# TERMINAL BLOCKS OVERVIEW



## **Product Family Overview**

The XB Series offers a complete terminal block system with a universal range of accessories. Marking, bridging and testing accessories are standardized across the different clamping technologies—reducing inventory and logistics costs. The modular terminal block design allows for use of the different terminal block types together or individually, providing the highest degree of flexibility.

## **Application Description**

The metal portion of the XB Series terminal blocks are made from highgrade, strain-crack and corrosion-proof copper alloys. They won't experience any electrolytic corrosion or rusting, even when moisture is present. The metal surfaces are protected with a lead-free, galvanic nickel or tin plating.

The good electrical conductivity permits only a low temperature rise. The Polyamide 6.6 housings allow for operating temperatures up to 125°C and are certified for inflammability Class V0 in accordance with UL 94.

### **Features**

**Global Acceptance**— The XB Series terminal blocks are designed to meet worldwide standards and the latest international requirements.

#### Flexible Pluq-In Bridge System—

All 3 technologies (screw, spring and IDC) use the same bridge system, allowing for individual potential distribution and quickly bridged connections among the same terminal block type or across different types. The XB Series terminal blocks have 2 bridge shafts arranged in 1 line, making flexible chain bridging and skip bridging between non-adjacent terminal blocks possible. Plug-in bridges are available from 2 to 50 positions. Reducing bridges are also available to connect a larger terminal block to a smaller one.

**Large Surface Area for Marking—** 



XBUT4RD-50PK \$40.50 for pkg of 50



All models shown smaller than actual size.





All XB Series terminal blocks have generously sized surface areas for labeling. This allows for clearly labeled wiring which results in reduced start-up time and simplifies activities such as testing and maintenance. There are provisions for marking individual terminal blocks and end stops, strips of terminal blocks, and large groups of terminal blocks.

#### Standardized Testing System—

All test plugs make contact in one of the easily accessible bridge shafts. A 2.3 mm diameter test plug is available for individual measuring wires. Modular test plugs are also available for more advanced testing.





XBAFBS105-10 PK, \$27.30





XBAFBS506, \$27.30

E67464; CE approved

LVD\*: EN 60947-7-1, EN 60947-7-2, EN 60998-2-3, EN 60352-4/A1

**ATEX Approval:** Eex e applications \* Not all standards apply to all

terminal blocks.

# **Modular Terminal Blocks for Potentially Explosive Environments**

The standard modular terminal blocks are approved for potentially explosive environments. In addition to the usual approvals, they also have been approved by a testing center authorized by the EU. No extra approval is required in intrinsic safety type applications. Modular terminal blocks on the internet address listed below fulfill the requirements for "increased safety" protection type when installation instructions are followed, and have a type examination certificate in accordance with the Ex directive Ex-RL 94/9/EU. These test certificates are recognized in all the EU member states and beyond.

The modular terminal blocks are approved for fitting in Zone 1, the Ex environment, as well as Zone 2. Zone 1 fitting is conditional upon terminal blocks being used in connection boxes approved for EEx e type protection and having the equivalent of at least IP54 protection.

The EEx approved modular terminal blocks can be divided into the following groups:

Screw connection terminal blocks

XBANS3575P, \$9.00

- Spring-cage connection terminal blocks
- Insulation displacement connection terminal blocks
- Mini terminal blocks
- Terminal blocks for specialized applications

#### Identification

Explosion protected electrical equipment must be marked so that the safety characteristics are identifiable. The identification of electrical equipment is described in the harmonized standard EN 50014, as shown in the following example:

TABLE 55-1. EN 50014 STANDARD EXAMPLE	
Type Designation	XBUT25
Abbreviation of Explosion Protection	EEx e II
Protection Type Increased Safety "e"	е
Equipment Group	II
Mark of the Testing Body	KEMA
Approval Number	05ATEX2158 U
Approvat Nulliber	03A1LAZ130 0

# **Identification in Accordance** with ATEX-RL

XBUT25-50PK, \$38.50

Electrical equipment that is certified in accordance with the ATEX 100a guideline also receives identification describing the site for use.

#### TABLE 55-2. ATEX GUIDELINE **EXAMPLE Manufacturing Data** 02.01.2004 Address of the Manufacturer Duncan, SC Number of the 344 **Appointed Dept** Ex symbol Common Marking **Equipment Group** Ш 2 Category Use in Gas and/or G D

**Dust Atmospheres** 

### **SPECIFICATIONS FOR XBUT6**

Terminal Width: 8.2 mm

Maximum Wire Size: 8 AWG/6 mm<sup>2</sup>

IEC 60 947-7-1 in V/A/AWG:

800/57/24-8

EN 50 0191 in V/A/AWG: 750/40 or 50/24-8

**UL-cUL Ratings in V/A/AWG:** 

600/50/24-8

#### **TECHNICAL DATA DIMENSIONS**

Width/Length/Cover Width in mm (in): 8.2 (0.32)/46.9 (1.85)/ 2.2 (0.09)

Height for 35 x 7.5/35 x 15 in mm (in):

47.5 (1.87)/55.0 (2.17)

#### **TECHNICAL DATA IN ACCORDANCE** WITH IEC

Maximum Load Current in A/ Cross-Section in mm<sup>2</sup>: 57/10 Rated Surge Voltage in kV/ **Contamination Class: 8/3** 

Surge Voltage Category/Insulating

Material Group: III/II CONNECTION CAPACITY

Stranded with Ferrule/with Ferrule and Plastic Sleeve in mm<sup>2</sup>:

0.25 to 6/0 .25 to 6

#### **MULTI-CONDUCTOR CONNECTION** (SAME CROSS-SECTION)

Solid/Stranded in mm<sup>2</sup>: 0.2 to 2.5/0.2 to 2.5

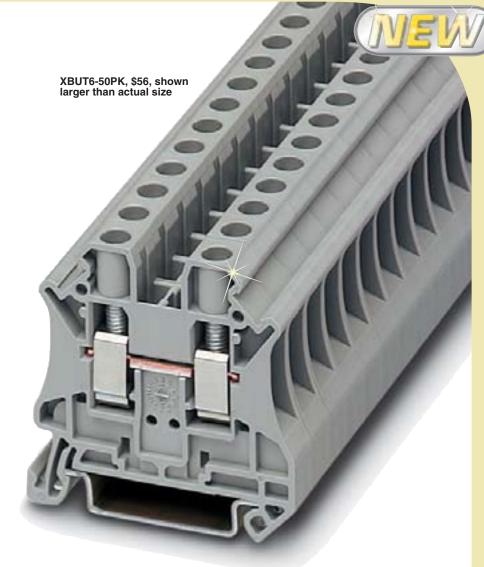
Stranded with Ferrules without Plastic

Sleeve in mm<sup>2</sup>: 0.25 to 1.5 Stranded with Twin Ferrule with Plastic Sleeve in mm<sup>2</sup>: 0.5 to 4 Stripping Length in mm (in): 10 (0.39)

Thread: M4

Torque in in-lb (Nm): 13.3 to 15.9

(1.5 to 1.8)



To	Nrdor	(Snecify	Model	Marine
		ISHECITY	waner	MIIIMMERI

To Urder (Specify Mode	el Number)	AVAILABLE FOR FAST DELIVERY!	
MODEL NO.	PRICE	DESCRIPTION	
XBUT6-50PK	\$56.00	Gray single level connection, package of 50	
XBUT6BU-50PK	56.00	Blue single level connection, package of 50	
ACCESSORIES			
XBACUT10-10PK	\$3.50	Gray end cover package of 10	
XBATUT10-10PK	4.60	Gray partition plate package of 10	
XBAFBS28-10PK	4.20	Red 2 position plug-in bridge package of 10	
XBATSPA14-10PK	80.00	Test adaptor package of 10	
XBMZB8-10PK	4.60	8.22 mm white blank marker strip package of 10	
XBANS3575P	9.00	DIN rail 35 x 7.5 mm x 2 m slotted	
XBANS3575U	9.30	DIN rail 35 x 7.5 mm x 2 m solid	
XBANS3515P	17.00	DIN rail 35 x 15 mm x 2 m slotted	
XBANS3515U	17.00	DIN rail 35 x 15 mm x 2 m slotted	
XBAES35C-50PK	42.00	1-screw mounted end stop package of 50	
XBAES35T-50PK	31.50	3-screw mounted end stop package of 50	
XBAES35N-50PK	26.50	Snap-on end stop package of 50	

Comes with instruction sheet.

Ordering Example: XBUT6-50PK, gray terminal blocks, XBANS357P, DIN rail, \$56 + 9 = \$65.

Note 1: EU type-examination certificate number KEMA 05ATEX2158U.

Your One-Stop Source for Process Measurement and Control!

One Omega Drive | Stamford, CT 06907 | 1-888-TC-OMEGA (1-888-826-6342) | info@omega.com

# www.omega.com



#### **UNITED STATES**

www.omega.com 1-800-TC-OMEGA Stamford, CT.

#### **CANADA**

www.omega.ca Laval(Quebec) 1-800-TC-OMEGA

#### **GERMANY**

www.omega.de Deckenpfronn, Germany 0800-8266342

#### UNITED KINGDOM

www.omega.co.uk Manchester, England 0800-488-488

#### **FRANCE**

www.omega.fr Guyancourt, France 088-466-342

#### **CZECH REPUBLIC**

www.omegaeng.cz Karviná, Czech Republic 596-311-899

#### **BENELUX**

www.omega.nl Amstelveen, NL 0800-099-33-44



# More than 100,000 Products Available!

# Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Glass Bulb Thermometers, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders Relative Humidity Measurement Instruments, RTD Probes, Elements and Assemblies, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples Thermowells and Head and Well Assemblies, Transmitters, Wire

#### Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

# pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

# Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

# • Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Strain Gages, Torque Transducers, Valves

#### Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters