

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

ALLEN-BRADLEY

1756-TBE

EXTENDED-DEPTH TERMINAL HOUSING

Used with the applicable ControlLogix I/O Accessories system configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official pages follow this cover with source pagination retained. Rockwell product record 1756-TBE; 1756-TD002T pages 269-270; 1756-SG002D page 19

Chassis and Power Supply

1756 ControlLogix I/O modules must be mounted in a ControlLogix chassis. Modules can be mounted in any chassis slot. Each chassis requires a power supply.

Product	Cat. No.
Chassis	1756-A4, 1756-A7, 1756-A10, 1756-A13, 1756-A17, 1756-A4K, 1756-A7K, 1756-A10K, 1756-A13K, 1756-A17K, 1756-A7XT, 1756-A10XT, 1756-A7ZXT, 1756-A10ZXT
Power supply, standard	1756-PA50, 1756-PA50K, 1756-PA72, 1756-PA72K, 1756-PA75, 1756-PA75K, 1756-PB50, 1756-PB50K, 1756-PB72, 1756-PB72K, 1756-PB75, 1756-PB75K, 1756-PC75, 1756-PH75, 1756-PH75K, 1756-PAXT, 1756-PBXT, 1756-PA30XT, 1756-PB30XT
Power supply, redundant	1756-PA75R, 1756-PB75R, 1756-PSCA2, 1756-PBXTR, 1756-PSCA2XT, 1756-PAXTR, 1756-PA75RK, 1756-PB75RK, 1756-PSCA2K, 1756-CPR2, 1756-CPR2D, or 1756-CPR2U cable

- For more information on chassis specifications, see ControlLogix Chassis Specifications Technical Data, publication [1756-TD006](#).
- For more power supply specifications, see ControlLogix Power Supply Specifications Technical Data, publication [1756-TD005](#).
- For more information on how to choose the right power supply for your application, the [Integrated Architecture® Builder \(IAB\)](#) software from Rockwell Automation provides advanced selection assistance and a graphical interface for designing systems.

1756 Removable Terminal Blocks



Removable terminal blocks (RTBs) provide a flexible interconnection between your plant wiring and 1756 ControlLogix I/O modules. The RTB plugs into the front of the I/O module. The type of module determines which RTB you need. You can choose screw-clamp or spring-clamp RTBs.

RTBs are not shipped with I/O modules. You must order them separately. The standard housing on the front of the wiring arm is not deep enough for 2.5 mm² (14 AWG) wiring. So, if you plan to use 2.5 mm² (14 AWG) wiring, order the extended housing.



ATTENTION: If separate power sources are used, do not exceed the specified isolation voltage. See the specifications for each individual module on the preceding pages.



WARNING: Do not use 1756-TBNHS, 1756-TBSHS, 1756-TBCHS, or 1756-TBS6HS safety RTBs and 1756-TBES extended-depth terminal block housings with non-safety I/O modules.

RTB Specifications

Attribute	1756-TBCH 1756-TBCHS 1756-TBCHXT	1756-TBNH 1756-TBNHS 1756-TBNHXT	1756-TBSH 1756-TBSHS 1756-TBSHXT	1756-TBS6H 1756-TBS6HS 1756-TBS6HXT	1756-TBE 1756-TBES 1756-TBEXT
Description	36-pin cage-clamp removable terminal block with standard housing	20-position NEMA screw-clamp removable block	20-pin spring-clamp removable terminal block with standard housing	36-pin spring-clamp removable terminal block with standard housing	Extended depth terminal block housing
Screw torque	0.5 N•m (4.4 lb•in)	1.36 N•m (12 lb•in)	-	-	-
Wire size ⁽¹⁾	Single wire connection: 0.33...2.1 mm ² (22...14 AWG) solid or stranded shielded copper wire rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max. Do not wire more than one conductor on any single terminal. Double wire connection: 0.33...1.3 mm ² (22...16 AWG) solid or stranded copper wire rated at 105 °C (221 °F), or greater, 1.2 mm (3/64 in.) insulation max. Do not wire more than two conductors on any single terminal.		Single wire connection: 0.33...2.1 mm ² (22...14 AWG) solid or stranded copper wire, rated at 105 °C (221 °F) or greater, 1.2 mm (3/64 in.) insulation max. Do not wire more than one conductor on any single terminal.		-
Screwdriver width	3.2 mm (1/8 in.)	8 mm (5/16 in.) Max	-	-	-

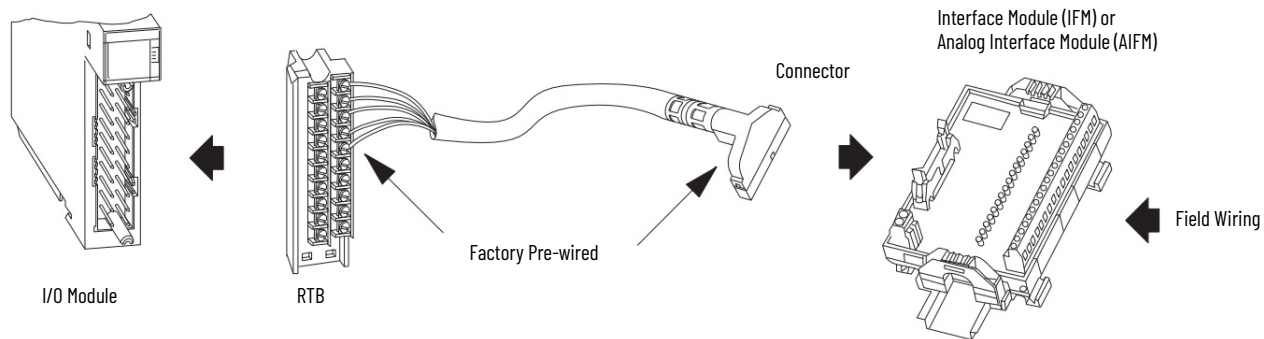
(1) Maximum wire size requires extended housing, catalog number 1756-TBE.

Wiring Systems

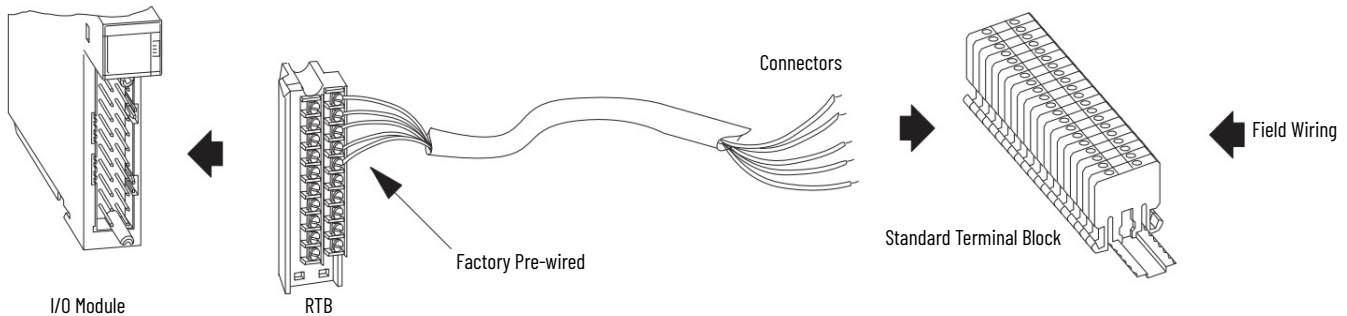


As an alternative to purchasing an RTB and connecting the wires yourself, you can purchase one of these types of wiring systems:

- Interface modules (IFMs) that provide the output terminal blocks for digital I/O modules. Use the pre-wired cables that match the I/O module to the IFM or AIFM.
- Analog interface modules (AIFMs) that provide the output terminal blocks for analog I/O modules. Use the pre-wired cables that match the I/O module to the IFM or AIFM.



- I/O module-ready cables. One end of the cable assembly is an RTB that plugs into the front of the I/O module. The other end has individually color-coded conductors that connect to a standard terminal block.



I/O Module Accessories

1756 Removable Terminal Blocks

Removable terminal blocks (RTBs) provide a flexible interconnection between your plant wiring and 1756 I/O modules. The RTB plugs into the front of the I/O module. The type of module determines the RTB that you need. You can choose screw-clamp or spring-clamp RTBs.



RTBs are not shipped with I/O modules. You must order them separately.

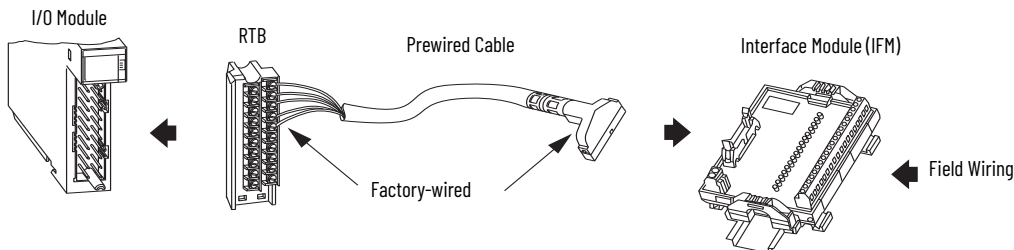
The standard housing on the front of the wiring arm is not necessarily deep enough for 2.5 mm² (14 AWG) wiring. If you plan to use 2.5 mm² (14 AWG) wiring, order the extended housing. For more information on Extended-Depth Housing, see Knowledgebase Technote [Use of the 1756-TBE Extended Terminal Housing](#).

Attribute	1756-TBNH 1756-TBNHS 1756-TBNHXT	1756-TBSH 1756-TBSHS 1756-TBSHXT	1756-TBCH 1756-TBCHS 1756-TBCHXT	1756-TBS6H 1756-TBS6HS 1756-TBS6HXT	1756-TBE 1756-TBES 1756-TBEXT
Description	20-position NEMA screw-clamp removable block	20-pin spring-clamp removable terminal block with standard housing	36-pin cage-clamp removable terminal block with standard housing	36-pin spring-clamp removable terminal block with standard housing	Extended-depth terminal block housing
Screw torque	1.36 N•m (12 lb•in)	—	0.5 N•m (4.4 lb•in)	—	—

Wiring Systems

As an alternative to buying RTBs and connecting the wires yourself, you can buy a wiring system of the following:

- Interface modules (IFMs) that provide the I/O terminal blocks for Digital I/O modules. Use the prewired cables that match the I/O module to the IFM.
- Analog interface modules (AIFMs) that provide the I/O terminal blocks for analog I/O modules. Use the prewired cables that match the I/O module to the AIFM.
- I/O module-ready cables. One end of the cable assembly is an RTB that plugs into the front of the I/O module. The other end has individually color-coded conductors that connect to a standard terminal block.



IMPORTANT IFMs and prewired cables are not rated for harsh environments (corrosive atmosphere, extended temperature, etc.). When they are used in a system with products that are rated for harsh environments, the system is derated to the specification values of the IFMs and cables.