm *(0.2 in.)* wide. Their 2 A Ith characteristic must be derated according to the duty cycles used and the number of operations required. They are available in 8 and 16-channel module formats. All the terminal blocks are removable.

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
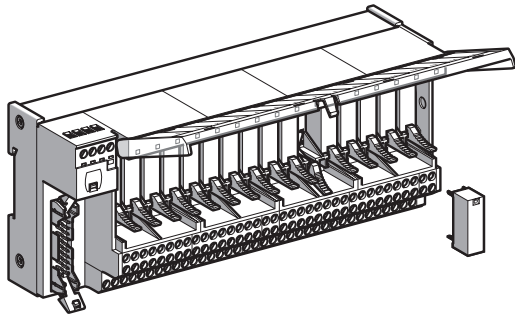
816406

ABE7R16T2●●

816405
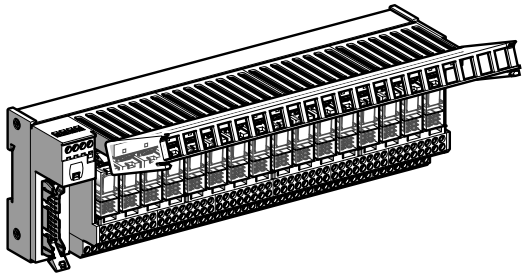
ABE7R16T3●●

Electromechanical relay output sub-bases (continued)
Plug-in relay sub-bases

ABE7P16T2●● and 7R16T2●●: These products may or may not be equipped with plug-in relays, with integral NO or C/O contact, 10 mm *(0.39 in.)* wide. Their 5 A Ith characteristic must be derated according to the duty cycles used and the number of operations required. They are available as 16-channel modules only.
It is possible to combine ABR7S2● electromechanical relays and ABS7S●2● solid state relays on the same sub-base. Some sub-bases, not equipped with relays, are offered with 5 x 20 fuse protection for each channel.

ABE7●16T111/M111: These **miniature** products use plug-in relays, 5 mm *(0.2 in.)* wide, with integral NO contact, rated up to 5 A. These products are pre-equipped with relays (**R**) or not (**P**). They can accept both electromechanical and solid state relays.
ABE7●16M111 sub-bases offer two connection methods, which make it possible to connect both inputs and outputs and obtain 8 inputs (passive connection) and 8 outputs (active relay connection). The signal state for each channel can be indicated via an LED. The terminals are on one row and the commons are brought in in groups of 4. The sub-base is supplied with a relay extractor; this accessory is also available as a spare part.

High-performance sub-bases for plug-in relays

ABE7P●●T3●● and 7R16T3●●: These products may or may not be equipped with plug-in relays, with integral 1 C/O or 2 C/O contacts, 12 mm *(0.47 in.)* wide. Their 8 A Ith characteristic must be derated according to the duty cycles used and the number of operations required.
The relays are equipped with reinforced Faston type clips for easy attachment. They are available in 8 and 16-channel module formats. It is possible to combine ABR7S3● electromechanical relays, ABS7S●3● solid state relays, and the ABE7ACC21 continuity block on the same sub-base. Some sub-bases, not equipped with relays, are offered with 5 x 20 fuse protection and isolation for each channel.

Connections

These relay sub-bases can be connected according to three possible schemes: volt-free, contact common, and common on both poles.

816408

Volt-free

816409

Common contact

816410

Common on both poles

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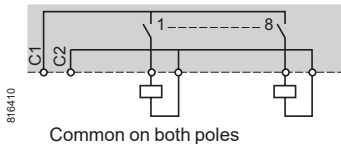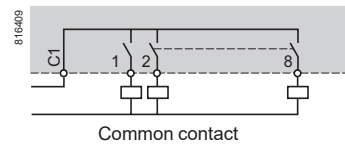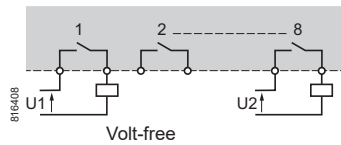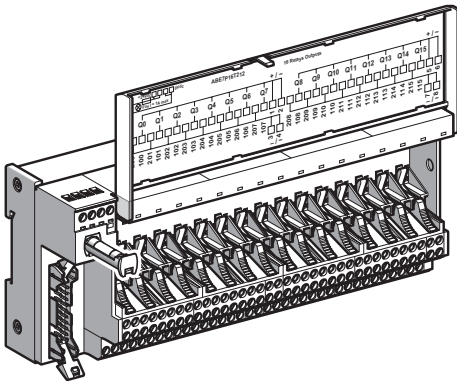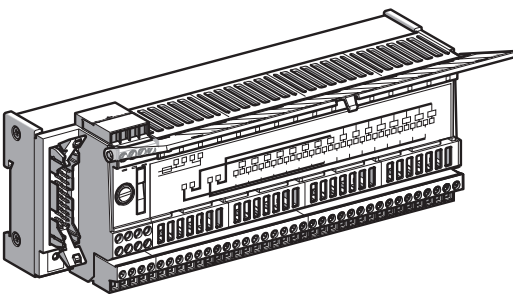
Solid state input or output sub-bases

Solid state input or output sub-bases are designed to adapt both current and voltage signals. They can be used to interface either inputs or outputs. Their technology enables high-speed signal switching, while maintaining a high level of electrical durability. For high sales volume products, screw or spring connections are available (references ending with E).

Input adapter sub-bases

ABE7S16E●● sub-bases equipped with solid state channels:
These sub-bases enable sensors with different voltages to be connected (24 V $\overline{}$ to 230 V $\sim$ depending on the reference).
These products provide electrical isolation for the various power supply inputs.
They are available as 16-channel modules only and the terminal blocks are removable.

ABE7P16F●● sub-bases for plug-in solid state relays:
These sub-bases enable sensors with different voltages to be connected (24 V $\overline{}$ to 230 V $\sim$), either on each channel or on each group of 8 channels.
They are available as 16-channel modules only.
The solid state relays are available separately. It is also possible to equip the sub-bases with electromechanical relays (please consult your Regional Sales Office).

Output adapter sub-base

ABE7S●●S●● sub-bases equipped with solid state channels:
These sub-bases enable actuators to be connected at 24 V $\overline{}$. The outputs are not isolated. The output current is either 0.5 or 2 A per channel depending on the products. The occurrence of overloads or short-circuits on the outputs can be transmitted to the PLC to be managed by program. These "fault signal" functions can only be used with TSX Micro and Premium PLCs, or with any other PLCs that have protected outputs.
They are available in 8 and 16-channel module formats, and the terminal blocks are removable.

Plug-in solid state relays
ABS7S plug-in relays are not available mounted directly on the sub-bases. They have to be ordered separately.
These relays are available for two power levels:
□ 5 V $\overline{}$ to 240 V $\sim$/0.5 A, 10 mm *(0.39 in.)* wide. These are for mounting on **ABE7P16T2●●** sub-bases.
□ 5 V $\overline{}$ to 240 V $\sim$/1.5 and 2 A, 12 mm *(0.47 in.)* wide. These are for mounting on **ABE7P16T3●●** sub-bases.
It is possible to combine electromechanical relays, solid state relays, and continuity blocks on the same sub-base.
They are available as 16-channel modules only.

816414

ABE7P16T215

816412

ABE7S16E2B1

816413
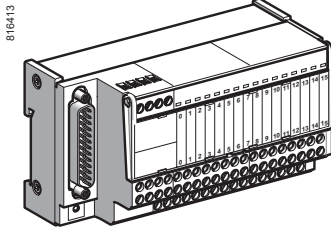
ABE7CPA02

Analog sub-bases and special functions

Analog signals are connected on the following products:

■ **ABE7CPA01** sub-base for counter modules in the TSX Micro and Premium ranges. This also communicates with the Altivar 18 variable speed drive.
■ **ABE7CPA02** sub-base for connection and distribution of 8 channels over screw terminals while maintaining shielding continuity.
■ **ABE7CPA21** sub-base with identical functions to the previous sub-base for the 4 analog output channels.
■ **ABE7CPA03** sub-base, which can also supply 2 or 4-wire sensors, channel by channel, with 24 V $=$ protected voltage and current limiting at 25 mA. It also ensures continuity of the current loops when the 25-way SUB-D connector is unplugged.
■ **ABE7CPA31** sub-base for distribution and isolation of the 24 V $=$ power supply required for the 8 analog input channels while maintaining isolation between channels of the TSXAEY810 module. All channels are self-limited to 25 mA.
■ **ABE7CPA11** sub-base, which enables the value from a parallel output absolute encoder to be read (binary or GRAY code). It is connected to a counter or axis control module in the Premium range.
■ **ABE7CPA12** sub-base, which can be used to connect 16 thermocouples and to increase the temperature of the cold junction compensation terminals, either by a probe integrated in the sub-base, or remotely via an external PT100 probe. In the latter case, only 14 thermocouples can be connected.

Accessories for connection sub-bases

The Modicon Telefast pre-wired system offers a range of accessories to simplify the installation of equipment and to enable full use of all features offered by the connection sub-bases.

Cable connections to the PLC
Cables
Only **ABFH20H●●** cables, made from rolled ribbon cable and HE 10 insulation piercing connectors, are truly universal. Owing to their small size, they can be connected to any I/O modules or terminal blocks equipped with 20-way HE 10 connectors. They are available in lengths of 0.5 to 5 m *(1.64 to 16.4 ft)*, but the user can create custom cables up to a maximum length of 30 m *(98.43 ft)* using additional cable and HE 10 connectors.
TSXCDP●●3 molded cables are only used with the TSX Micro and Premium ranges. They are multicore cables and have a high quality finish.
Custom cables are also available for the Allen Bradley and Siemens ranges of PLCs.

Splitter sub-bases
When module configuration and signal distribution are not compatible, the Telefast system can use **ABE7ACC0●** splitter sub-bases:
□ 16 channels (2 x 8) for all 16-channel outputs
□ 24 channels (3 x 8) for DST2472 modules
□ 32 channels (2 x 16) for NUM inputs
□ 24 channels (3 x 8) for NUM outputs
Other sub-bases enable I/O redundancy on 2 input modules in parallel (**ABE7ACC11**) or on 2 output modules in parallel (**ABE7ACC10**).

ABE7ACC02

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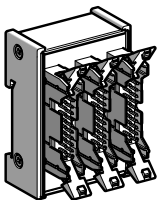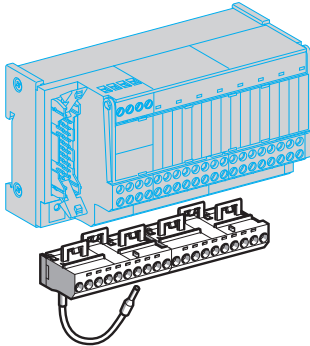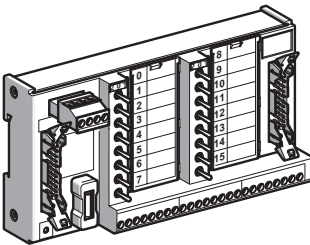
ABE7BV20

ABE7TES160

Accessories for connection sub-bases (continued)

Cabling accessories

Cable gland assembly
Using the cable gland assembly enables 3 cables to run outside the enclosure without the addition of a series connection.

ABE7BV10 and **ABE7BV20** add-on terminal blocks
With 8 and 16 channels, these products give wider connection options: common, shielding, etc.

Other accessories

Plug-in continuity blocks
Available in 10 and 12 mm *(0.39 and 0.47 in.)* widths, the blocks are mounted on ABE7P16T●●● relay sub-bases in place of ABR7 and ABS7 modules. They make use of the sub-base functions to connect the channel without the need to adapt the channel using a relay.

ABE7TES160 simulator sub-base
This can be used to force or inhibit the discrete I/O.

5 x 20 fuses
References for all fuses can be found under accessories.

Label marking software
This produces finished labels for channels, simplifying installation and reducing the risk of error during maintenance by marking the labels according to the sub-base mounting. The program runs under Windows.

Sub-base/plug-in output relay combinations

Relays for ABE7●16T●●● sub-bases	Relay width 10 mm *(0.39 in.)*				Relay width 5 mm *(0.2 in.)*	
Relays	ABR7S21	ABR7S23	ABS7SA2M	ABS7SC2E	ABR7S11	ABS7SC1B
Function	Relay 1 NO	Relay 1 C/O	Output 230 V ∼ - 0.5 A	Output 48 V ⎓ - 0.5 A	Relay 1 NO	Output 24 V ⎓ - 2 A
Sub-bases/modules						
ABE7●16T210	■		■	■		
ABE7●16T111/M111			■	■	■	■
ABE7R16T212	■		■	■		
ABE7●16T214	■		■	■		
ABE7●16T215	■		■	■		
ABE7●16T230		■	■	■		
ABE7●16T231		■				

12.5 mm *(0.49 in)* width relay for ABE7●16T3●● sub-bases						
Relays	ABR7S33	ABR7S37	ABS7SA3M	ABS7SC3E	ABS7SC3BA	ABE7ACC21 *(1)*
Function	Relay 1 C/O	Relay 2 C/O	Output 230 V ∼ - 1.5 A	Output 48 V ⎓ - 1.5 A	Output 24 V ⎓ - 2 A Protected	Continuity 0.5 A
Sub-bases/modules						
ABE7●16T318	■		■	■		■
ABE7●16T330	■		■	■	■	■
ABE7●16T334	■		■	■		■
ABE7●16T370		■	■			

■ Compatible

(1) Product mounted on ABE7P16F3●● plug-in input sub-bases

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Discrete input and/or output sub-bases - IP 20

Applications	Discrete inputs or outputs				Discrete inputs or outputs	Outputs for solid state and/or electromechanical relays
	Optimum "Economy"	Optimum "Miniature"	Universal		Optimum "Miniature"	Optimum and Universal
Compatibility ☐ Direct	☐ Modicon X80 I/O expansion modules (see page 26) ☐ Modicon Premium automation platforms (see page 30) ☐ Modicon TSX Micro compact/ modular PLCs (see page 40)	☐ Modicon M221 Book logic controllers (see page 24) ☐ Modicon TM3 I/O expansion modules (see page 24) ☐ Modicon X80 I/O modules (see page 26) ☐ Modicon Premium automation platforms (see page 30) ☐ Allen Bradley SLC500 and Siemens automation platforms (see page 36) ☐ Modicon TSX Micro compact/modular PLCs (see page 40)			☐ Modicon M221 Book logic controllers (see page 24) ☐ Modicon TM3 I/O expansion modules (see page 24) ☐ Modicon X80 I/O modules (see page 26) ☐ Modicon Premium automation platforms (see page 30) ☐ Allen Bradley SLC500 and Siemens automation platforms (see page 36) ☐ Modicon TSX Micro compact/modular PLCs (see page 40)	
☐ Indirect	☐ Via Modicon X80 I/O modules: - Modicon 340 automation platforms - Modicon 580 automation platforms	☐ Via Modicon TM3 I/O expansion modules: - Modicon M241 logic controllers - Modicon M251 logic controllers ☐ Via Modicon X80 I/O modules: - Modicon 340 automation platforms - Modicon 580 automation platforms - Modicon Quantum automation platforms			☐ Via Modicon TM3 I/O expansion modules: - Modicon M241 logic controllers - Modicon M251 logic controllers ☐ Via Modicon X80 I/O modules: - Modicon 340 automation platforms - Modicon 580 automation platforms - Modicon Quantum automation platforms	
Sub-base type	Passive connection sub-bases				Passive connection sub-bases	Plug-in electromechanical or solid state relays
Equipped with relays	–				–	Yes
Control voltage	24 V ⎓				24 V ⎓	
Output voltage	24 V ⎓				24 V ⎓	24 V ⎓ (solid state) 5...24 V ⎓, 230 V ∼ (electromechanical)
Output current per channel	0.5 A				0.5 A	5 A (th)
Modularity	16 channels		8-12-16 channels		16 channels	16 channels 8 passive inputs 8 relay outputs
No. of terminals per channel	1	1 to 3	1	2	2	1
Type of connection terminals	Signal	Signal, common (configurable as 24 V ⎓ or 0 V)	Signal	Signal, common (configurable as 24 V ⎓ or 0 V)	Signal, common, 2 common connections between the inputs and the outputs	1 NO contact and common, 4 output channels 2 input connection points
Connectors	20-way HE10 connector				20-way HE10 connectors	
Terminal block — Removable	No		No		No	
Terminal type	Screw				Screw	
Additional or optional function	Economy version available in kit form (sub-base plus cordset)	Miniature sub-bases	Compact size	Type 2 input (1) | Isolator	Miniature sub-base Synergy with Tego Power and Micro PLC	Miniature sub-base - Common per group of 4 channels Synergy with Tego Power and Micro PLC
Type of device	**ABE7H20E000**	**ABE7H16C10, ABE7H16C11, ABE7H16C21, ABE7H16C31**	**ABE7H16R50**	**ABE7H08R21, ABE7H16R20, ABE7H16R21, ABE7H16R23** | **ABE7H16S21**	**ABE7H16CM21**	**ABE7R16M111**
Page	16		16		16	18

(1) For Modicon TSX Micro and Modicon Premium PLCs.

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Discrete input and/or output sub-bases - IP 20

Left page

Applications	Discrete outputs				
	Optimum	Universal	Optimum		Universal
Compatibility □ Direct	□ Modicon M221 Book logic controllers (see page 24) □ Modicon TM3 I/O expansion modules (see page 24) □ Modicon X80 I/O modules (see page 26) □ Modicon Premium automation platforms (see page 30) □ Allen Bradley SLC500 and Siemens automation platforms (see page 36) □ Modicon TSX Micro compact/modular PLCs (see page 40)				
□ Indirect	□ Via Modicon TM3 I/O expansion modules: - Modicon M241 logic controllers - Modicon M251 logic controllers □ Via Modicon X80 I/O modules: - Modicon 340 automation platforms - Modicon 580 automation platforms - Modicon Quantum automation platforms				
Relay sub-base	Electromechanical, fixed		Electromechanical or solid state		
Equipped with relays	Yes	Yes	No		No
Control voltage	24 V $=$				
Output voltage	5 V...30 V $=$, 230 V $\sim$	5 V...48 V $=$, 230 V $\sim$	24 V $=$ (solid state), 5 V...24 V $=$, 230 V $\sim$ (electromechanical)		5 V...150 V $=$, 230 V $\sim$
Output current per channel	2 A (th)	5 A (th)	2 A (solid state), 6 A (electromechanical)		0.5 to 10 A (depending on relay)
Modularity	8-16 channels		16 channels		8 or 16 channels
No. of terminals per channel	1	2	1		2 to 3
Type of connection terminals	1 NO contact	1 NO contact and common	1 NO contact		Signal, polarities
Connectors	20-way HE 10 connector				
Terminal block Removable	Yes	Yes	No		No
Terminal type	Screw or spring		Screw		
Additional or optional function	Volt-free or common per group of 8 channels		Miniature sub-bases, Common per group of 4 channels		Isolator and fuse
Type of device	ABE7R08S111, ABE7R16S111, ABE7R16S111E	ABE7R08S210, ABE7R16S210, ABE7R16S212	ABE7R16T111	ABE7P16T111	ABE7P16T210, ABE7P16T230, ABE7P16T214, ABE7P16T215, ABE7P16T330, ABE7P16T334, ABE7P16T318
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Applications	Discrete outputs — Universal						Discrete inputs or outputs — Universal	
Compatibility □ Direct	□ Modicon M221 Book logic controllers (see page 24) □ Modicon TM3 I/O expansion modules (see page 24) □ Modicon X80 I/O modules (see page 26) □ Modicon Premium automation platforms (see page 30) □ Allen Bradley SLC500 and Siemens automation platforms (see page 36) □ Modicon TSX Micro compact/modular PLCs (see page 40)							
□ Indirect	□ Via Modicon TM3 I/O expansion modules: - Modicon M241 logic controllers - Modicon M251 logic controllers □ Via Modicon X80 I/O modules: - Modicon 340 automation platforms - Modicon 580 automation platforms - Modicon Quantum automation platforms							
Relay sub-base	Electromechanical, plug-in	Solid state, fixed	–	–			Solid state, plug-in	
Equipped with relays	Yes	Yes	–	–			Yes	No
Control voltage	24 V $=$						From 24 V to 230 V $\sim$	From 5 V TTL to 230 V $\sim$
Output voltage	5 V...150 V $=$, 230 V $\sim$	24 V $=$						
Output current per channel	5 A (th)	8 A (th)	0.5 to 2 A	125 mA	0.5 A	125 mA	12 mA	
Modularity	16 channels							
No. of terminals per channel	2 to 3	2 to 6	2		3		2	
Type of connection terminals	1 C/O contact or 1 NO contact and common	1 C/O contact or 2 NO contacts and common	Signal and 0 V		24 V $=$ signal and 0 V	Signal can be isolated, protected common	Signal	Signal and common
Connectors	20-way HE 10 connector							
Terminal block Removable	No		Yes	No	No		Yes	No
Terminal type	Screw		Screw or spring		Screw		Screw or spring	
Additional or optional function	Volt-free or common per group of: 8 channels	4 channels	Fault signal	Isolator and fuse (indicator)	3-wire proximity sensor	Isolator and fuse (indicator)	–	
Type of device	ABE7R16T210, ABE7R16T212, ABE7R16T230	ABE7R16T330, ABE7R16T370	ABE7S16S2B0, ABE7S16S1B2	ABE7H16F43	ABE7H16R31	ABE7H16S43	ABE7S16E2E1, ABE7S16E2E0, ABE7S16E2F0, ABE7S16E2M0	ABE7P16F310, ABE7P16F312
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Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Analog and application-specific sub-bases - IP 20

Page 14

Applications	Analog signals and special functions				
Compatibility	Modicon TSX Micro: - TSX3722 - TSXCTZ●A	Modicon Premium: - TSXCTY●A - TSXCAY●1	Modicon Premium: - TSXASY800 - TSXAEY1600 - TSXA●Y800 Modicon X80 I/O platforms: - BMXAMI0800 - BMXAMI0810 - BMXAMO0802 Modicon Quantum: - 140AVI03000 - 140ACI03000 - 140ACI04000 - 140ACO13000	Modicon Premium: - TSXASY410 - TSXAEY420 Modicon X80 I/O platforms: - BMXAMO0210 - BMXAMO0410 - BMEAHO0412 Modicon Quantum: - 140AVO02000 - 140ACO02000	Modicon X80 I/O platforms: - BMXAMI0410 - BMXAMI0410 - BMXART0414 - BMXART0814 Modicon Premium: - TSXAEY1614
Type of signal	Counter inputs and analog I/O	Counter inputs Axis control Position control	Analog inputs Current/Voltage Pt 100	Analog outputs Current Voltage	Analog inputs
Functions	Passive connection, point-to-point with shield continuity				Direct connection of 4 thermocouples with cold junction compensation Provision and distribution of isolated power supplies
Modularity	1 counter channel or 8 analog inputs + 2 analog outputs		8 channels	4 channels	4 channels
Control voltage	24 V ---				–
Output voltage	24 V ---				–
Output current per channel	25 mA				–
No. of terminals per channel	2		2 or 4	2 or 4	2 or 4
Type of connector	15-way SUB-D + 9-way SUB-D		25-way SUB-D		25-way SUB-D
Fuse terminal block Removable	No		No		No
Terminal type	Screw		Screw		Screw
Type of device	ABE7CPA01		ABE7CPA02	ABE7CPA21	ABE7CPA412 ABE7CPA410
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Page 15

Analog signals and special functions			
Modicon Premium: - TSXAEY800 - TSXAEY1600 Modicon Quantum: - 140AVI03000 - 140ACI03000 - 140ACI04000	Modicon Premium: - TSXAEY810 Modicon X80 I/O platforms: - BMXAMI0800 - BMXAMI0810 - BMEAHI0812 *(1)* Modicon Premium: - 140AVI03000 - 140ACI03000 - 140ACI04000	Modicon Premium: - TSXCAY●1 - TSXCTY●A	Modicon Premium: - TSXAEY1614
Analog inputs Current Voltage Pt 100	Isolated analog inputs	Counter inputs	Inputs for thermocouples
Distribution of sensor power supplies by limiter (25 mA)	Distribution of isolated sensor power supplies by converter	Acquisition of value from an absolute encoder	Direct connection of 16 thermocouples with cold junction compensation
8 channels	8 channels	1 channel	16 channels
24 V ---			
24 V ---			
25 mA			
2 or 4		–	2 or 4
25-way SUB-D	25-way SUB-D	15-way SUB-D	25-way SUB-D
No	No	No	No
Screw	Screw or spring	Screw	Screw
ABE7CPA03	ABE7CPA31 ABE7CPA31E	ABE7CPA11	ABE7CPA12
19			

(1) BMEAHI0812 is only supplied with ABE7CPA31.

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Passive connection sub-bases for discrete signals

ABE7H20E000

ABE7H20E100
ABE7H20E200

ABE7H34E100
ABE7H34E200

ABE7H16CM21

ABE7H08R21

ABE7H16R●●

ABE7H16S43

ABE7H16F43

Passive connection sub-bases for discrete signals

Optimum "Economy" sub-base

Function	No. of channels	No. of terminals per channel	No. of terminals on row number	For PLCs	Length of PLC connection cable m/ft	Type of connection	Reference	Weight kg lb
Input or output	16	1	2	□ Modicon M221 □ TSX Micro □ Modicon Premium □ Modicon X80 I/O modules □ Modicon M340	–	Screw	**ABE7H20E000**	–

Kits (Optimum Economy sub-base + cordset)

Kit contents	Compatibility	Reference	Weight kg lb
1x 16-channel Economy sub-base (type ABE7H20E000) and 1 cordset (type ABFH20H100, length 1 m/3.28 ft)	□ TSX Micro □ Modicon Premium	**ABE7H20E100**	0.330 *0.728*
1x 16-channel Economy sub-base (type ABE7H20E000) and 1 cordset (type ABFH20H200, length 2 m/6.56 ft)	□ TSX Micro □ Modicon Premium	**ABE7H20E200**	0.410 *0.904*
2x 16-channel Economy sub-bases (type ABE7H20E000) and 1 Y-cordset (type ABFH34M100, length 1 m/3.28 ft)	□ Modicon X80 I/O modules □ Modicon M340	**ABE7H34E100**	0.582 *1.283*
2x 16-channel Economy sub-bases (type ABE7H20E000) and 1 Y-cordset (type ABFH34M200, length 2 m/6.56 ft)	□ Modicon X80 I/O modules □ Modicon M340	**ABE7H34E200**	0.725 *1.598*

Optimum "Miniature" sub-bases

Function	No. of channels	No. of terminals per channel	No. of terminals on row number	LED per channel	Polarity distribution	Type of connection	Reference	Weight kg lb
Input or output	16	1	1	No	No	Screw	**ABE7H16C10**	0.160 *0.353*
				Yes	No	Screw	**ABE7H16C11**	0.160 *0.353*
		2	2	Yes	0 or 24 V	Screw	**ABE7H16C21**	0.205 *0.452*
		3	3	Yes	0 or 24 V	Screw	**ABE7H16C31**	0.260 *0.573*
Input and output (1)	16	2	2	Yes	0 or 24 V	Screw	**ABE7H16CM21**	0.200 *0.441*

Universal sub-bases

Function	No. of channels	No. of terminals per channel	No. of terminals on row number	LED per channel	Polarity distribution	Isolator (S) Fuse (F) per channel	Type of connection	Reference	Weight kg lb
Input or output	8	2	2	Yes	0 or 24 V	–	Screw	**ABE7H08R21**	0.218 *0.481*
	16	1	1	No	No	–	Screw	**ABE7H16R10**	0.274 *0.604*
				Yes	No	–	Screw	**ABE7H16R11**	0.274 *0.604*
			2	No	No	–	Screw	**ABE7H16R50**	0.196 *0.432*
		2	2	No	0 or 24 V	–	Screw	**ABE7H16R20**	0.300 *0.661*
				Yes	0 or 24 V	–	Screw	**ABE7H16R21**	0.300 *0.661*
						S	Screw	**ABE7H16S21**	0.375 *0.827*
		3	3	Yes	0 or 24 V	–	Screw	**ABE7H16R31**	0.346 *0.763*
Input type 2 (2)	16	2	2	Yes	0 or 24 V	–	Screw	**ABE7H16R23**	0.320 *0.705*
Input	16	2	1	Yes	24 V	S, F (3)	Screw	**ABE7H16S43**	0.640 *1.411*
Output	16	2	1	Yes	0 V	S, F (3)	Screw	**ABE7H16F43**	0.640 *1.411*

(1) 8 I + 8 Q: These products have 2 commons connections that enable inputs and outputs to be connected to the same sub-base at the same time.
(2) For TSX Micro, Modicon Premium.
(3) With LED to indicate blown fuse.

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Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Adapter sub-bases with fixed relays

ABE7S16E2●●

ABE7S16S●●

ABE7R08S21●

Adapter sub-bases with fixed relays and removable terminal blocks

Universal input sub-bases with solid state relays

Number of channels	Number of terminals per channel	Isolation of PLC/ Operative part	Voltage	Type of connection	Reference	Weight kg *lb*
16	2	Yes	24 V ⎓	Screw	**ABE7S16E2B1**	0.370 *0.816*
			48 V ⎓	Screw	**ABE7S16E2E1**	0.370 *0.816*
			48 V ∿	Screw	**ABE7S16E2E0**	0.386 *0.851*
			110 V ∿	Screw	**ABE7S16E2F0**	0.397 *0.875*
			230 V ∿	Screw	**ABE7S16E2M0**	0.407 *0.897*

Universal output sub-bases with solid state relays

Number of channels	Isolation of PLC/ Operative part	Output voltage	Output current	Fault detection signal (1)	Type of connection	Reference	Weight kg *lb*
16	No	24 V ⎓	0.5 A	Yes (2)	Screw	**ABE7S16S2B0**	0.405 *0.893*
				No	Screw	**ABE7S16S1B2**	0.400 *0.882*

Optimum and Universal output sub-bases with electromechanical relays

Number of channels	Number of contacts	Output current	Polarity distribution/ operative part	Type of connection	Reference	Weight kg *lb*
8	1 NO	2 A	Contact common per group of 4 channels	Screw	**ABE7R08S111**	0.252 *0.556*
	1 NO	5 A	Volt-free	Screw	**ABE7R08S210**	0.448 *0.988*
16	1 NO	2 A	Contact common per group of 8 channels	Screw	**ABE7R16S111**	0.405 *0.893*
				Spring	**ABE7R16S111E**	0.405 *0.893*
	1 NO	5 A	Volt-free	Screw	**ABE7R16S210**	0.405 *0.893*
			Common per group of 8 channels on both poles	Screw	**ABE7R16S212**	0.400 *0.882*

(1) A fault on a sub-base output Qn will set PLC output Qn to safety mode, which will be detected by the PLC.
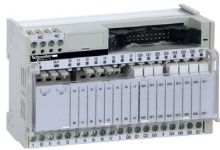*(2) Can only be used with modules with protected outputs.*

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Adapter sub-bases with plug-in relays

ABE7P16F31●

ABE7R16M111

ABE7R16T210

ABE7P16T111

ABE7P16●●●●

Adapter sub-bases with plug-in (relays

Universal input sub-bases for solid state relays, supplied without relays

No. of channels	Number of terminals per channel	For relay type	Isolation of PLC/ Operative part	Input connection	Type of connection	Reference	Weight kg *lb*
16	2	ABS7E ABR7 ABS7S33E	Yes	Volt-free	Screw	**ABE7P16F310**	0.850 *1.874*
				Polarity distribution	Screw	**ABE7P16F312**	0.850 *1.874*

Optimum and Universal output sub-bases, supplied with electromechanical relays (1)

No. of channels	Relay width	Relay type supplied	Number and type of contacts	Polarity distribution/ operative part	Reference	Weight kg *lb*
16	5 mm *0.197 in.*	ABR7S11	1 NO	Contact common per group of 4 channels	**ABE7R16T111**	0.600 *1.323*
				Contact common per group of 4 output channels + 2 common input terminals	**ABE7R16M111** (2)	0.600 *1.323*
	10 mm *0.394 in.*	ABR7S21	1 NO	Volt-free	**ABE7R16T210**	0.735 *1.620*
				Common on both poles (3)	**ABE7R16T212**	0.730 *1.609*
		ABR7S23	1 C/O	Volt-free	**ABE7R16T230**	0.775 *1.709*
	12 mm *0.472 in.*	ABR7S33	1 C/O	Volt-free	**ABE7R16T330**	1.300 *2.866*
		ABR7S37	2 C/O	Volt-free	**ABE7R16T370**	1.300 *2.866*

Optimum and Universal output sub-bases for solid state relays and/or electromechanical relays (4)

No. of channels	Relay width	For relay type	Isolator per channel	Fuse per channel	Polarity distribution/ operative part	Type of connection	Reference	Weight kg *lb*
16	5 mm *0.197 in.*	ABR7S11 ABS7SC1B	No	No	Contact common per group of 4 channels	Screw	**ABE7P16T111**	0.550 *1.213*
	10 mm *0.394 in.*	ABR7S2● ABS7SA2● ABS7SC2●	No	No	Volt-free	Screw	**ABE7P16T210** (5)	0.615 *1.356*
							ABE7P16T230 (5)	0.655 *1.444*
			Yes		Volt-free	Screw	**ABE7P16T214**	0.675 *1.488*
			Yes		Common on both poles (3)	Screw	**ABE7P16T215**	0.670 *1.477*
16	12 mm *0.472 in.*	ABR7S33 ABS7A3● ABS7SC3●● ABE7ACC21	No	No	Volt-free	Screw	**ABE7P16T330**	0.900 *1.984*
		ABR7S33 ABS7SA3M ABS7SC3E ABE7ACC21	No	Yes	Volt-free	Screw	**ABE7P16T334**	0.900 *1.984*
			Yes	Yes	Common on both poles (4)	Screw	**ABE7P16T318**	1.000 *2.205*

(1) The sub-bases are supplied as standard with electromechanical relays, all or some of which can be replaced by solid state relays of the same width (it is possible to combine these different technologies on a single sub-base).
(2) Two connection methods are available, enabling inputs and outputs to be connected to the same sub-base at the same time.
(3) Per group of 8 channels.
(4) Not equipped with relays.
(5) To be used with *ABR7S21* relay for *ABE7P16T210* sub-base and *ABR7S23* relay for *ABE7P16T230●* sub-base.

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Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for counter and analog channels

ABE7CPA01

ABE7CPA11

ABE7CPA21/410/412

Connection sub-bases for counter and analog channels

Functions	For platforms	Compatible modules	Type of connection on Telefast end	Type of connection	Reference	Weight kg/*lb*
Counter and analog, axis control, position control	TSX Micro Modicon Premium	TSX3722 TSXCTZ●A TSXCTY●A TSXCAY●1	15-way SUB-D	Screw	**ABE7CPA01**	0.300 *0.661*
Connection of absolute encoder with parallel output	Modicon Premium	TSXCTY●A TSXCAY●1	15-way SUB-D	Screw	**ABE7CPA11**	0.330 *0.728*
Distribution of 4 thermocouples	Modicon X80 I/O	BMXART0414 BMXART0814	25-way SUB-D	Screw	**ABE7CPA412**	0.180 *0.397*
Distribution of 16 thermocouples	Modicon Premium	TSXAEY1614	25-way SUB-D	Screw	**ABE7CPA12**	0.300 *0.661*
Passive distribution of 8 analog I/O channels on screw terminals, with shield continuity	Modicon Premium	TSXASY800 TSXAEY1600 TSXA●Y800	25-way SUB-D	Screw	**ABE7CPA02**	0.290 *0.639*
	Modicon X80 I/O	BMXAMI0800 BMXAMI0810 BMEAHI0812 BMXAMO0802				
	Modicon Quantum	140AVI03000 140ACI03000 140ACI04000 140ACO13000				
Provision and distribution of protected isolated power supplies for 4 analog input channels	Modicon M340	BMXAMI0410	25-way SUB-D	Screw	**ABE7CPA410**	0.180 *0.397*
Distribution of 4 analog output channels	Modicon Premium	TSXASY410 TSXAEY420	25-way SUB-D	Screw	**ABE7CPA21**	0.210 *0.463*
	Modicon X80 I/O	BMXAMO0210 BMXAMO0410 BMEAHO0412				
	Modicon Quantum	140AVO02000 140ACO02000				
Distribution and supply of 8 analog input channels (with limitation of each current loop)	Modicon Premium	TSXAEY800 TSXAEY1600	25-way SUB-D	Screw	**ABE7CPA03**	0.330 *0.728*
	Modicon Quantum	140AVI03000 140ACI03000 140ACI04000				
Distribution and supply of 8 analog input channels isolated from one another with 25 mA limitation per channel	Modicon Premium	TSXAEY810	25-way SUB-D	Screw	**ABE7CPA31**	0.410 *0.904*
	Modicon X80 I/O	BMXAMI0800 BMXAMI0810 BMEAHI0812 (1)		Spring	**ABE7CPA31E**	0.410 *0.904*
	Modicon Quantum	140AVI03000 140ACI03000 140ACI04000				

(1) The BMEAHI0812 module is not compatible with the ABE7CPA31E connection sub-base.

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Cordsets

ABFH20H●00

ABFH34M●00

Cordsets for connection between TSX Micro, Modicon Premium, and sub-bases						
Description	**Compatibility**	**Gauge Cross-section**	**Connector type**	**Length m/ft**	Reference	**Weight kg/lb**
Cordsets equipped with an HE10 (20-way) connector at each end	TSX Micro or Modicon Premium and ABE7H20E000 sub-base	AWG 28/ 0.08 mm²	HE10 - HE10	1/3.28	**ABFH20H100**	–
				2/6.56	**ABFH20H200**	–

Cordsets for connection between Modicon X80 and Modicon M340 I/O and sub-bases						
Description	**Compatibility**		**Connector type**	**Length m/ft**	Reference	**Weight kg/lb**
Y-cordsets equipped with one 40-way FCN connector and two HE10 20-way connectors	Modicon X80 and Modicon M340 I/O modules and ABE7H20E000 sub-base	AWG 28/ 0.08 mm²	FCN 40-way - 2x HE10	1/3.28	**ABFH34M100**	–
				2/6.56	**ABFH34M200**	–

ABFTE20●P●00

TWDFCW●0K

| Cordsets for connection between TM221M●32TK controller, TM3 modules, and sub-bases						
Description	**Compatibility**	**Cross-section**	**Connector type**	**Length m/ft**	Reference	**Weight kg/lb**
Cordsets for digital inputs	TM221M32TK, TM221ME32TK, TM3DI16K, TM3DI32K	AWG 28/ 0.08 mm²	HE10 - HE10	1/3.28	**ABFTE20EP100**	–
				2/6.56	**ABFTE20EP200**	–
				3/9.84	**ABFTE20EP300**	–
Cordsets for digital outputs	TM221M32TK, TM221ME32TK, TM3DQ16TK, TM3DQ32TK	AWG 28/ 0.08 mm²	HE10 - HE10	1/3.28	**ABFTE20SP100**	–
				2/6.56	**ABFTE20SP200**	–
				3/9.84	**ABFTE20SP300**	–
Cordsets for digital I/O	TM221M32TK, TM221ME32TK, TM3DI16K, TM3DI32K, TM3DQ16TK, TM3DQ32TK	AWG 22/ 0.035 mm²	HE10 - Flying leads	3/9.84	**TWDFCW30K**	0.405 *0.893*
				5/16.40	**TWDFCW50K**	0.670 *1.477*

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Telefast Pre-wired System

Modicon ABE7 connection sub-bases
Cabled connectors for Modicon Quantum I/O modules

ABFM32H●●1

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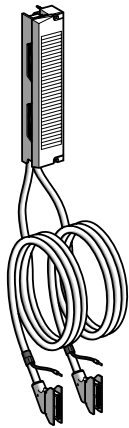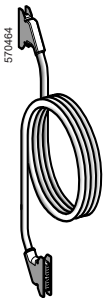
TSXCDP●03

Cabled connectors for Modicon Quantum I/O modules

Type of signal	I/O modules	Connector types	Gauge AWG	Cross-section mm²	Length m/*ft*	No. of channels	Reference	Weight kg/*lb*
Relay inputs and outputs	*(2)*	2 x 20-way HE 10	22	0.324	1.5/*4.921*	2 x 16	**ABFM32H150**	0.650 *1.433*
					3/*9.843*	2 x 16	**ABFM32H300**	1.150 *2.535*
0.5 A outputs	*(2)*	2 x 20-way HE 10 + external power supply	22	0.324	3/*9.843*	2 x 16	**ABFM32H301**	1.150 *2.535*
Inputs or outputs (96 channels)	140DDI36400 140DDO36400	2 x 20-way HE 10	22	0.324	0.5/*1.640*	6 x 16	**TSXCDP053**	0.085 *0.187*
					1/*3.281*	6 x 16	**TSXCDP103**	0.150 *0.331*
					2/*6.562*	6 x 16	**TSXCDP203**	0.280 *0.617*
					3/*9.843*	6 x 16	**TSXCDP303**	0.410 *0.904*
					5/*16.404*	6 x 16	**TSXCDP503**	0.670 *1.477*
Analog inputs	140AVI03000 140ACI03000	1 x 25-way SUB-D	24	0.22	2/*6.562*	8	**ABFM08S201**	0.600 *1.323*
Analog outputs	140AVO02000	1 x 25-way SUB-D	24	0.22	2/*6.562*	4	**ABFM04S200**	0.450 *0.992*
	140ACO02000	1 x 25-way SUB-D	24	0.22	2/*6.562*	4	**ABFM04S201**	0.450 *0.992*
	140ACO13000	1 x 25-way SUB-D	24	0.22	2/*6.562*	8	**ABFM08S202**	0.450 *0.992*

(1) The BMEAHI0812 module is not compatible with the ABE7CPA31E connection sub-base.
(2) Please consult our website www.schneider-electric.com

ABE7ACC02

ABE7BV20

ABE7TES160

AR1SB3

ABEC08R●●●
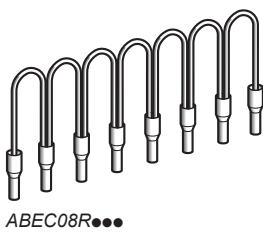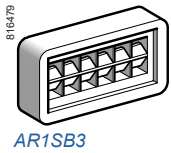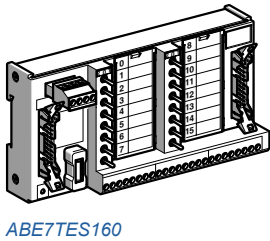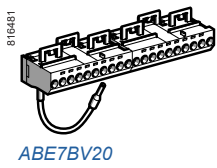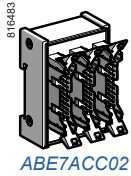
Accessories					
Description	**No. of channels**	**Characteristics**	**Order in multiples of**	**Unit reference**	**Weight kg/*lb***
Splitter sub-base	–	16 as 2 x 8 channels	1	**ABE7ACC02**	0.075 *0.165*
Redundant output sub-base	–	16 as 2 x 16 channels	1	**ABE7ACC10**	0.075 *0.165*
Redundant input sub-base	–	16 as 2 x 16 channels	1	**ABE7ACC11**	0.075 *0.165*
Plug-in continuity blocks	–	Width 12 mm	4	**ABE7ACC21**	0.010 *0.022*
Additional snap-on terminal blocks (shunted terminals)	8	10 screw terminals	5	**ABE7BV10**	0.030 *0.066*
	16	20 screw terminals	5	**ABE7BV20**	0.060 *0.132*
I/O simulator sub-base	16	For display, forcing, inhibition, continuity	1	**ABE7TES160**	0.010 *0.022*
Self-adhesive marker tag holder	–	For 6 characters	50	**AR1SB3**	0.010 *0.022*
Quick-blow fuses 5 x 20, 250 V, UL	–	0.125 A	10	**ABE7FU012**	0.010 *0.022*
		0.5 A	10	**ABE7FU050**	0.010 *0.022*
		1 A	10	**ABE7FU100**	0.010 *0.022*
		2 A	10	**ABE7FU200**	0.010 *0.022*
		4 A	10	**ABE7FU400**	0.010 *0.022*
		6.3 A	10	**ABE7FU630**	0.010 *0.022*

Commoning link accessories					
Description	**For common**	**Color**	**Distance between cable ends**	**Reference**	**Weight kg/*lb***
Commoning links Modularity 8 x 1 mm²	Coil	White	12 cm *4.724 in.*	**ABFC08R12W**	0.020 *0.044*
			2 cm *0.787 in.*	**ABFC08R02W**	0.010 *0.022*
	~	Red	12 cm *4,724 in.*	**ABFC08R12R**	0.020 *0.044*
			2 cm *0.787 in.*	**ABFC08R02R**	0.010 *0.022*
	---	Blue	12 cm *4.724 in.*	**ABFC08R12B**	0.020 *0.044*
			2 cm *0.787 in.*	**ABFC08R02B**	0.010 *0.022*

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Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Plug-in solid state relays
Plug-in electromechanical relays

ABS7SC1B

ABS7SC2E

ABS7SA2M

ABS7EC3B2
ABS7EC3E2
ABS7EA3E5
ABS7EA3F5
ABS7EA3M5

ABS7SC3BA
ABS7SC3E

ABS7SA3M

ABR7S11
ABR7S21

ABR7S23
ABR7S33
ABR7S37
ABR7S33E

Plug-in solid state relays

Relay width	Functions	Input circuit		Output circuit		Unit reference **Order in multiples of 4**	Weight **kg** *lb*
		Current	Nominal voltage	Current	Nominal voltage *(1)*		
5 mm *0.197 in.*	Output	---	24 V	2 A	24 V ---	**ABS7SC1B**	0.010 *0.022*
10 mm *0.394 in.*	Output	---	24 V	0.5 A	5…48 V ---	**ABS7SC2E**	0.016 *0.035*
					24…240 V ∿	**ABS7SA2M**	0.016 *0.035*
12 mm *0.472 in.*	Input	---	24 V Type 2	–	24 V ---	**ABS7EC3B2**	0.014 *0.031*
			48 V Type 2	–	24 V ---	**ABS7EC3E2**	0.014 *0.031*
		50 Hz ∿	48 V	–	24 V ---	**ABS7EA3E5**	0.014 *0.031*
		60 Hz ∿	110…130 V	–	24 V ---	**ABS7EA3F5**	0.014 *0.031*
		50 Hz ∿	230…240 V	–	24 V ---	**ABS7EA3M5**	0.014 *0.031*
	Output	---	24 V	2 A Self-protected	24 V ---	**ABS7SC3BA**	0.016 *0.035*
				1.5 A	5…48 V ---	**ABS7SC3E**	0.016 *0.035*
				1.5 A	24…240 V ∿	**ABS7SA3M**	0.016 *0.035*

Plug-in electromechanical relays

Relay width	Control voltage	Output current *(1)*	Number of contacts	Order in multiples of	Unit reference	Weight **kg** *lb*
5 mm *0.197 in.*	24 V ---	5 A (Ith)	1 NO	4	**ABR7S11**	0.005 *0.011*
10 mm *0.394 in.*	24 V ---	5 A (Ith)	1 NO	4	**ABR7S21**	0.008 *0.018*
			1 C/O	4	**ABR7S23**	0.008 *0.018*
12 mm *0.472 in.*	2 V ---	10 A (Ith)	1 C/O	4	**ABR7S33**	0.017 *0.037*
		8 A (Ith)	2 C/O	4	**ABR7S37**	0.017 *0.037*
	48 V ---	8 A (Ith)	1 C/O	4	**ABR7S33E**	0.017 *0.037*

Accessory for relays

Description	Reference	Weight **kg** *lb*
Extractor for 5 mm *(0.197 in.)* **miniature relay**	**ABE7ACC12**	0.010 *0.022*

(1) In DC mode (---) nominal voltage varies from 5 to 48 V. In AC mode (∿) nominal voltage varies between 24 and 240 V.
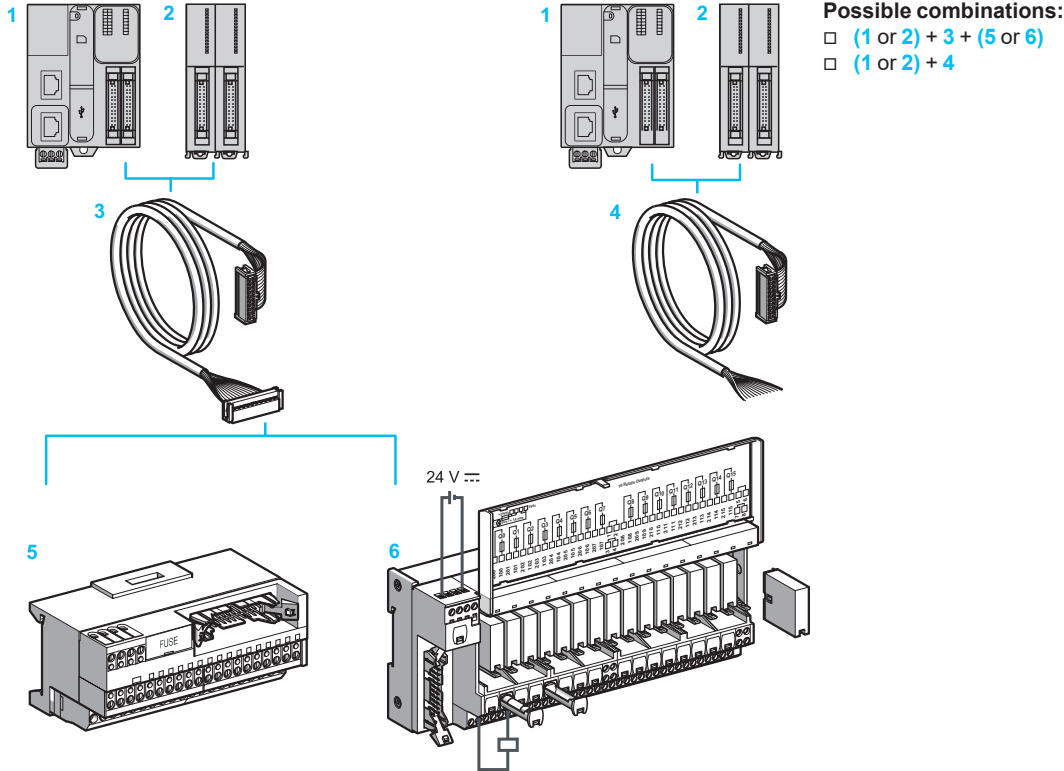
Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for M221 Book logic controllers and Modicon TM3 expansion modules

Telefast pre-wired system with Modicon ABE7

For 32-channel Modicon M221 Book logic controller and Modicon TM3 digital I/O expansion modules

Possible combinations:
- ☐ **(1** or **2)** + **3** + **(5** or **6)**
- ☐ **(1** or **2)** + **4**

1 32-channel Modicon M221 Book logic controllers (TM221M32TK, TM221ME32TK), equipped with HE 10 connectors
2 Digital I/O modules (TM3D●●●●K) with 16 or 32 I/O, equipped with HE 10 connectors
3 **ABFTE20●●●** cordsets with one HE 10 connector at each end
4 TWDFCW●●● cordsets with an HE 10 connector at one end and flying leads at the other end for direct connection to sensors, preactuators, and terminal blocks
5 Optimum "miniature" sub-bases
6 16-channel sub-base for expansion modules

Combinations

Combinations of Modicon ABE7 sub-bases with M221 Book logic controllers and Modicon TM3 expansion modules

Modicon Telefast sub-bases		Modicon M221 Book logic controllers		Modicon TM3 I/O expansion modules		
		TM221M32TK, TM221ME32TK		TM3DI16K, TM3DI32K	TM3DQ16TK, TM3DQ32TK	TM3DQ16UK, TM3DQ32UK
Type	Reference	Inputs	Outputs (Source)	Inputs	Outputs (Source)	Outputs (Sink)
Passive sub-bases	**ABE7H20E000**	🟩	🟦	🟩	🟦	
	ABE7H16C10	🟩	🟦	🟩	🟦	
	ABE7H16C11	🟩	🟦	🟩	🟦	
	ABE7H16C21	🟩	🟦	🟩	🟦	
	ABE7H16C31	🟩	🟦	🟩	🟦	
Electromechanical relay output sub-bases	**ABE7R16S111**		🟦		🟦	
	ABE7R16S111E		🟦		🟦	
	ABE7R16T111		🟦		🟦	
Empty sub-base for solid state or electromechanical relay	**ABE7P16T111**		🟦		🟦	

🟩	Compatible with inputs. For use with ABFTE20EP●●●● cordsets (1)
🟦	Compatible with outputs. For use with ABFTE20SP●●●● cordsets (1)
⬜	Not compatible

(1) Available lengths: 1, 2, and 3 m (3.28, 6.56 and 9.84 ft).

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Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for M221 Book logic controllers
and Modicon TM3 expansion modules

Combinations

Combinations of Modicon ABE7 sub-bases with M221/M241/M251 Book logic controllers and Modicon TM3 expansion modules

Modicon Telefast sub-bases		Other Modicon M221/M241/M251 logic controllers		Other Modicon M221/M241/M251 logic controllers: connection via Modicon TM3 I/O expansion modules		
		No HE10 connectors		TM3DI16K, TM3DI32K	TM3DQ16TK, TM3DQ32TK	TM3DQ16UK, TM3DQ32UK
Type	Reference	–	–	Inputs	Outputs (Source)	Outputs (Sink)
Passive sub-bases	ABE7H16C10			green	blue	
	ABE7H16C11			green	blue	
	ABE7H16C21			green	blue	
	ABE7H16C31			green	blue	
	ABE7H16F43				blue	
	ABE7H16R10			green	blue	
	ABE7H16R11				blue	
	ABE7H16R20				blue	
	ABE7H16R21				blue	
	ABE7H16R31				blue	
	ABE7H16R50				blue	
	ABE7H16S21				blue	
	ABE7H16S43				blue	
	ABE7H20E000				blue	
Solid state relay input sub-bases	ABE7P16F310			green		
	ABE7P16F312			green		
Output sub-bases for solid state and/or electromechanical relays	ABE7P16T111				blue	
	ABE7P16T210				blue	
	ABE7P16T214				blue	
	ABE7P16T215				blue	
	ABE7P16T318				blue	
	ABE7P16T330				blue	
	ABE7P16T334				blue	
Electromechanical relay output sub-bases	ABE7R16S111				blue	
	ABE7R16S111E				blue	
	ABE7R16S210				blue	
	ABE7R16S212				blue	
	ABE7R16T111				blue	
	ABE7R16T210				blue	
	ABE7R16T212				blue	
	ABE7R16T230				blue	
	ABE7R16T330				blue	
	ABE7R16T370				blue	
Solid state relay input sub-bases	ABE7S16E2B1			green		
	ABE7S16E2E0			green		
	ABE7S16E2E1			green		
	ABE7S16E2F0			green		
	ABE7S16E2M0			green		
	ABE7S16S1B2				blue	
	ABE7S16S2B0				blue	

green — Compatible with inputs. For use with ABFTE20EP●●●● cordsets (1)
blue — Compatible with outputs. For use with ABFTE20SP●●●● cordsets (1)
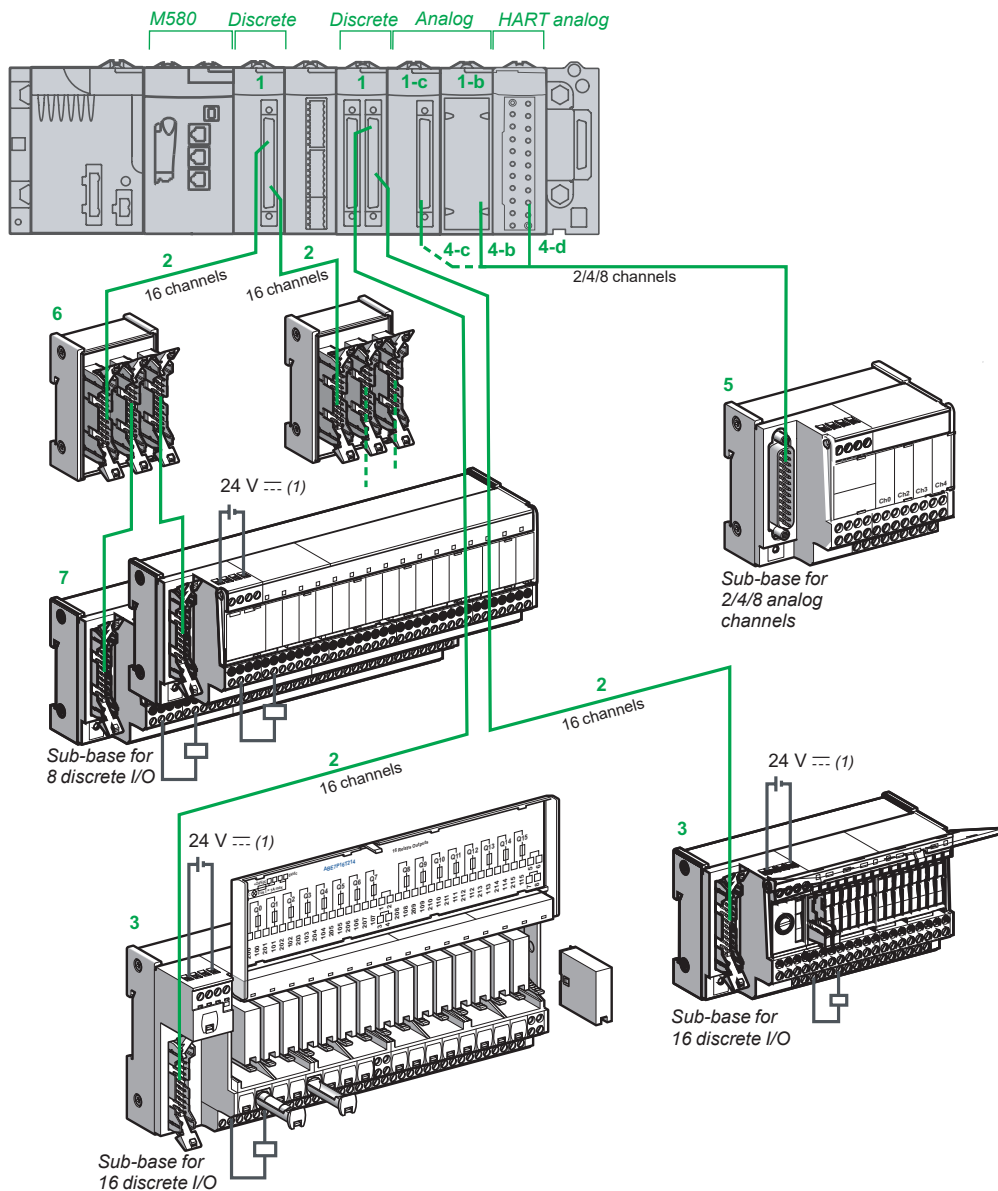Not compatible

(1) Available lengths: 1, 2, and 3 m (3.28, 6.56 and 9.84 ft).

Presentation

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon X80 I/O modules

Sub-base for 2/4/8 analog channels

Sub-base for 8 discrete I/O

Sub-base for 16 discrete I/O

Sub-base for 16 discrete I/O

(1) The 24 V ⎓ power supply is connected using Modicon Telefast ABE7 sub-bases only. The 0 V ⎓ connections must be equipotential.

Selection guide:
pages 10 to 15

References:
pages 16 to 23

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Presentation (continued)

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon X80 I/O modules

Presentation

I/O modules on the Modicon X80 platform

1 Discrete input modules (BMXDDI●●02K), discrete output modules (BMXDDO●●02K), and discrete mixed I/O modules (BMXDDM3202K) equipped with one or two 40-way FCN connectors. The modularity of each module (●●) is 32 or 64 channels.

☐ **1-b** Analog input or output modules:
- Analog inputs: **BMXAMI0410** (4 channels), **BMXAMI0800** (4 channels), and **BMXAMI0810** (8 channels)
- Analog outputs: **BMXAMO0210** (2 channels), **BMXAMO0410** (4 channels), and **BMXAMO0802** (8 channels)

☐ **1-c** Analog input modules **BMXART0414** (4 channels) and **BMXART0814** (8 channels)

☐ **1-d** HART analog I/O modules **BMEAHI0812** (8 channels) and **BMEAHO0412** (4 channels)

2 2 types of cordset are available depending on the type of discrete module connected to the sub-base (for combinations, see page 28). These cordsets are available in 0.5, 1, 2, 3, 5, or 10 m/*1.64, 3.28, 6.56, 9.84, 16.40, and 32.81 ft* lengths:
- **BMXFCC●●●1** cordsets with 20-wire sheath (*AWG 22*) equipped with one 40-way FCN connector on the module end and one HE 10 molded connector on the Telefast sub-base end
- **BMXFCC●●●3** cordsets with two 20-wire sheaths (*AWG 22*) equipped with one common 40-way FCN connector on the module end and two HE 10 molded connectors on the Telefast sub-base end

3 16-channel Modicon Telefast ABE 7 Optimum or Universal passive connection sub-bases or adapter sub-bases

4 4 types of cordset are available depending on the type of analog module connected to the sub-base (for combinations, see page 29)

☐ **4-b** : Connection to analog module with 20-way or 28-way removable terminal block:
- **BMXFCA●●0** cordsets with a 20-way removable terminal block on the module end and a 25-way SUB-D connector on the Telefast sub-base end. Cordsets are available in 1.5 or 3 m/*4.92 or 9.84 ft* lengths.
- **BMXFTA●●2** cordsets with a 20-way terminal block on the module end and a 25-way SUB-D connector on the Telefast sub-base end. Cordsets are available in 1.5 or 3 m/*4.92 or 9.84 ft* lengths.
- **BMXFTA●●0** cordsets with a 28-way terminal block on the module end and a 25-way SUB-D connector on the Telefast sub-base end. Cordsets are available in 1.5 or 3 m/*4.92 or 9.84 ft* lengths.

☐ **4-c** : Connection to analog module with 40-way FCN connector:
- **BMXFCA●●2** cordsets with a 40-way FCN connector on the module end and a 25-way SUB-D connector on the Telefast sub-base end. Cordsets are available in 1.5 or 3 m/*4.92 or 9.84 ft* lengths.

☐ **4-d** : Connection to HART analog input module:
- **BMXFTA1522/3022** cordsets with a 20-way removable terminal block at the module end and a 25-way SUB-D connector at the Telefast sub-base end. Cordsets are available in 1.5 or 3 m/*4.92 or 9.84 ft lengths.* Connection to HART analog input module:
- **BMXFCA●●0** (see description in section **4-b**)

5 Modicon Telefast ABE7CPA analog and application-specific connection sub-bases (for combinations, see pages 29):
- **ABE7CPA410** allows connection on a screw terminal block of 4 current/voltage inputs, with provision and distribution of 4 isolated protected power supplies for the current loop inputs
- **ABE7CPA412** allows connection on a screw terminal block of 4 thermocouple inputs, with supply of cold-junction compensation for these inputs
- **ABE7CPA21** allows connection on a screw terminal block of 4 current/voltage outputs
- **ABE7CPA02** allows connection on a screw terminal block of 8 current/voltage I/O
- **ABE7CPA03** allows connection on a screw terminal block of 8 inputs, with provision and distribution of the power supply (with limitation of each current loop) for the current/voltage outputs of the **BMXAMO0210** analog module
- **ABE7CPA31, ABE7CPA31E** allow connection on a screw terminal block (ABE7CPA31) or a spring-type terminal block (ABE7CPA31E) of 8 inputs, with provision and distribution of the power supply (limited to 25 mA per input)

6 **ABE7ACC02 sub-base for splitting 16 into 2 x 8 channels**, allowing connection of 8 channels

7 8-channel Modicon Telefast ABE 7 Optimum or Universal passive connection sub-bases or adapter sub-bases

Combinations

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon X80 I/O modules

Combinations of discrete inputs/outputs on the Modicon X80 platform with ABE7 sub-bases

(Items 1…7), see Presentation on page 26		Discrete I/O modules for Modicon X80				
		Reference for 24 V ⎓ discrete I/O modules (item 1)				
		Inputs		Outputs		I/O
		2 x 16 I	4 x 16 I	2 x 16 Q	4 x 16 Q	1 x 16 I, 1 x 16 Q
		BMXDDI3202K	BMXDDI6402K	BMXDDO3202K	BMXDDO6402K	BMXDDM3202K
Required cordsets						
Preassembled cordsets (connectors at both ends)	BMXFCC●●1, BMXFCC●●3 (item 2) (1)	Yes	Yes	Yes	Yes	No
	BMXFCC●●3 (item 2) (1)	No	No	No	No	Yes
	Quantities to be ordered	1	2	1	2	1
Passive connection sub-bases						
Optimum 16 channels (item 3)	ABE7H34E100, ABE7H34E200 "Economy" (2)	🟩	🟩	🟩	🟩	🟩
	ABE7H16C●● "Miniature"	🟩	🟩	🟩	🟩	🟩
Universal 8 channels (item 7)	ABE7H08R21	🟩 (3)	🟩 (3)	🟩 (3)	🟩 (3)	🟩 (3)
Universal 16 channels (item 3)	ABE7H16R1●●	🟩	🟩	🟩	🟩	🟩
	ABE7H16R50	🟩	🟩	🟩	🟩	🟩
	ABE7H16R2●●	🟩	🟩	🟩	🟩	🟩
	ABE7H16S21	🟩	🟩	🟩	🟩	🟩
	ABE7H16S31	🟩	🟩	🟩	🟩	🟩
	ABE7H16R23	🟩	🟩			
	ABE7H16S43					
	ABE7H16F43			🟩	🟩	
Input adapter sub-bases with solid state relays						
Universal 16 channels (item 3)	ABE7S16E2●●● Fixed solid state relays, removable terminal blocks	🟩	🟩			🟩
	ABE7P16F310, ABE7P16F312 Plug-in solid state relays	🟩	🟩			🟩
Output adapter sub-bases with fixed relays, removable terminal blocks						
Optimum & Universal 8 channels (item 7)	ABE7R08S111, ABE7R08S210 Electromechanical relays			🟩 (3)	🟩 (3)	🟩 (3)
Optimum & Universal 16 channels (item 3)	ABE7S16S●B●● Solid state relays			🟩	🟩	🟩
	ABE7R16S111●, ABE7R16S210, ABE7R16S212 Electromechanical relays			🟩	🟩	🟩
Output adapter sub-bases with plug-in relays						
Optimum & Universal 16 channels (item 3)	ABE7R16T●●●, ABE7R16M111 Electromechanical relays			🟩	🟩	🟩
	ABE7P16T●●● Solid state and/or electromechanical relays			🟩	🟩	🟩
Sub-bases for analog I/O						
4 channels (item 5)	ABE7CPA410					
	ABE7CPA412					
2 channels (item 5)	ABE7CPA21					
8 channels (item 5)	ABE7CPA02					
	ABE7CPA03					
	ABE7CPA31, ABE7CPA31E					

🟩 Compatible
⬜ Not compatible

(1) References for cordsets to be completed; please refer to our "Modicon X80 I/O Platform" offer for Modicon M340, Modicon M580, and Modicon Quantum.
(2) ABE7H34E100 kit: ABE7H20E000 Optimum "Economy" sub-base + ABFH34M100 cordset (1 m/3.28 ft) included. ABE7H34E200 kit: ABE7H20E000 Optimum "Economy" sub-base + ABFH34M200 cordset (2 m/6.56 ft) included.
(3) Via 6 ABE7ACC02 splitter sub-base used to separate 16 channels into 2 x 8 channels.

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon X80 I/O modules

Combinations of analog inputs/outputs on the Modicon X80 platform with ABE7 sub-bases

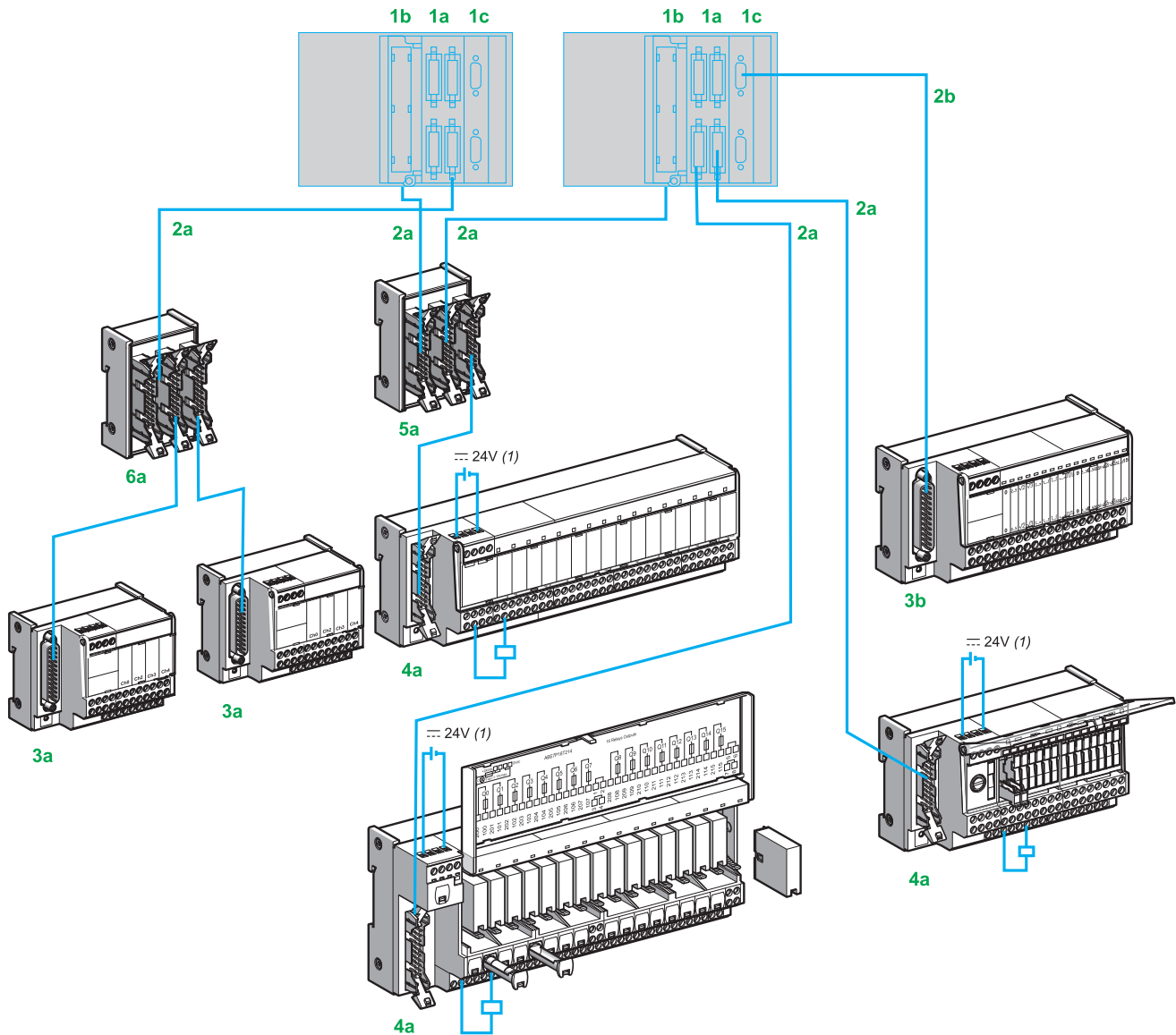| (Items 1…7), see Presentation on page 26	Analog I/O modules for Modicon X80									
	Reference for analog I/O modules (item 1-b, 1-c and 1-d)									
	Inputs						Outputs			
	4	4	2 x 4	8	8	8	2	4	8	4
	BMX AMI 0410	BMX ART 0414	BMX ART 0814	BMX AMI 0800	BMX AMI 0810	BME AHI 0812	BMX AMO 0210	BMX AMO 0410	BMX AMO 0802	BME AHO 0412
Required cordsets										
Preassembled cordsets (connectors at both ends) — BMXFCA●●0 (item 4-b) (1)	Yes	No	No	No	No	No	Yes	Yes	No	Yes
BMXFCA●●2 (item 4-c) (1)	No	Yes	Yes	No	No	No	No	No	No	No
BMXFTA●●0 (item 4-c) (1)	No	No	No	Yes	Yes	No	No	Yes	No	No
BMXFTA●●2 (item 4-c) (1)	No	No	No	No	No	No	No	No	Yes	No
BMXFTA●●22 (item 4-d) (1)	No	No	No	No	No	Yes	No	No	No	No
Quantities to be ordered	1	1	2	1	1	1	1	1	1	1
Passive connection sub-bases										
Optimum 16 channels (item 3) — ABE7H16C●● "miniature"										
Universal 8 channels (item 7) — ABE7H08R21										
Universal 16 channels (item 3) — ABE7H16R1●●										
ABE7H16R50										
ABE7H16R2●●										
ABE7H16S21										
ABE7H16S31										
ABE7H16R23										
ABE7H16S43										
ABE7H16F43										
Input adapter sub-bases with solid state relays										
Universal 16 channels (item 3) — ABE7S16E2●●● Fixed solid state relays, removable terminal blocks										
ABE7P16F310, ABE7P16F312 Plug-in solid state relays										
Output adapter sub-bases with fixed relays, removable terminal blocks										
Optimum & Universal 8 channels (item 7) — ABE7R08S111, ABE7R08S210 Electromechanical relays										
Optimum & Universal 16 channels (item 3) — ABE7S16S●B●● Solid state relays										
ABE7R16S111●, ABE7R16S210, ABE7R16S212 Electromechanical relays										
Output adapter sub-bases with plug-in relays										
Optimum & Universal 16 channels (item 3) — ABE7R16T●●●, ABE7R16M111 Electromechanical relays										
ABE7P16T●●● Solid state and/or electromechanical relays										
Sub-bases for analog I/O										
4 channels (item 5) — ABE7CPA410	■									
ABE7CPA412		■	■							
2 channels (item 5) — ABE7CPA21							■	■		■
8 channels (item 5) — ABE7CPA02				■	■	■			■	
ABE7CPA03				■	■					
ABE7CPA31				■	■	■				
ABE7CPA31E				■	■					

■ Compatible
☐ Not compatible

(1) References for cordsets to be completed; please refer to our "Modicon X80 I/O Platform" offer for Modicon M340, Modicon M580, and Modicon Quantum.

Presentation

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon Premium platform

1a Discrete I/O modules equipped with HE 10 connectors

1b Analog I/O modules, equipped with 25-way SUB-D connectors

1c Application-specific modules with screw terminals

2a A single type of cordset equipped with 20-way HE 10 connectors, for 8,12, or 16-channel modularity. The HE 10 connectors can be molded, **TSXCDP●●●** (AWG 22) or insulation piercing, **ABFH20H●●●** (AWG 28).
These cordsets are available in various lengths. They use AWG 28 (0.08 mm^2) for connecting input and output sub-bases rated 100 mA directly, as well as sub-bases with relays.
Adapter **ABE7ACC02** allows connection of sub-bases with 8-channel modularity.

2b All analog signals are connected with a **TSXCAP030/100** preassembled cordset equipped with 25-way SUB-D connectors, to provide shielding continuity.

3a 8-channel Modicon Telefast ABE7 sub-bases

3b Sub-bases dedicated to counter and analog channels:
- **ABE7CPA02** for connecting current, voltage, or PT100 inputs on a screw terminal block
- **ABE7CPA03** with 4-20 mA sensor loop power supply and 25 mA/channel limiter
- **ABE7CPA21** for connecting output modules with 4 analog channels on a screw terminal block
- **ABE7CPA31** with the 4-20 mA sensor loop isolated power supply for 8 input channels isolated from one another
- **ABE7CPA11** for connecting an absolute encoder with parallel outputs
- **ABE7CPA12** for connecting 16 thermocouple probes

4a 16-channel Modicon Telefast ABE7 sub-bases

5a Splitter sub-bases for connecting discrete I/O in parallel from a Modicon Telefast ABE7 sub-base on 2 different PLCs:
- **ABE7ACC10** for output redundancy
- **ABE7ACC11** for input redundancy

6a **ABE7CPA01** sub-base dedicated to connecting axis control and counter inputs on a terminal block

The 24 V power supply is connected using Telefast sub-bases only. The 0 V connections must be equipotential.

Combinations

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon Premium platform

Combinations of discrete I/O on the Modicon Premium platform with ABE7 sub-bases

(For item numbers, see Presentation on page 30)		Discrete I/O modules for Modicon Premium					
		Reference for 24 V ⎓ discrete I/O modules (item 1a)					
		Inputs			Outputs	I/O	
		4 x 16 I 2 x 16 I	2 x 16 I	1 x 16 I	4 x 16 Q 2 x 16 Q	1 x 16 I	1 x 12 Q
		TSXDEY64D2K TSXDEY32D2K	TSXDEY32DK	TSXDEY16FK	TSXDSY64T2K TSXDSY32T2K	TSXDMY28FK TSXDMY28RFK	
Required cordsets							
Preassembled cordsets (connectors at both ends)	TSXCDP●●3 (item 2a), see page 21	Yes	Yes	Yes	Yes	Yes	Yes
	ABFH20H●●0 (item 2a), see page 20	Yes	Yes	Yes	Yes	Yes	Yes
Passive connection sub-bases							
Universal 8 channels (item 3a)	ABE7H08R21	*(1)*		*(1)*	*(1)*	*(1)*	
Universal 16 channels (item 4a)	ABE7H16R●●		ABE7H16R20				
	ABE7H16C●●		ABE7H16R20				
	ABE7H20E●●● (2)		ABE7H16R20				
	ABE7H16S21						
	ABE7H16R23						
	ABE7H16F43						
	ABE7H16S43						
Input adapter sub-bases with solid state relays							
Universal 16 channels (item 4a)	ABE7S16E2●● Fixed solid state relays, removable terminal blocks						
	ABE7P16F3●● Plug-in solid state relays						
Output adapter sub-bases with fixed relays, removable terminal blocks							
Optimum & Universal 8 channels (item 3a)	ABE7R08S111, ABE7R08S210 Electromechanical relays				*(1)*		
Optimum & Universal 16 channels (item 4a)	ABE7S16S●●● Solid state relays						
	ABE7R16S●●● Electromechanical relays						
Output adapter sub-bases with plug-in relays							
Optimum & Universal 16 channels (item 4a)	ABE7R16T●●● Electromechanical relays						
	ABE7P16T●●● Solid state and/or electromechanical relays						

Compatible
Not compatible

(1) Using splitter sub-base ABE7ACC02, which allows 16 channels to be split into 2 x 8 channels.
(2) ABE7H20E●●● low-cost sub-bases including cordset.

Combinations (continued)

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon Premium platform

Combinations of analog I/O on the Modicon Premium platform with ABE7 sub-bases

(For item numbers, see Presentation on page 30)		Analog I/O modules for Modicon Premium						
		Reference for analog I/O modules (item 1b)						
		Inputs				Outputs		Thermocouple inputs
		2 x 8 I	8 I	8 I	4 I	4 Q	8 Q	2 x 8 I
		TSXAEY1600	**TSXAEY800**	**TSXAEY810**	**TSXAEY420**	**TSXASY410**	**TSXASY800**	**TSXAEY1614**
Required cordsets								
Preassembled cordsets (connectors at both ends)	TSXCAP●●0 (item 2b)	Yes	Yes	Yes	Yes	(2)	Yes	Yes
Passive connection sub-bases								
Universal 8 channels (item 3a)	ABE7H08R21							
Universal 16 channels (item 4a)	ABE7H16R●●							
	ABE7H16C●●							
	ABE7H20E●●● (1)							
	ABE7H16S21							
	ABE7H16R23							
	ABE7H16F43							
	ABE7H16S43							
Input adapter sub-bases with solid state relays								
Universal 16 channels (item 4a)	ABE7S16E2●● Fixed solid state relays, removable terminal blocks							
	ABE7P16F3●● Plug-in solid state relays							
Output adapter sub-bases with fixed relays, removable terminal blocks								
Optimum & Universal 8 channels (item 3a)	ABE7R08S111, ABE7R08S210 Electromechanical relays							
Optimum & Universal 16 channels (item 4a)	ABE7S16S●●● Solid state relays							
	ABE7R16S●●● Electromechanical relays							
Output adapter sub-bases with plug-in relays								
Optimum & Universal 16 channels (item 4a)	ABE7R16T●●● Electromechanical relays							
	ABE7P16T●●● Solid state and/or electromechanical relays							
Sub-bases for analog channels								
ABE7CPA01 (item 6a)								
ABE7CPA11 (item 3b)								
ABE7CPA02 (item 3b)		Compatible	Compatible	Compatible	Compatible		Compatible	Compatible
ABE7CPA21 (item 3b)					(2)	Compatible	Compatible	
ABE7CPA03 (item 3b)		Compatible	Compatible	Compatible	(3)			
ABE7CPA31 (item 3b)				Compatible				
ABE7CPA12 (item 3b)								Compatible

Compatible
Not compatible

(1) **ABE7H20E●●●** *low-cost sub-bases including cordset*
(2) **ABFY25S200** *cabled connector equipped with* **TSXBLY01** *terminal block*
(3) *Only the first 4 channels are balanced.*

Combinations (continued)

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon Premium platform

Combinations of application-specific I/O on the Modicon Premium platform with ABE7 sub-bases

(For item numbers, see Presentation on page 30)		Application-specific I/O modules for Modicon Premium					
		Reference for application-specific I/O modules (item 1c)					
		Axis control		Counter		High-speed counter	
		Speed reference	Auxiliary inputs	Auxiliary inputs	Counter	Auxiliary inputs	Counter
		TSXCAY●1, TSXCFY●A		TSXCTY●A		TSXCTY2C	
Required cordsets							
Preassembled cordsets (connectors at both ends)	TSXCAP030 (item 2b)	Yes	No	No	Yes	No	Yes
	TSXCDP●●3 (item 2a)	No	Yes	Yes	No	Yes	No
Passive connection sub-bases							
Universal 8 channels (item 3a)	ABE7H08R21					■	
Universal 16 channels (item 4a)	ABE7H16R●●		ABE7H16 R20	ABE7H16 R20 (1)		ABE7H16 R20 (1)	
	ABE7H16C●●		ABE7H16 R20	ABE7H16 R20 (1)			
	ABE7H20E●●● (2)		ABE7H16 R20	ABE7H16 R20 (1)			
	ABE7H16S21						
	ABE7H16R23						
	ABE7H16F43						
	ABE7H16S43						
Input adapter sub-bases with solid state relays							
Universal 16 channels (item 5)	ABE7S16E2●● Fixed solid state relays, removable terminal blocks						
	ABE7P16F3●● Plug-in solid state relays						
Output adapter sub-bases with fixed relays, removable terminal blocks							
Optimum & Universal 8 channels (item 3a)	ABE7R08S111, ABE7R08S210 Electromechanical relays						
Optimum & Universal 16 channels (item 4a)	ABE7S16S●●● Solid state relays						
	ABE7R16S●●● Electromechanical relays						
Output adapter sub-bases with plug-in relays							
Optimum & Universal 16 channels (item 4a)	ABE7R16T●●● Electromechanical relays						
	ABE7P16T●●● Solid state and/or electromechanical relays						
Sub-bases for counter channels							
ABE7CPA01 (item 6a)		■			■		■
ABE7CPA11 (item 3b)		■ (3)					■
ABE7CPA02 (item 3b)							
ABE7CPA21 (item 3b)							
ABE7CPA03 (item 3b)							
ABE7CPA31 (item 3b)							
ABE7CPA12 (item 3b)							

■ Compatible
☐ Not compatible

(1) 2-channel connection
(2) ABE7H20E●●● low-cost sub-bases including cordset
(3) Compatible with module TSXCAY●1 only.

Presentation

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for I/O modules for
Modicon Quantum platforms

24 V *(1)*

24 V *(1)*

24 V *(1)*

24 V *(1)*

24 V *(1)*
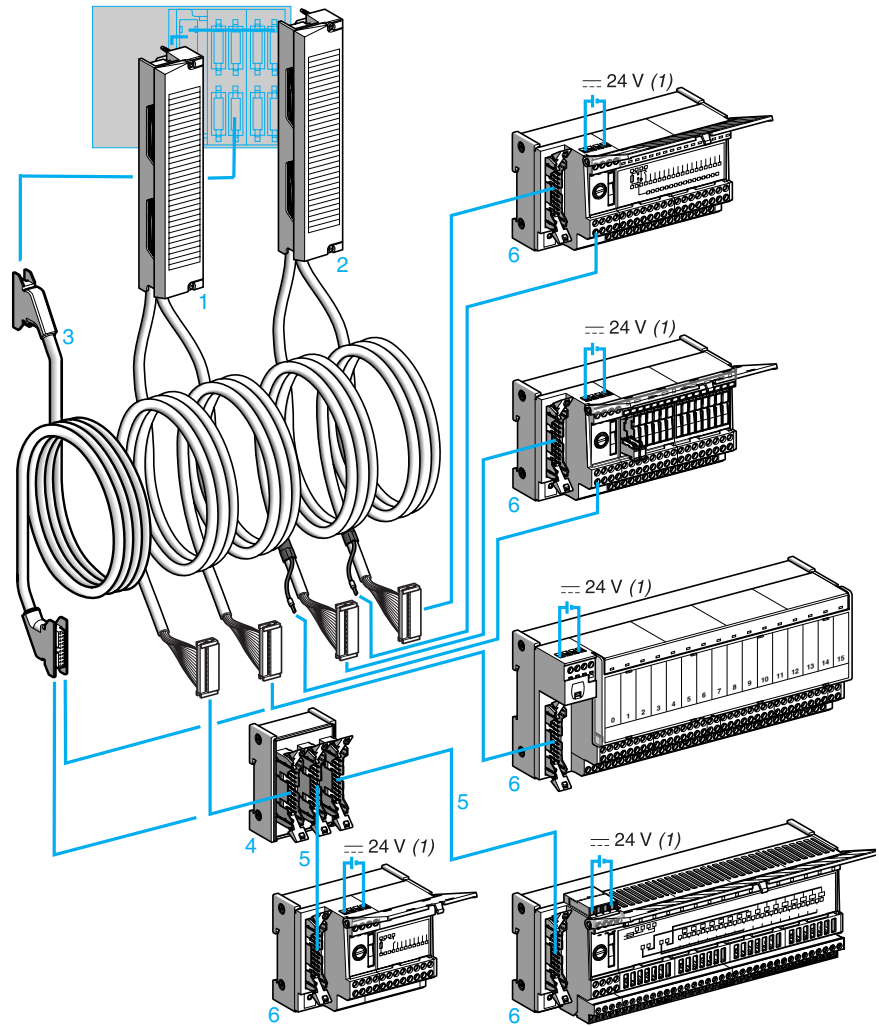
1-2 Cabled connectors combining a standard screw terminal block, two multicore (AWG 22) cables and two 20-way HE 10 connectors. Two types of cabled connector are available:
□ **ABFM32H150, ABFM32H300 1** cabled connectors for I/O modules (32 channels) on the Modicon Quantum platform, with 2 HE 10 connectors each integrating 16 channels
□ **ABFM32H301 2** cabled connector I/O modules (32 channels) on the Modicon Quantum platform, with 2 HE 10 connectors each integrating 16 channels and an external power supply with a direct connection to the terminal marked *(1)* on the sub-bases **6**.

ABFM08S202 cabled connector for analog I/O modules (8 channels) on the Modicon Quantum platform equipped with a standard screw terminal block at one end and a 25-way SUB-D connector at the other end

3 Cordsets (AWG 22) equipped with a 20-way HE 10 connector **TSXCDP053/●03** for 96-channel I/O modules (connected on six 20-way HE 10 connectors)

4 **ABE7ACC02** splitter box (16 to 2 x 8 channels) for use with 8-channel sub-bases

5 A single type of cordset equipped with 20-way HE 10 connectors, irrespective of the 8 or 16-channel modularity. The HE 10 connectors can be molded **TSXCDP●●●** or insulation piercing **ABFH20H●●●**.

6 8 and 16-channel connection sub-bases from the Modicon ABE 7 range

(1) The 24 V ⎓ power supply for the Quantum I/O modules must only be connected via Telefast ABE7 sub-bases. The 0 V ⎓ connections must be equipotential.

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for I/O modules for
Modicon Quantum platforms

Quantum I/O modules								
	24 V --- discrete I/O				**Analog I/O**			
	Inputs	Outputs	Inputs	Outputs	Inputs	Outputs		
	32 I	32 Q	96 I	96 Q	8 I	4 Q		8 Q
	140DDI35300 140DDI85300	140DDO35300	140DDI36400	140DDO36400	140AVI03000 140ACI03000	140AVO02000	140ACO02000	140ACO13000
Cabled connectors	ABFM32H150 ABFM32H300	ABFM32H301	–		ABFM08S201	ABFM04S200	ABFM04S201	ABFM 08S202
Cordsets	–		TSXCDP053 TSXCDP●03		–			
Passive sub-bases								
8 channels ABE7H08R21	(1) ○		(1) ●					
16 channels ABE7H16R●●, ABE7H16C●●		○	●					
ABE7H16S21	○	○	●					
ABE7H16R23	(2) ○							
ABE7H16F43								
ABE7H16S43	(3) ○		●					
Input adapter sub-bases								
16 channels ABE7S16E2B1, ABE7P16F310, ABE7P16F312	○		●					
Output adapter sub-bases								
8 channels ABE7R08S●●●		(1) ○		(1) ●				
16 channels ABE7R16S●●●		○		●				
ABE7R16T●●●, ABE7P16T●●●		○		●				
ABE7S16S●●●								
Sub-bases for analog I/O								
4 channels ABE7CPA21						○	○	
8 channels ABE7CPA02					○			○
ABE7CPA03					○			
ABE7CPA31					○			

○ **ABFM32H●●** cabled connectors
● **TSXCDP●●●** cordsets

Note: For harsh environments, **Modicon ABE9** IP67 passive splitter boxes can be used in combination with I/O modules on the Modicon Quantum platform. Main characteristics:
- 8/16 I/O channels
- Connection of 1 to 16 sensors/actuators
- M12 I/O connectors
- Connection to the PLC by connector or multicore cable
- IP67 degree of protection
- Plastic case
Please consult our website www.schneider-electric.com.

(1) With the ABE7ACC02 splitter sub-base (16 channels as 2 x 8).
(2) With 140DDI35300 module only.
(3) With 140DDI85300 module only.

Presentation

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Allen Bradley SLC500 PLCs

Cordsets for Allen Bradley SLC500 PLCs
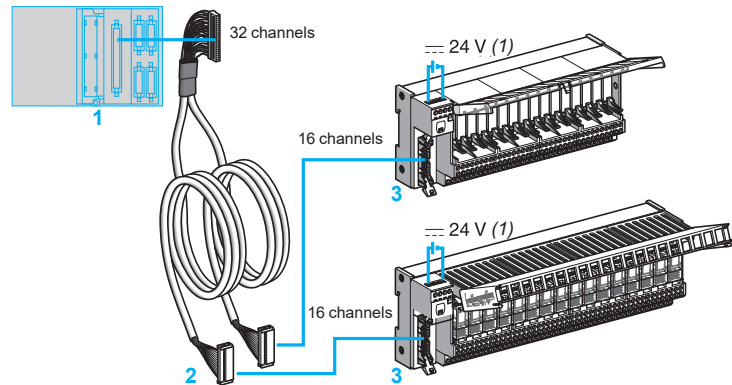
1 For the SLC500 range, specially designed cordsets connect to I/O modules that are equipped with 40-way HE 10 connectors, integrating 32 channels.
2 ABFH40H300 cordset for connecting 16-channel sub-bases. These are preassembled with one 40-way HE 10 connector at the PLC end and 2 x 20-way HE 10 connectors at the Telefast end. Available in 3 m *(9.84 ft)* lengths, AWG 22, there are 2 types of "Y" form cable: one exclusively for inputs and one for outputs.
3 16-channel sub-bases. It is possible to use 8-channel sub-bases by inserting the ABE7ACC02 adapter.

(1) The power may be supplied via the PLC terminal block or via the Telefast sub-base.

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Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Allen Bradley SLC500 PLCs

Combinations

I/O modules for Allen Bradley PLCs

		Allen Bradley		
		SLC500		
		Input		
Integrated in the PLCs		32 I	32 Q	
		1746 IB32	**1746 OB32**	**1746 OV32**
Connection terminal blocks		None		
Cordsets Modularity: 16 channels		**ABFH40H300**	**ABFH40H300**	
Connection sub-bases				
8 channels	**ABE7H08R21**	*(2)*	*(2)*	*(1) (2)*
16 channels	**ABE7H16R●●,** **ABE7H16C●●**			*(1)*
	ABE7H16S21			
	ABE7H16R23			
	ABE7H16F43			
	ABE7H16S43			
Input adapter sub-bases				
16 channels	**ABE7S16E2●●, ABE7P16F3●●**			
Output adapter sub-bases				
8 channels	**ABE7R08S●●●**		*(2)*	
16 channels	**ABE7R16S●●●,** **ABE7R16T●●●**			
	ABE7P16T●●●			
	ABE7S16S●●●		*(3)*	
Sub-bases for analog/counter I/O				
	ABE7CPA01			
	ABE7CPA02			
	ABE7CPA03			
	ABE7CPA21			

(1) With Telefast sub-bases with no channel LED.
(2) With ABE7ACC02 splitter sub-base.
(3) ABE7S16S●B2 sub-base only.

Preassembled cordsets

Presentation

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Siemens S7 PLCs

Cordsets for Siemens S7 PLCs

8 channels

8 channels

24 V *(1)*

16 channels
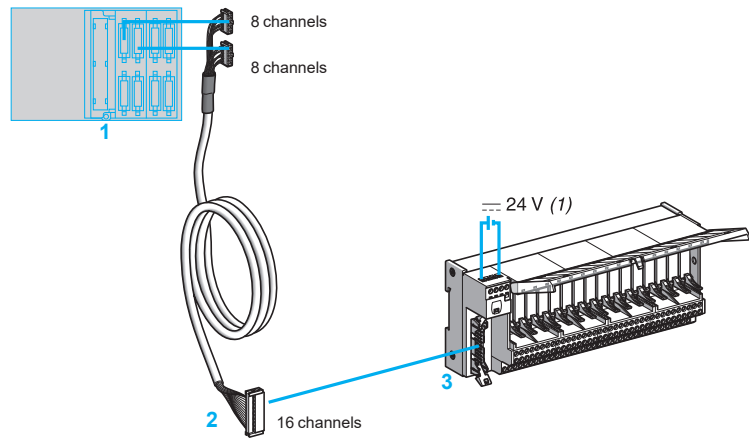
1 The 24 V ⎓ power supply can be provided via 6ES7-●●● terminal blocks connected to the PLC modules.
For the S7200/300/400 ranges, the specially designed cordsets connect to the manufacturer's terminal blocks with 16-way HE10 connectors. Each connector has 8 channels.

2 ABFH32H●●● cordsets for connecting 16-channel sub-bases. These are preassembled with 2 x 16-way HE 10 connectors at the S7 PLC end and one 20-way HE 10 connectors at the Telefast end. Available in 1.5 and 3 m *(4.92 and 9.84 ft)* lengths, AWG 26, these "Y" form cables only connect the I/O controlling the relay sub-bases.

(1) The power may be supplied via the PLC terminal block or via the Telefast sub-base.

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Siemens S7 PLCs

Combinations

I/O modules for Siemens S7 PLCs

	Siemens					
	S7-300				S7-400	
	Input	Input	Output	Output	Input	Output
	16 I	32 I	16 Q	32 Q	32 I	32 Q
Integrated in the PLCs 6ES7	321 1BH01 0AA0	321 1BL00 0AA0	322 1BH01 0AA0	322 1BL00 0AA0	421 1BL00 0AA0	422 1BL00 0AA0
Connection terminal blocks 6ES7	921 3AB00 0AA0	921 3AA20 0AA0	921 3AB00 0AA0	921 3AA20 0AA0	921 4AB00 0AA0	921 4AB00 0AA0
Cordsets Modularity 16 channels	ABFH32H150, ABFH32H300	ABFH32H150, ABFH32H300	ABFH32H150, ABFH32H300	ABFH32H150, ABFH32H300	ABFH32H150, ABFH32H300	ABFH32H150, ABFH32H300
Connection sub-bases						
8 channels **ABE7H08R21**	■	■	■	■	■	■
16 channels **ABE7H16R●●, ABE7H32●●●, ABE7H16C●●**	■	■			■	
ABE7H16S21	■	■			■	
ABE7H16R23, ABE7H16F43						
ABE7H16S43	■	■			■	
Input adapter sub-bases						
16 channels **ABE7S16E2●●, ABE7P16F3●●**	■	■			■	
Output adapter sub-base						
8 channels **ABE7R08S●●●**			■	■		■
16 channels **ABE7R16S●●●**			■	■		■
ABE7R16T●●●			■	■		■
ABE7P16T●●●						■
ABE7S16S●●●			*(1)*	*(2)*		*(2)*
Sub-bases for analog/counter I/O						
ABE7CPA01						
ABE7CPA02						
ABE7CPA03						
ABE7CPA21						

(1) With ABE7S16S2B2 sub-base only
(2) Do not use with ABE7ACC21.

■ Preassembled cordsets

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon TSX Micro PLCs
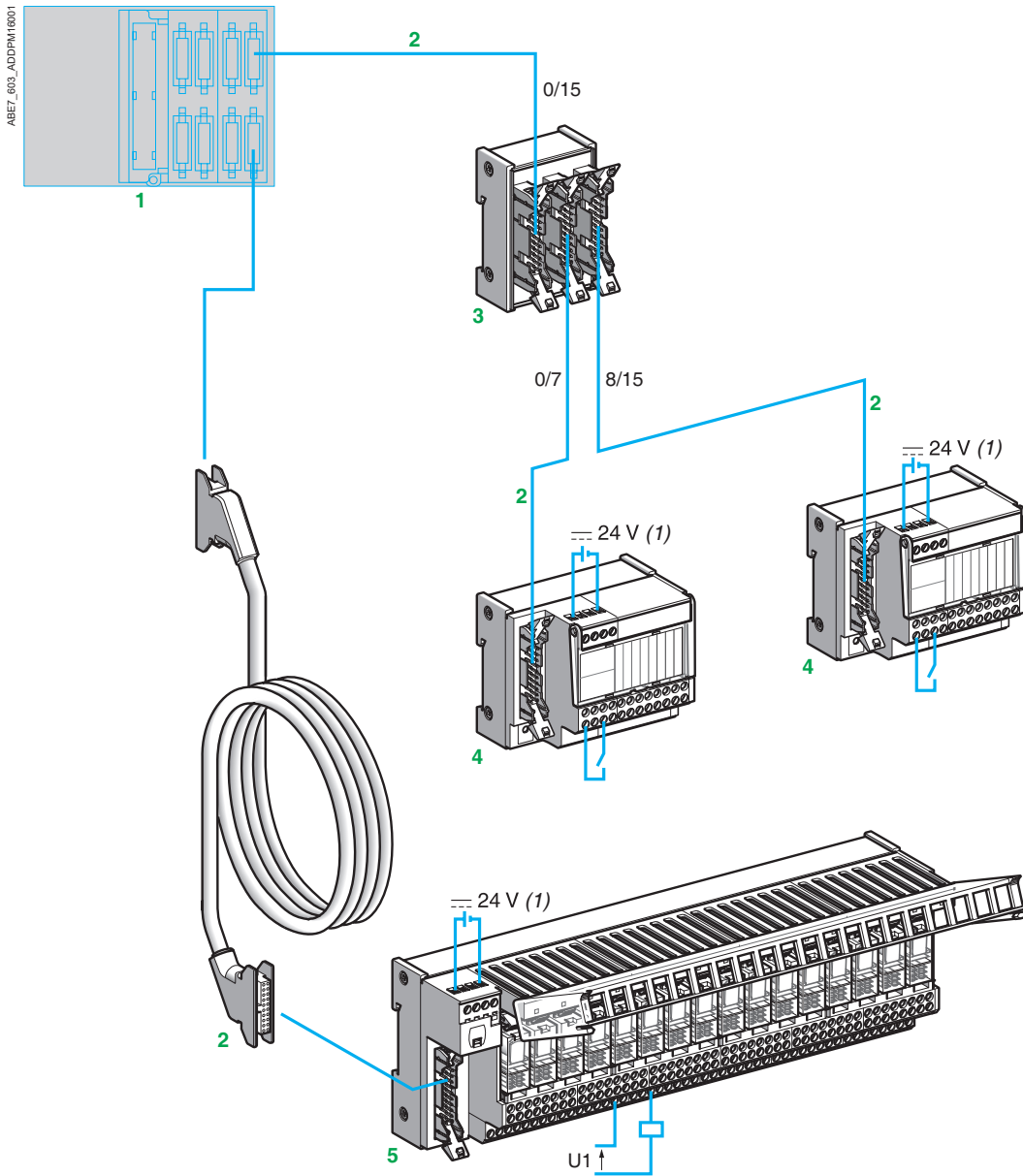
1. I/O modules equipped with HE 10 connectors. Available in modules of 8, 12, 28, and 64 I/O.
2. A single type of cordset equipped with 20-way HE 10 connectors, irrespective of the 8,12, or 16-channel modularity. The HE 10 connectors may be molded (TSXCDP●●●) or insulation piercing (ABFH20H●●●).
   These cordsets are available in 0.5 m/*1.64 ft*, 1 m/*3.28 ft*, 2 m/*6.56 ft*, 3 m/*9.84 ft* and 5 m/*16.40 ft* lengths. They use AWG 28 (0.08 mm²) for connecting inputs and relay sub-bases, and AWG 22 (0.324 mm²) for direct connection of 0.5 A outputs of 8 and 28 I/O modules.
3. 16 channels may be split into 2 x 8 channels using splitter sub-base ABE7ACC02.

4-5 8-channel and 16-channel sub-bases respectively.

(1) The 24 V ⎓ power supply is connected using Telefast sub-bases only. The 0 V ⎓ connections must be equipotential.

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Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon TSX Micro PLCs

Combinations

I/O modules for Modicon TSX Micro PLCs

		24 V ⎓ discrete					Inputs	Outputs	Counter	Counter	Analog and counter
		I/O							Auxiliary inputs	Counter	
		8 I + 8 Q	1 X 16 I	1 X 12 Q	2 X 16 I	2 X 16 Q	1 X 12 I	1 X 8 Q	–	–	–
Integrated in the PLCs TSX		–	3710128DTK1		3710164DTK1		–	–	–	–	3722001
		–	–	–	–	–	–	–	–	–	3722011
With modules TSX		DMZ16DTK	DMZ28DTK	–	DMZ64DTK		DEZ12D2K	DSZ08T2K	CTZ1A	CTZ1A	–
		–	–	–	–	–	–	–	CTZ2A	CTZ2A	–

Connection sub-bases

	8 I + 8 Q	1 X 16 I	1 X 12 Q	2 X 16 I	2 X 16 Q	1 X 12 I	1 X 8 Q	Aux. inputs	Counter	Analog/counter
8 channels ABE7H08R21		■ *(1)*		■ *(1)*	■ *(1)*		■			
16 channels ABE7H16R••, ABE7H16C••, ABE7H20E•••		■		■				■ ABE7H16R20 *(2)*		
ABE7H16S21		■		■						
ABE7H16R23		■								
ABE7H16F43					■					
ABE7H16S43	■			■						

Input adapter sub-bases

	8 I + 8 Q	1 X 16 I	1 X 12 Q	2 X 16 I	2 X 16 Q	1 X 12 I	1 X 8 Q	Aux. inputs	Counter	Analog/counter
16 channels ABE7S16E2••		■		■		■ *(3)*				
ABE7P16F3••		■		■		■ *(3)*				

Input and output adapter sub-bases

	8 I + 8 Q	1 X 16 I	1 X 12 Q	2 X 16 I	2 X 16 Q	1 X 12 I	1 X 8 Q	Aux. inputs	Counter	Analog/counter
16 channels 8 I + 8 Q ABE7H16CM21	■									
ABE7R16M111	■									

Output adapter sub-bases

	8 I + 8 Q	1 X 16 I	1 X 12 Q	2 X 16 I	2 X 16 Q	1 X 12 I	1 X 8 Q	Aux. inputs	Counter	Analog/counter
8 channels ABE7R08S111, ABE7R08S210					■ *(1)*		■			
16 channels ABE7S16S•••					■					
ABE7R16S•••			■ *(4)*		■					
ABE7R16T•••			■ *(4)*		■					
ABE7P16T•••			■ *(4)*		■					

Sub-bases for analog/counter I/O

	8 I + 8 Q	1 X 16 I	1 X 12 Q	2 X 16 I	2 X 16 Q	1 X 12 I	1 X 8 Q	Aux. inputs	Counter	Analog/counter
ABE7CPA01									■	■
ABE7CPA11										
ABE7CPA02										
ABE7CPA03										

(1) Using splitter sub-base ABE7ACC02, which allows 16 channels to be split into 2 x 8 channels
(2) With module TSXCTZ2A, to be used with sub-bases with no LED.
(3) The last four channels are not used.
(4) The last four channels are not used and remain at state 1.

■ Preassembled cordsets

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Twido controller and Modicon TM2 I/O expansion modules

Presentation

Relay and connection functions, with or without polarity distribution, significantly reduce wiring time and eliminate the risk of error.

The Telefast pre-wired system allows fast, reliable and economical remote connection of I/O modules (24 V ⎓ discrete) to operative parts, partly eliminating the single-wire connection and intermediate terminal blocks.

The Telefast ABE7 system can only be connected to Twido modules and Modicon TM2 expansion modules equipped with HE 10 connectors. It consists of cordsets and interface sub-bases.

The Telefast ABE7 range is suitable for all types of connection found in control system devices:
□ I/O located in the PLC cabinet
□ I/O located directly on the machine or in auxiliary enclosures

All the I/O connection sub-bases comprise output terminals on 2 rows:
■ 1st row: connection of the signal
■ 2nd row: connection of the common
□ 24 V ⎓ for the inputs
□ 0 V for the outputs
A 3rd row of optional terminals ABE7BV20 may be added for connecting another common.

These I/O sub-bases are available in different configurations:

Sub-bases for Twido modular base controllers

■ **ABE7B20MPN20:** Sub-base with 12 passive inputs + 8 passive outputs

■ **ABE7B20MPN22:** Sub-base with 12 passive inputs + 8 passive outputs
□ individual fuse protection for each output (0.315 A)
□ LED indication
□ blade type isolator for the 0 V common

■ **ABE7B20MRM20:** Sub-base with 12 soldered relay inputs + 8 soldered relay outputs
□ 2 A solid state relay (1 x 4 A common/2 channels) on 2 outputs
□ electromechanical relays (1 NO 24 V ⎓/250 V ∿, 3 A) on 6 outputs for adaptation of the current or voltage signal (1 x 10 A common/6 channels)

Sub-bases for Modicon TM2 I/O expansion modules

■ **ABE7E16EPN20:** Sub-base with 16 passive inputs

■ **ABE7E16SPN20:** Sub-base with 16 passive outputs

■ **ABE7E16SPN22 :** Sub-base with 16 passive outputs
□ individual fuse protection for each output (0.315 A)
□ LED indication
□ blade type isolator for the 0 V common

■ **ABE7E16SRM20:** Sub-base with 16 soldered relay outputs
□ electromechanical relays (1 NO 24 V ⎓/250 V ∿, 3 A) on 16 outputs for adapting the current or voltage signal (1 x 5 A common/4 channels)

Optional terminal block

■ **ABE7BV20**
□ 20 shunted screw terminals for connecting a single common

Selection guide:
page 44

References:
pages 46 to 47

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Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Twido controller and Modicon TM2 I/O expansion modules
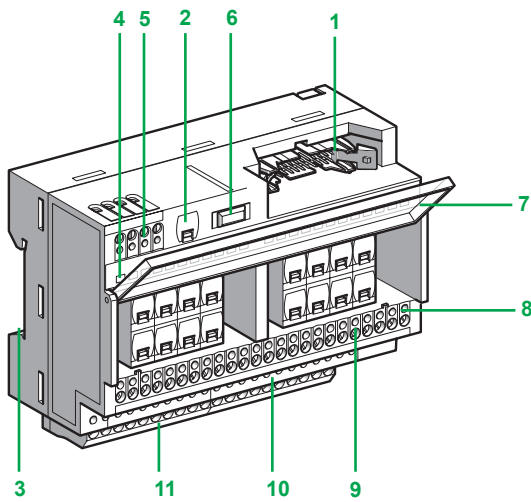
Description

ABE7B20M●●●●, ABE7E16SRM20, and ABE7E16SPN22 connection sub-bases

1 HE 10 connector (20-way for ABE7E16●●●●●, 26-way for ABE7B20●●●●●)
2 Fuse for the 24 V --- power circuit
3 Rail mounting
4 LED for channel indication (on ABE7B20MPN22 and ABE7E16SPN22 only)
5 24 V --- power supply terminal block
6 Blade type isolator on 0 V --- (on ABE7B20MPN22 and ABE7E16SPN22 only)
7 Legend holder cover: customer marking on outside and sub-base wiring scheme on inside, providing access to fuses per channel (on ABE7B20MPN22 and ABE7E16SPN22 only)
8 Test point for Ø 2.3 mm *(0.9 in.)* plug
9 Upper terminal block for connection of signals
10 Lower terminal block for connection of commons
11 Additional snap-on terminal block equipped with 20 screw or spring terminals
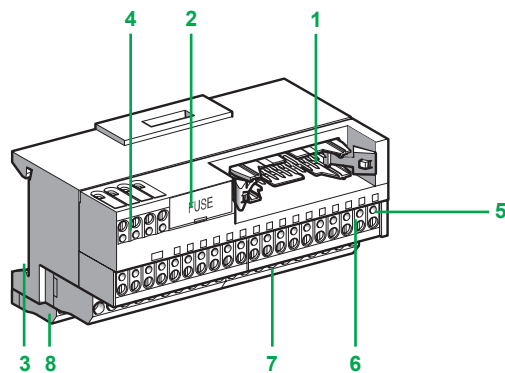
ABE7E16EPN20 and ABE7E16SPN20 connection sub-bases

1 20-way HE 10 connector
2 Fuse for the 24 V --- power circuit
3 Rail mounting
4 24 V --- power supply terminal block
5 Test point for Ø 2.3 mm *(0.9 in.)* plug
6 Upper terminal block for connection of signals
7 Lower terminal block for connection of commons
8 Additional snap-on terminal block equipped with 20 screw or spring terminals

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for discrete inputs and outputs

Applications		Connection sub-bases for discrete inputs and outputs		
Compatibility	□ Direct	□ Twido controllers (modular bases): **TWDLMDA20DTK, TWDLMDA40DTK** (see page 48)		
	□ Indirect	–		

Relay amplification	–	Electromechanical and solid state, fixed	
Control voltage	24 V ⎓		
Output voltage	24 V ⎓	24 V ⎓ (solid state) 5…30 V ⎓, 250 V ∼ (electromechanical)	
Current per channel Input	5…7 mA	5…7 mA	
Output	0.3 A	2 A (solid state) 3 A (electromechanical)	
Modularity	20 (12 inputs/8 outputs)		
Type of I/O	- 12 inputs (1 common/12 channels) - 8 outputs (1 common/8 channels)	- 12 inputs (1 common/12 channels) - 8 outputs with fuse protection (1 common/8 channels) LED indication	- 12 inputs (1 common/12 channels) - 2 solid state outputs (1 common/ 2 channels) - 6 relay outputs (electromechanical) 1 NO (1 common/6 channels)
Number of terminals per channel	2, 3 (with optional snap-on terminal block)		
Connection to controllers	26-way HE 10 connector		
Terminal type	Fixed screw terminal block		
Interface type	**ABE7B20MPN20**	**ABE7B20MPN22**	**ABE7B20MRM20**
Page	46		

Connection sub-bases for discrete inputs	Connection sub-bases for discrete outputs
□ ModiconTM2 I/O expansion modules: **TM2DDI16DK, TM2DDI32DK** (see page 48) □ ModiconTM2 I/O expansion modules: TM2DDO16TK, TM2DDO32TK (see page 50) □ Magelis XBTGC HMI controllers (see page 52) □ Modicon STB (Distributed I/O solution) (see page 54) □ Via Modicon TM2 I/O expansion modules: - Modicon M238 logic controllers - Magelis XBTGC HMI controllers	

–		Electromechanical, fixed	
24 V ⎓			
24 V ⎓		5…30 V ⎓, 250 V ∼ (electromechanical)	
5 mA	–		–
–	0.1 A		3 A
16 inputs	16 outputs		
16 inputs (1 common/16 channels)	16 outputs (1 common/ 16 channels)	16 outputs with fuse protection LED indication	16 relay outputs (electromechanical) 1 NO (1 common/4 channels)
2, 3 (with optional snap-on terminal block)			
20-way HE 10 connector			
Fixed screw terminal block			
ABE7E16EPN20	**ABE7E16SPN20**	**ABE7E16SPN22**	**ABE7E16SRM20**
46	46		

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases and cordsets
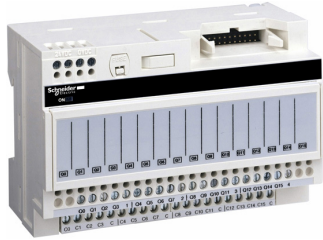
ABE7B20MPN20

ABE7E16EPN20

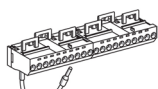*ABE7E16SRM20*

ABFT26B0●●●

ABFT20E●●●

ABE7BV20

ABE7FU●●

References

Connection sub-bases for Twido modular base controllers

Number of I/O	Number, type of input	Number, type of output	Compatibility	LED per channel	Fuse	Reference	Weight kg *lb*
20	12, sink, 24 V ---	8, source, 24 V ---	TWDLMDA20DTK, TWDLMDA40DTK	No	No	**ABE7B20MPN20**	0.430 *0.947*
				Yes	Yes	**ABE7B20MPN22**	0.430 *0.947*
	12, sink, 24 V ---	2, source, 24 V --- , 2 A and 6, relay, 24 V --- / 250 V ∿, 3 A	TWDLMDA20DTK, TWDLMDA40DTK	No	No	**ABE7B20MRM20**	0.430 *0.947*

Connection sub-bases for Modicon TM2 digital I/O expansion modules, Magelis XBGTC HMI controllers, and Modicon STB

Number of inputs	Input type	Compatibility	LED per channel	Fuse	Reference	Weight kg *lb*
16	Sink, 24 V ---	TM2DDI16DK, TM2DDI32DK, XBTGC●●●T, STBDDI3725	No	No	**ABE7E16EPN20**	0.430 *0.947*

Number of outputs	Output type	Compatibility	LED per channel	Fuse	Reference	Weight kg *lb*
16	Source, 24 V ---	TM2DDO16TK, TM2DDO32TK, XBTGC●●●T, STBDDO3705	No	No	**ABE7E16SPN20**	0.450 *0.992*
			Yes	Yes	**ABE7E16SPN22**	0.450 *0.992*
	Relay, 24 V --- / 250 V ∿, 3 A	TM2DDO16TK, TM2DDO32TK, XBTGC●●●T, STBDDO3705	No	No	**ABE7E16SRM20**	0.430 *0.947*

Cordsets for Twido modular base controllers

Type of signal	Compatibility	Connection type		Gauge/ c.s.a.	Length *(1)*	Reference	Weight kg *lb*
		Twido end	Telefast end				
Discrete I/O	TWDLMDA20DTK, TWDLMDA40DTK	HE 10 26-way	HE 10 26-way	AWG 28 0.08 mm²	0.5 m *1.64 ft*	**ABFT26B050**	0.080 *0.176*
					1 m *3.28 ft*	**ABFT26B100**	0.110 *0.242*
					2 m *6.56 ft*	**ABFT26B200**	0.180 *0.396*

Cordsets for Modicon TM2 digital I/O expansion modules

Type of signal	Compatibility	Connection type		Gauge/ c.s.a.	Length *(1)*	Reference	Weight kg *lb*
		TM2 end	Telefast end				
Discrete I/O	TM2DDI16DK, TM2DDI32DK, TM2DDO16TK, TM2DDO32TK	HE 10 20-way	HE 10 20-way	AWG 28 0.08 mm²	0.5 m *1.64 ft*	**ABFT20E050**	0.060 *0.132*
					1 m *3.28 ft*	**ABFT20E100**	0.080 *0.176*
					2 m *6.56 ft*	**ABFT20E200**	0.140 *0.308*

Separate parts

Description	Number of shunted terminals	Characteristics	Order in multiples of	Unit reference	Weight kg *lb*
Optional snap-on terminal block	20	–	5	**ABE7BV20**	0.060 *0.132*
Quick-blow fuses for ABE7E16SPN22 sub-bases 5 x 20, 250 V, UL	–	0.125 A	10	**ABE7FU012**	0.010 *0.024*
		0.315 A	10	**ABE7FU030**	0.010 *0.024*
		1 A	10	**ABE7FU100**	0.010 *0.024*
		2 A	10	**ABE7FU200**	0.010 *0.024*

(1) Please contact us for lengths > 2 m (6.56 ft)

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Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Separate parts

References (continued)				
Separate parts				
Description	**Type**	**Compatibility**	**Unit reference**	**Weight kg** *lb*
Connectors (sold in lots of 5)	HE 10 female 26-way	TWDLMDA20DTK, TWDLMDA40DTK	**TWDFCN2K26**	–
	HE 10 female 20-way	TM2DDI16DK, TM2DDI32DK, TM2DDO16TK, TM2DDO32TK	**TWDFCN2K20**	–
Screw terminals (sold in lots of 2)	10-way	TM2DDI●DT, TM2DAI8DT, TM2DDO8●T, TM2DRA●RT	**TWDFTB2T10**	–
	11-way	TM2DMM8DRT, TM2AMI●●T, TM2ARI8HT, TM2DAI8DT, TM2DRA8RT	**TWDFTB2T11**	–

Description	**Compatibility**	**Connection type**		**Gauge/ c.s.a.**	**Length**	**Reference**	**Weight kg** *lb*
		Twido end	**Other end**				
Cordsets for digital I/O	TWDLMDA20DTK, TWDLMDA40DTK	HE 10 26-way	Flying leads	AWG 22 0.035 mm²	3 m *9.84 ft*	**TWDFCW30M**	0.405 *0.892*
					5 m *16.40 ft*	**TWDFCW50M**	0.670 *1.477*
	TM2DDI16DK, TM2DDI32DK, TM2DDO16TK, TM2DDO32TK	HE 10 20-way	Flying leads	AWG 22 0.035 mm²	3 m *9.84 ft*	**TWDFCW30K**	0.405 *0.892*
					5 m *16.40 ft*	**TWDFCW50K**	0.670 *1.477*
Rolled ribbon cable	20 conductors	–	–	AWG 28 0.08 mm²	20 m *65.6 ft*	**ABFC20R200**	1.310 *2.888*

ABFC20R200

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Twido controllers and
Modicon TM2 I/O expansion modules
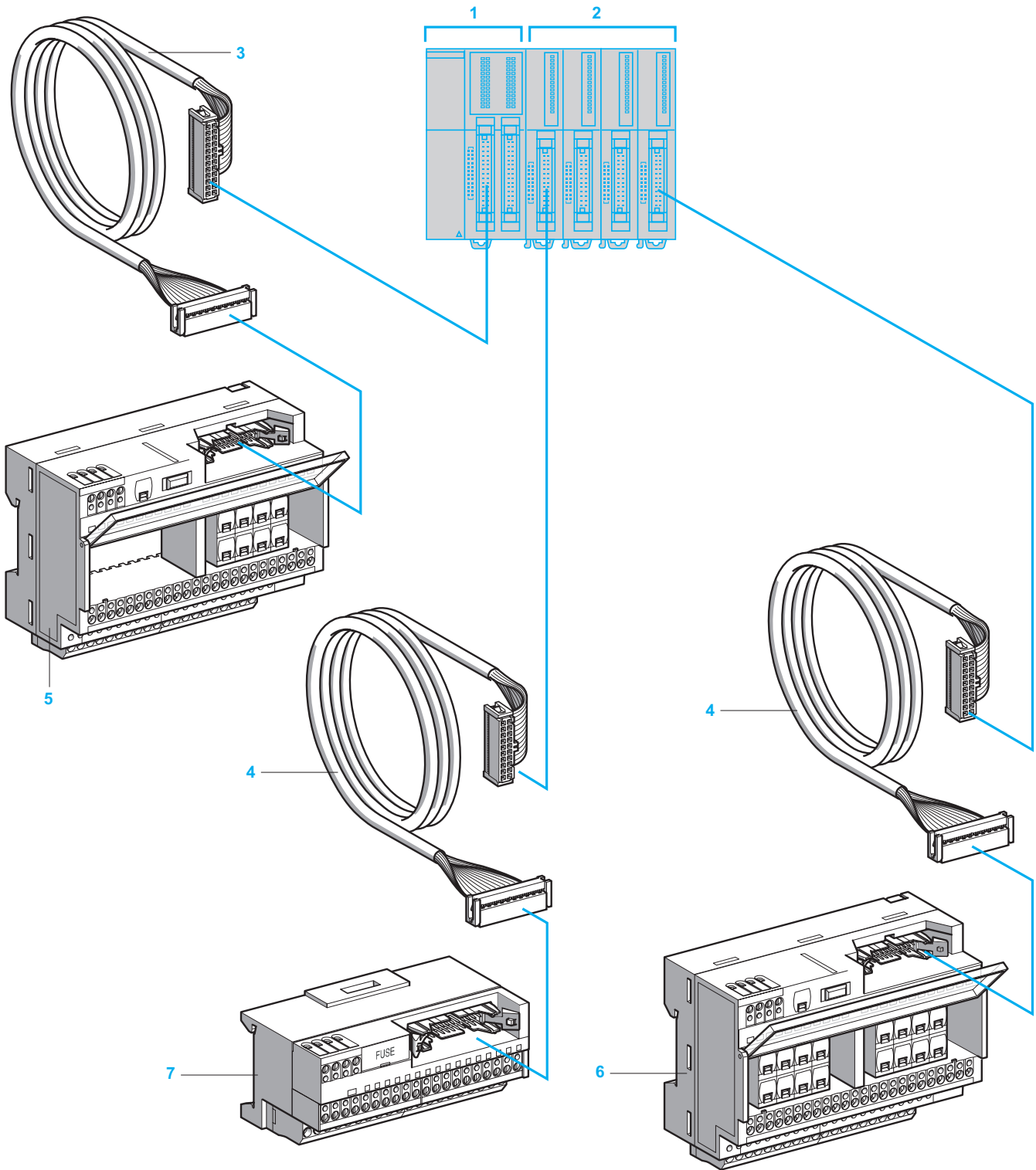
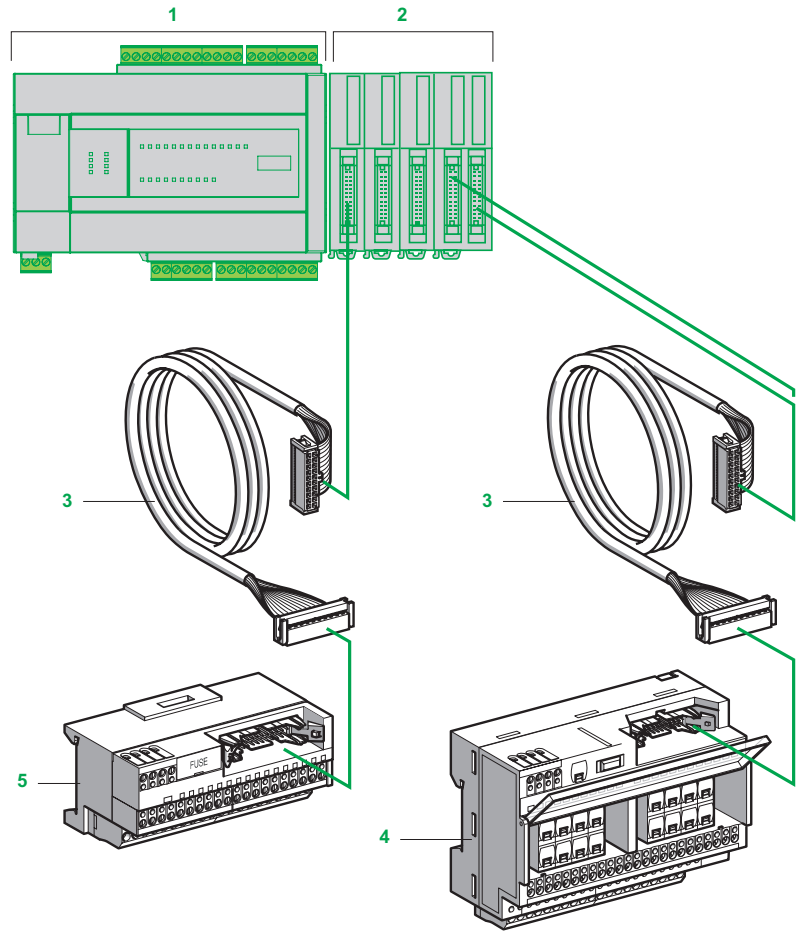**1** Twido Modular base controller with 26-way HE 10 connectors. The modular sizes available are 20 or 40 I/O.
2 Modicon TM2 Discrete I/O modules with 20-way HE 10 connectors. The modular sizes available are 16 or 32 I/O.
3 Cable (ABFT26B●●0) equipped with a 26-way HE 10 connector at each end. This cable is available in 0.5, 1 and 2 metre lengths (AWG 28/0.08 mm2).
4 Cable (ABFT20E●●0) equipped with a 20-way HE 10 connector at each end. This cable is available in 0.5, 1, 2 and 3 metre lengths (AWG 28/0.08 mm2).
5 20 channel sub-base (ABE7B20MPN2● or ABE7B20MR20) for modular base controllers.
6 16 channel sub-base (ABE7E16SPN22 or ABE7E16SRM20) for output extension modules.
**7** 16 channel sub-base (ABE7E16EPN20 or ABE7E16SPN20) for input or output extension modules.

Combinations

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Twido controllers and
Modicon TM2 I/O expansion modules

Combinations with Twido controllers and Modicon TM2 I/O modules

		Twido Modular base controllers		Modicon TM2 Discrete I/O modules	
		Inputs/outputs		Inputs	Outputs
Incorporated in Twido programmable controllers		**TWDLMDA20DTK (12 I/8 O)** **TWDLMDA40DTK (24 I/16 O)**		**TM2DDI16DK (16 I)** **TM2DDI32DK (32 I)**	**TM2DDO16TK (16 O)** **TM2DDO32TK (32 O)**
Terminal block types		HE 10 connector, 26-way		HE 10 connector, 20-way	
Connection to Twido programmable controller		**ABFT26B●●0 (HE 10, 26-way)**		**ABFT20E●●0 (HE 10, 20-way)**	
Passive connection sub-bases					
20 channels	**ABE7B20MPN2●**	███	███		
16 channels	**ABE7E16EPN20**			███	
	ABE7E16SPN2●				███
Output adapter bases					
20 channels	**ABE7B20MRM20**	███	███		
16 channels	**ABE7E16SRM20**				███

███ Compatible

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon TM2 expansion modules and Modicon M238 logic controller

Presentation

1 Modicon M238 logic controller.
2 Modicon TM2 Discrete I/O modules with 20-way HE 10 connectors. The modular sizes available are 16 or 32 I/O.
3 Cable (**ABFT20E●●0**) equipped with a 20-way HE 10 connector at each end. This cable is available in 0.5, 1, 2 and 3 m lengths (AWG 28/0.08 mm²).
4 16 channel sub-base (**ABE7E16SPN22** or **ABE7E16SRM20**) for output expansion modules.
5 16 channel sub-base (**ABE7E16EPN20** or **ABE7E16SPN20**) for input or output expansion modules.

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Telefast Pre-wired System

Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon TM2 expansion
modules and Modicon M238 logic controller

Combinations with Modicon TM2 I/O expansion modules

		Modicon TM2 Discrete I/O modules	
		Inputs	Outputs (source)
		TM2DDI16DK (16 inputs) **TM2DDI32DK** (32 inputs)	**TM2DDO16TK** (16 outputs) **TM2DDO32TK** (32 outputs)
Terminal block types		HE 10 connectors, 20-ways	
Connection to I/O expansion modules		**ABFT20E●●0** (HE 10, 20-ways)	
Passive connection sub-bases			
16 channels	**ABE7E16EPN20**	Compatible	
	ABE7E16SPN2●		Compatible
Output adapter bases			
16 channels	**ABE7E16SRM20**		Compatible

Compatible

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Magelis XBTGC HMI
controllers and Modicon TM2 expansion modules

Presentation
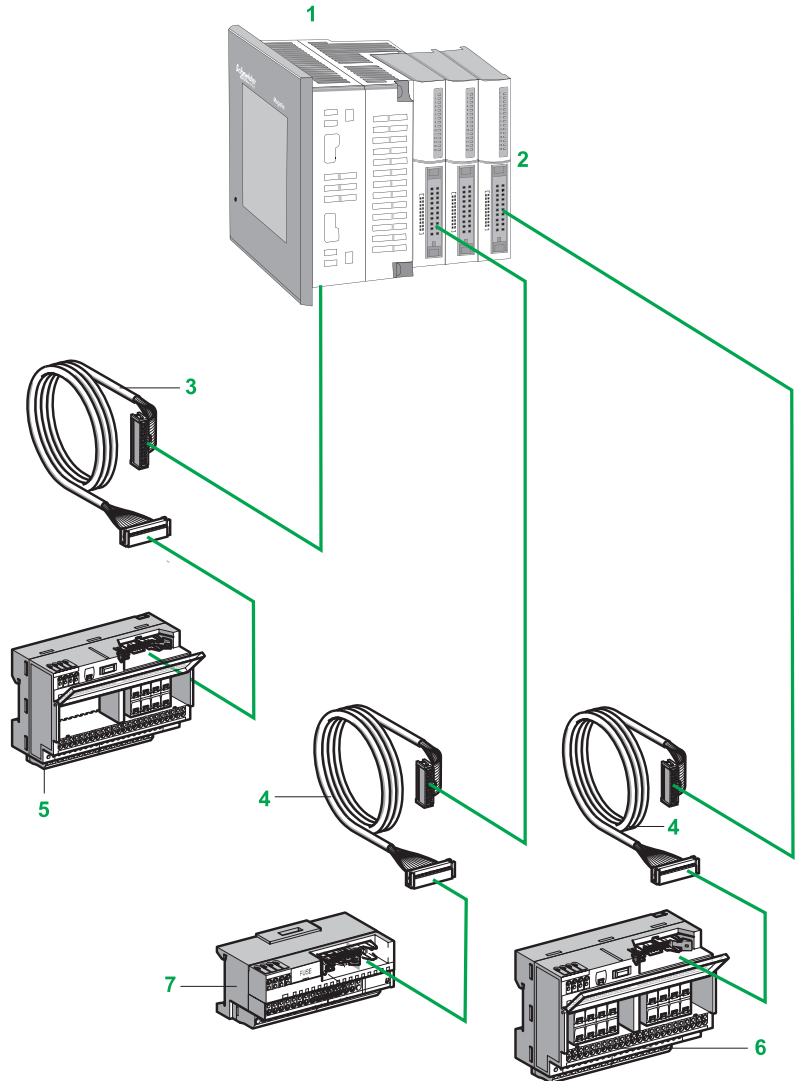
1 **XBTGC** equipped with 38-way direct I/O connectors. The modularity options offered have 32 I/O.
2 Modicon TM2 digital I/O expansion modules equipped with 20-way HE10 connectors. The modularity options offered have 16 or 32 I/O.

3 2 m/*6.56 ft.* AWG 28/0.08 mm^2 cordsets, depending on model:
□ For **XBTGC2●●●T**: **XBTZGABE2** preassembled cordset with two 20-way HE10 connectors and a 38-way direct I/O-XBTGC connector
4 **ABFT20E●●0** preassembled cordset with a 20-way HE 10 connector at each end, available in 0.5, 1, 2, and 3 m *(1.64, 3.28, 6.56 and 9.84 ft)* lengths (AWG 28/0.08 mm^2)

5 Depending on model:
□ For **XBTGC2●●●T**: **ABE7E16EPN20** or **ABE7E16SPN2●** 16-channel sub-base

6 **ABE7E16SPN22** or **ABE7E16SRM20** 16-channel sub-base for digital outputs integrated or on expansion modules
7 **ABE7E16EPN20** or **ABE7E16SPN20** 16-channel sub-base for digital inputs or outputs integrated or on expansion modules

Combinations

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Magelis XBTGC HMI
controllers and Modicon TM2 expansion modules

Combinations involving modular base controllers and I/O expansion modules

		Magelis XBTGC HMI controllers	Modicon TM2 digital I/O expansion modules	
		Integrated digital I/O	Inputs	Outputs (source)
		XBTGC2230T, XBTGC2230T,	TM2DDI16DK (16 E) TM2DDI32DK (32 I)	TM2DDO16TK (16 Q) TM2DDO32TK (32 Q)
Connection block types		Direct I/O, 38-way	HE 10, 20-way	
Connection to XBTGC programmable HMI controller		XBTZGABE2	**ABFT20E050, ABFT20E100, ABFT20E200** (HE 10, 20-way)	
Passive connection sub-bases				
16-channel	**ABE7E16EPN20**	Compatible	Compatible	Not compatible
	ABE7E16SPN20, ABE7E16SPN22	Not compatible	Compatible	Compatible
Output adapter sub-base				
16-channel	**ABE7E16SRM20**	Not compatible	Compatible	Compatible

▮ Compatible

▮ Not compatible

Note: Telefast cables and modules are not compatible with **XBTGC2●●●U** units with sink outputs (U suffix).

(1) 6 channels used for 8 available
(2) 6 channels used for 8 available with 2 transistor outputs and 4 relay outputs

Presentation

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon STB
(distributed I/O solution)

Presentation *(1)*

Using the Telefast connector or adapter system rationalizes and simplifies electrical enclosure wiring.
Far less space is required in the enclosure and the Modicon ABE7 sub-base replaces the connection terminals at the bottom of the enclosure.

The Telefast wiring system is particularly suitable for applications requiring:
■ 48 V $=$ and 48 V $\sim$ I/O
■ A large number of 115 V $\sim$ and 230 V $\sim$ I/O
■ A large number of relay outputs

Connection of Modicon STB I/O modules to the Telefast system differs according to the type of module:
■ STBDDI3725 and STBDDO3705 16-channel digital I/O: connection via Telefast HE 10 connectors and their associated Telefast cables or ribbon cables. These connection components must be ordered separately (see description below and combinations on page 55).
■ Other Modicon STB digital and analog I/O modules: connection via screw or spring-type 5/6-way removable connectors, supplied with the I/O modules and the associated pre-wired cables. The latter must be ordered separately (see below).

Description *(1)*

STBDDI3725 and STBDDO3705 16-channel digital I/O modules	Other Modicon STB digital and analog I/O modules
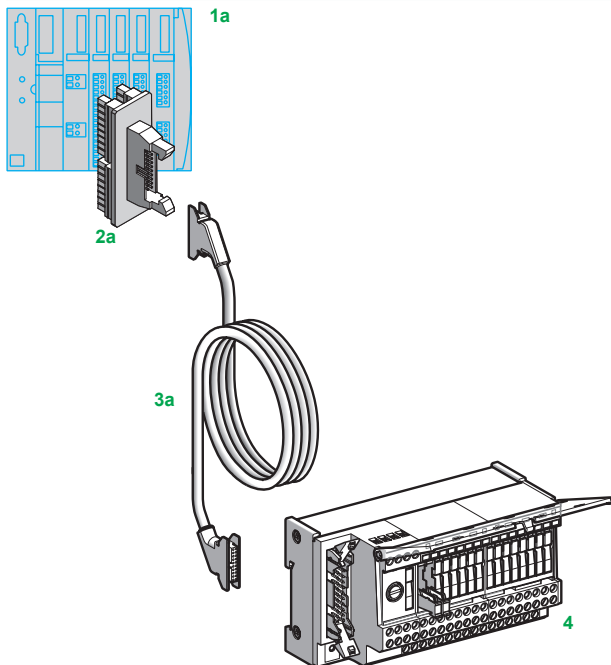
1a Modicon STB island incorporating a STBDDI3725 or STBDDO3705 module with 16 I/O
2a STBXTS5●10 (DDI) or STBXTS6●90 (DDO) HE 10 connector
3a TSXCDP●02 rolled ribbon cable or TSXCDP●03 connection cable equipped with two 20-way HE10 connectors
4 Modicon ABE7 connection or adapter sub-base (see compatibility table on page 55)

1b STBDDI/DDO●●●●K Modicon STB I/O island incorporating a digital I/O module (except for 16-channel modules) or an STBAVI/ACI/ART/AVO/ACO●●●●K analog I/O module
2b Screw or spring-type 5/6-way removable connectors, supplied with the STB I/O module
3b TSXCDP301/501/1001 pre-wired cable (3, 5, or 10 m/*9.84, 16.4 or 32.8 ft* long), with HE10 connector at one end and flying leads at the other end. Cross-section 0.324 mm², AWG24
4 Modicon ABE7 connection or adapter sub-base

Redundancy solution for Modicon STB I/O *(1)*

Two Modicon STB I/O modules of the same type, located in two separate islands, can be connected to a single Telefast pre-wired sub-base (I/O redundancy). This configuration is used, for example, in the context of a Premium Hot Standby architecture (please refer to our "Modicon Premium automation platform" catalog).
Digital I/O modules are connected via an ABE7ACC11 (inputs) or ABE7ACC10 (outputs) redundancy sub-base and the same connectors and cables or ribbon cables used for single connections.
STB analog I/O modules are connected via JM Concept JK 3000 N2 (inputs) and GK 3000 D1 (outputs) analog I/O multiplexers.

(1) If you require any more information on the Telefast pre-wired system, please consult our Customer Care Center.

Combinations

Telefast Pre-wired System
Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon STB
(distributed I/O solution)

Combinations of STB modules with 16 digital I/O and Modicon ABE7 sub-bases (1) (2)

Modicon ABE7 sub-bases (Item 4)		STBDDI3725 (item 1a)	STBDDO3705 (item 1a)	Ribbon cables (item 3a)	Cables (item 3a)
		Associated STBXTS●●●● connector (item 2a)			
Passive connection sub-bases (16-channel)					
Universal	**ABE7H16R●●**	STBXTS6510	STBXTS6610	**TSXCDP●02** (100 mA total max.) *(3)*	**TSXCDP●●3** (> 500 mA total max.) *(4)*
	ABE7H16S21	STBXTS6510			
	ABE7H16S43	STBXTS6510			
	ABE7H16F43		STBXTS6610	or	
Miniature	**ABE7H16C10**	STBXTS6510		**ABFH20H●00** (> 500 mA total max.) *(3)*	
	ABE7H16C11	STBXTS6510			
	ABE7H16C21	STBXTS6510			
	ABE7H16C31	STBXTS6510			
Passive connection sub-bases for Twido controller (16-channel)					
16 passive inputs	**ABE7E16EPN20**	STBXTS5510		–	**ABFT20E●●0** (> 500 mA total max.) *(5)*
16 passive outputs	**ABE7E16SPN20**		STBXTS5610		
	ABE7E16SPN22		STBXTS5610		
	ABE7E16SRM20		STBXTS5610		

Input adapter active sub-bases (16-channel)

Voltage	Modicon ABE7 sub-base				
V					
48 ⎓	**ABE7S16E2E1**	STBXTS6510		**TSXCDP●02** (100 mA total max.) *(3)*	**TSXCDP●●3** (> 500 mA total max.) *(4)*
48 ∿	**ABE7S16E2E0**	STBXTS6510			
115 ∿	**ABE7S16E2F0**	STBXTS6510			
230…240 ∿	**ABE7S16E2M0**	STBXTS6510		or	
	ABE7P16F310	STBXTS6510		**ABFH20H●00** (> 500 mA total max.) *(3)*	
	ABE7P16F312	STBXTS6510			

Output adapter active sub-bases (16-channel)

Type	Voltage	Current per channel	Modicon ABE7 sub-base	Relay			
	V	**A**					
Relay	24 ⎓	0.5	**ABE7S16S2B0**	–	STBXTS6610	**TSXCDP●02** (100 mA total max.) *(3)*	**TSXCDP●●3** (> 500 mA total max.) *(4)*
		0.5	**ABE7S16S1B2**	–	STBXTS6610		
		≥ 0.7	**ABE7P16T●●●●** *(6)*	–	STBXTS6610	or	
Relay	48 ⎓	0.5	**ABE7P16T2●●●** *(6)*	ABS7SC2E	STBXTS6610	**ABFH20H●00** (> 500 mA total max.) *(3)*	
Relay	48 ∿	0.5	**ABE7P16T2●●●** *(6)*	ABS7SA2M	STBXTS6610		
Relay	115 ∿	0.5	**ABE7P16T2●●●** *(6)*	ABS7SA2M	STBXTS6610		
Relay	230…240 ∿	0.5	**ABE7P16T2●●●** *(6)*	ABS7SA2M	STBXTS6610		
Solid state	24…240 ∿	1.5	**ABE7P16T3●●**	ABS7SA3MA	STBXTS6610		
Solid state	24…48 ⎓	1.5	**ABE7P16T3●●**	ABS7SC3E	STBXTS6610		
Solid state	24 ⎓	2	**ABE7P16T3●●**	ABS7SC3BA	STBXTS6610		
Economy relay	30 ⎓	2	**ABE7R16S●●●**	–	STBXTS6610		
	30 ⎓	2..5	**ABE7R16S210/212**	–	STBXTS6610		
Economy relay	230 ∿	2	**ABE7R16S●●●**	–	STBXTS6610		
	230 ∿	2…5	**ABE7R16S210/212**	–	STBXTS6610		

🟩	*Compatible*
⬜	*Not compatible*

⚠ The STB module can provide the 24 V ⎓ power to the Modicon ABE7 block provided the current does not exceed 50 mA per group of 4 channels. Otherwise an external power supply will be required and only the reference 0 V should be connected between the STB module and the ABE 7 block.

(1) Combinations given for 16-channel Modicon STB digital I/O modules (STBDDI3725/STBDDO3705). For other Modicon STB I/O modules (1b), connectors (2b) are included with the modules and the connection is made via TSXCDP●●●●● pre-wired cable (3b). See page 54.
(2) The item numbers indicated in this table correspond to the item numbers mentioned in the description on page 54.
(3) Replace the "●" with "1" for a 1 m (3,28 ft) length, "2" for 2 m (6,56 ft), "3" for 3 m (9,84 ft).
(4) Replace the "●●" with "05" for a 0.5 m (1.64 ft) length, "10" for 1 m (3.28 ft), "20" for 2 m (6.56 ft), "30" for 3 m (9.84 ft), "50" for 5 m (16.40 ft).
(5) Replace the "●●" with "05" for a 0.5 m (1,64 ft) length, "10" for 1 m (3.28 ft), "20" for 2 m (6.56 ft).
(6) Empty sub-bases.

Splitter box and interface type		IP67 passive splitter boxes		

Fieldbus type		–		
Inputs/outputs	Discrete	8 I/O (4 channels), 16 I/O (8 channels)		
	Analog	–		
Functions		Connection of 1 to 16 sensors/actuators LED indicator depending on model		
Type of connectors	Sensors/actuators	Female M12, 5-way connectors		
	Control system	Male M23 connector	Multicore cable	
			Length 5 m *(16.40 ft)*	Length 10 m *(32.81 ft)*
Housing type		Plastic		
Module type		**ABE 9C12••C23**	**ABE 9C12••L05**	**ABE 9C12••L10**
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Presentation

■ ABE9 passive splitter boxes for M12 connectors make it possible to eliminate long and difficult cabling operations. Their modularity and dimensions mean they are the ideal solution for a wide variety of customer applications.
Connection to the processing unit can either be made by connector or by multicore cable of different lengths.
IP 67 protection allows these products to be used within processes or machines in harsh environments (splashing water, oil, dust, etc.).
The splitter boxes, available in 4 or 8-channel versions, allow connection of up to 16 signals maximum, depending on the version (2 per channel).

The characteristics of ABE9C12 splitter boxes are as follows:
■ Connection of sensors and actuators using M12, 5-way connectors
■ Modularity: 4 or 8 channels
■ Mounting system and connection to the processing unit conforming to market standards:
□ center-to-center distances
□ M23, 19-way connector, enabling the use of preassembled cables in order to reduce installation time and the risk of error
□ multicore cable, 5 or 10 meters *(16.4 or 32.8 ft)* long. The splitter box comprises a connection cover equipped with plug-in terminals, which provides considerable flexibility for replacing damaged parts and changing the cable length.
ABE9C12●●L●● sub-bases enable the use of 2 separate commons, which can be used for emergency stop management, for example. This function is accessible beneath the terminal cover using 2 removable links. If both links are removed, the 2 supplies become independent.

The use of a Y-connector allows 2 signals to be connected to the same M12 channel on the splitter box. For example, the ABE9C1281 splitter box (8 channels) allows 16 signals to be connected to the processing unit.
The Y-connector is available in 2 versions:
■ M12-M12 for connection of two M12 connectors to a single M12 channel on the splitter box
■ M8-M12 for connection of two M8 connectors to a single M12 channel on the splitter box
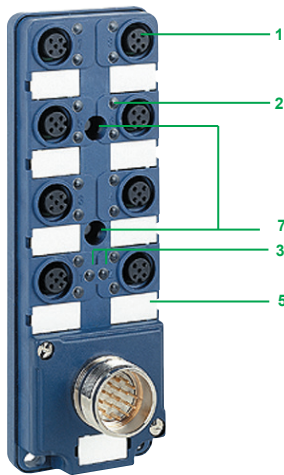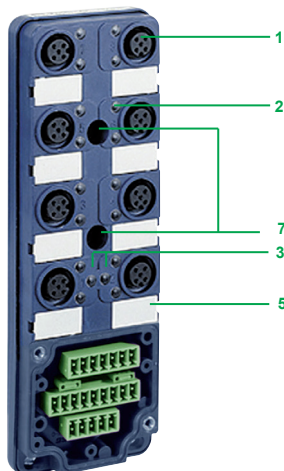
Complete reference	= Splitter box only	+ Connector with cable
ABE9C1240L05	= ABE9C1240M	+ ABE9XCA1405
ABE9C1240L10	= ABE9C1240M	+ ABE9XCA1410
ABE9C1241L05	= ABE9C1241M	+ ABE9XCA1405
ABE9C1241L10	= ABE9C1241M	+ ABE9XCA1410
ABE9C1280L05	= ABE9C1280M	+ ABE9XCA1805
ABE9C1280L10	= ABE9C1280M	+ ABE9XCA1810
ABE9C1281L05	= ABE9C1281M	+ ABE9XCA1805
ABE9C1281L10	= ABE9C1281M	+ ABE9XCA1810
Connector only		
ABE9CM12C		

Description

ABE9C12●●C23 passive splitter boxes have the following on the front face:
1 Four or eight M12 female connectors (depending on model) for connection of sensors and actuators (2 channels per connector)
2 Eight or sixteen channel status indicator lights (depending on model)
3 One "Power on" indicator light on the splitter box (depending on model)
4 One M23, 19-way male connector
5 Four or eight channel marker labels
6 One splitter box marker label
7 Splitter box mounting holes

ABE9C12●●L●● passive splitter boxes have the following on the front face:
1 Four or eight M12 female connectors (depending on model) for connection of sensors and actuators (2 channels per connector)
2 Eight or sixteen channel status indicator lights (depending on model)
3 Two "Power on" indicator lights on the splitter box (depending on model)
4 One removable connection cover equipped with plug-in terminals
5 Four or eight channel marker labels
6 One splitter box marker label
7 Splitter box mounting holes

ABE9C12●●C23

ABE9C12●●L●●

Schneider Electric

ABE9C124●C23

ABE9C128●C23

ABE9C124●L●●

ABE9C128●L●●

ABE9C128●M

ABE9XCA1●●●

FTXCY1212

References

Splitter boxes with connection by M23 connector

Number of channels	Connection by	LED indicator	Reference	Weight kg lb
4	4 x M12 female connectors	Yes	ABE9C1241C23	0.080 0.176
8	8 x M12 female connectors	Yes	ABE9C1281C23	0.140 0.309
		No	ABE9C1280C23	0.140 0.309

Splitter boxes with connection by cable

Number of channels	Connection by	Length m ft	LED indicator	Reference	Weight kg lb
4	4 x M12 female connectors	5 16.4	Yes	ABE9C1241L05	0.680 1.499
			No	ABE9C1240L05	0.680 1.499
		10 32.8	Yes	ABE9C1241L10	1.700 3.747
			No	ABE9C1240L10	1.700 3.747
8	8 x M12 female connectors	5 16.4	Yes	ABE9C1281L05	1.610 3.549
			No	ABE9C1280L05	1.610 3.549
		10 32.8	Yes	ABE9C1281L10	3.060 6.746
			No	ABE9C1280L10	3.060 6.746

Splitter boxes only, M12

Number of channels	For use with connector terminal block	with cable	LED indicator	Reference	Weight kg lb
4	ABE9CM12C	ABE9XCA14●●	Yes	ABE9C1241M	0.060 0.132
			No	ABE9C1240M	0.060 0.132
8	ABE9CM12C	ABE9XCA18●●	Yes	ABE9C1281M	0.100 0.220
			No	ABE9C1280M	0.100 0.220

Separate components

Type	No. of channels	For use with splitter box	Length m ft	Reference	Weight kg lb
Terminal block connector (1)	–	ABE9C124●M ABE9C128●M	–	ABE9CM12C	0.040 0.088
Connectors with cable	4	ABE9C124●M	5 16.4	ABE9XCA1405	1.060 2.337
			10 32.8	ABE9XCA1410	2.080 4.585
	8	ABE9C128●M	5 16.4	ABE9XCA1805	1.510 3.328
			10 32.8	ABE9XCA1810	2.240 4.938

Accessories

Description	Composition	Reference	Weight kg lb
Sealing plugs	For M8 connector (lot of 10)	FTXCM08B	0.100 0.220
	For M12 connector (lot of 10)	FTXCM12B	0.100 0.220
Y-connectors	Connection of 2 x M8 connectors to M12 connector on splitter box	FTXCY1208	0.020 0.044
	Connection of 2 x M12 connectors to M12 connector on splitter box	FTXCY1212	0.030 0.066

(1) To be cabled by user.

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