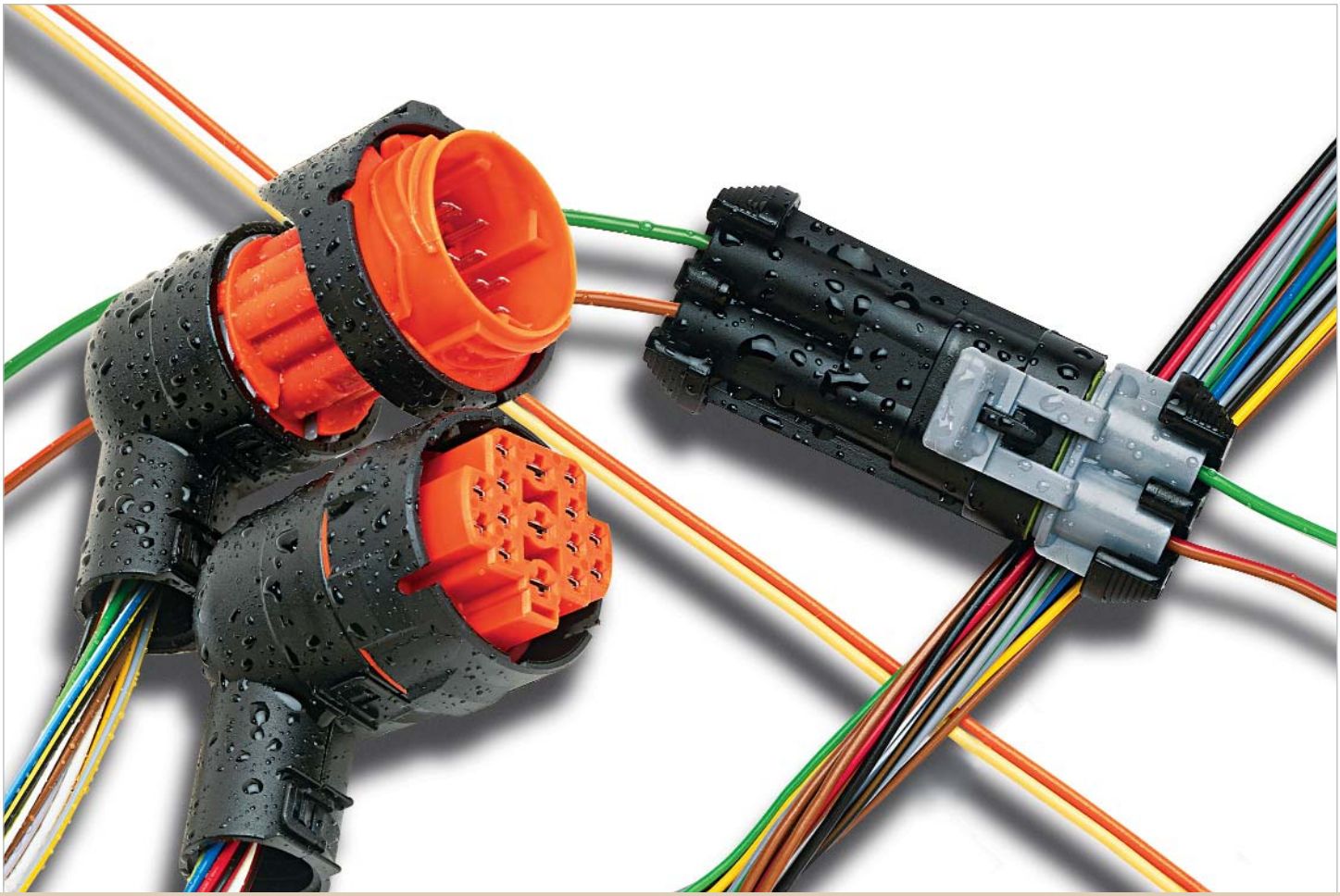
Ducon™ Connection Systems

DELPHI



Delphi's Ducon™ connection systems are based on industry-leading technologies that provide superior mechanical and electrical performances for automotive and commercial vehicle applications. Our robust two-piece terminal design allows for greater electric current flow in smaller size terminals than many comparable connection systems.

Ducon™ – First to Market

When introduced in 1989, the Ducon connection system was the first high-current system on the market, offering greater current loads in smaller terminal dimensions. This advanced system helped push the envelope to meet the demands of newer vehicle systems with increased electric and electronic requirements in smaller and smaller packaging.

Ducon Connection Systems continues its tradition of innovation with new technologies and products, including our 9.5mm HT (high temperature) terminals. We have also expanded existing family sizes for emerging market trends such as pre-fuse, high power distribution, and high vibration resistance requirements for engine applications.

Today, Ducon is a cost-effective and proven connection system, that offers a wide portfolio of products in six terminal sizes.

Superior Terminal Design

Ducon's two-piece terminals are superior to conventional one-piece systems. A unique terminal geometry, featuring multiple contact-points at two off-setting levels, helps the female and male terminals retain constant conductivity during operation. This increased conductivity allows for higher current loads within smaller dimensions.

Our female terminals are robust, user friendly and easy to handle for installation and maintenance. Ducon terminals provide excellent resistance to temperature and vibration, while providing reliable electrical performance. The special construction of the contact arms lowers engage and disengage forces – important for multi-way connectors. During vehicle servicing the contact element can be easily unlocked, removed and reinserted. Delphi also offers a wide range of service tools to aid in removing and reinserting the contact elements.

Connectors - Sealed & Unsealed

Ducon's sealed connectors are available for in-line and device configurations in applications requiring robust environmental protection. With its multiple contact-point design, the system offers exceptional electrical stability, even in high vibration applications.

Unsealed connectors are available in device and in-line connection systems, in both high- and low-current configurations. Vehicle interiors encompass many of the applications for Ducon's unsealed connector line.

Ducon offers proven performance in its power sizes (4.8 to 9.5mm)

Custom Designs

Ducon offers custom application designs for OEMs and device manufacturers. Additionally, our products are engineered to help optimize quality and ergonomics for manufacturing and assembly processes. Ducon is a proven and reliable connector family that adapts well to market needs.

The Ducon Family

Low-Current



0.8 mm

Cable Range . . . . . 0.5 mm^2 - 1.0 mm^2
Current Range . . . . . 0 - 15 amps
Temperature Range . . . . . -40°C to +135°C
Resistance . . . . . <10 mΩ @ 20 mV
Voltage Drop . . . . . <4.0 mV/amp



1.5 mm

Cable Range . . . . . 0.5 mm^2 - 2.5 mm^2
Current Range . . . . . 25 amps
Temperature Range . . . . . -40°C to +135°C
Resistance . . . . . <10 mΩ @ 20 mV
Voltage Drop . . . . . <4.0 mV/amp



2.8 mm

Cable Range . . . . . 0.5 mm^2 - 2.5 mm^2
Current Range . . . . . 33 amps
Temperature Range . . . . . -40°C to +135°C
Resistance . . . . . <10 mΩ @ 20 mV
Voltage Drop . . . . . <4.0 mV/amp

Ducon Connection Systems have been validated using DIN Cable Standards.

Ducon is a complete connection family offering a large range of crimp versions in six terminal sizes.

The Ducon Family

High-Current

4.8mm

Cable Range . . . . . 0.5 mm² - 6.0 mm²
Current Range. . . . . 45 amps
Temperature Range . . . . . -40°C to +135°C
Resistance . . . . . <10 mΩ @ 20 mV
Voltage Drop . . . . . <4.0 mV/amp

6.3 mm

Cable Range . . . . . 1.5 mm² - 6.0 mm²
Current Range. . . . . 55 amps
Temperature Range . . . . . -40°C to +135°C
Resistance . . . . . <10 mΩ @ 20 mV
Voltage Drop . . . . . <4.0 mV/amp

9.5mm

Cable Range. . . . . 4.0 mm² - 16.0 mm²
Current Range . . . . . 115 amps
Temperature Range . . . . . -40°C to +135°C
Resistance . . . . . <10 mΩ @ 20 mV
Voltage Drop . . . . . <4.0 mV/amp

NEW PRODUCT: The 9.5mm terminal features a 16mm² crimp for high electrical performance requirements.

9.5mm HT

Cable Range . . . . . 4.0 mm² - 16.0 mm²
Current Range . . . . . 116 amps
Temperature Range . . . . . -40°C to +150°C
Resistance . . . . . <10 mΩ @ 20 mV
Voltage Drop . . . . . <4.0 mV/amp

NEW PRODUCT: The 9.5 HT (high temperature) terminal provides more amps for 150°C applications.

- Material improvement from Stoll 76 to K55
- New temperature resistant surface FSnAG.
- HT surface mixed with silver.

Ducon™ Overview

Product Features -

- Available sizes (mm): 0.8; 1.5; 2.8; 4.8; 6.3; 9.5 and 9.5HT
- Rugged two-piece terminal construction
- Multiple contact points technology
- Small overall dimensions
- Low energy, low voltage capability
- High energy, high voltage capability
- Excellent resistance to temperature, chemicals, abrasion and vibration
- Optimized locking mechanism
- Terminal Position Assurance (TPA)
- In-line and device connector systems
- Sealed and unsealed versions
- Custom application designs available

Typical Applications -

Ducon Connection Systems are used in all types of automotive and commercial vehicle applications, as well as non-automotive applications. Ducon serves both OEM and device-supplier market segments. Typical applications include:

- Blower switches
- Doors off connections (front and rear)
- Electrical mirror switches
- Engine-to-body in-lines
- Fan control units (In-line)
- HVAC
- Ignition switches
- IP-to-body in-lines
- Lighting module applications
- Electric power steering
- Transmissions

Applications & Mixed Series

Engine/Body Interface

Doors Off System

Ignition Device

13-way Sealed In-line Fan Control

47-way 0.8, 2.8 and 6.3 mm Unsealed Connector

Ducon™

Product Applications

	PRODUCT FAMILIES						
	0.8 mm	1.5 mm	2.8 mm	4.8 mm	6.3 mm	9.5 mm	9.5 mm HT
APPLICATIONS							
Blower switches				■		■	■
Doors off connections	■	■	■	■	■	■	
Electric mirror switches	■						
Engine connections		■	■	■			
Fan control units					■		■
HVAC				■			
Ignition switches						■	■
IP connections	■	■	■		■		
Lighting modules				■	■		
Electric power steering					■	■	■
Transmissions				■	■	■	

The products and applications within this brochure are presented as a reference guide only. Other Delphi Connection Systems' products may also apply to the application categories presented herein. In addition, these and other Delphi products may be available for other similar application categories not represented in this brochure.

For additional product information and application support, please contact your local Delphi Connection Systems' sales representative or contact us directly at [1] 248.813.2334, or visit our website at www.delphi.com/connect.

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