

Telefast Pre-wired system

Modicon ABE7 IP20 connection sub-bases

Modicon ABE9 IP67 passive splitter boxes

Catalog

July 2016



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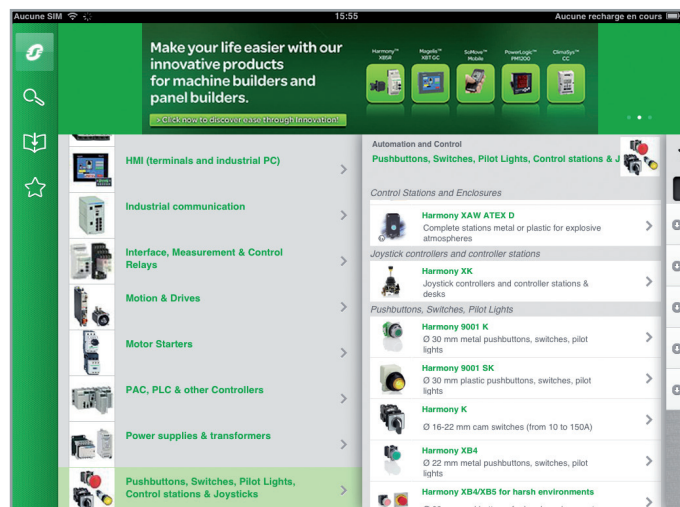
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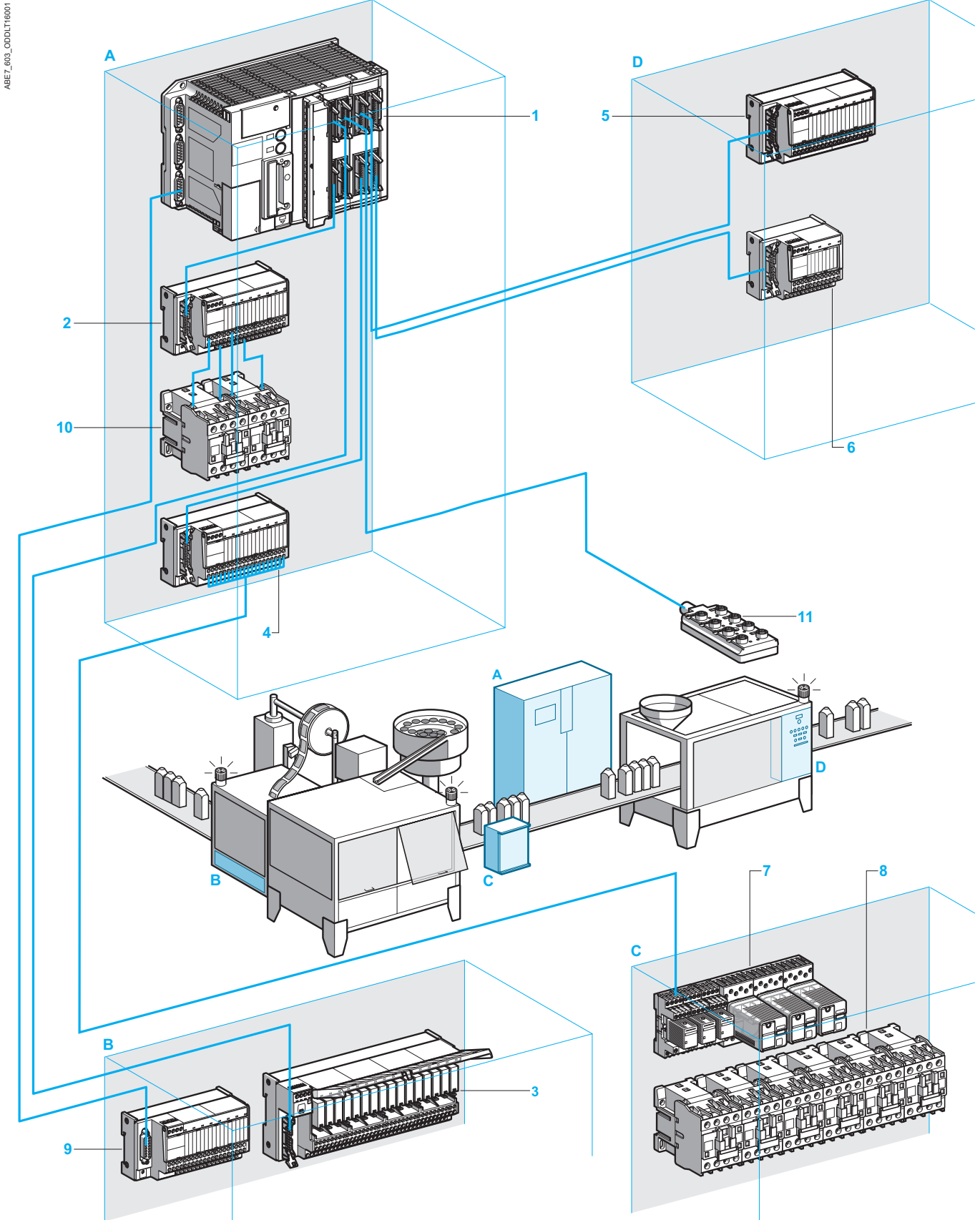
Telefast Pre-wired System

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 - > Modicon M221 Book logic controllers,
 - > Modicon TM3 I/O expansion modules,
 - > Modicon X80 I/O expansion modules,
 - > Modicon Premium automation platforms,
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General presentation

The Telefast system is a set of products for rapid connection of I/O modules (24 V discrete, analogue 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 which 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 fitted with HE 10 connectors **1**.

I/O modules not fitted with HE 10 connectors are connected to Telefast sub-bases by means of a cabled connector, which consists of a cable whose conductors (0.34 mm² c.s.a.) are 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-metre 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 **3** wires (signal, 24 V, 0 V) to be connected directly from sensors or preactuators when the latter **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 analogue signals **9**.

In cases where size is of prime importance **D**, fixed relay sub-bases **ABE7R16S111 5** (125 mm long) and passive sub-bases **ABE7H16R50 6** (84 mm 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** which connect connector leads from sensors or preactuators **7, 8** fulfil the same function as traditional terminal blocks.

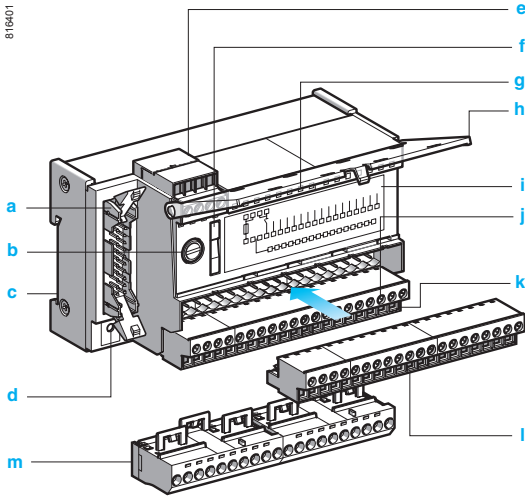
■ IP67 dust and damp-proof connections for enclosures and cabinets

Eight-channel versions offer, in addition, the possibility of directly connecting the **XSZ** dust and damp-proof splitter blocks **11** (see page 60) for height sensors.

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Passive connection sub-bases



Description of a Telefast® 2 connection sub-base

All connection sub-bases in the Telefast family have a standardised 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 Fixing on DIN rail
- 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 Customer label-holder/cover
- i Wiring diagram
- j Test point for Ø 2.3 mm plug
- k Upper terminal block (1)
- l Lower terminal block (1), offset by ½ step*
- m Additional clip-on terminal block fitted with 20 screw or spring terminals*

(1) Removable screw or spring type, according to reference, at 5.08 mm 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). A terminal block sub-base ABE7BV●0 can be added.

ABE7H20E●●/7H32E●●: these extremely economical products are supplied with a direct connection cable for TSXMicro, Premium or other PLCs using splitter sub-base H20E, or for Siemens S7 PLCs (using splitter sub-base H32E). The cable is available in 3 or 2 metre lengths respectively. The output terminals are on 2 rows.

Compact sub-bases

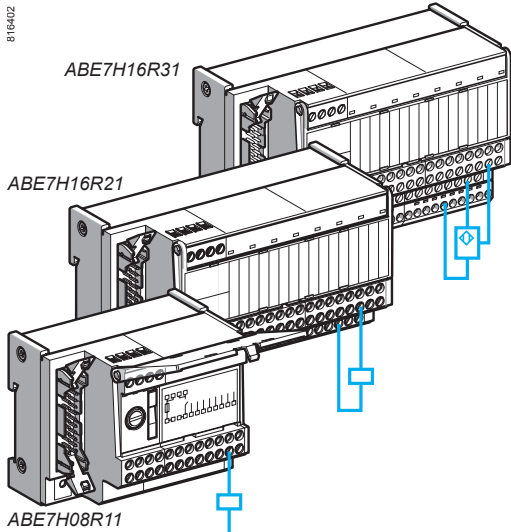
ABE7H●●R50: these products fulfil the same functions as the previous sub-bases but their size is reduced by almost half. The output terminals are in fact on two rows.

ABE7H16C1●/CM11: these are miniature products. The signal state for each channel can be indicated via an LED (C11/CM11) or not (C10). The output terminals are on a single row. A terminal block sub-base ABE7BV●0 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 which allow the commons to be connected, is selected via a jumper. Both wires of 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 two commons connections which allow both the inputs and outputs to be connected at the same time, with a 0 or 24 V common, according to the customer's wiring. The output terminals are on 2 rows.



Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Passive connection sub-bases

Electromechanical relay output sub-bases

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 TSXMicro and Premium and Num N.C.

Sub-bases for 3-wire sensors

ABE7H16R31/R30: the \sim 24 V and 0 V signals are brought into the sub-base for each channel. The output terminals are on three 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.

In addition, 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 \sim 24 V **inputs**.

Both wires are brought to the screw terminals on a single row.

Each channel has 2 blade isolators, fixed together, to isolate the signal and its \sim 24 V supply.

The \sim 24 V 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 \sim 24 V **outputs**.

Both wires are brought to the screw terminals on a single row.

Each channel has 2 blade isolators, fixed together, to isolate the signal and its 0V 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 N/O, 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).

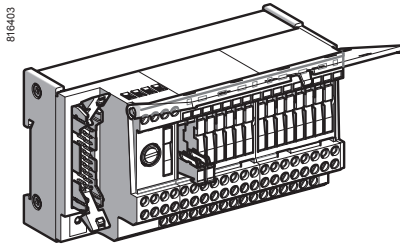
Sub-bases with fixed relays and removable terminal blocks

ABE7R●●S21●: these products are equipped with a fixed relay, with integral N/O contact, 10 mm wide. Their 5 A Ith characteristic must be derated according to the duty cycles used and the number of operations required.

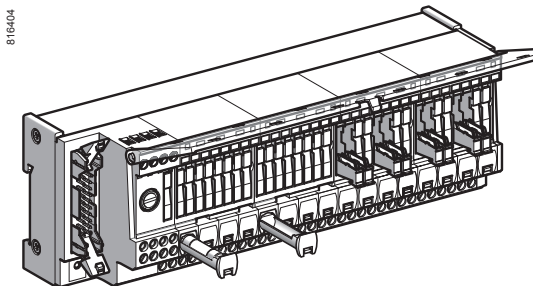
They are available in 8 and 16-channel modules. All the terminal blocks are removable.

ABE7R●●S111: almost 50% smaller than the standard sub-bases, these products have a fixed relay, integrating an N/O contact, 5 mm 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 modules. All the terminal blocks are removable.

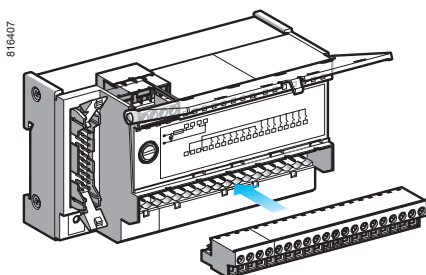
ABE7R08S216: these **miniature** products are equipped with latching relays which can withstand a current of 2 A at \sim 230 V. They enable 2 output wires to be connected on a removable terminal block. Two PLC outputs are used per channel: one for tripping the relay, the other for resetting it. The relay stays in the de-energised position. The signal state for each channel can be indicated via an LED.



ABE7H16S21



ABE7H16S43

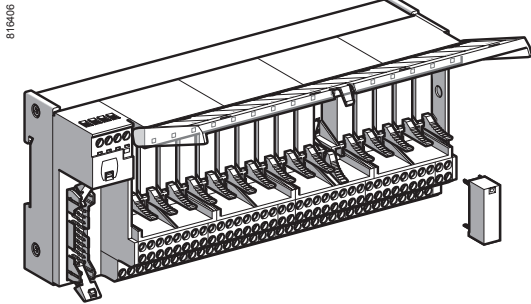


ABE7R16S111

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Electromechanical relay output sub-bases



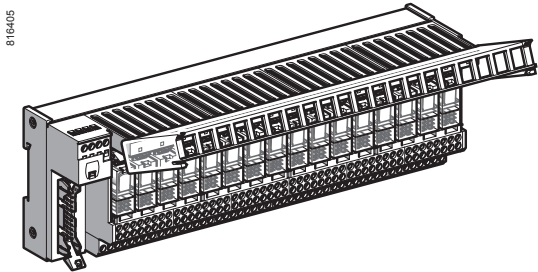
ABE7R16T2

Plug-in relay sub-bases

ABE7P16T2 and 7R16T2: these products may or may not be equipped with plug-in relays, with integral N/O or C/O contact, 10 mm 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 16-channel modules only. ABR7S2 electromechanical relays and ABS7S2 solid state relays can be combined on the same sub-base. Some sub-bases, not equipped with relays, are offered with 5 x 20 fuse protection for each channel.

ABE716T11/M11: these **miniature** products use plug-in relays, 5 mm wide, with integral N/O contact, rated up to 5 A. These products may be pre-equipped with relays (R) or not (P). They can be fitted with both electromechanical and solid state relays.

Sub-bases **ABE716M11** 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.



ABE7R16T3

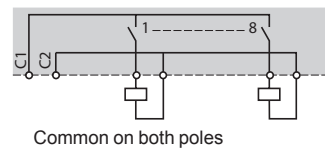
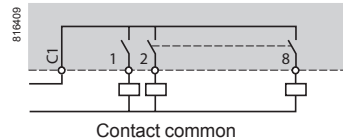
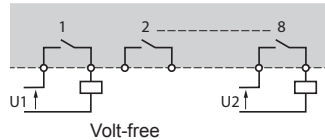
High performance sub-bases for plug-in relays

ABE7P3T3 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 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 modules. ABR7S3 electromechanical relays, ABS7S3 solid state relays and ABE7ACC21 continuity block can all be combined 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.



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

Sub-bases equipped with solid state channels ABE7S16E●●: these sub-bases enable sensors with different voltages to be connected (\sim 24 V to \sim 230 V according to the reference).

These products provide electrical isolation for the various power supply inputs. They are available in 16-channel modules only and the terminal blocks are removable.

Sub-bases for plug-in solid state relays ABE7P16F●●:

these sub-bases enable sensors with different voltages to be connected (\sim 24 V to \sim 230 V), either on each channel or on each group of 8 channels.

They are available in 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

Sub-bases equipped with solid state channels ABE7S●●S●●:

these sub-bases enable actuators to be connected at \sim 24 V. The outputs are not isolated. The output current is, depending on the products, 0.5 or 2 A per channel. The occurrence of overloads or short-circuits on the outputs can be transmitted to the PLC to be managed by program. These "fault report" functions can only be used with TSXMicro and Premium PLCs or with any other PLCs which have protected outputs. They are available in 8 and 16-channel modules, 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 must be ordered separately.

These relays are available for two power levels:

□ from \sim 5 V to \sim 240 V/0.5 A, 10 mm wide. These are for mounting on

ABE7P16T2●● sub-bases,

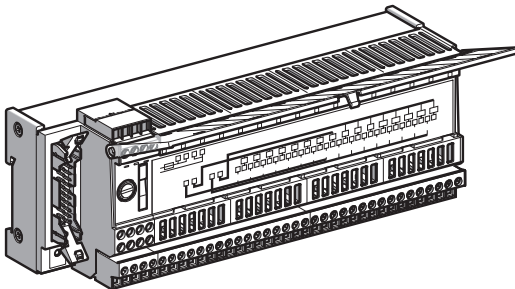
□ from \sim 5 V to \sim 240 V/1.5 and 2 A, 12 mm wide. These are for mounting on

ABE7P16T3●● or **ABE7P08T330** sub-bases,

It is possible to combine electromechanical relays and solid state relays, as well as continuity blocks, on the same sub-base.

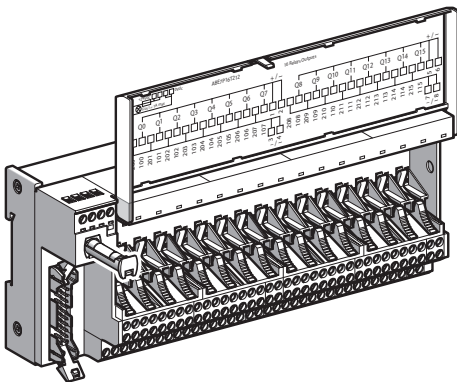
They are available in 16-channel modules only.

816412



ABE7S16E2B1

816414



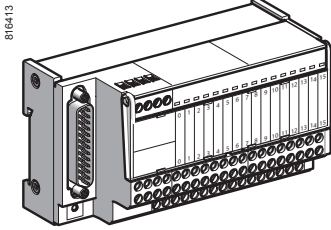
ABE7P16T215

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Analogue sub-bases

Accessories for connection sub-bases



ABE7CPA02

Analogue sub-bases and special functions

Analogue signals are connected on the following products:

- Sub-base **ABE7CPA01** for the counter modules in the TSXMicro and premium range. It also communicates with the Altivar 18 variable speed drive.
- Sub-base **ABE7CPA02** for connection and distribution of 8 channels over screw terminals while maintaining shielding continuity.
- Sub-base **ABE7CPA21** with identical functions to the previous sub-base for the 4 analogue output channels.
- Sub-base **ABE7CPA03** can also supply 2 or 4-wire sensors, channel by channel, with \pm 24 V protected voltage and current limiting at 25 mA. In addition, it ensures continuity of the current loops when the 25-way SUB-D connector is unplugged.
- Sub-base **ABE7CPA31** enables distribution and isolation of the \pm 24 V power supply required for the 8 analogue input channels while maintaining isolation between channels of the TSXAEY810 module. Limitation for all channels is 25 mA.
- Sub-base **ABE7CPA11** 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.
- Sub-base **ABE7CPA12** can be used to connect 16 thermocouples and to increase the temperature of the terminal blocks for cold junction compensation, 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.
- Sub-base **ABE7CPA13** simplifies connection of safety module TSXPAY2●2 on the Premium. It allows the connection of 12, double contact Emergency stops.

Accessories for connection sub-bases

The 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.

Connection to the PLC: cables and cabled connectors

Cables

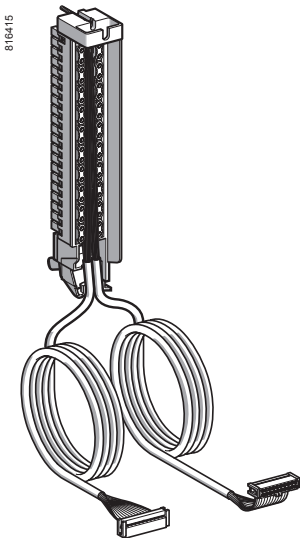
Only **ABFH20H●●●** cables, made from rolled ribbon cable and HE 10 insulation piercing connectors are truly universal. Owing to their small size, they can be connected to any I/O modules or terminal blocks fitted with 20-way HE 10 connectors. They are available in lengths of 0.5 to 5 m, but the user can create custom cables up to a maximum length of 30 m using additional cable and HE 10 connectors.

TSXCDP●●3 moulded cables are only used with the TSXMicro 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.

Cabled connectors

When the PLC I/O modules do not have rapid connection features, the cables and terminal blocks are pre-assembled by us to produce a pre-wired solution. Telefast can therefore offer cabled connectors suitable for the Modicon, April (**ABFA32H●00**) and Telemecanique ranges of analogue modules.



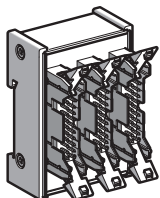
ABFA32H●00

Splitter sub-bases

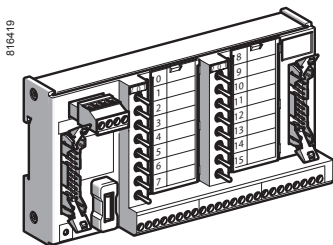
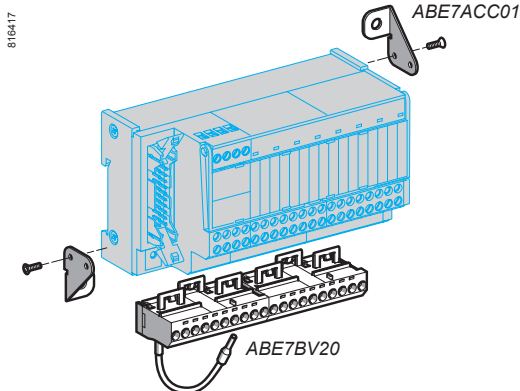
When module configuration and signal distribution are not compatible, the Telefast system can use **ABE7ACC●●** splitter sub-bases:

- 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



ABE7TES160

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.

ABE7ACC01 mounting kit for solid mounting plate

This provides an alternative solution for mounting sub-bases without using an additional rail.

Additional terminal blocks ABE7BV10 and ABE7BV20

With 8 and 16 channels, these products give wider connection alternatives: common, screening, etc.

Other accessories

Plug-in continuity blocks

Available in 10 and 12 mm 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 simulation sub-base

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

Relay for sub-bases ABE7●16T●●●	Relay width 10mm				Relay width 5mm	
Relay	ABR7S21	ABR7S23	ABS7SA2M	ABS7SC2E	ABR7S11	ABS7SC1B
Function	Relay 1 N/O	Relay 1 C/O	Output ~230V - 0.5A	Output --- 48V -0.5A	Relay 1 N/O	Output --- 24V -2 A
Sub-bases/modules						
ABE7●16T210		Not applic.				
ABE7●16T111/M111						
ABE7R16T212		Not applic.				
ABE7●16T214		Not applic.				
ABE7●16T215		Not applic.				
ABE7●16T230						
ABE7●16T231						

12.5 mm wide relays for sub-bases ABE7●16T3●●						
Relay	ABR7S33	ABR7S37	ABS7SA3M	ABS7SC3E	ABS7SC3BA	ABE7ACC21 (1)
Function	Relay 1 C/O	Relay 2 C/O	Output ~230 V - 1.5A	Output --- 48 V - 1.5A	Output --- 24 V - 2 A Protected	Continuity 0.5 A
Sub-bases/modules						
ABE7●16T318						
ABE7●16T330						
ABE7●16T332						
ABE7●16T334						
ABE7●16T370						
ABE7P08T330						

Compatible

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

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Discrete input and/or output sub-bases - IP 20

Applications	Discrete inputs or outputs		
	Optimum "Economy"	Optimum "Miniature"	Universal
Compatibility <input type="checkbox"/> Direct	<ul style="list-style-type: none"> <input type="checkbox"/> Modicon X80 I/O expansion modules (see page 28) <input type="checkbox"/> Modicon Premium automation platforms (see page 32) <input type="checkbox"/> Modicon TSX Micro Compact/modular PLC (see page 44) 		
	<ul style="list-style-type: none"> <input type="checkbox"/> Modicon M221 Book logic controllers (see page 26) <input type="checkbox"/> Modicon TM3 I/O expansion modules (see page 26) <input type="checkbox"/> Modicon X80 I/O expansion modules (see page 28) <input type="checkbox"/> Modicon Premium automation platforms (see page 32) <input type="checkbox"/> Allen Bradley SLC500 and Siemens S5 automation platforms (see page 38) <input type="checkbox"/> Telemecanique TSX47 to 107 controllers (see page 42) <input type="checkbox"/> Modicon TSX Micro Compact/modular PLC (see page 44) 		
<input type="checkbox"/> Indirect	<ul style="list-style-type: none"> <input type="checkbox"/> Via Modicon X80 I/O expansion modules: - Modicon 340 automation platforms, - Modicon 580 automation platforms 	<ul style="list-style-type: none"> <input type="checkbox"/> Via Modicon TM3 I/O expansion modules: - Modicon M241 logic controllers, - Modicon M251 logic controllers, <input type="checkbox"/> Via Modicon X80 I/O expansion modules: - Modicon 340 automation platforms, - Modicon 580 automation platforms, - Modicon Quantum automation platforms 	



Sub-base type	Passive connection sub-bases			
Equipped with relays	-			
Control voltage	24 V ~			
Output voltage	24 V ~			
Output current per channel	0.5 A			
Modularity	16	8 -12 -16		
No. of terminals per channel	1	1 to 3	1	2
Type of connection terminals	Signal	Signal, common (configurable as 24 V ~ or 0 V)	Signal	Signal, common (configurable as 24 V ~ or 0 V)
Connectors	20-way HE10 connector			
Terminal block	Removable	No		No
	Terminal type	Screw		
Additional or optional* function	Low-cost version fitted with cable	Miniature sub-bases	Compact size *	Input type 2* (1) Isolator *
Type of device	ABE7H●●E●00	ABE7H16C●●	ABE7H●●R1● ABE7H●●R50	ABE7H●●R2● ABE7H●●S21
Page	16		17	

(1) For Modicon TSX Micro and Modicon Premium PLCs

Discrete inputs or outputs	Outputs for solid state and/or electromechanical relays
	Optimum "Miniature"
<ul style="list-style-type: none"> <input type="checkbox"/> Modicon M221 Book logic controllers (see page 26) <input type="checkbox"/> Modicon TM3 I/O expansion modules (see page 26) <input type="checkbox"/> Modicon X80 I/O expansion modules (see page 28) <input type="checkbox"/> Modicon Premium automation platforms (see page 32) <input type="checkbox"/> Allen Bradley SLC500 and Siemens S5 automation platforms (see page 38) <input type="checkbox"/> Telemecanique TSX47 to 107 controllers (see page 42) <input type="checkbox"/> Modicon TSX Micro Compact/modular PLC (see page 44) 	
<ul style="list-style-type: none"> <input type="checkbox"/> Via Modicon TM3 I/O expansion modules: - Modicon M241 logic controllers, - Modicon M251 logic controllers, <input type="checkbox"/> Via Modicon X80 I/O expansion modules: - Modicon 340 automation platforms, - Modicon 580 automation platforms, - Modicon Quantum automation platforms 	



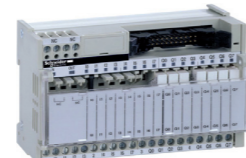
Sub-base type	Passive connection sub-bases	Plug-in electromechanical or solid state relays
Equipped with relays	-	Yes
Control voltage	24 V ~	
Output voltage	24 V ~	24V ~ (solid state) 5... 24 V ~, 230 V ~ (electromechanical)
Output current per channel	0.5 A	5 A (th)
Modularity	16	16 8 passive inputs 8 relay outputs
No. of terminals per channel	1	2
Type of connection terminals	Signal, 2 common connections between the inputs and the outputs	Signal, common, 2 common connections between the inputs and the outputs
Connectors	20-way HE10 connectors	
Terminal block	No	
	Screw	
Additional or optional* function	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	ABE7H16CM11	ABE7H16CM21 ABE7R16M111
Page	16	19

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Discrete input and output sub-bases - IP 20

Applications	Discrete outputs			
	Optimum		Universal	
Compatibility <input type="checkbox"/> Direct <input type="checkbox"/> Indirect	<ul style="list-style-type: none"> <input type="checkbox"/> Modicon M221 Book logic controllers (see page 26) <input type="checkbox"/> Modicon TM3 I/O expansion modules (see page 26) <input type="checkbox"/> Modicon X80 I/O expansion modules (see page 28) <input type="checkbox"/> Modicon Premium automation platforms (see page 32) <input type="checkbox"/> Allen Bradley SLC500 and Siemens S5 automation platforms (see page 38) <input type="checkbox"/> Telemecanique TSX47 to 107 controllers (see page 42) <input type="checkbox"/> Modicon TSX Micro Compact/modular PLC (see page 44) 			
	<ul style="list-style-type: none"> <input type="checkbox"/> Via Modicon TM3 I/O expansion modules: <ul style="list-style-type: none"> - Modicon M241 logic controllers, - Modicon M251 logic controllers <input type="checkbox"/> Via Modicon X80 I/O expansion modules: <ul style="list-style-type: none"> - 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 ~		5 V... 150 V ~ 230 V ~	24 V ~ (solid state) 5 V... 24 V ~, 230 V ~ (E.M.)		
Output current per channel	2 A (th)	2 A (th)	5 A (th)	2 A (solid state) 6 A (electromechanical)		
Modularity	8	8 - 16		16	8 or 16	
No. of terminals per channel	2	1	2	1	2 to 3	
Type of connection terminals	1 N/O contact and common Volt-free	1 N/O contact	1 N/O contact and common	1 N/O contact	Signal, Polarities	
Connectors	20-way HE 10 connector					
Terminal block	Removable	Yes	Yes	Yes	No	
	Terminal type	Screw or spring			Screw	
Additional or optional* function	Miniature sub-base Latching relay	Volt-free or common per group of 8 channels		Miniature sub-bases Common per group of 4 channels	Isolator and fuse	
Type of device	ABE7R08S216●	ABE7R●●S1●●	ABE7R●●S2●●	ABE7R16T111	ABE7P16T111	ABE7P16T2●●● ABE7P08T3●●●
Page	18			19	20	

(1) For TSXMicro and Modicon Premium PLCs



Discrete outputs	Discrete inputs or outputs					
Universal	Universal					
<ul style="list-style-type: none"> <input type="checkbox"/> Modicon M221 Book logic controllers (see page 26) <input type="checkbox"/> Modicon TM3 I/O expansion modules (see page 26) <input type="checkbox"/> Modicon X80 I/O expansion modules (see page 28) <input type="checkbox"/> Modicon Premium automation platforms (see page 32) <input type="checkbox"/> Allen Bradley SLC500 and Siemens S5 automation platforms (see page 38) <input type="checkbox"/> Telemecanique TSX47 to 107 controllers (see page 42) <input type="checkbox"/> Modicon TSX Micro Compact/modular PLC (see page 44) 	<ul style="list-style-type: none"> <input type="checkbox"/> Via Modicon TM3 I/O expansion modules: <ul style="list-style-type: none"> - Modicon M241 logic controllers, - Modicon M251 logic controllers <input type="checkbox"/> Via Modicon X80 I/O expansion modules: <ul style="list-style-type: none"> - Modicon 340 automation platforms, - Modicon 580 automation platforms, - Modicon Quantum automation platforms 					





Electromechanical, plug-in	Solid state, fixed	–	–	Solid state, fixed	Solid state, plug-in		
Yes	Yes	–	–	Yes	No		
24 V ~				From 24 V ~ to 230 V ~	From 5 V TTL to 230 V ~		
5 V... 150 V ~ 230 V ~		24 V ~					
5 A (th)	8 A (th)	0.5 to 2 A	125 mA	0.5 A	125 mA	12 mA	
16							
2 to 3	2 to 6	2	3	2			
1 C/O contact or 1 N/O contact and common	1 C/O contact or 2 C/O contacts and common	Signal and 0 V	24 V ~ and 0 V signal	Signal can be isolated, Protected common	Signal	Signal and common	
20-way HE 10 connector							
No	Yes	No	No	Yes	No		
Screw		Screw or spring		Screw			
Screw or spring		Screw or spring		Screw or spring			
Volt-free or common per group of: 8 channels		Fault signal	Isolator and fuse (indicator)	3-wire proximity sensor	Isolator and fuse (indicator)	–	
4 channels							
ABE7R16T2●●	ABE7R16T3●●	ABE7S●●S2B●	ABE7H16F43	ABE7H16R3●	ABE7H16S43	ABE7S16E2●●E	ABE7P16F31●
19		18	17		18	19	

Telefast Pre-wired System

Modicon ABE7 connection sub-bases
Analog and application-specific sub-bases - IP 20

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: - BMXAMI0800 - BMXAMI0810 - BMXAMO0802 Modicon Quantum: - 140AVI03000 - 140ACI03000 - 140ACI04000 - 140ACO13000	Modicon Premium: - TSXASY410 - TSXAEY420 Modicon X80 I/O: - BMXAMO0210 - BMXAMO0410 - BMEAHO0412 Modicon Quantum: - 140AVO02000 - 140ACO02000	Modicon X80 I/O: - BMXAMI0410 - BMXAMI0414 - 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			Connection of 4 thermocouples with cold junction compensation Provision and distribution of protected 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	
Connector type		15-way SUB-D + 9-way SUB-D		25-way SUB-D		25-way SUB-D	
Terminal block	Removable	No		No		No	
	Terminal type	Screw		Screw		Screw	
Type of device		ABE7CPA01		ABE7CPA02	ABE7CPA21	ABE7CPA412 ABE7CPA410	
Page		22					

Analog signals and special functions				
Modicon Premium: - TSXAEY800 - TSXAEY1600 Modicon Quantum: - 140AVI03000 - 140ACI03000 - 140ACI04000	Modicon Premium: - TSXAEY810 Modicon X80 I/O: - BMXAMI0800 - BMXAMI0810 - BMEAHI0812 Modicon Quantum: - 140AVI03000 - 140ACI03000 - 140ACI04000	Modicon Premium: - TSXCAY●1, - TSXCTY●A	Modicon Premium: - TSXAEY1614	Modicon Premium: - TSXPAY2●2
				
Analog inputs Current Voltage Pt 100	Isolated analog inputs	Counter inputs	Inputs for thermocouples	I/O
Distribution of sensor power supplies by limiter (25 mA)	Distribution of isolated sensor power supplies by converter	Acquisition of value from an absolute encoder	Connection of 16 thermocouples with cold junction compensation	Safety module (BG)
8 channels	8 channels	1 channel	16 channels	12 Emergency stops
24 V ~				
24 V ~				
25 mA				
2 or 4		-	2 or 4	1
25-way SUB-D	25-way SUB-D	15-way SUB-D	25-way SUB-D	50-way SUB-D
No	No	No	No	No
Screw	Screw or spring	Screw	Screw	Screw
ABE7CPA03	ABE7CPA31●	ABE7CPA11	ABE7CPA12	ABE7CPA13
22				

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Passive connection sub-bases

Passive connection sub-bases for discrete signals

Optimum "Economy" sub-bases

Function	No. of channels	No. of terminals		For PLCs	Length of PLC connection cable	Type of connection	Reference	Weight
		per channel	on row number		m			kg
					ft.			lb
Input or output	16	1	2	<input type="checkbox"/> Modicon M221 logic controllers <input type="checkbox"/> TSX Micro controllers <input type="checkbox"/> Modicon Premium automation platforms	–	Screw	ABE7H20E000	–
				<input type="checkbox"/> Modicon X80 I/O expansion modules <input type="checkbox"/> TSX Micro controllers <input type="checkbox"/> Modicon Premium automation platforms	1 3.281	Screw	ABE7H20E100	0.330 0.728
					2 6.562	Screw	ABE7H20E200	0.410 0.904



ABE7H20E●●●

Optimum "Miniature" sub-bases

Function	No. of channels	No. of terminals		LED per channel	Polarity distribution	Type of connection	Reference	Weight			
		per channel	on row number					kg			
								lb			
Input or output	16	1	1	No	No	Screw	ABE7H16C10	0.160 0.353			
				Yes	No	Screw	ABE7H16C11	0.160 0.353			
					0 or 24 V	Screw	ABE7H16C21	0.205 0.452			
				Yes	0 or 24 V	Screw	ABE7H16C31	0.260 0.573			
				Input and output (1)	1	1	Yes	No	Screw	ABE7H16CM11	0.160 0.353
							Yes	0 or 24 V	Screw	ABE7H16CM21	0.200 0.441



ABE7H16CM11



ABE7H16CM21

(1) 8 I + 8 Q: these products have 2 common connections which enable inputs and outputs to be connected to the same sub-base at the same time.

Passive connection sub-bases for discrete signals (continued)

Universal sub-bases

Function	No. of channels	No. of terminals per channel	No. of terminals on row number	LED per channel	Polarity distribution	Isolator (I) Fuse (F) per channel	Type of connection	Reference	Weight kg/lb
Input or output	8	1	1	No	No	–	Screw	ABE7H08R10	0.187 0.412
				Yes	No	–	Screw	ABE7H08R11	0.187 0.412
		2	2	Yes	0 or 24 V	–	Screw	ABE7H08R21	0.218 0.481
					I	Screw	ABE7H08S21	0.245 0.540	
	12		1	1	No	No	–	Screw	ABE7H12R10
		Yes			No	–	Screw	ABE7H12R11	0.274 0.604
2		2		No	No	–	Screw	ABE7H12R50	0.196 0.432
			Yes	0 or 24 V	–	Screw	ABE7H12R20	0.300 0.661	
				Yes	0 or 24 V	–	Screw	ABE7H12R21	0.300 0.661
16		1	1	No	No	–	Screw	ABE7H16R10	0.274 0.604
	Yes			No	–	Screw	ABE7H16R11	0.274 0.604	
	2		2	No	No	–	Screw	ABE7H16R50	0.196 0.432
		Yes		0 or 24 V	–	Screw	ABE7H16R20	0.300 0.661	
				Yes	0 or 24 V	–	Screw	ABE7H16R21	0.300 0.661
	Input type 2 (1)	16	2	2	No	0 or 24 V	–	Screw	ABE7H16R21
Yes					0 or 24 V	–	Screw	ABE7H16S21	0.375 0.827
3			3	Yes	0 or 24 V	–	Screw	ABE7H16S31	0.346 0.763
Input		16	2	1	Yes	24 V	I, F (2)	Screw	ABE7H16S43
Output	16	2	1	Yes	0 V	I, F (2)	Screw	ABE7H16F43	0.640 1.411

(1) For TSXMicro, Modicon Premium.

(2) With LED to indicate blown fuse.



Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Adaptor sub-bases with fixed relays and removable terminal blocks



ABE7S16E2●●

Adaptor sub-bases with fixed solid state relays, removable terminal blocks

Universal input sub-bases with solid state relays

Number of channels	No. 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



ABE7S16S●●

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 N/O	2 A	Contact common per group of 4 channels	Screw	ABE7R08S111	0.252 0.556
				Screw	ABE7R08S216	0.448 0.988
				Screw	ABE7R08S210	0.448 0.988
16	1 N/O	2 A	Contact common per group of 8 channels	Screw	ABE7R16S111	0.405 0.893
				Spring	ABE7R16S111E	0.405 0.893
				Screw	ABE7R16S210	0.405 0.893
				Screw	ABE7R16S212	0.400 0.882



ABE7R08S21●

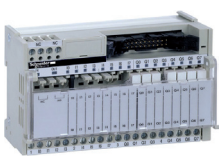
(1) A fault on a sub-base output Qn will set PLC output Qn to safety mode, which will be detected by the PLC.
 (2) Can only be used with modules with protected outputs.

ABE7_603_CPFJR16022-DLT2



ABE7P16F31

ABE7_603_CPFJR16025-DLT2



ABE7R16M111

ABE7_603_CPFJR16023-DLT2



ABE7R16T210

Adaptor sub-bases with plug-in relays

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

Number of channels	No. 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

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

Number of channels	Relay width mm in.	Relay type supplied	Number and type of contacts	Polarity distribution/ operative part	Reference	Weight kg lb
16	5 0,197	ABR7S11	1 N/O	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	0,394	ABR7S21	1 N/O	Volt-free	ABE7R16T210	0.735 1.620
				Common on both poles (3)	ABE7R16T212	0.730 1.609
12	0,472	ABR7S23	1 C/O	Volt-free	ABE7R16T230	0.775 1.709
				Volt-free	ABE7R16T330	1.300 2.866
		ABR7S37	2 C/O	Volt-free	ABE7R16T370	1.300 2.866

(1) The sub-bases are supplied as standard with electromechanical relays, all or part 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.

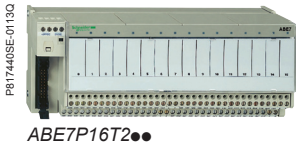
(3) Per group of 8 channels.

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Output adaptor sub-bases for plug-in relays

Output adaptor sub-bases for plug-in relays									
Optimum and Universal output sub-bases for solid state relays and/or electromechanical relays (1)									
No. of channels	Relay width mm in.	For relay type	Isolator per channel	Fuse per channel	Polarity distribution/ operative part	Type of connection	Reference	Weight kg lb	
16	5 0.197	ABR7S11 ABS7SC1B	No	No	Contact common per group of 4 channels	Screw	ABE7P16T111	0.550	
								1.213	
	10 0.394	ABR7S2● ABS7SA2● ABS7SC2●	No	No	Volt-free	Screw	ABE7P16T210 (2)	0.615	
								1.356	
								ABE7P16T230 (2)	0.655
							1.444		
				Yes	Volt-free	Screw	ABE7P16T214	0.675	
				Yes	Common on both poles (3)	Screw	ABE7P16T215	1.477	
8	12 0.472	ABR7S33 ABS7A3● ABS7SC3●● ABE7ACC21	No	No	Volt-free	Screw	ABE7P08T330	0.450 0.992	
16	12 0.472	ABR7S33 ABS7A3● ABS7SC3●● ABE7ACC21	No	No	Volt-free	Screw	ABE7P16T330	0.900	
								1.984	
						Common on both poles (4)	Screw	ABE7P16T332	0.900
								1.984	
		ABR7S33 ABS7SA3M ABS7SC3E ABE7ACC21	No	Yes	Volt-free	Screw	ABE7P16T334	0.900	
			Yes	Yes	Common on both poles (4)	Screw	ABE7P16T318	1.000	
								2.205	



(1) Not equipped with relays.

(2) With relay ABR7S21 for sub-base ABE7P16T210, with relay ABR7S23 for sub-base ABE7P16T230●.

(3) Per group of 8 channels.

(4) Per group of 4 channels.



ABS7SC1B

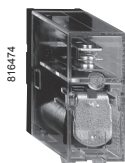
Plug-in solid state relays									
Relay width mm in.	Functions	Input circuit		Output circuit		Unit reference Order in lots of 4	Weight kg lb		
		Current	Nominal voltage	Current	Nominal voltage				
5 0.197	Output	---	24 V	2 A	24 V ---	ABS7SC1B	0.010 0.022		
				0.5 A	5...48 V ---		ABS7SC2E	0.016 0.035	
10 0.394	Output	---	24 V	2 A	24 V ---	ABS7SA2M		0.016 0.035	
				0.5 A	5...48 V ---		ABS7SC3AL	0.016 0.035	
12 0.472	Input	---	5 V TTL	–	24 V ---	ABS7EC3AL		0.014 0.031	
			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
			60 Hz ~	110...130 V	–		24 V ---	ABS7EA3F5	
			50 Hz ~	230...240 V	–		24 V ---		ABS7EA3M5
			Output	---	24 V		2 A	24 V ---	
Self-protected	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 mm in.	Control voltage	Output current (1)	Number of contacts	Order in lots of	Unit reference	Weight kg lb	
5 0.197	24 V ---	5 A (lth)	1 N/O	4	ABR7S11	0.005 0.011	
			1 N/O	4		ABR7S21	0.008 0.018
10 0.394	24 V ---	5 A (lth)	1 C/O	4	ABR7S23		0.008 0.018
			1 C/O	4		ABR7S33	0.017 0.037
12 0.472	2 V ---	10 A (lth)	1 C/O	4	ABR7S33		0.017 0.037
		8 A (lth)	2 C/O	4		ABR7S37	0.017 0.037
		48 V --- 8 A (lth)	1 C/O	4			ABR7S33E

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



ABR7S2●



ABR7S3●

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Connection sub-bases for analog channels and application-specific channels

ABE7_603_CPFJR16012-DLT2



ABE7CPA01

ABE7_603_CPFJR16010-DLT2



ABE7CPA11

ABE7_603_CPFJR16011-DLT2



ABE7CPA 21/410/412

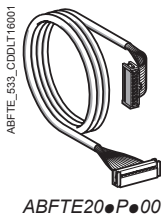
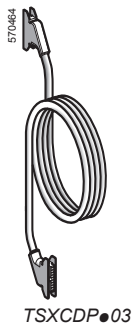
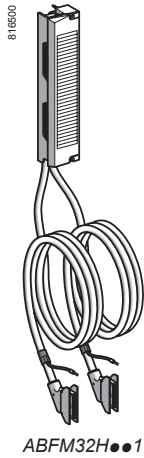
Connection sub-bases for counter and analog channels						
Functions	For platforms	Compatible modules	Type of connection on Telefast end	Type of connection	Reference	Weight kg lb
Analog and counter	TSXMicro	Analog and integrated counter TSX3722 TSXCTZ●A	15-way SUB-D	Screw	ABE7CPA01	0.300 0.661
Counter, axis control, position control	Modicon Premium	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 EIS 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 BMXAMO802				
	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				
	Modicon Premium	TSXAEY810	25-way SUB-D	Screw	ABE7CPA31	0.410 0.904
Distribution and supply of 8 analog input channels isolated from one another with 25 mA/ channel limitation	Modicon X80 I/O	BMXAMI0800 BMXAMI0810 BMEAHI0812 (1)		Spring	ABE7CPA31E	0.410 0.904
	Modicon Quantum	140AVI03000 140ACI03000 140ACI04000				
	Modicon Premium	TSXPAY2●2	25-way SUB-D	Screw	ABE7CPA13	0.290 0.639

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

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Cabled connectors, connection cable



Cabled connectors for Modicon Quantum I/O modules									
Type of signal	I/O modules	Type of connector	Gauge	Cross-section	Length	No. of channels	Reference	Weight	
			AWG	mm ²				m ft	kg lb
Inputs and relay outputs	Consult our website www.schneider-electric.com	2 x 20-way HE10	22	0.324	1.5	2 x 16	ABFM32H150	0.650	
					4.921			1.433	
0.5 A outputs	Consult our website www.schneider-electric.com	2 x 20-way HE10 + external power supply	22	0.324	1.5	2 x 16	ABFM32H151	0.650	
					4.921			1.433	
Inputs or outputs (96 channels)	140DDI36400 140DDO36400	2 x 20-way HE10	22	0.324	0.5	6 x 16	TSXCDP053	0.085	
					1.640			0.187	
					1	6 x 16		TSXCDP103	0.150
					3.281			0.331	
					2	6 x 16		TSXCDP203	0.280
					6.562			0.617	
Analog inputs	140AVI03000 140ACI03000 140ACI04000	1 x 25-way SUB-D	24	0.22	2	8	ABFM08S201	0.600	
					6.562			1.323	
		2 x 25-way SUB-D	24	0.22	2	16	ABFM16S201	0.620	
								6.562	
Analog outputs	140AVO02000 140ACO02000 140ACO13000	1 x 25-way SUB-D	24	0.22	2	4	ABFM04S200	0.450	
					6.562			0.992	
		1 x 25-way SUB-D	24	0.22	2	4	ABFM04S201	0.450	
								6.562	
1 x 25-way SUB-D	24	0.22	2	8	ABFM04S202	0.450			
						6.562		0.992	

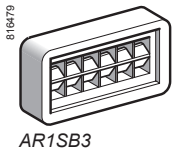
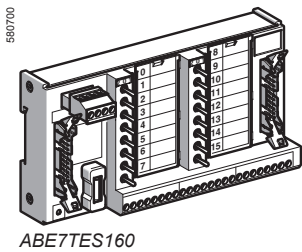
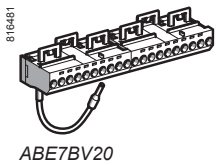
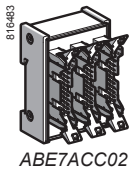
Connection cables between TM221M●32TK controller, TM3 modules and sub-bases							
Designation	Compatibility	CSA	Connection method	Length m ft.	Reference	Weight kg lb	
Cordsets for digital inputs	TM221M32TK, M221ME32TK, TM3DI16K, TM3DI32K	AWG 28/ 0.08 mm ²	HE10 - HE10	1	ABFTE20EP100	-	
				3.281			
				2		ABFTE20EP200	-
				6.562			
Cordsets for digital outputs	TM221M32TK, TM221ME32TK, TM3DQ16TK, TM3DQ32TK	AWG 28/ 0.08 mm ²	HE10 - HE10	1	ABFTE20SP100	-	
				3.28			
				2		ABFTE20SP200	-
				6.56			
Cordsets for digital I/O	TM221M32TK, TM221ME32TK, TM3DI16K, TM3DI32K, TM3DQ16TK, TM3DQ32TK	AWG 22/ 0.035 mm ²	HE10 - Flying leads	3	TWDFCW30K	0.405	
				9.84			0.893
				5		TWDFCW50K	0.670
				16.40		1.477	

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Accessories for connection sub-bases

Software					
Description	Operating system	Reference	Weight kg lb		
Software for customer label marking	In Windows version 3.1 or 95	ABE7LOGV10	0.350 0.772		
Pack of 25 pre-cut label sheets (160 labels)	–	ABE7LOGF25	0.200 0.440		
Accessories					
Description	No. of channels	Characteristics	Order in multiples of	Unit reference	Weight kg lb
Kit for fixing on solid plate	–	–	10	ABE7ACC01	0.008 0.017
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
Locating device for removable terminal block	–	–	100	ABE7ACC30	0.100 0.220
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	0.350 0.772
Self-adhesive marker tag holder	–	For 6 characters	50	AR1SB3	0.001 0.002
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



Telefast Pre-wired System

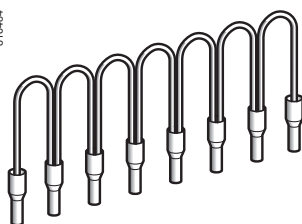
Modicon ABE7 connection sub-bases

Accessories for connection sub-bases

Commoning link accessories

Description	For common	Colour	Distance between cable ends cm in.	Reference	Weight kg lb	
Commoning links Modularity 8 x 1 mm ²	Coil	White	12	ABFC08R12W	0.020	
			4.724		0.044	
				2	ABFC08R02W	0.010
				0.787		0.022
	~	Red		12	ABFC08R12R	0.020
				4.724		0.044
			2	ABFC08R02R	0.010	
			0.787		0.022	
---	Blue		12	ABFC08R12B	0.020	
			4.724		0.044	
			2	ABFC08R02B	0.010	
			0.787		0.022	

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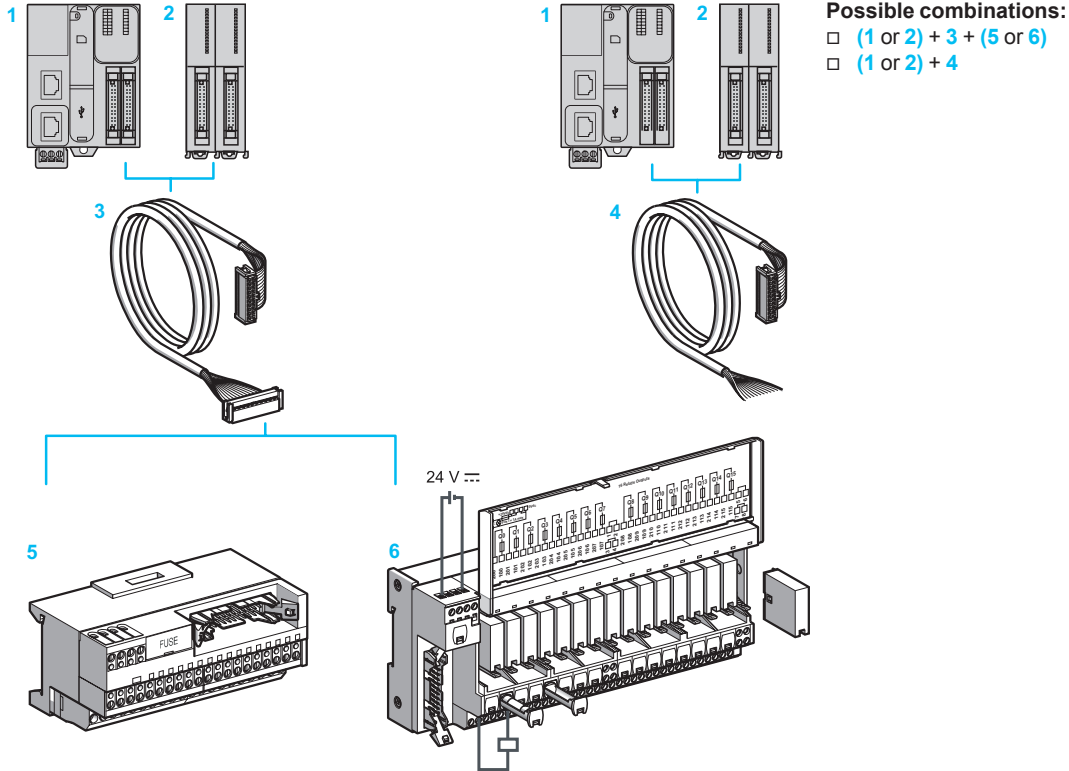
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Telefast Pre-wired System

Modicon ABE7 connection sub-bases
Connection sub-bases for Modicon M221 Book logic controllers, and Modicon TM3 expansion modules

Telefast pre-wired system with Modicon ABE 7

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



- 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 connections 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 controllers and Modicon TM3 expansion modules

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

Compatible with inputs, For use with ABFTE20EP●●●● cordset (1)

Compatible with outputs, For use with ABFTE20SP●●●● cordset (1)

No Compatible

(1) Available length: From 1 to 3 m.

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Connection sub-bases for Modicon M221 Book logic controllers, and Modicon TM3 expansion modules

Combinations						
Combinations of Modicon ABE7 sub-bases with Modicon M221/M241/M251 controllers and Modicon TM3 expansion modules						
Modicon Telefast sub-bases		Other logic controllers Modicon M221/M241/M251		Other logic controllers Modicon M221/M241/M251: connection via Modicon TM3 I/O expansion modules		
		Without HE10 connector		TM3DI16K, TM3DI32K	TM3DQ16TK, TM3DQ32TK	TM3DQ16UK, TM3DQ32UK
Reference	Type	–	–	Inputs	Outputs (Source)	Outputs (Sink)
ABE7H16C10	Passive sub-base					
ABE7H16C11	Passive sub-base					
ABE7H16C21	Passive sub-base					
ABE7H16C31	Passive sub-base					
ABE7H16F43	Passive sub-base					
ABE7H16R10	Passive sub-base					
ABE7H16R11	Passive sub-base					
ABE7H16R20	Passive sub-base					
ABE7H16R21	Passive sub-base					
ABE7H16R31	Passive sub-base					
ABE7H16R50	Passive sub-base					
ABE7H16S21	Passive sub-base					
ABE7H16S43	Passive sub-base					
ABE7H20E000	Passive sub-base					
ABE7P16F310	Input sub-base for solid state relays					
ABE7P16F312	Input sub-base for solid state relays					
ABE7P16T111	Output sub-base for solid state relays and/or electromechanical relays					
ABE7P16T210	Output sub-base for solid state relays and/or electromechanical relays					
ABE7P16T214	Output sub-base for solid state relays and/or electromechanical relays					
ABE7P16T215	Output sub-base for solid state relays and/or electromechanical relays					
ABE7P16T318	Output sub-base for solid state relays and/or electromechanical relays					
ABE7P16T330	Output sub-base for solid state relays and/or electromechanical relays					
ABE7P16T334	Output sub-base for solid state relays and/or electromechanical relays					
ABE7R16S111	Output sub-base with electromechanical relays					
ABE7R16S111E	Output sub-base with electromechanical relays					
ABE7R16S210	Output sub-base with electromechanical relays					
ABE7R16S212	Output sub-base with electromechanical relays					
ABE7R16T111	Output sub-base with electromechanical relays					
ABE7R16T210	Output sub-base with electromechanical relays					
ABE7R16T212	Output sub-base with electromechanical relays					
ABE7R16T230	Output sub-base with electromechanical relays					
ABE7R16T330	Output sub-base with electromechanical relays					
ABE7R16T370	Output sub-base with electromechanical relays					
ABE7S16E2B1	Input sub-base with solid state relays					
ABE7S16E2E0	Input sub-base with solid state relays					
ABE7S16E2E1	Input sub-base with solid state relays					
ABE7S16E2F0	Input sub-base with solid state relays					
ABE7S16E2M0	Input sub-base with solid state relays					
ABE7S16S1B2	Output sub-base with solid state relays					
ABE7S16S2B0	Output sub-base with solid state relays					

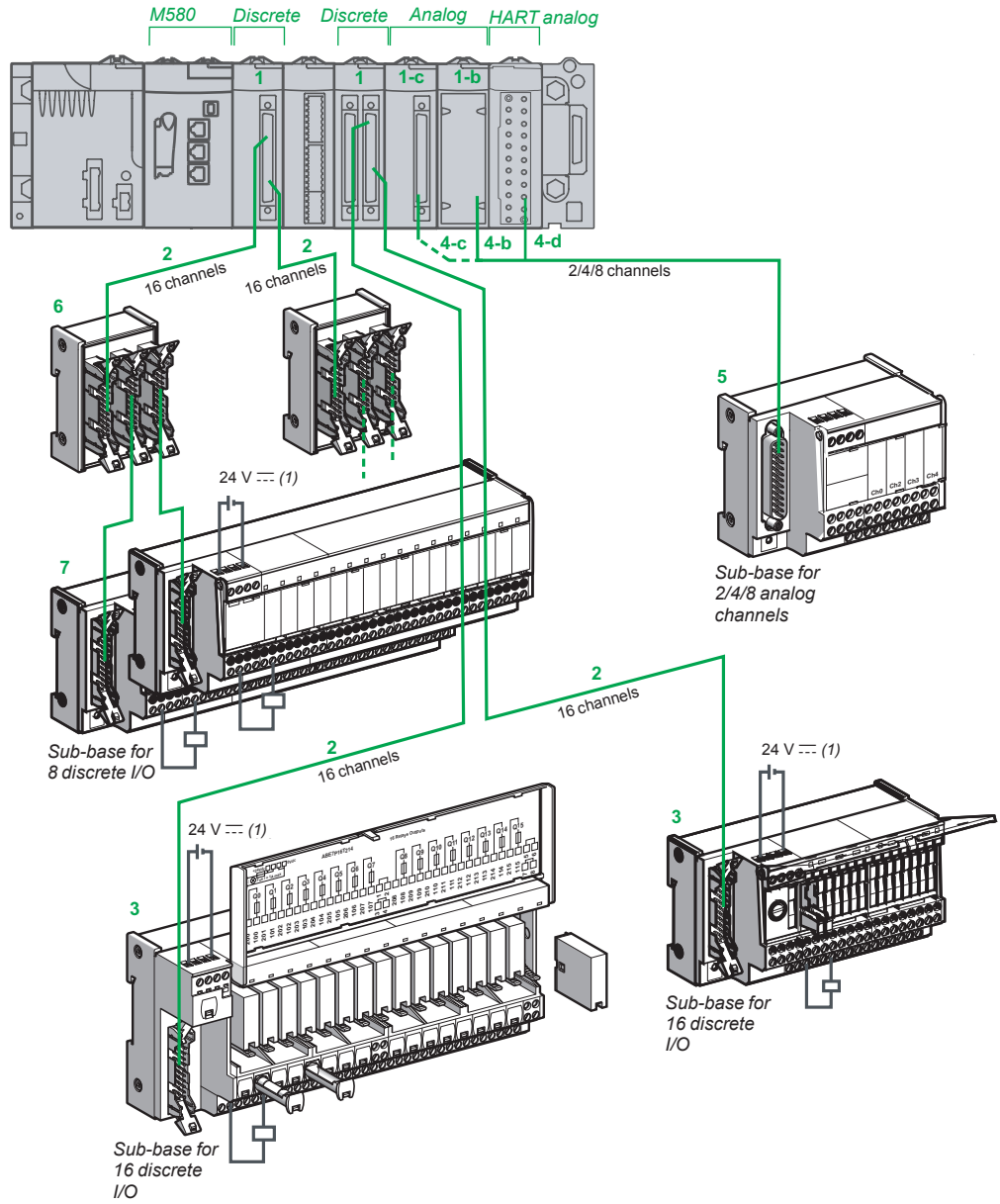
Compatible with inputs, For use with ABFTE20EP●●●● cordset (1)
 Compatible with outputs, For use with ABFTE20SP●●●● cordset (1)
 No Compatible

(1) Available length: From 1 to 3 m.

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Connection sub-bases for Modicon X80 I/O modules



(1) Connection of the 24 V AC power supply is only possible using Modicon Telefast ABE7 sub-bases. The 0 V connections must be equipotential.

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 30). These cordsets are available in 0.5, 1, 2, 3, 5 or 10 m/1.640, 3.281, 6.562, 9.843, 16.404, 32.808 ft lengths:
 - **BMXFCC●●●1** cordsets with one 20-wire sheath (AWG 22) equipped with one 40-way FCN connector and one HE 10 moulded 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 moulded connectors on the Telefast sub-base end
- 3 16-channel Modicon Telefast ABE7 Optimum or Universal passive connection sub-bases or adaptor 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 31).
 - 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 available in 1.5 or 3m/4.92 or 9.84 ft lengths.
 - **BMXFTA●●●2** 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 available in 1.5 or 3m/4.92 or 9.84 ft lengths.
 - **BMXFTA●●●0** cordsets with a 28-way removable terminal block on the module end and a 25-way SUB-D connector on the Telefast sub-base end. Cordsets available in 1.5 or 3m/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 available in 1.5 or 3m/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 on the module end and a 25-way SUB-D connector on the Telefast sub-base end. Cordsets available in 1.5 or 3m/4.92 or 9.84 ft lengths.
 For connection to HART analog output module:
 - **BMXFCA●●●0** (see description in section 4-b)
- 5 Modicon Telefast ABE7CPA analog and application-specific connection sub-bases (for combinations, see pages 31):
 - **ABE7CPA410** allows connection on a screw terminal block of 4 current/voltage inputs, with provision and distribution of 4 isolated power supplies for the current loop inputs
 - **ABE7CPA412** allows connection on a screw terminal block of 4 thermocouple inputs, with cold-junction compensation supplied 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** allows 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-channel sub-bases.
- 7 8-channel Modicon Telefast ABE7 Optimum or Universal passive connection sub-bases or adaptor sub-bases.

Combinations of discrete inputs/outputs on the Modicon X80 platform with ABE7 sub-bases						
(items 1...7), see Presentation on page 28		Discrete I/O modules on the Modicon X80 platform				
		Reference for 24 V ⎓ discrete I/O modules (item 1)				
		Inputs		Outputs		Inputs/outputs
		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 (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)	ABE7H34E●00 “economy” (2)					
	ABE7H16C●● “miniature”					
Universal 8 channels (item 7)	ABE7H08R●●	(3)	(3)	(3)	(3)	(3)
	ABE7H08S21	(3)	(3)	(3)	(3)	(3)
Universal 16 channels (item 3)	ABE7H16R1●●					
	ABE7H16R50●					
	ABE7H16R2●●					
	ABE7H16S21●					
	ABE7H16R3●					
	ABE7H16R23					
	ABE7H16S43					
ABE7H16F43						
Input adaptor sub-bases with solid state relays						
Universal 16 channels (item 3)	ABE7S16E2●●● Fixed solid state relays, removable terminal blocks					
	ABE7P16F31● Plug-in solid state relays					
Output adaptor sub-bases with fixed relays, removable terminal blocks						
Optimum & Universal 8 channels (item 7)	ABE7S08S2B●● Solid state relays			(3)	(3)	(3)
	ABE7R08S111●, ABE7R08S21●● Electromechanical relays			(3)	(3)	(3)
Optimum & Universal 16 channels (item 3)	ABE7S16S●B●● Solid state relays					
	ABE7R16S111●, ABE7R16S210●, ABE7R16S212 Electromechanical relays					
Output adaptor sub-bases with plug-in relays						
Universal 8 channels (item 7)	ABE7P08T330● Solid state relays			(3)	(3)	(3)
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 consult our offer “Modicon X80 I/Os, common platform of modules for Modicon M580, Quantum Ethernet I/O and M340 PAC”.

(2) ABE7H34E●00 “economy” sub-bases: the cordset is supplied.

(3) Via the splitter sub-base 6 ABE7ACC02 used to separate 16 channels into 2 x 8 channels

Combinations of analog inputs/outputs on the Modicon X80 platform with ABE7 sub-bases											
(items 1...7), see Presentation on page 28		Analog I/O modules on the Modicon X80 platform									
		Reference for analog I/O modules (item 1-b, 1-c and 1-d)									
		Inputs						Outputs			
		4 I	4 I	2 x 4 I	8 I	8 I	8 I	2 Q	4 Q	8 Q	4 Q
		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 (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)	ABE7H08R●●										
	ABE7H08S21										
Universal 16 channels (item 3)	ABE7H16R1●●										
	ABE7H16R50●●										
	ABE7H16R2●●										
	ABE7H16S21●●										
	ABE7H16R3●●										
	ABE7H16R23										
	ABE7H16S43										
	ABE7H16F43										
Input adaptor sub-bases with solid state relays											
Universal 16 channels (item 3)	ABE7S16E2●●●										
	Fixed solid state relays, removable terminal blocks										
	ABE7P16F31●●										
	Plug-in solid state relays										
Output adaptor sub-bases with fixed relays, removable terminal blocks											
Optimum & Universal 8 channels (item 7)	ABE7S08S2B●●										
	Solid state relays										
	ABE7R08S111●●, ABE7R08S21●●										
	Electromechanical relays										
Optimum & Universal 16 channels (item 3)	ABE7S16S●B●●										
	Solid state relays										
	ABE7R16S111●●, ABE7R16S210●●, ABE7R16S212										
	Electromechanical relays										
Output adaptor sub-bases with plug-in relays											
Universal 8 channels (item 7)	ABE7P08T330●●										
	Solid state 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										

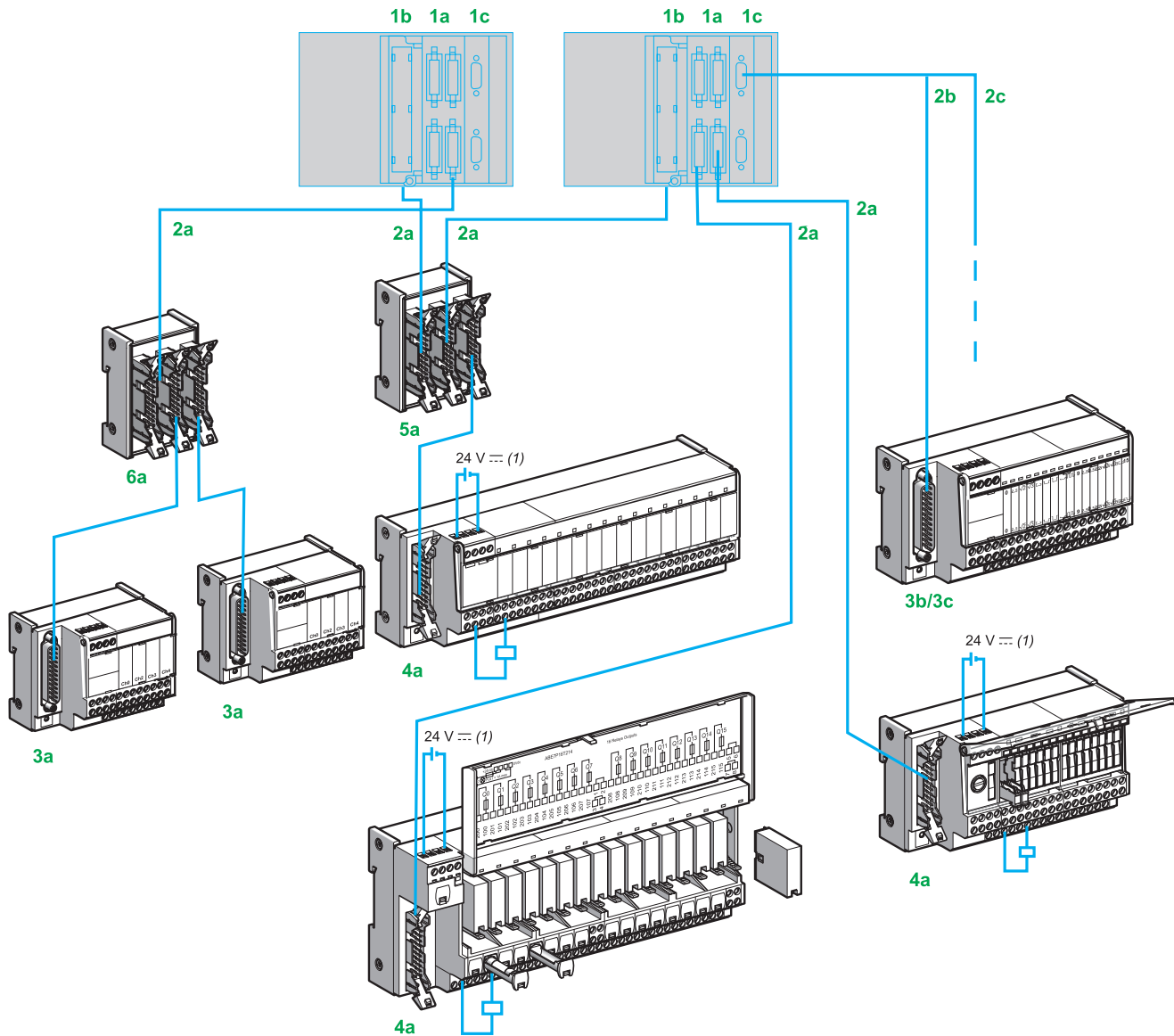
Compatible
Not compatible

(1) References for cordsets: to be completed, please consult our offer "Modicon X80 I/Os, common platform of modules for Modicon M580, Quantum Ethernet I/O and M340 PAC"

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Connection sub-bases for Modicon Premium platform



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

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

1c Application-specific modules with screw terminals.

2a A single type of cable with 20-way HE 10 connectors, for 8, 12 or 16-channel modularity. The HE 10 connectors can be moulded, **TSXCDP●●●** (AWG 22) or insulation piercing, **ABFH20H●●●** (AWG 28).

These cordsets are available in various lengths. AWG 28 (0.08 mm²) allows input and output sub-bases rated 100 mA to be connected directly, as well as sub-bases with relays. Adaptor **ABE7ACC02** allows connection of sub-bases with 8-channel modularity.

2b All analog signals are connected with a pre-wired cable **TSXCAP030/100** with 25-way SUB-D connectors, guaranteeing shielding continuity.

2c Cable **TSXCPP●02**

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 with 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

3c Sub-base **ABE7CPA13** dedicated to the safety channels.

4a 12 or 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 Sub-base **ABE7CPA01** dedicated to connecting axis control and counter inputs on a terminal block.

(1) Connection of the 24 V AC power supply is only possible using Telefast sub-bases. The 0 V connections must be equipotential.

Combinations of discrete I/O on the Modicon Premium platform with ABE 7 sub-bases							
(item numbers: see Presentation on page 32)		Discrete I/O modules for Modicon Premium					
Reference for 24 V \square 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 O 2 x 16 O	1 x 16 I	1 x 12 O
		TSXDEY64D2K TSXDEY32D2K	TSXDEY32DK	TSXDEY16FK	TSXDSY64T2K TSXDSY32T2K	TSXDYM28FK TSXDYM28RFK	
Required cordsets							
Preassembled cordsets (at both ends)	TSXCDP●●3 (item 2a), see page 23	Yes	Yes	Yes	Yes	Yes	Yes
	ABFH20H●●0 (item 2a), see page 23	Yes	Yes	Yes	Yes	Yes	Yes
Passive connection sub-bases							
Universal 8 channels (item 3a)	ABE7H08R●●	(1)		(1)	(1)	(1)	
	ABE7H08S21	(1)		(1)	(1)	(1)	
Universal 12 channels (item 4a)	ABE7H12R●●						
	ABE7H12S21						
Universal 16 channels (item 4a)	ABE7H16R●●		ABE7H16 R20				
	ABE7H16C●●		ABE7H16 R20				
	ABE7H20E●●● (2)		ABE7H16 R20				
	ABE7H16S21						
	ABE7H16R23						
	ABE7H16F43						
	ABE7H16S43						
Input adaptor sub-bases with solid state relays							
Universal 16 channels (item 4a)	ABE7S16E2●●						
	ABE7P16F3●●						
Output adaptor sub-bases with fixed relays, removable terminal blocks							
Optimum & Universal 8 channels (item 3a)	ABE7S08S2●●				(1)		
	ABE7R08S●●●				(1)		
Optimum & Universal 16 channels (item 4a)	ABE7S16S●●●						
	ABE7R16S●●●						
Output adaptor sub-bases with plug-in relays							
Universal 8 channels (item 3a)	ABE7P08T330●				(1)		
	ABE7R16T●●●						
Optimum & Universal 16 channels (item 4a)	ABE7R16T●●●						
	ABE7P16T●●●						

Compatible
Not compatible

(1) Via splitter sub-base ABE7ACC02 used to separate 16 channels into 2 x 8 channels.
(2) Low-cost sub-base ABE7H20E●●● including connection cable.

Combinations of analog I/O on the Modicon Premium platform with ABE 7 sub-bases								
(item numbers: see Presentation on page 32)								
Analog I/O modules for Modicon Premium								
Reference for analog I/O modules (item 1b)								
Inputs				Outputs		Thermo-couple inputs		
2 x 8 I	8 I	8 I	4 I	4 O	8 O	2 x 8 I		
TSXAEY1600	TSXAEY800	TSXAEY810	TSXAEY420	TSXASY410	TSXASY800	TSXAEY1614		
Required cordsets								
Preassembled cordsets (at both ends)	TSXCAP●●0 (item 2b)	Yes	Yes	Yes	Yes	(2)	Yes	Yes
Passive connection sub-bases								
Universal 8 channels (item 3a)	ABE7H08R●●							
	ABE7H08S21							
Universal 12 channels (item 4a)	ABE7H12R●●							
	ABE7H12S21							
Universal 16 channels (item 4a)	ABE7H16R●●							
	ABE7H16C●●							
	ABE7H20E●●● (1)							
	ABE7H16S21							
	ABE7H16R23							
	ABE7H16F43							
	ABE7H16S43							
Input adaptor 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 adaptor sub-bases with fixed relays, removable terminal blocks								
Optimum & Universal 8 channels (item 3a)	ABE7S08S2●●							
	Solid state relays							
	ABE7R08S●●●							
	Electromechanical relays							
Optimum & Universal 16 channels (item 4a)	ABE7S16S●●●							
	Solid state relays							
	ABE7R16S●●●							
	Electromechanical relays							
Output adaptor sub-bases with plug-in relays								
Universal 8 channels (item 3a)	ABE7P08T330●							
	Solid state 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)								
ABE7CPA21 (item 3b)								
ABE7CPA03 (item 3b)								
ABE7CPA31 (item 3b)								
ABE7CPA12 (item 3b)								
ABE7CPA13 (item 3c)								

Compatible
Not compatible

(1) Low-cost sub-base ABE7H20E●●● including connection cable.
 (2) Cabled connector ABFY25S200 equipped with terminal block TSXBLY 01.
 (3) Only the first 4 channels are balanced.

Combinations of application-specific I/O on the Modicon Premium platform with ABE 7 sub-bases								
(item numbers: see Presentation on page 32)		Application-specific I/O modules for Modicon Premium						
		Reference for application-specific I/O modules (item 1c)						
		Axis control		Counter		High-speed counter		Safety
		Speed reference	Auxiliary inputs	Auxiliary inputs	Counter	Auxiliary inputs	Counter	
		TSXCAY●1, TSXCFY●A	TSXCTY●A	TSXCTY●A		TSXCTY2C		TSXPAY262
Required cordsets								
Preassembled cordsets	TSXCAP030 (item 2b)	Yes	No	No	Yes	No	Yes	No
(at both ends)	TSXCDP●●3 (item 2a)	No	Yes	Yes	No	Yes	No	No
	TSXCPP●02 (item 2c)	No	No	No	No	No	No	Yes
Passive connection sub-bases								
Universal 8 channels (item 3a)	ABE7H08R●●			ABE7H08 R10 (1)				
	ABE7H08S21							
Universal 12 channels (item 4a)	ABE7H12R●●							
	ABE7H12S21							
Universal 16 channels (item 4a)	ABE7H16R●●		ABE7H16 R20	ABE7H16 R20 (2)		ABE7H16 R20 (2)		
	ABE7H16C●●		ABE7H16 R20	ABE7H16 R20 (2)				
	ABE7H20E●●● (3)		ABE7H16 R20	ABE7H16 R20 (2)				
	ABE7H16S21							
	ABE7H16R23							
	ABE7H16F43							
	ABE7H16S43							
Input adaptor 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 adaptor sub-bases with fixed relays, removable terminal blocks								
Optimum & Universal 8 channels (item 3a)	ABE7S08S2●●							
	Solid state relays							
	ABE7R08S●●●							
	Electromechanical relays							
Optimum & Universal 16 channels (item 4a)	ABE7S16S●●●							
	Solid state relays							
	ABE7R16S●●●							
	Electromechanical relays							
Output adaptor sub-bases with plug-in relays								
Universal 8 channels (item 3a)	ABE7P08T330●							
	Solid state 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)	(4)						
	ABE7CPA02 (item 3b)							
	ABE7CPA21 (item 3b)							
	ABE7CPA03 (item 3b)							
	ABE7CPA31 (item 3b)							
	ABE7CPA12 (item 3b)							
	ABE7CPA13 (item 3c)							

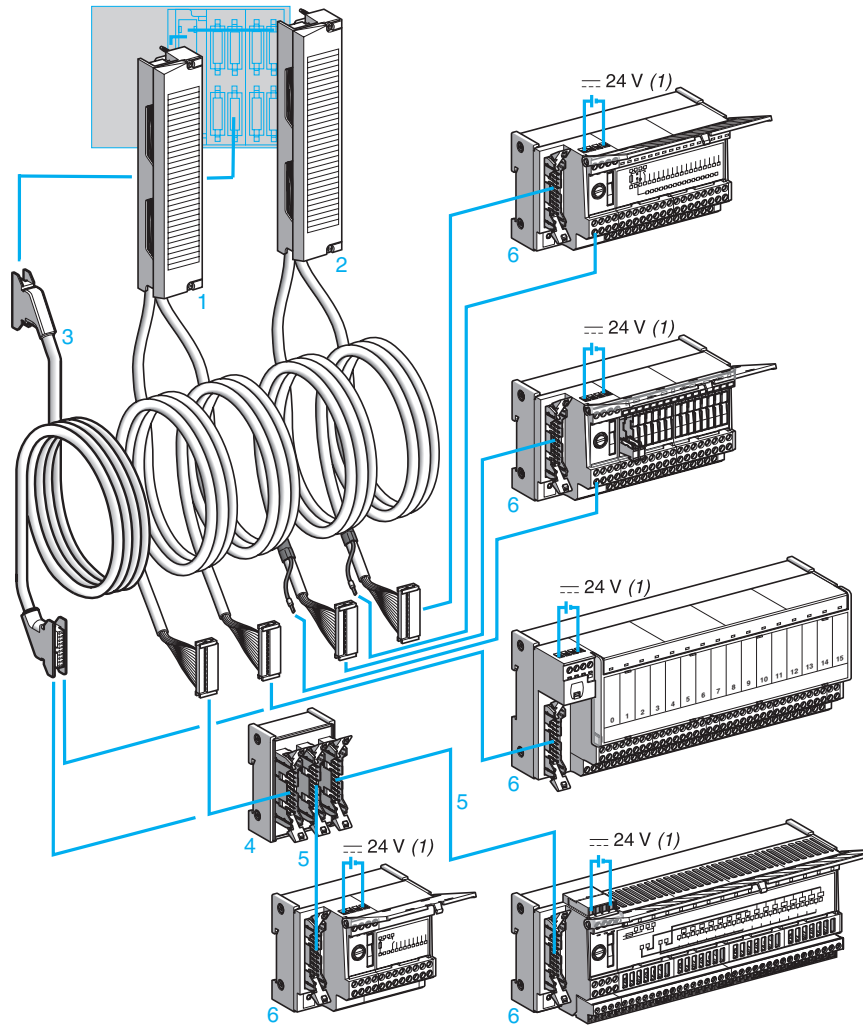
Compatible
Not compatible

- (1) 1-channel connection.
- (2) 2-channel connection.
- (3) Low-cost sub-base ABE7H20E●●● including connection cable.
- (4) Compatibility with module TSXCAY●1 only.

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Connection sub-bases for I/O modules for Modicon Quantum platforms



- 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:
- **ABFM32H●●1** cabled connectors for I/O modules (32 channels) on the Modicon Quantum platform, with 2 HE 10 connectors each integrating 16 channels
 - **ABFM32H●●2** cabled connectors for 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**
- ABFM0●S20●** cabled connectors for analog I/O modules (4, 8 or 16 channels) on the Modicon Quantum platform equipped with a standard screw terminal block 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 cable equipped with 20-way HE 10 connectors, irrespective of the 8 or 16-channel modularity. The HE 10 connectors can be moulded **TSXCDP●●●** or insulation piercing **ABFH20H●●●**.
- 6** 8 and 16-channel connection sub-bases from the Modicon ABE7 range

(1) The 24 V $\overline{\sim}$ power supply of Quantum I/O modules must only be connected via Telefast ABE7 sub-bases. The 0 V $\overline{\sim}$ 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 O	96 I	96 O	8 I	16 I	4 O	8 O
140	DDI 35300 DDI 85300	DDO35300		DDI 36400	DDO 36400	AVI 03000 ACI 03000	ACI 04000	AVO 02000 ACO 02000	ACO 13000
Cabled connectors	ABF	M32H●●0	M32H●●1	-		M08 S201	M16 S201	M04 S200	M04 S201 M08 S202
Cordsets	TSX	-		CDP053/●03		-			
Passive sub-bases									
8 channels	ABE7H08R●●	(1)		(1)					
	ABE7H08S21			(1)					
16 channels	ABE7H16R●●/H16C●●								
	ABE7H16S21								
	ABE7H16R23	(2)							
	ABE7H16F43								
	ABE7H16S43	(3)							
Input adaptor sub-bases									
16 channels	ABE7S16E2B1●/7P16F31●●								
	ABE7P08T330		(1)						
Output adaptor sub-bases									
8 channels	ABE7S08S2●●				(1)				
	ABE7R08S●●●/7P08T330	(1)			(1)				
16 channels	ABE7R16S●●●								
	ABE7R16T●●●/7P16T●●●								
	ABE7S16S●●●								
Sub-bases for analog I/O									
4 channels	ABE7CPA21								
8 channels	ABE7CPA02					(4)			
	ABE7CPA03					(4)			
	ABE7CPA31					(4)			

ABFM●● cabled connectors
TSXCDP●●● cordsets

Note: For 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 by 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.

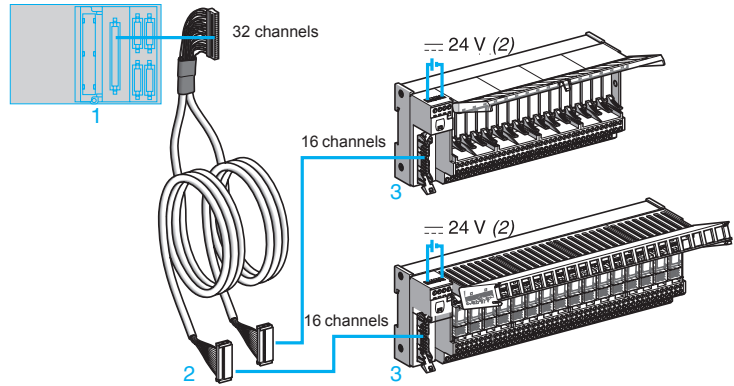
(4) 2 **ABE7CPA●●** sub-bases are required.

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

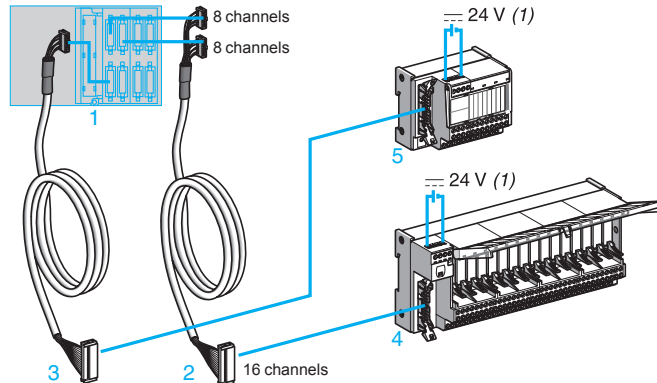
Connection sub-bases for Allen Bradley and Siemens S5 PLCs

Connection cables for Allen Bradley SLC500 PLCs



- 1 For the SLC500 range, specially designed cables connect to I/O modules which are equipped with 40-way HE 10 connectors, integrating 32 channels.
- 2 Cables ABFH40H●●● for connection of 16-channel sub-bases. These cables are pre-equipped 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 metre 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 adapter ABE7ACC02.

Connection cables for Siemens S5 PLCs



- 1 The $\text{---} 24 \text{ V}$ power supply can be provided via 6EP5 ●●● terminal blocks connected to the PLC modules.
For the 95U/100U/115U/135U/155U ranges, the cables developed connect to the manufacturer's terminal blocks with 14-way HE 10 connectors (6EP5 ●●● 1AA00). Each connector has 8 channels.
- 2 Cables ABFH28H●●● for connection of 16-channel sub-bases. These cables are pre-equipped with 2 x 14-way HE 10 connectors at the S5 PLC end and one 20-way HE 10 connector at the Telefast end. Available in 1.5 and 3 metre lengths, AWG 26, these “Y” form cables only connect the I/O controlling the relay sub-bases.
- 3 Cables ABFH14H●●● for connection of 8-channel sub-bases. These cables are pre-equipped with one 14-way HE 10 connector at the S5 PLC end and one 20-way HE 10 connector at the Telefast end. Available in 1.5 and 3 metre lengths, AWG 26, these cables are used to connect the I/O directly to the sub-bases.

(1) The $\text{---} 24 \text{ V}$ power supply is connected using Telefast sub-bases only.
The $\text{---} 0 \text{ V}$ connections must be equipotential.

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

Combinations

I/O modules for Allen Bradley and Siemens S5 PLCs

	Allen Bradley					Siemens											
	SLC500					S5-95U/100U					S5-115U		S5-135U/155U				
	Input	Output				I/O	Input	Input	Output	Ana.in.	Input	Output	Input	Output	Ana.in.	Ana.out	
Integrated in the PLCs	32 I	16 O	16 O	32 O		16I + 16 O	16 I	8 I	8 O	4 I	32 I	32 O	32 I	32 O	8 I	8 O	
	1746 IB32	1746 IB16	1746 OB16	1746 OB32	1746 OV32	6ES5-095 8MA03 6ES-5-482 8MA13	6ES5-422 8MA11	6ES5-421 8MA12 6ES5-431 8MA11	6ES5-441 8MA11 6ES5-454 8MA11	6ES5-464 8ME11	6ES5-430 7LA12 6ES5-420 7LA11	6ES5-441 7LA12 6ES5-451 7LA11 6ES5-451 7LA21	6ES5-430 4UA14 6ES5-420 4UA14	6ES5-441 4UA14 6ES5-451 4UA14	6ES5-460 4UA13	6ES5-470 4UA12	
Connection terminal blocks	None					6EP5-100-1 AA00	6EP5-100-1 AA00	Included		6ES5-700-8MA11	6EP5-115-1AA00	6EP5-115-1AA00	6EP5-135-1AA00	6EP5-135-1AA00	6ES5-497-4UB12	6ES5-497-4UB12	
Connection cables																	
Modularity 16 channels	ABF H40 H●●0 R16 H201 R16 H200 H40H●●0					H28H●●0	H28 H●●0				H28 H●●0		H28 H●●0				
8 channels	ABF H●●0					H14H●●0	H14 H●●0	S16 H●●0	S16 H●●0		H14 H●●0	H14 H●●0	H14 H●●0	H14 H●●0			
	ABF (7)									F25 S200					F25 S200	F25 S200	
Connection sub-bases																	
8 channels	ABE7H08R●●	(2)	(2)		(2)	(1) (2)											
	ABE7H08S21	(2)	(2)		(2)												
12 channels	ABE7H12R●●/ 7H12S21																
16 channels	ABE7H16R●●/ 16C●●			(5)		(1)	(4)										
	ABE7H16S21						(4)										
	ABE7H16R23																
	ABE7H16F43																
	ABE7H16S43																
Input adapter sub-bases																	
16 channels	ABE7S16E2●●/ 7P16F3●●																
Output adapter sub-base																	
8 channels	ABE7S08S2●●																
	ABE7R08S●●●				(2)												
	ABE7P08T330				(2)							(2)		(2)			
16 channels	ABE7R16S●●●/ 7R16T●●●																
	ABE7P16T●●● (6)																
	ABE7S16S●●●				(3)		(3)					(3)		(3)			
Sub-bases for analogue/counter I/O																	
	ABE7CPA01																
	ABE7CPA02																
	ABE7CPA03																
	ABE7CPA21																

- (1) With Telefast sub-bases with no channel LED.
- (2) With splitter sub-base ABE7ACC02.
- (3) Sub-base ABE7S16S●●B2 only.
- (4) Input only.
- (5) — 24 V power supply without cable.
- (6) Do not use with ABE7ACC21.
- (7) Cable with 25-way SUB-D connector at Telefast end. Labelled bare wires at PLC end.

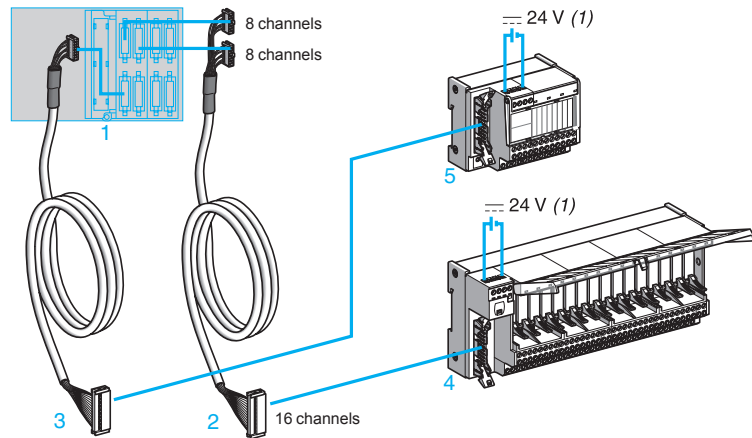
 Pre-wired cables

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Connection sub-bases for Siemens S5 PLCs

Connection cables for Siemens S7 PLCs




- 1 The \sim 24 V power supply can be provided via 6ES7-... terminal blocks connected to the PLC modules.
For the S7200/300/400 ranges, the cables developed connect to the manufacturer's terminal blocks with 16-way HE 10 connectors. Each connector has 8 channels.
- 2 Cables ABFH32H... for connection of 16-channel sub-bases. These cables are pre-equipped with 2 x 16-way HE 10 connectors at the S7 PLC end and one 20-way HE 10 connector at the Telefast end. Available in 1.5 and 3 metre lengths, AWG 26, these "Y" form cables only connect the I/O controlling the relay sub-bases.
- 3 Cables ABFH16H... for connection of 8-channel sub-bases. These cables are pre-equipped with one 14-way HE 10 connector at the S7 PLC end and one 20-way HE 10 connector at the Telefast end. Available in 1.5 and 3 metre lengths, AWG 26, these cables are used to connect the I/O directly to the sub-bases.

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

Combinations													
I/O modules for Siemens S7 PLCs													
		Siemens											
		S7-200				S7-300				S7-400			
		Input/output	Input	Output	Input	Input	Output	Output	Analogue output	Input	Output	Analogue output	Analogue output
		14 I + 10 O	8 I	8 O	16 I	32 I	16 O	32 O	4 O	32 I	32 O	8 I	8 O
Integral to the PLCs	6ES7-	214-1AC01-0XB0	221-1BF00-0XA0	222-1BF00-0XA0	321-1BH01-0AA0	321-1BL00-0AA0	322-1BH01-0AA0	322-1BL00-0AA0	332-5HD01-0AA0	421-1BL00-0AA0	422-1BL00-0AA0	431-1KF00-0AB0	432-1HF00-0AB0
	6ES7-	Included			921-3AB00-0AA0	921-3AA20-0AA0	921-3AB00-0AA0	921-3AA20-0AA0	392-1AJ00-0AA0	921-4AB00-0AA0	921-4AB00-0AA0	492-1AL00-0AA0	492-1AL00-0AA0
Connection cables					H32 H●●0	H32 H●●0	H32 H●●0	H32 H●●0		H32 H●●0	H32 H●●0		
Modularity	16 channels	ABF			H16 H●●0	H16 H●●0	H16 H●●0	H16 H●●0		H16 H●●0	H16 H●●0		
	8 channels	ABF	S08 H●●2	S08 H●●3									
	other	ABF	S24 H●●0						F25 S200 (4)			F25 S200 (4)	F25 S200 (4)
Connection sub-bases													
8 channels	ABE7H08R●●/7H08S21												
12 channels	ABE7H12R●●												
	ABE7H12S21												
16 channels	ABE7H16R●●/32●●●/16C●●												
	ABE7H16S21												
	ABE7H16R23/7H16F43												
	ABE7H16S43												
Input adapter sub-bases													
16 channels	ABE7S16E2●●/7P16F3●●												
Output adapter sub-base													
8 channels	ABE7S08S2●●												
	ABE7R08S●●●												
	ABE7P08T330							(1)			(1)		
16 channels	ABE7R16S●●●												
	ABE7R16T●●●												
	ABE7P16T●●● (3)												
	ABE7S16S●●●							(2)	(2)		(2)		
Sub-bases for analogue/counter I/O													
	ABE7CPA01												
	ABE7CPA02												
	ABE7CPA03												
	ABE7CPA21												

(1) With the splitter sub-base ABE7ACC02.
 (2) Sub-base ABE7S16S2B2 only.
 (3) Do not use with ABE7ACC21.
 (4) Cable with 25-way SUB-D connector at Telefast end. Labelled bare wires at PLC end.

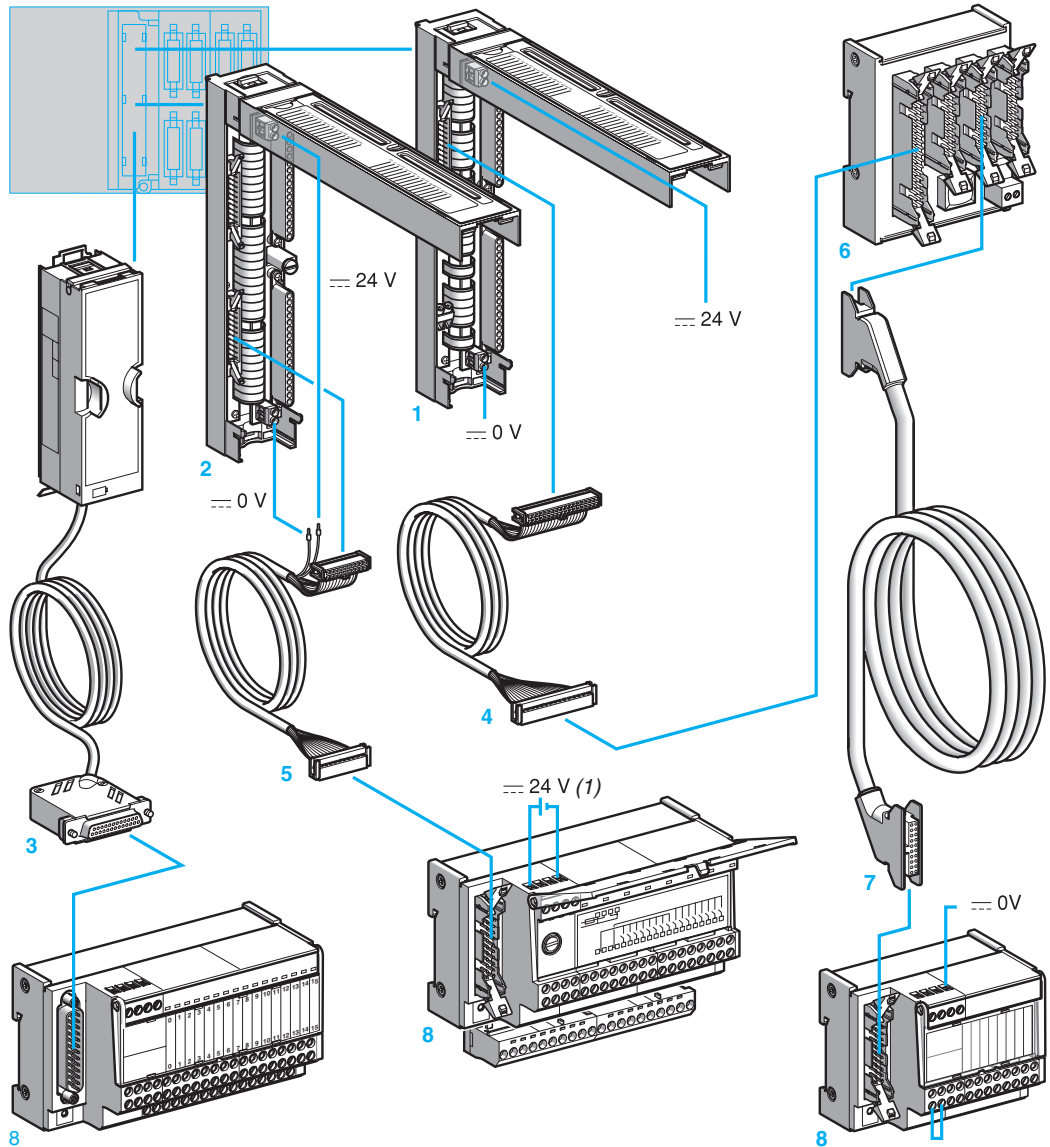
 Pre-wired cables

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Connection sub-bases for Telemecanique TSX47 to 107,

April Series 1000 PLCs



- 1 TSXBLK 81 terminal block connected to TSXDST 24 modules. Outputs are connected using a 34-way HE 10 connector, integrating all 24 channels. The \sim 24 V power can only be supplied via the screw terminals of the terminal block.
- 2 TSXBLK 71/91 terminal blocks connected respectively to TSXDET 32●● and TSXDST 3292 modules. I/O are connected using two 20-way HE 10 connectors, each integrating 16 channels.
- 3 BF B25S●●0 cabled connector, for TSXAEM8●● analogue modules, comprising a standard TSXBLK 4 terminal block, a screened multicore cable (AWG 22) and a 25-way SUB-D connector, providing continuity of shielding. An ABFB50S●●0 cabled connector, fitted with two SUB-D connectors, enables connection to TSXAEM 160● modules.
- 4 ABFH34H●00 connection cables (AWG 28) fitted with 34-way HE 10 connectors, supplied in 1, 2 and 3 metre lengths.
- 5 ABFH20H●●1 connection cables fitted with 20-way HE 10 connectors and a rolled ribbon cable (AWG 28). These cables are used specifically to carry power supplies so that they can be connected to TSXBLK 71 and TSXBLK 91 terminal blocks. If these cables are used, it is essential that both polarities are connected to the Telefast sub-base.
- 6 ABE7ACC03 splitter sub-base enabling 24 channels to be connected to Telefast sub-bases with 8-channel modularity. In this case, it is essential to connect the \sim 0 V to the Telefast sub-bases.
- 7 Cables TSXCDCP●●● or ABFH20H●●●.
- 8 ABE7CPA02, ABE7R16S111 sub-bases with ABE7BV20 and ABE7H08R11 terminal blocks. Sub-base ABE7CPA02 enables the current, voltage or PT 100 inputs to be connected whilst maintaining continuity of shielding.

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

Combinations

I/O modules (Series 7 and Series 1000)

		Telemecanique TSX47 to 107 PLC modules						APRIL Series 1000 PLC modules		
		Discrete			Analogue			Discrete		Analogue
		Inputs	Outputs		Inputs			Inputs, outputs < 0.5 A	Outputs = 0.5 A	Inputs
		32 channels	32 channels	24 channels	16 channels	16 channels	8 channels	32 channels	32 channels	16 channels
Integrated in the PLCs	TSX	DET3232	DST3292	DST2472	AEM1613	AEM160●	AEM80●	QDB3205	QDB3205	IXA1600
		DET3242	-	DST2482	-	-	-	QPA3205	QPA3205	IRA1600
		DET3252	-	-	-	-	-	IDB3224	-	-
Connection terminal blocks	TSX	BLK71	BLK91	BLK81	None	Included	Included	Included	Included	None
Connection cables	ABF	H20H●●1			S25S301	B50S●01	B25S●01	A32H●00	A32H●●1	S25S302
Connection sub-bases										
8 channels	ABE7H08R●●/ 7H08S21	(1)	(1)	(2)				(1)		
12 channels	ABE7H12R●●/ 7H12S21									
16 channels	ABE7H16R●●/ 7H16S21/ H16C●●/ H20E●●●									
	ABE7H16R23									
	ABE7H16F43									
	ABE7H16S43	(4)						(5)		
Input adapter sub-bases										
16 channels	ABE7S16E2●●/ 7P16F3●●									
Output adapter sub-base										
8 channels	ABE7S08S2●●			(2)				(1)		
	7R08S●●●/ 7P08T330		(1)	(2)				(1)		
16 channels	ABE7S16S●●●		(3)							
	ABE7R16S●●●									
	ABE7R16T●●●/ 7P16T●●●									
Sub-bases for analogue/counter I/O										
	ABE7CPA01									
	ABE7CPA02									
	ABE7CPA03									

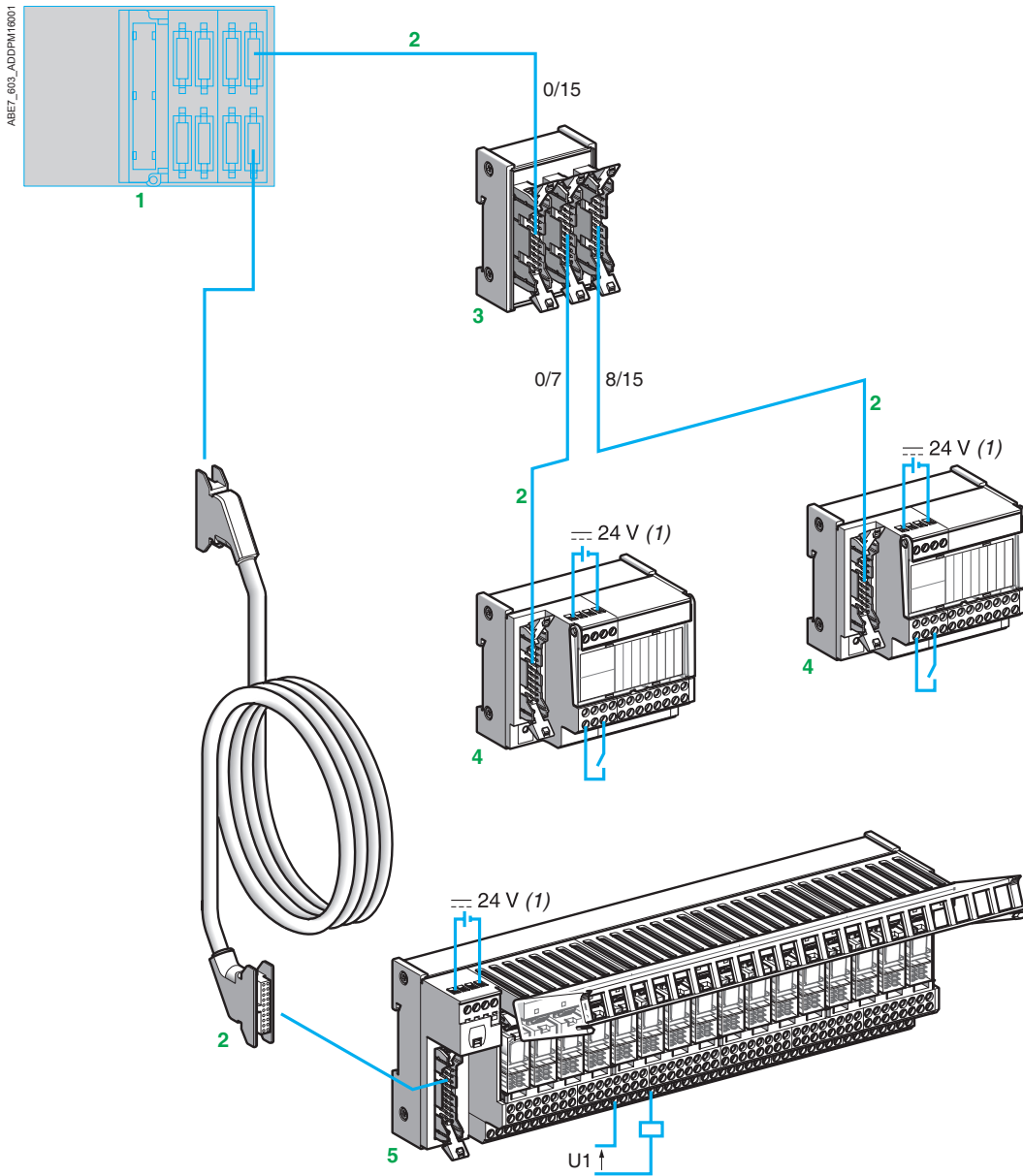
- (1) Using splitter sub-base ABE7ACC02 which allows 16 channels to be split into 2 x 8 channels.
- (2) Using splitter sub-base ABE7ACC03 which allows 24 channels to be split into 3 x 8 channels.
- (3) With sub-base ABE7S16S2B2 only.
- (4) Except DET3252.
- (5) Input only.

 Pre-wired cables

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Connection sub-bases for Modicon TSX Micro PLC



- 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 cable equipped with 20-way HE 10 connectors, irrespective of the 8, 12 or 16-channel modularity. The HE 10 connectors may be moulded (TSXCDP●●●) or insulation piercing (ABFH20H●●●).
These cables 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 connection of inputs and relay sub-bases, and AWG 22 (0.324 mm²) for direct connection of the 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.

Combinations											
I/O modules for Modicon TSX Micro PLCs											
		--- 24 V discrete							Counter		Analogue and counter
		Inputs/outputs					Inputs	Outputs	Auxiliary inputs	Counter	
		8 E + 8 O	1 X 16 I	1 X 12 O	2 X 16 I	2 X 16 O	1 X 12 I	1 X 8 O	-	-	
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 channels	ABE7H08R●●		(1)		(1)	(1)			ABE7H08R10 (2)		
	ABE7H08S21		(1)		(1)	(1)					
12 channels	ABE7H12R●●										
	ABE7H12S21										
16 channels	ABE7H16R●●								ABE7H16R20 (3)		
	ABE7H16C●●										
	ABE7H20E●●●										
	ABE7H16S21										
	ABE7H16R23										
	ABE7H16F43										
	ABE7H16S43										
Input adapter sub-bases											
16 channels	ABE7S16E2●●						(4)				
	ABE7P16F3●●						(4)				
Input and output adapter sub-bases											
16 channels 8 I + 8 O	ABE7H16CM●1										
	ABE7●16M111										
Output adapter sub-base											
8 channels	ABE7S08S2●●					(1)					
	ABE7R08S●●●					(1)					
	ABE7P08T330					(1)					
16 channels	ABE7S16S●●●										
	ABE7R16S●●●			(5)							
	ABE7R16T●●●			(5)							
	ABE7P16T●●●			(5)							
Sub-bases for analogue/counter I/O											
	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 TSXCTZ1A, to be used with sub-bases with no LED.
- (3) With module TSXCTZ2A, to be used with sub-bases with no LED.
- (4) The last four channels are not used.
- (5) The last four channels are not used and remain at state 1.

 Pre-wired cables

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Connection sub-bases for Twido controller

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 equipped with HE 10 type connectors. It consists of connecting cables 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 its common
- 24 V for the inputs,
- 0 V for the outputs.

A 3rd row of optional terminals ABE7BV●● may be added for connection of another common.

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

Sub-bases for Twido modular base controllers

- **ABE7B20MPN20**: sub-base with 12 inputs + 8 passive outputs.
- **ABE7B20MPN22**: sub-base with 12 inputs + 8 passive outputs.
 - individual fuse protection for each output (0.315 A),
 - LED indication,
 - blade disconnecter for the 0 V common.
- **ABE7B20MRM20**: sub-base with 12 inputs + 8 outputs with soldered relays
 - 2 A solid state relay (1 x 4 A common/2 channels) on 2 outputs,
 - electromechanical relays (1N/O — 24 V/~ 250 V, 3 A) on 6 outputs for adaptation of the current or voltage signal (1 x 10 A common/6 channels).

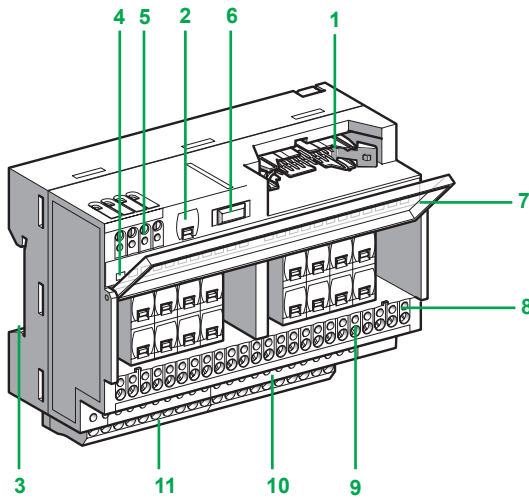
Sub-bases for Twido I/O expansion modules

- **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 disconnecter for breaking the 0 V common.
- **ABE7E16SRM20**: sub-base with 16 soldered relay outputs
 - electromechanical relays (1N/O — 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 blocks

- **ABE7BV20TB**
 - 12 shunted screw terminals for the input common,
 - 8 shunted screw terminals for the output common.
- **ABE7BV20**
 - 20 shunted screw terminals for connection of a single common.

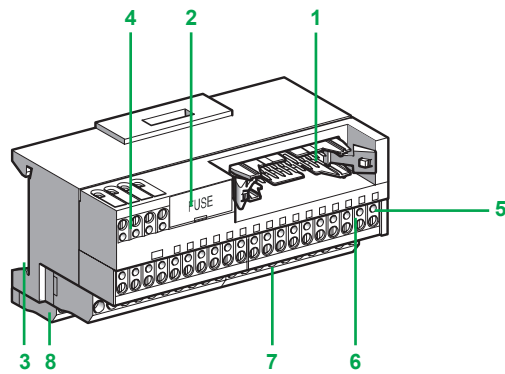
Telefast Pre-wired System Modicon ABE7 connection sub-bases Connection sub-bases for Twido controller



Description

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

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



Connection sub-bases ABE7E16EPN20 and ABE7E16SPN20

- 1 HE 10 connector, 20-way,
- 2 Fuse for the --- 24 V supply circuit.
- 3 Rail mounting.
- 4 --- 24 V power supply terminal block.
- 5 Test point for \varnothing 2.3 mm plug.
- 6 Upper terminal block for connection of signals.
- 7 Lower terminal block for connection of commons.
- 8 Optional snap-on terminal block with 20 screw 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	<ul style="list-style-type: none"> <input type="checkbox"/> Direct <input type="checkbox"/> 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 N/O (1 common/6 channels)
Number of terminals per channel	2, 3 (with optional snap-on terminal block)		
Connection to controllers	HE 10 connector, 26-way		
Type of terminal	Fixed screw terminal block		
Interface type	ABE7B20MPN20	ABE7B20MPN22	ABE7B20MRM20
Pages	50		

Connection sub-bases for discrete inputs	Connection sub-bases for discrete outputs
<ul style="list-style-type: none"> <input type="checkbox"/> Modicon TM2 I/O expansion modules: TM2DDI16DK, TM2DDI32DK (see page 52) <input type="checkbox"/> Modicon TM2 I/O expansion modules: TM2DDO16TK, TM2DDO32TK (see page 54) <input type="checkbox"/> Magelis XBTGC HMI controllers (see page 56) <input type="checkbox"/> Modicon STB (Distributed I/O solution) (see page 58) 	
<ul style="list-style-type: none"> <input type="checkbox"/> Via Modicon TM2 I/O expansion modules: <ul style="list-style-type: none"> - Modicon M238 logic controllers, - Magelis XBTGC HMI controllers 	



–	–		Electromechanical, fixed
~ 24 V	~ 24 V		
~ 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 N/O (1 common/4 channels)
2, 3 (with optional snap-on terminal block)			
HE 10 connector, 20-way			
Fixed screw terminal block			
ABE7E16EPN20	ABE7E16SPN20	ABE7E16SPN22	ABE7E16SRM20
50	50		

Telefast Pre-wired System

Modicon ABE7 connection sub-bases

Connection sub-bases and connection cables



ABE7B20MPN20



ABE7E16EPN20



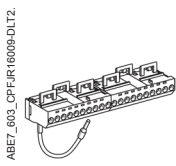
ABE7E16SRM20



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 0.948
				Yes	Yes	ABE7B20MPN22	0.430 0.948
	12, sink --- 24 V	2, source --- 24 V, 2 A and 6, relay --- 24/~ 250 V, 3 A	TWDLMDA20DTK, TWDLMDA40DTK	No	No	ABE7B20MRM20	0.430 0.948

Connection sub-bases for Modicon TM2 discrete I/O extension modules, Magelis XBTGC HMI controllers and Modicon STB (Distributed I/O solution)

Number of inputs	Type of input	Compatibility	LED per channel	Fuse	Reference	Weight kg/lb
16	Sink --- 24 V	TM2DDI16DK, TM2DDI32DK, XBTGC●●●T, STBDDI3725	No	No	ABE7E16EPN20	0.430 0.948

Number of outputs	Type of output	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/~ 250 V, 3 A	TM2DDO16TK, TM2DDO32TK, XBTGC●●●T, STBDDO3705	No	No	ABE7E16SRM20	0.430 0.948

Connection cables for Twido modular base controllers

Type of signal	Compatibility	Type of connection		Gauge/ C.s.a.	Length (1) m ft.	Reference	Weight kg lb
		Twido side	Telefast ABE7 side				
Discrete inputs/outputs	TWDLMDA20DTK, TWDLMDA40DTK	HE 10 26-way	HE 10 26-way	AWG 28 0.08 mm ²	0.5	ABFT26B050	0.080
					1.64	ABFT26B100	0.176
					3.28	ABFT26B100	0.110 0.242
					6.56	ABFT26B200	0.180 0.397

Connection cables for Modicon TM2 discrete I/O extension modules

Type of signal	Compatibility	Type of connection		Gauge Section	Length (1) m ft.	Reference	Weight kg lb
		Twido side	Telefast ABE7 side				
Discrete inputs/outputs	TM2DDI16DK, TM2DDI32DK, TM2DDO16TK, TM2DDO32TK	HE 10 20-way	HE 10 20-way	AWG 28 0.08 mm ²	0.5	ABFT20E050	0.060
					1.64	ABFT20E100	0.132
					3.28	ABFT20E100	0.080 0.176
					6.56	ABFT20E200	0.140 0.309

Accessories

Description	Number of shunted terminals	Characteristics	Sold in lots of	Unit reference	Weight kg/lb
Optional snap-on terminal blocks	20	–	5	ABE7BV20	0.060 0.132
	12 + 8	–	5	ABE7BV20TB	0.060 0.132
Quick-blow fuses 5 x 20, 250 V, UL	–	0.125 A	10	ABE7FU012	0.010 0.022
		0.315 A	10	ABE7FU030	0.010 0.022
		1 A	10	ABE7FU100	0.010 0.022
		2 A	10	ABE7FU200	0.010 0.022

(1) For lengths > 2 m, please contact us.

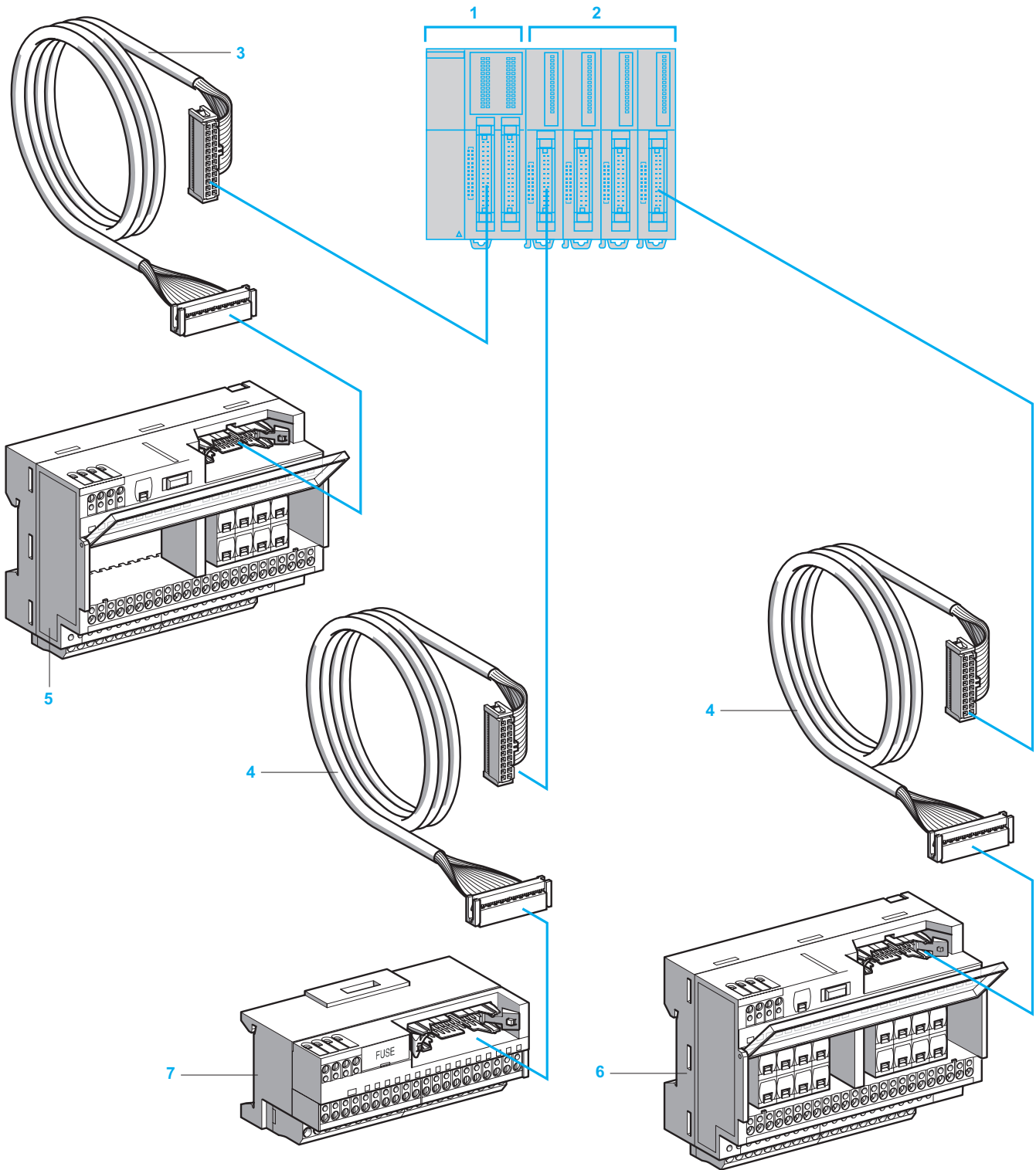
References (continued)								
Separate components								
Description	Type	Compatibility	Sold in lots of	Unit reference	Weight			
					kg	lb		
Connectors (sold in lots of 5)	HE 10 female 26-way	TWDLMDA20DTK, TWDLMDA40DTK	5	TWDFCN2K26	–	–		
	HE 10 female 20-way	TM2DDI16DK, TM2DDI32DK, TM2DDO16TK, TM2DDO32TK	5	TWDFCN2K20	–	–		
Screw terminal blocks (sold in lots of 2)	10-way	TM2DDI●DT, TM2DAI8DT, TM2DDO●T, TM2DRA●RT	2	TWDFTB2T10	–	–		
	11-way	TM2DMM8DRT, TM2AMI●T, TM2ARI8HT, TM2DAI8DT, TM2DRA8RT	2	TWDFTB2T11	–	–		
Description	Compatibility	Type of connection		Gauge/ C.s.a.	Length m ft.	Reference	Weight kg lb	
		Twido side	Other end					
Cables for discrete I/O	TWDLMDA20DTK, TWDLMDA40DTK	HE 10 26-way	Bare wires	AWG 22 0.035 mm ²	3	TWDFCW30M	0.405	
					9.84		0.893	
						5	TWDFCW50M	0.670
						16.40		1.477
	TM2DDI16DK, TM2DDI32DK, TM2DDO16TK, TM2DDO32TK	HE 10 20-way	Bare wires	AWG 22 0.035 mm ²	3	TWDFCW30K	0.405	
					9.84		0.893	
					5	TWDFCW50K	0.670	
					16.40		1.477	
Pre-formed cable, rolled	20 conductors	–	–	AWG 28 0.08 mm ²	20 65.6	ABFC20R200	1.310 2.888	

ABE7_003_CPFJR16011-DLZ



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.

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				

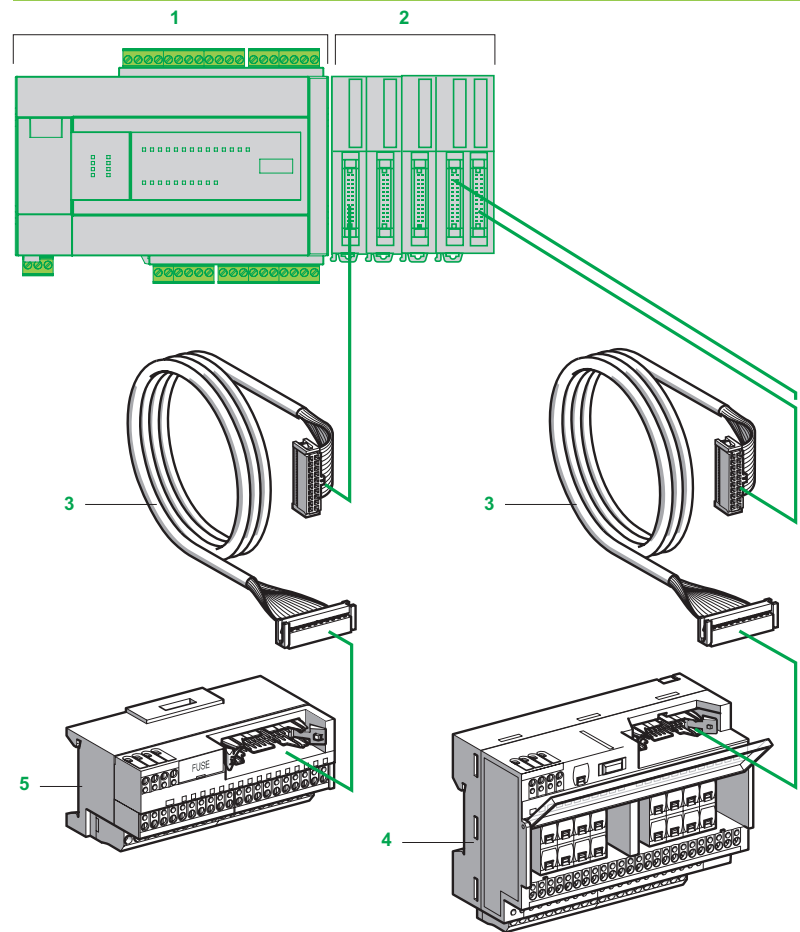
Compatible

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.

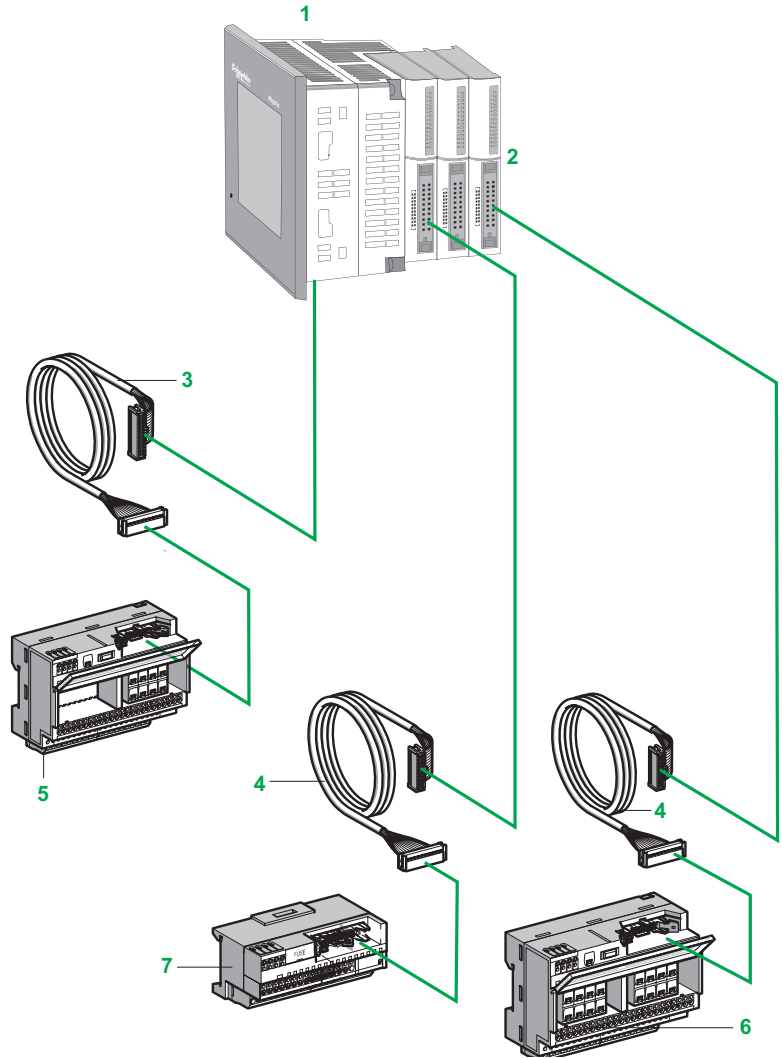
Combinations with Modicon TM2 I/O expansion modules			
Modicon TM2 Discrete I/O modules			
		Inputs	Outputs (source)
		TM2DDI16DK (16 inputs) TM2DDI32DK (32 inputs)	TM2DDO16TK (16 outputs) TM2DDO32TK (32 outputs)
Terminal block types	HE 10 connectors, 20-ways		
Connection to I/O expansion modules	ABFT20E●●0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

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 mm² cordsets, depending on the model:
 - For XBTGC2●●●T/U: 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 HE10 connector at each end, available in 0.5, 1, 2 and 3 m lengths (AWG 28/0.08 mm²)
- 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 involving modular bases and I/O expansion modules					
		XBTGC HMI controllers		Modicon TM2 Discrete I/O modules	
		Integrated digital I/O		Inputs	Outputs (source)
Integrated in Twido programmable controllers	XBTGC2●●●T	16 I	16 O (source)	TM2DDI16DK (16 I) TM2DDI32DK (32 I)	TM2DDO16TK (16 O) TM2DDO32TK (32 O)
	Connection block types	Direct I/O, 38-way		HE 10, 20-way	
Connection to XBTGC programmable HMI controller		XBTZGABE2		ABFT20E●●0 (HE 10, 20-way)	
Passive connection sub-bases					
20-channel	ABE7B20MPN2●				
16-channel	ABE7E16EPN20				
	ABE7E16SPN2●				
Output adaptor sub-bases					
20-channel	ABE7B20MRM20				
16-channel	ABE7E16SRM20				

 Compatible
 Incompatible

Note: Telefast cables and modules are not compatible with XBTGC 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 (1)

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

The Telefast wiring system is particularly suitable for applications requiring:

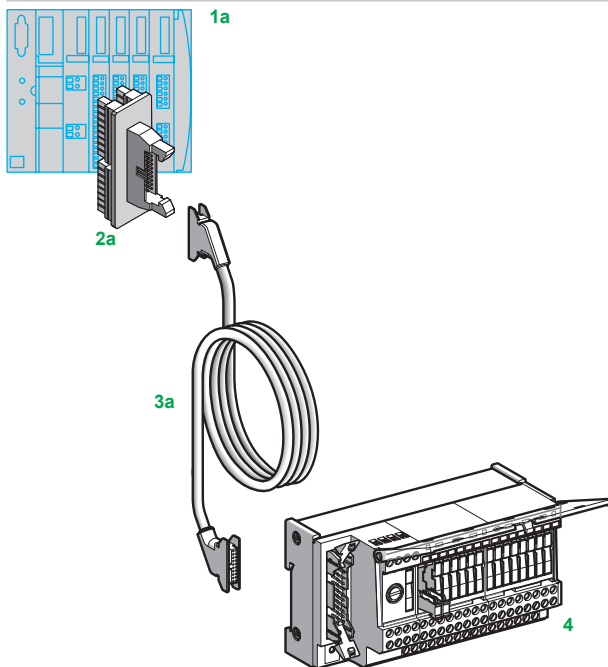
- 48 V $\overline{\text{---}}$ and 48 V \sim voltage I/O.
- A large number of 115 V \sim and 230 V \sim I/O.
- A large number of relay outputs.

Connection of Modicon STB I/O modules to the Telefast system differs according to the type of module:

- 16-channel digital I/O modules STBDDI3725 and STBDDO3705: Connection via Telefast HE 10 connectors and their associated Telefast ribbon cables or cables. These connection components must be ordered separately (see description below and combinations on page 59).
- 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).

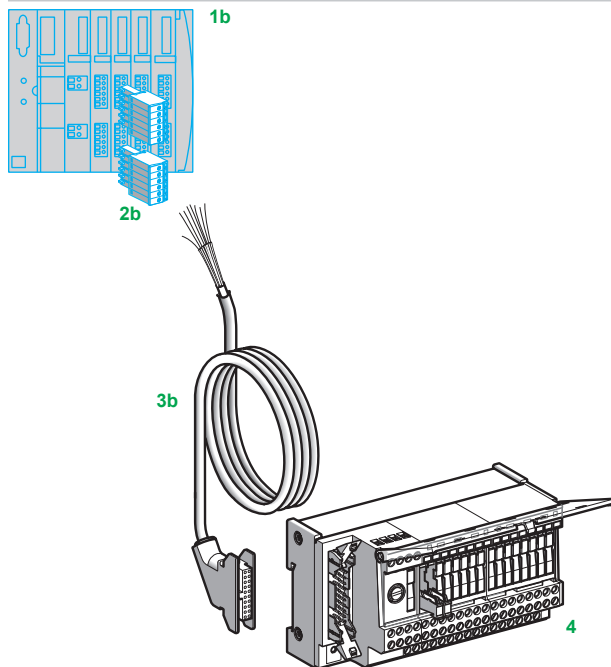
Description (1)

16-channel digital I/O modules STBDDI3725 and STBDDO3705



- 1a Modicon STB I/O island incorporating a module with 16 I/O STBDDI3725 or STBDDO3705.
- 2a HE10 connector STBXTS5•10 (DDI) or STBXTS6•90 (DDO).
- 3a Rolled ribbon cable TSXCDP•02 or connection cable TSXCDP•03 equipped with two 20-way HE10 connectors.
- 4 Modicon Telefast ABE7 connector or adapter base. See combination table on page 59.

Other Modicon STB digital and analog I/O modules



- 1b Modicon STB I/O island incorporating a digital I/O module STBDDI/DDO••••K (except for 16-channel modules) or an analog I/O module STBAVI/ACI/ART/AVO/ACO••••K.
- 2b Screw or spring-type 5/6-way removable connectors, supplied with the STB I/O module.
- 3b Pre-wired cable TSXCDP301/501/1001 (length 3/5/10 meters) with HE10 connector at one end and flying leads at the other end. Cross-section 0.324 mm², AWG24.
- 4 Modicon Telefast ABE7 connector or adapter 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 base (redundancy of I/O). This configuration is used, for example, in the context of a Premium Hot Standby architecture, please refer to our "Modicon Premium automation platform" catalogue.

Digital I/O modules are connected via a Telefast redundancy base ABE7ACC11 (inputs) or ABE7ACC10 (outputs) and the same connectors and ribbon cables or cables used for single connections.

STB analog I/O modules are connected via JM Concept analog I/O multiplexers JK3000N2 (inputs) and GK3000D1 (outputs).

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

Combinations of STB modules with 16 digital I/O/ Modicon ABE7 sub-bases (1) (2)							
Telefast ABE7 bases (item 4)		STBDDI3725 (item 1a)	STBDDO3705 (item 1a)	Ribbon cables (item 3a)	Cables (item 3a)		
		Associated STBXTS●●●● connector (item 2a)					
Telefast passive connector bases (16-channel)							
Universal	ABE7H16R●●	STBXTS6510	STBXTS6610	TSXCDP●02 (100 mA total max.) (3)	TSXCDP●●3 (> 500 mA total max.) (4)		
	ABE7H16S21						
	ABE7H16S43						
	ABE7H16F43		STBXTS6610				
Miniature	ABE7H16C10	STBXTS6510		or ABFH20H●00 (> 500 mA total max.) (3)			
	ABE7H16C11						
	ABE7H16C21						
	ABE7H16C31						
Telefast for Twido controllers passive connector bases (16-channel) (6)							
16 passive inputs	ABE7E16EPN20	STBXTS5510		–	ABFT20E●●0 (> 500 mA total max.) (5)		
16 passive outputs	ABE7E16SPN20		STBXTS5610				
	ABE7E16SPN22						
	ABE7E16SRM20						
Telefast input adapter active bases (16-channel)							
Voltage		Telefast ABE7 base					
V							
48 ̄	ABE7S16E2E1	STBXTS6510		TSXCDP●02 (100 mA total max.) (3)	TSXCDP●●3 (> 500 mA total max.) (4)		
48 ~	ABE7S16E2E0						
115 ~	ABE7S16E2F0						
230...240 ~	ABE7S16E2M0					or	
	ABE7P16F310		ABFH20H●00 (> 500 mA total max.) (3)				
	ABE7P16F312						
Telefast output adapter active bases (16-channel)							
Type	Voltage	Current per channel	Telefast sub-base ABE7	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	–			
		≥ 0.7	ABE7P16T●●●● (7)	–			
Relay	48 ̄	0.5	ABE7P16T2●●● (7)	ABS7C2E		or	
Relay	48 ~	0.5	ABE7P16T2●●● (7)	ABS7SA2M		ABFH20H●00 (> 500 mA total max.) (3)	
Relay	115 ~	0.5	ABE7P16T2●●● (7)	ABS7SA2M			
Relay	230...240 ~	0.5	ABE7P16T2●●● (7)	ABS7SA2M			
Solid state	24...240 ~	1.5	ABE7P16T3●●	ABS7SA3MA			
Solid state	24...48 ̄	1.5	ABE7P16T3●●	ABS7SC3E			
Solid state	24 ̄	2	ABE7P16T3●●	ABS7SC3BA			
Economy relay	30 ̄	2	ABE7R16S●●●	–			
	30 ̄	2..5	ABE7R16S210/212	–			
Economy relay	230 ~	2	ABE7R16S●●●	–			
	230 ~	2...5	ABE7R16S210/212	–			
Compatible							
Not compatible							



The STB module can provide 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 0 V reference should be connected between the STB module and the ABE7 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 supplied with the modules and the connection is made via pre-wired cable TSXCDP●●●●● (3b). See page 58.

(2) The item numbers indicated in this table correspond to the item numbers mentioned in the description on page 58.

(3) Replace the "●" with "1" for a 1 m length, "2" for 2 m, "3" for 3 m.

(4) Replace the "●●" with "05" for a 0.5 m length, "10" for 1 m, "20" for 2 m, "30" for 3 m, "50" for 5 m.

(5) Replace the "●●" with "05" for a 0.5 m length, "10" for 1 m, "20" for 2 m.

(6) For complete references and descriptions, please consult our specialist catalogue "Twido programmable controller".

(7) Empty bases.

Telefast Pre-wired System

Modicon ABE9 IP 67 passive splitter boxes

Presentation

ABE9 passive splitter boxes for M12 connectors make it possible to eliminate long and difficult cabling operations. Due their modularity and their dimensions, 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 splitter boxes ABE9C12 are as follows:

- Connection of sensors and actuators using M12, 5-pin connectors.
- Modularity: 4 or 8 channels.
- Fixing system and connection to the processing unit conforming to market standards:
 - fixing centres,
 - M23, 19-pin connector, enabling the use of pre-formed cables in order to reduce installation time and the risk of error,
 - multicore cable, 5 or 10 metres long. The splitter box comprises a connection cover fitted with plug-in terminals, which provides considerable flexibility for:
 - the replacement of damaged parts,
 - modification of cable length.

Base units ABE9C12●●L●● enable the use of 2 separate commons which, for example, can be used for the management of an emergency stop. 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.

Example: splitter box ABE9C1281 (8 channels) enables the connection of 16 signals to the processing unit.

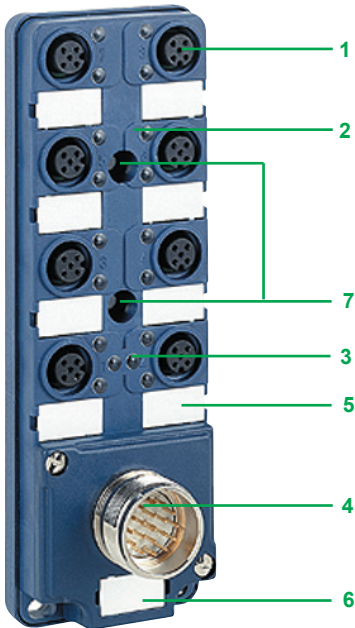
The Y-connector is available in 2 versions:

- 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

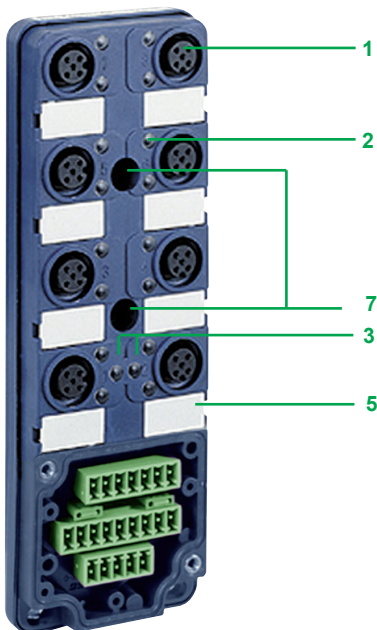


ABE9C12●●C23

Description

Passive splitter boxes ABE9C12●●C23 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-pin male connector.
- 5 Four or eight channel marker labels.
- 6 One splitter box marker label.
- 7 Splitter box fixing holes.



ABE9C12●●L●●

Passive splitter boxes ABE9C12●●L●● 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 fitted with plug-in terminals.
- 5 Four or eight channel marker labels.
- 6 One splitter box marker label.
- 7 Splitter box fixing holes.





ABE9C124●C23



ABE9C128●C23



ABE9C124●L●●



ABE9C128●L●●



ABE9C128●M



ABE9XCA1●●●

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	With	ABE9C1241C23	0.080 0.176
		Without	ABE9C1240C23	0.080 0.176
8	8 x M12 female connectors	With	ABE9C1281C23	0.140 0.309
		Without	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 16.40	With	ABE9C1241L05	0.680 1.499
			Without	ABE9C1240L05	0.680 1.499
		10 32.80	With	ABE9C1241L10	1.700 3.747
			Without	ABE9C1240L10	1.700 3.747
8	8 x M12 female connectors	5 16.40	With	ABE9C1281L05	1.610 3.549
			Without	ABE9C1280L05	1.610 3.549
		10 32.80	With	ABE9C1281L10	3.060 6.746
			Without	ABE9C1280L10	3.060 6.746

Splitter boxes only, M12

Number of channels	For use with connector		LED indicator	Reference	Weight kg lb
	terminal	with cable			
4	ABE9CM12C	ABE9XCA14●●	With	ABE9C1241M	0.060 0.132
			Without	ABE9C1240M	0.060 0.132
8	ABE9CM12C	ABE9XCA18●●	With	ABE9C1281M	0.100 0.220
			Without	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	-	ABE9CM12C	0.040
		ABE9C128●M	-		0.088
Connectors with cable	4	ABE9C124●M	5 16.40	ABE9XCA1405	1.060 2.337
			10 32.80	ABE9XCA1410	2.080 4.585
			5 16.40	ABE9XCA1805	1.510 3.328
	8	ABE9C128●M	10 32.80	ABE9XCA1810	2.240 4.938

(1) To be cabled by user.

PF108770-14602



FTXCY1212

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
Marker labels	Lot of 12	ABE9XLA10	–

Telefast Pre-wired system

Modicon ABE7 IP20 connection sub-bases
Modicon ABE9 IP67 passive splitter boxes
Product reference index

A		ABE7H16S21	17	ABFC08R02B	25	TWDFCW50K	23
ABE7ACC01	24	ABE7H16S43	17	ABFC08R02R	25	TWDFCW50M	51
ABE7ACC02	24	ABE7H20E000	16	ABFC08R02W	25	TWDFTB2T10	51
ABE7ACC10	24	ABE7H20E100	16	ABFC08R12B	25	TWDFTB2T11	51
ABE7ACC11	24	ABE7H20E200	16	ABFC08R12R	25		
ABE7ACC12	21	ABE7LOGF25	24	ABFC08R12W	25		
ABE7ACC21	24	ABE7LOGV10	24	ABFC20R200	51		
ABE7ACC30	24	ABE7P08T330	20	ABFM04S200	23		
ABE7B20MPN20	50	ABE7P16F310	19	ABFM04S201	23		
ABE7B20MPN22	50	ABE7P16F312	19	ABFM04S202	23		
ABE7B20MRM20	50	ABE7P16T111	20	ABFM08S201	23		
ABE7BV10	24	ABE7P16T210	20	ABFM16S201	23		
ABE7BV20	24	ABE7P16T214	20	ABFM32H150	23		
	50	ABE7P16T215	20	ABFM32H151	23		
ABE7BV20TB	50	ABE7P16T230	20	ABFM32H300	23		
ABE7CPA01	22	ABE7P16T318	20	ABFM32H301	23		
ABE7CPA02	22	ABE7P16T330	20	ABFT20E050	50		
ABE7CPA03	22	ABE7P16T332	20	ABFT20E100	50		
ABE7CPA11	22	ABE7P16T334	20	ABFT20E200	50		
ABE7CPA12	22	ABE7R08S111	18	ABFT26B050	50		
ABE7CPA13	22	ABE7R08S210	18	ABFT26B100	50		
ABE7CPA21	22	ABE7R08S216	18	ABFT26B200	50		
ABE7CPA31	22	ABE7R16M111	19	ABFTE20EP100	23		
ABE7CPA31E	22	ABE7R16S111	18	ABFTE20EP200	23		
ABE7CPA410	22	ABE7R16S111E	18	ABFTE20EP300	23		
ABE7CPA412	22	ABE7R16S210	18	ABFTE20SP100	23		
ABE7E16EPN20	50	ABE7R16S212	18	ABFTE20SP200	23		
ABE7E16SPN20	50	ABE7R16T111	19	ABFTE20SP300	23		
ABE7E16SPN22	50	ABE7R16T210	19	ABR7S11	21		
ABE7E16SRM20	50	ABE7R16T212	19	ABR7S21	21		
ABE7FU012	24	ABE7R16T230	19	ABR7S23	21		
	50	ABE7R16T330	19	ABR7S33	21		
ABE7FU030	50	ABE7R16T330	19	ABR7S33E	21		
ABE7FU050	24	ABE7R16T370	19	ABR7S37	21		
ABE7FU100	24	ABE7S16E2B1	18	ABS7EA3E5	21		
	50	ABE7S16E2E0	18	ABS7EA3F5	21		
ABE7FU200	24	ABE7S16E2E1	18	ABS7EA3M5	21		
	50	ABE7S16E2F0	18	ABS7EC3AL	21		
ABE7FU400	24	ABE7S16E2M0	18	ABS7EC3B2	21		
ABE7FU630	24	ABE7S16S1B2	18	ABS7EC3E2	21		
ABE7H08R10	17	ABE7S16S2B0	18	ABS7SA2M	21		
ABE7H08R11	17	ABE7TES160	24	ABS7SA3M	21		
ABE7H08R21	17	ABE9C1240C23	62	ABS7SC1B	21		
ABE7H08S21	17	ABE9C1240L05	62	ABS7SC2E	21		
ABE7H12R10	17	ABE9C1240L10	62	ABS7SC3BA	21		
ABE7H12R11	17	ABE9C1240M	62	ABS7SC3E	21		
ABE7H12R20	17	ABE9C1241C23	62	AR1SB3	24		
ABE7H12R21	17	ABE9C1241L05	62				
ABE7H12R50	17	ABE9C1241L10	62	F			
ABE7H12S21	17	ABE9C1241M	62	FTXCM08B	63		
ABE7H16C10	16	ABE9C1280C23	62	FTXCM12B	63		
ABE7H16C11	16	ABE9C1280L05	62	FTXCY1208	63		
ABE7H16C21	16	ABE9C1280L10	62	FTXCY1212	63		
ABE7H16C31	16	ABE9C1280M	62	T			
ABE7H16CM11	16	ABE9C1281C23	62	TSXCDP053	23		
ABE7H16CM21	16	ABE9C1281L05	62	TSXCDP103	23		
ABE7H16F43	17	ABE9C1281L10	62	TSXCDP203	23		
ABE7H16R10	17	ABE9C1281M	62	TSXCDP303	23		
ABE7H16R11	17	ABE9CM12C	62	TSXCDP503	23		
ABE7H16R20	17	ABE9XCA1405	62	TWDFCN2K20	51		
ABE7H16R21	17	ABE9XCA1410	62	TWDFCN2K26	51		
ABE7H16R23	17	ABE9XCA1805	62	TWDFCW30K	23		
ABE7H16R31	17	ABE9XCA1810	62		51		
ABE7H16R50	17	ABE9XLA10	63	TWDFCW30M	51		

The Next Generation



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