International Standards, Worldwide Use

Why?

Rectangular Circuit Interconnections
- Best use of space for multiple contacts in heavy-duty housings
- Easy to assemble with many different insert options
- Best fit for easy access in panels, machinery and enclosures
- Sealed connector with quick disconnect handles
- Wide variety of circuit possibilities from standard items
- Solid or stranded wire in fixed or portable use

Who?
- Machine tool OEMs
- Material handling equipment OEMs
- Robotics systems OEMs and installations
- Packaging machinery OEMs and facilities
- Control panels and PLC systems
- Molding, assembly or line machinery OEMs and facilities
- Carnival applications
- Construction, mining and welding apparatus

What?
- Servo controls
- Sensing and feedback loops
- Conveyer and process controls
- Low power, DC or logic systems
- Combination power, system and other circuits
- Modular controls including fiber-optic connections

Where?

Worldwide agency approvals and applications
- DIN VDE 0627/86, 0110/02.79, and 0110-1/04.97
- IEC 60.664-1, DIN/IEC 512
- CSA Certified
- UL Recognized
- Protection classes IP44 through IP65 per IEC 529
- Available from Thomas & Betts – Pos-E-Kon™ authorized distributors
- T&B sales representatives and agents worldwide
Overview

The Basic System: Build an Application

Rectangular Circuit Interconnections

Step 1 – Maximum voltage and amperage requirements (300V or 600 V classes, 10–80 A)
Step 2 – Number of contacts or circuits needed
Step 3 – Choose wire terminations style; screw terminal or crimp contacts. Select Series from charts.
Step 4 – Base (or coupler) and hood construction/mating selection per Series (single or double levers)

As Easy As 1. 2. 3. 4.

1. Hood
   • Separable housing for inserts
   • Top or side conduit/wire entry
   • Standard locking posts, dual or single
   • Locks to Panel Base, Box Base or inline Coupler Hood

2. Base Housing (or Coupler Hood)
   • Surface wall-mount box base (shown)
   • Panel Base for through-panel access
   • Coupler Hood mating for portable use
   • Single or dual “lever” locking

3. Male Insert
   • Male contact carrier body
   • Screw terminal contacts (pins with wire protection saddles) or crimp terminated pins

4. Female Insert
   • Female contact carrier
   • Screw terminal contacts (sleeves with wire protection saddles) or crimp terminated sleeves

DIN Standard Configurations

• Most inserts and housings are interface compatible with other DIN standard lines. Verify physical application before selecting cross reference.

• Pos-E-Kon™ construction includes standard NPT conduit adapters for hoods and bases, with many options available. DIN standard Hoods and Bases may have “Euro Style” PG fittings (or none) included unless specially ordered.
Overview

Pos-E-Kon™ Insert Selector Chart

Select the # of contacts — all Blocs de connexion have separate ground contacts

| Amps | Volts | Series | 3 | 4 | 6 | 7 | 8 | 10 | 12 | 15 | 16 | 20 | 24 | 25 | 26 | 32 | 40 | 42 | 48 | 50-216 |
|------|-------|--------|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|--------|
| 10   | 50    | D      |   |   |   |   |   | C  |   | F  |   |    |    |    |    |    |    |    |    |    |        |
| 10   | 600   | A      | S | S | S | S | S | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  |        |
| 16   | 600   | A      | S | S | S | S | S | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  |        |
| 16   | 600   | B      | S | C | A | S | C | A  | S  | C  | A  | S  | C  | A  | S  | C  | A  | S  | C  | A  |        |
| 35   | 600   | C      | C | C | S | S | S | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  |        |
| 10   | 600   | D      |   |   | C  | C  | F  | C  | F  | C  | F  | C  | F  | C  | F  | C  | F  | C  | F  | C  |        |
| 10   | 600   | DD     |   |   | C  | C  | F  | C  | F  | C  | F  | C  | F  | C  | F  | C  | F  | C  | F  | C  |        |
| 80/16| 600   | K      | S | S | S | S | S | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  |        |
| 16-T | 600   | T      | S | S | S | S | S | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  |        |
| 316-V| 600   | V      | S | C | S | S | S | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  | S  |        |

Screw Terminal/Insert Types (Integral Contacts)
Screw termination is used for ease of assembly plus ease of maintenance. No tooling beyond a screwdriver and wire strippers is required.

Crimp Terminal/Insert Types (Crimp Contacts)
Crimp terminals offer solid, thermally cool vibration-resistant terminations for OEM equipment and critical applications. Better for smaller AWG sizes also. Crimp tools are noted in each section.

Select the # of contacts — all Blocs de connexion have separate ground contacts

S – Screw Terminals
C – Crimp Contacts
F – Fiber Optic (POF)
A – Terminal Block Wiring Adapter

All crimp types represented require contacts ordered separately. Each section contains hand Crimp Tool selection notes.
Overview

Screw Terminal Inserts
- Integral screw terminal contacts provide for easy terminal wiring and fast assembly
- Standard wire protection saddles prevent cutting of strands during assembly

Crimp Terminal Inserts
- Provide reliable connections for long-term configurations
- Contact sizes accommodate wiring from 12–20 AWG

WAR, Right Ground Strap
WAL, Left Ground Strap

Terminal Block Wiring Adapters
- Allow for measuring of circuit while in operation
- Provide easy connections in panel mounting configurations
- Labels available for easy identification of circuits
- Can be mounted on DIN rails by using snap-on mounting feet
- Used in switch cabinets, panel enclosures or mounted in panel base housings — see B and D Series

Insert Strip Blank – WAM1B
Insert Strip Nos. 1–64 – WAM1N64
Insert Strip Letters A–Z – WAM1AZ

- Made of durable glass fiber-filled thermoplastic
- Contact numbers clearly marked for easy identification
- Easily installed (male or female) in either hoods or bases using captive mounting screws
Overview

Hood and Base Housings
- Rugged cast aluminum hoods and bases: Maximum performance in many operating conditions
- Various hood heights available: Easier assembly and wiring with low, high and standard profiles
- Corrosion-resistant finishes: Optional special materials extend life in corrosive conditions
- Locking possibilities include single locking system and double locking system
- Complete selection: Flexible product designs (see Hood/Base Cross Reference below)
- Dust covers and more: See Adapters (page D9) and Covers (page D8) or Bases with Covers available in most series (Accessories, page D50)
- Custom configurations: Multiple conduit entry/sizes and other configurations available to spec

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<th>A4</th>
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* Special high-temperature series in copper-free aluminum with special green epoxy powder coat, Viton® seals†
** Special isolation design allows additional control circuit capability
† Viton® is a trademark of DuPont Performance Elastomers

Box Base
Top Cable Entry
Panel Base
Side Cable Entry
Box Base Housing with single lever and spring cover. Metal spring covers available for B series, where noted.
1. Select size (# of contacts) from each Series’ section left-hand page chart (selected inserts), then look at corresponding right-hand page columns.

2. Vertical columns note single or double locking systems available (double locking usually preferable).

3. Select base housings for mounting and/or function: conduit/cable entry, thru-panel access, inline coupler or reversed locking as shown. (Note profile height options.)

4. Select side or top entry hoods as shown. (Note profile height options.)

5. Review conduit and cable entry options (standard NPT adapter sizes for each series).

Note: M Series (layout) groups interior options, followed by base selection options.

Overview

Each Right-Hand Page Shows:

- Standard Bases
- Hood to Base
- Standard Hoods
- Lever Hoods
- Hood to Base
- Portable Service
- Coupler Hoods
- Post Bases
- Reverse Locking
Sub-Miniature (DB) Adapter Plates
- Connect test and diagnostic equipment to control circuits
- Panel base, box housing base or any hood installation (ribbon cable — entry hoods available)
- Industry standard sizes
- Dust covers for protection recommended
- 9, 15, 25, 37 and 50 Series

B24 Insert Mounting Adapter Plates
- Allow housing standardization for multiple applications
- B24 footprint fit to single B6, B10, B16 inserts
- Rugged thermoplastic
- Fit standard B24 Hoods and Bases

Cover Plates
- Allow custom connections for drill-and-install work
- Blank plate for expansion
- All standard Hood/Base sizes supported

Dust Covers & Hinged Covers
(thermoplastic)  (thermoplastic or metal)
- Separate covers or fixed-mount hinged types
- Metal fixed-mount hinged covers for B Series bases available in select sizes
- Separate or fixed covers protect contacts when not in use or while unmated
- Refer to page D50
Overview

Wire and Cable Entry Options

Portable Service Cord
- Sheathed industrial multi-conductor cables usage
- Options cover many installation needs
- Special constructions available for retrofit or original specification
- Hoods and Bases may be specified (in bulk volumes)
- Euro standard gland seal also available
- Refer to page D52

Standard NPT Conduit Adapters
- Euro PG to NPT thread adapters (PG male to NPT female)
- Standard on all Pos-E-Kon™ Hoods and Bases
- Available separately for MRO
- Sizes from (PG11 to 1/2 in.) through (PG48 to 1-1/2 in.) NPT
- Refer to page D52

Cord Grip Fittings
- Both NPT and PG thread styles
- Thermoplastic sealing glands in NPT, PG and ISO threads — for retrofit or original specification
- More options than shown are available (shown in grey; black also available)
- Refer to page D53

Pos-E-Kon™ Advantages
- Feature: Ergonomic thermoplastic levers for “B” Series double-lever housings B10–B24
- Benefits: Non-slip comfortable grip for easier locking and unlocking
- Feature: Laser-etched labeling for all metal housings and hot-stamped labeling on contact carrier inserts
- Benefits: Permanent marking with all data combined in external marking vs. internal label
Overview

Easy-to-use catalogue number construction pioneered by Thomas & Betts

Hoods
TH – Top Entry Hood with NPT fitting
SH – Side Entry Hood with NPT fitting

Wiring Entry options
• Cord or Conduit Adapter fittings
• Ribbon cable and Euro cable entry
• Housings without fittings
• Custom assemblies

Male and Female Terminal Block Wiring Adapters
MS or FSxxxWAR/WAL
(right/left ground) options for Panel Base installations

Male and Female Inserts
– same installation to any hood or base orientation
MS – Male Screw Terminal Insert (shown)
FS – Female Screw Terminal Insert (shown)
– OR –
MC – Male Crimp Insert
FC – Female Crimp Insert
>use MP – Male and FP – Female Pins

PB – Panel Base Housing
Panel face or bulkhead mounting with rear wiring access

BB – Box Base Housing Surface Mount with NPT conduit entry (1 or 2) fittings (standard)

CH – Coupler Hood
Inline Portable Connection

Locking
• Single lever/Single posts or Double lever/Double posts locking
• “Reversed Locking” (levers on hoods) available
# Overview

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