

**Electronic Fieldbus Device Coupler for fast installation & easy commissioning in Zone 1**

**Unique magnetic interlock - safe removal or connection of Exd devices under power**

**Unique short-circuit protection design switches fault current to trickle-level only - prevents spur faults continuously loading segment**

**Patented Automatic Termination circuit - no worries over provision and control of segment termination, and segments remain terminated even if cables are cut between couplers**

**Complete package concept - simple to specify, fast to install, easy to commission**

**Fieldbus Device Couplers** reduce specification effort for systems integrators and wiring workload for field installers by enabling fast and easy connection/disconnection of FOUNDATION fieldbus™ and PROFIBUS PA devices into fieldbus segments. TG300 Series Device Couplers provide electronic & auto-resetting short-circuit protection, automatic segment termination and are the only Device Couplers specifically designed to ease wiring issues in Zone 1.

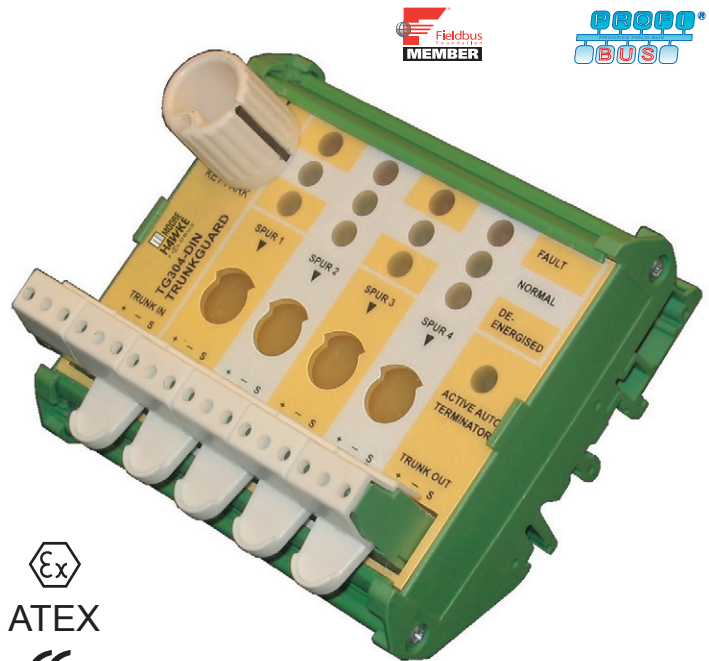
**TG Series 300** is designed and approved for use in Zone 1 and Zone 2 with flameproof Exd devices. Uniquely, individual Exd devices can be manually de-energised with a special key. This allows those devices to be disconnected without de-powering the segment - even in Zone 1. LED indicators show the exact state per spur: 'NORMAL', 'FAULT' or 'DE-ENERGISED'.

**Spur short-circuit protection** uses MooreHawke's TRUNKGUARD™ technology to immediately react to excess current demand and to then 'fold-back' to a nominal trickle-level, eliminating the risk of internal overheating & adverse segment loading effects common with so-called "current limiting" spur protection circuits. The protection circuit auto-resets once the fault is cleared.

**Automatic segment termination** is a unique feature of MooreHawke TRUNKGUARD, allowing any upstream TG unit to take over segment termination in the event of any downstream wiring failure, preventing loss of communications.

**Standard field enclosure** is the MooreHawke PL620/630 in GRP, fully Exe-approved, robust and well regarded for real process plant use with IP67 and DTS01 protection. MooreHawke also offers a variety of 316 SST alternatives, or TG300-DIN can be specified for installation into custom enclosures (by others).

Refer to PDS-FPS200 for a complementary segment power

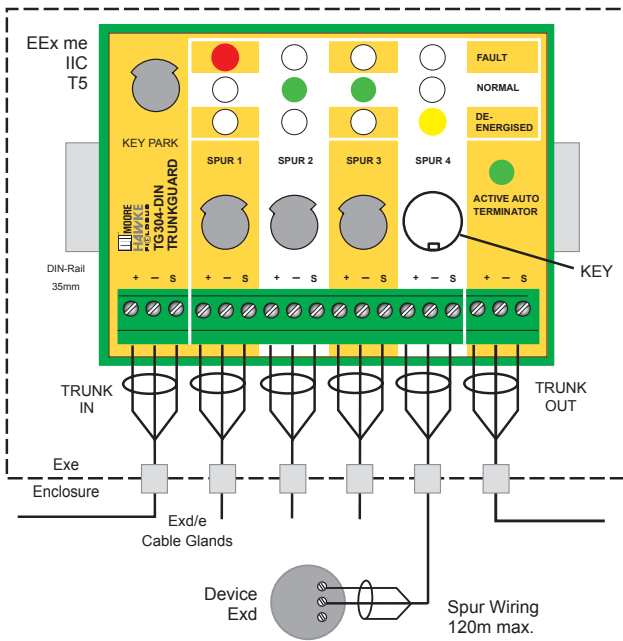


Note: TG304-DIN shown without external enclosure

## SPECIFICATION

<b>Capacity Supply Quiescent Current</b>	4 or 8 fieldbus devices maximum, plus TRUNK IN / OUT 9.5 to 32V DC, 800mA (max) 8mA nominal (10mA with Auto-Terminator active)
<b>Per Spur Maximum Spur Current Voltage Drop Short Circuit Protection</b>	50mA 0.2V @ 20mA spur current, 0.5V max. Electronic, switches faulty spur to trickle-level current (~2mA)
<b>LED Indicators</b>	RED - Spur Fault GREEN - Spur Normal YELLOW - Spur De-Energised
<b>Auto-Terminator (patent pending)</b>	Nominal 100 Ohms / 1 µF Automatically activated by last Device Coupler in segment.
<b>Terminals</b>	0.8 to 4.0 mm <sup>2</sup> / 12 to 24 AWG (EExe approved) IP30 (IEC529) with terminal shrouds/fillers in place
<b>Environmental Humidity Ambient Temperature</b>	0-95%, non-condensing -40 to +70 Deg C (operating) -50 to +85 Deg C (storage)
<b>EMC Compliance</b>	EN61326:1998 EN61000-6-1/2 EN61000-6-3/4
<b>TG300 Enclosure Materials/Finish Weight (c/w glands) Protection</b>	Glass-Reinforced Polyester (standard - others available) Self-coloured Black semi gloss 4.0 Kg (TG234-B) 5.5Kg (TG248-B) IP67 (IEC529)
<b>Certification TG300-DIN</b>	EEx me II T5 II 2 G D Sira 03ATEX5500  EEx nC IIC T5 II 3 G D Sira 03ATEX4499
<b>Enclosure</b>	EEx e II T5 II 2 G D BAS 01ATEX2107U (GRP) BAS 04ATEX0171U (316 SST)

## TYPICAL HOOK-UP & APPLICATION



Each TG300-DIN has terminals for 4 or 8 hazardous area devices, plus TRUNK-IN and TRUNK-OUT provision. For multiple TG units, TRUNK-OUT can be looped into any adjacent TRUNK-IN. Segment termination is AUTOMATICALLY provided by the final active TG300-DIN unit - NO additional or external fieldbus terminator is required.

LEDs indicate the status of each spur as either Normal (GREEN), Fault (RED) or De-Energised (YELLOW). 'Normal' shows that the spur has sufficient voltage for device operation and that spur current is within limits. 'Fault' indicates that the protection circuit is active, preventing that spur imposing a continuous load on the segment from a field-wiring fault or device short-circuit.

Use of the DISCONN KEY operates a magnetic interlock to physically de-energise an individual spur, allowing wiring activity without affecting other devices on the segment, even in the hazardous area. The 'De-Energised' (YELLOW) LED can only be activated if the magnetic interlock has operated correctly, providing a positive indication of safety for temporary wiring access. The DISCONN KEY can be locked in position if required. Wiring terminals have shrouds and fillers to ensure all live parts are covered to IP30, and these must be refitted before returning unit into service.

Field devices should be certified/approved for use in hazardous areas (e.g. EExd in Zone 1) and are typically connected using armoured, braided or toughened-sheath cabling. Hawke cable glands fitted are EExd/e approved, but need to be sized for the appropriate armoured or toughened cable. Earth continuity plates are provided, bonded to an external earth tag.

## TO ORDER, please specify full product code

**TG304-DIN** TG standalone unit, 4-way, DIN-rail mounting

**TG334** EExe Device Coupler for up to 4 devices - GRP  
**TG338** EExe Device Coupler for up to 8 devices - GRP

- A 421 Gland for unarmoured cable, EExe/EEExd
- B 453 Gland for armoured cable, EExe / EEExd (standard)  
 (Note: codes are for ALL entries, not mixtures)

Cable outer sheath diam. (mm) (Hawke size)

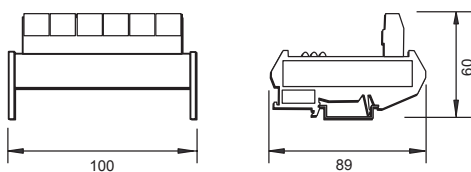
	Type 421	Type 453	
- S	3.0-8.0	5.5-12.0	(OS)
- O	7.5-11.9	9.5-16.0	(O - standard)

Example: **TG334-B-O**

**DISCONN -KEY** Spare Isolation Key  
 For use with any TRUNKGUARD unit

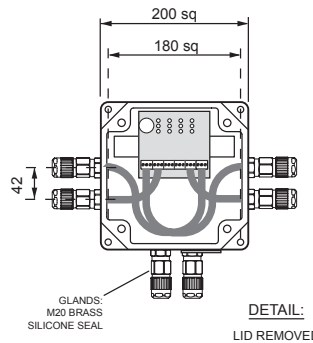
**TG-SD01** Screwdriver, 2.4mm blade  
 Removes wiring while maintaining IP30 protection

## TG304-DIN

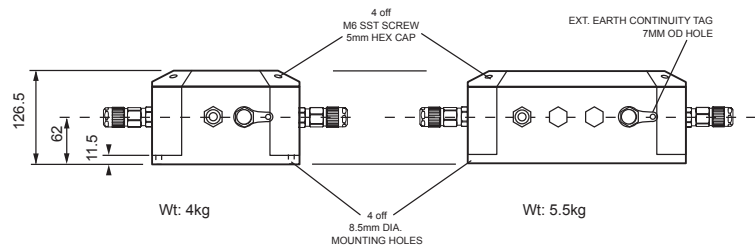
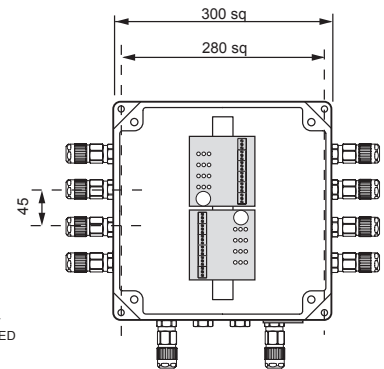


## DIMENSIONS AND CABLE ENTRY POSITIONS (mm)

### TG334-B



### TG338-B



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Specifications and information subject to change without notice.