Contacts & Tools

Contacts & Tools

Contacts & Tools

0462-005-2031

1060-12-0222

0462-203-12141

114019

0460-215-1631

1060-20-0122

- Made from high-quality copper alloys, finished with nickel, tin or gold-plating.
- Exceptional durability, performance, corrosion and oxidation resistance.
- Exceed demands of today's industrial electrical systems.
- No retention tangs required, eliminating potential contact damage.
- Solder is not recommended, eliminating potential flux corrosion.
- Pack quantities of varying sizes available.

Material : Copper Alloy
Plating : Nickel, Tin or Gold

*Bulk packaged quantities calculated by weight,
a +/- 2% variation acceptable.*

Solid Contacts

Wire Size AWG / mm²

Size

Recommended Strip Length – mm

TE DEUTSCH solid contacts are designed for use with larger wire size and heavy-duty applications. Solid contacts are manufactured using a cold heading process with solid copper alloy wire and are available with either a nickel or gold-plating finish.

Solid contacts terminate wire from 20 AWG to 6 AWG (0.5 – 13mm²) and are available in 5 sizes each of the pin and socket. The applicable contact is determined by the size of the conductor only.

Green & Purple Band Contacts

Size 16 and size 20 solid contacts are both available to suit two wire sizes.

Contacts with the green band marking accept the larger wire size of 14 AWG (1.0 – 2.0mm²].
Contacts with the purple band marking accept the larger wire size of 18–16 AWG (0.75 – 1.3mm²].

Solid style contacts are sold in bulk.

Bulk packaged quantities calculated by weight,
a +/- 2% variation acceptable.

Stamped & Formed Contacts (F-Crimp)

Wire Insulation O.D. Range – mm

Wire Size AWG / mm²

Size

Recommended Strip Length – mm
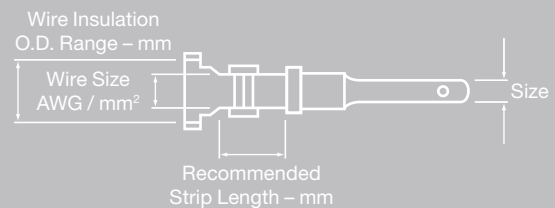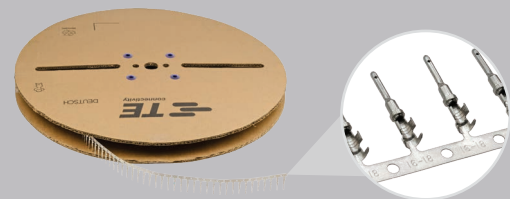
TE DEUTSCH stamped & formed contacts are designed for use where wire termination costs are of primary concern without sacrificing reliability of electrical circuits. The stamped & formed contacts are made on a precision stamping machine using flat strip stock, and then a durable and corrosion-proof nickel-plating or optional gold-plating is applied.

The stamped & formed style contacts terminate wire from 22 AWG to 10 AWG (0.35 – 6.0mm²) and are available in multiple sizes to accommodate a wide range of wire insulation.

The specific contact is determined by the outside diameter of wire insulation and conductor size.

Stamped & formed contacts are available as
cut strips or in pack quantities including complete reels.

TE connectivity **DEUTSCH**

Contacts – Stamped & Formed (F-Crimp)

Size	Part No. Pin	Part No. Socket	Plating	Wire Size AWG	Wire Size mm²	Wire Insulation O.D. Range (mm)	Recommended Strip Length (mm)	Max. Rated A @ 125°C Continuous
20	1060-20-0122	1062-20-0122	Nickel	22 – 16	0.3 – 1.5	1.91 – 3.15	4.0 – 5.0	7.5
	1060-20-0144	1062-20-0144	Gold					
16	1060-16-0622	1062-16-0622	Nickel	20 – 16	0.5 – 1.0	1.40 – 2.54	3.8 – 5.0	13
	1060-14-0122	1062-14-0122	Nickel	18 – 14	0.75 – 2.0	2.41 – 3.81	3.8 – 5.0	
	1060-14-0144	–	Gold	18 – 14	0.75 – 2.0	2.41 – 3.81	3.8 – 5.0	
	1060-16-0122	1062-16-0122	Nickel	18 – 14	0.75 – 2.0	1.91 – 3.55	3.8 – 5.0	
	1060-16-0144	1062-16-0144	Gold	18 – 14	0.75 – 2.0	1.91 – 3.55	3.8 – 5.0	
	–	1062-16-1222	Nickel	16 – 12	1.3 – 3.3	1.91 – 3.55	4.5 – 5.8	
12	1060-12-0166	1062-12-0166	Tin/Nickel	14 – 12	2.0 – 3.3	2.87 – 4.47	5.7 – 6.9	25
	1060-12-0222	1062-12-0222	Nickel	12 – 10	3.3 – 5.2	3.56 – 5.18	5.8 – 7.0	

Contacts – Stamped & Formed (F-Crimp) – Pack Quantities

Size	Plating	Pins Part No.	100	Reel Qty	Sockets Part No.	100	Reel Qty
20	Nickel	1060-20-0122	●	4000	1062-20-0122	●	4000
16	Nickel	1060-16-0122	●	4000	1062-16-0122	●	4000
	Gold	1060-16-0144	–	4000	1062-16-0144	●	4000
	Nickel	1060-14-0122	●	3200	1062-14-0122	●	4000
12	Nickel	1060-12-0222	●	2000	1062-12-0222	●	2000

Contacts & Tools

Contacts – Solid

Size	Part No. Pin	Part No. Socket	Plating	Wire Size AWG	Wire Size mm²	Recommended Strip Length (mm)	Max. Rated A @ 125°C Continuous
20	0460-202-2031	0462-201-2031	Gold	20	0.5	4.0 – 5.5	7.5
	0460-202-20141	0462-201-20141	Nickel				
20 Purple Band	0460-010-2031	0462-005-2031	Gold	18 – 16	0.75 – 1.3	3.9 – 5.5	7.5
	0460-010-20141	0462-005-20141	Nickel				
16	0460-202-1631	0462-201-1631	Gold	20 – 16	0.5 – 1.0	6.4 – 8.0	13
	0460-202-16141	0462-201-16141	Nickel				
16 Green Band	0460-215-1631	0462-209-1631	Gold	14	1.0 – 2.0	6.4 – 8.0	13
	0460-215-16141	0462-209-16141	Nickel				
12	0460-220-1231	0462-210-1231	Gold	14 – 12	2.0 – 3.0	5.6 – 7.2	25
	0460-204-12141	0462-203-12141	Nickel				
8	0460-204-08141	0462-203-08141	Nickel	10 – 8	5.0 – 8.0	11.0 – 12.5	60
4	0460-204-0490	0462-203-04141	Nickel	6	13.0	11.0 – 12.5	100

TE DEUTSCH

Contacts – Solid – Pins – Pack Quantities

Size	Part No.	Plating	1	25	50	100	400	500	800	1000	2.5K	5K	10K
20	0460-202-2031	Gold	●	●	●	●	–	●	–	●	–	–	●
	0460-202-20141	Nickel	●	●	●	●	–	●	–	●	–	–	●
20 Purple Band	0460-010-2031	Gold	●	–	●	●	–	–	–	–	–	–	–
	0460-010-20141	Nickel	●	●	●	●	–	●	–	–	–	–	–
16	0460-202-1631	Gold	●	●	●	●	–	●	–	–	–	●	–
	0460-202-16141	Nickel	●	●	●	●	–	●	–	●	●	–	–
16 Green Band	0460-215-1631	Gold	●	●	●	●	–	●	–	–	–	●	–
	0460-215-16141	Nickel	●	●	●	●	–	●	–	●	–	●	–
12	0460-220-1231	Gold	●	●	●	●	–	●	–	–	–	●	–
	0460-204-12141	Nickel	●	●	●	●	–	●	–	●	●	–	–
8	0460-204-08141	Nickel	●	●	–	●	–	–	●	–	–	–	–
4	0460-204-0490	Nickel	●	–	–	●	●	–	–	–	–	–	–

Contacts – Solid – Sockets – Pack Quantities

Size	Part No.	Plating	1	25	50	100	400	500	750	1000	2.5K	5K	10K
20	0462-201-2031	Gold	●	●	●	●	–	●	–	●	–	–	●
	0462-201-20141	Nickel	●	●	●	●	–	●	–	●	–	–	●
20 Purple Band	0462-005-2031	Gold	●	–	●	●	–	–	–	–	–	–	–
	0462-005-20141	Nickel	●	●	●	●	–	–	–	–	–	–	–
16	0462-201-1631	Gold	●	●	●	●	–	●	–	–	●	–	–
	0462-201-16141	Nickel	●	●	●	●	–	●	–	●	–	●	–
16 Green Band	0462-209-1631	Gold	●	●	●	●	–	●	–	–	●	–	–
	0462-209-16141	Nickel	●	●	●	●	–	●	–	●	●	–	–
12	0462-210-1231	Gold	●	●	●	●	–	–	–	–	●	–	–
	0462-203-12141	Nickel	●	●	●	●	–	●	–	●	–	–	–
8	0462-203-08141	Nickel	●	●	–	●	–	–	●	–	–	–	–
4	0462-203-04141	Nickel	●	–	–	●	●	–	–	–	–	–	–

Contacts & Tools
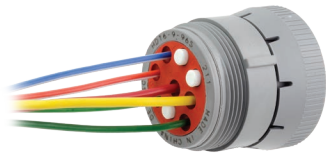
Cavity Plugs are used to seal the connector when a cavity is not used by a wire

Keying Pins are used to help prevent mis-mating of like connectors in close proximity

NEW

0413-204-2005	114017	114018	114019	0413-214-1205

Cavity Plugs & Keying Pin

Part No.	Contact Size	Material	Colour	Pack Quantities					
				1	20	50	100	500	1K
0413-204-2005	20	Plastic	Red	–	●	–	●	●	–
114017	16 & 12	Plastic	White	–	●	–	●	●	●
114018	8	Plastic	White	●	–	●	–	–	–
114019	4	Rubber	Red	●	–	–	–	–	–
0413-214-1205 NEW	12	Plastic	Yellow	●	–	–	–	–	–

Contact Insertion

Step 1
Hold crimped contact approximately 25mm behind the contact barrel.

Step 2
Hold connector with rear grommet toward the contact.

Push contact into connector grommet until a click is felt. Gently pull back to confirm contact is locked in place.
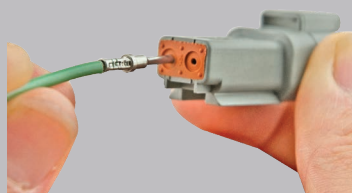
Step 3
Once all contacts are in place, insert wedgelock.
The wedgelock will snap into place securing the contacts.
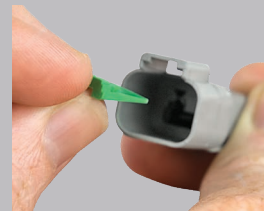
Contact Removal

Step 1
With the rear insert toward you, snap appropriate size removal tool over the wire of contact to be removed.

Step 2
Slide tool along the wire into the insert cavity until it engages the contact and resistance is felt.

Step 3
Pull contact wire assembly and removal tool out of connector.
Do not twist the removal tool when inside the connector.

DEUTSCH
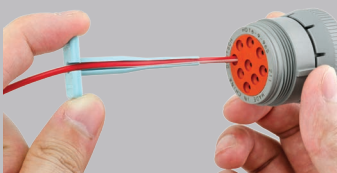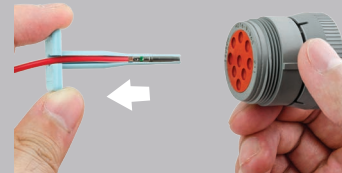
Contact Performance Specifications

Current Rating @ 125°C Continuous

Size	Maximum Current (A)
20	7.5
16	13
12	25
8	60
4	100

Crimp Tensile Strength

Size	Tensile Strength (lbs)
20	20
16	25
12	70
8	90
4	300

Contact Retention

Size	lbs	N
20	20	89
16	25	111
12	30	133
8	35	156
4	35	156

Contact Millivolt Drop

Size	Test Current (A)	Solid (mV)	Stamped & Formed (mV)
20	7.5	60	100
16	13	60	100
12	25	60	100
8	60	60	N/A
4	100	60	N/A

Durability

No electrical or mechanical defects after 100 cycles of engagement and disengagement.

AWG to mm2

American Wire Gauge (AWG)	Diameter (mm)	Nominal Area (mm²)	American Wire Gauge (AWG)	Diameter (mm)	Nominal Area (mm²)	American Wire Gauge (AWG)	Diameter (mm)	Nominal Area (mm²)
4	5.19	21.14	12	2.05	3.31	20	0.81	0.52
6	4.11	13.29	14	1.63	2.08	22	0.65	0.33
8	3.26	8.36	16	1.29	1.31	24	0.51	0.20
10	2.59	5.26	18	1.02	0.82			

Solid Contacts
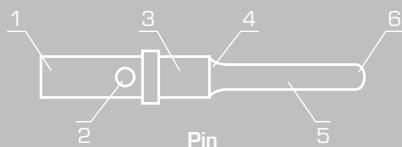
Pin

1 – Wire lead-in chamfer to aid wire insertion.
2 – Inspection hole.
3 – Maximum diameter to prevent bending.
4 – Radius for added strength.
5 – Smooth finish to minimise mating forces.
6 – Radius for smooth engagement and reduced misalignment.
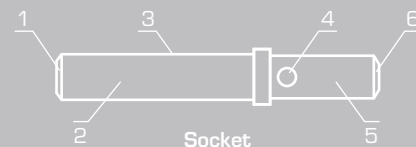
Socket

1 – Closed entry to prevent probe damage and prevent misalignment, chamfered lead-in to prevent misalignment.
2 – Durable tines for superior electrical performance.
3 – Stainless steel sleeve for maximum socket tine protection.
4 – Inspection hole.
5 – Crimp barrel.
6 – Wire lead-in chamfer to aid wire insertion.

Stamped & Formed Contacts (F-Crimp)
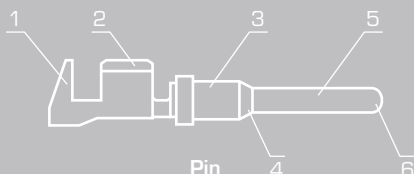
Pin

1 – Insulation wings for insulation support.
2 – Conductor wings for minimal contact resistance.
3 – Maximum diameter to prevent bending.
4 – Chamfered for added strength.
5 – Smooth finish to minimise mating forces.
6 – Radius for smooth engagement and reduced misalignment.
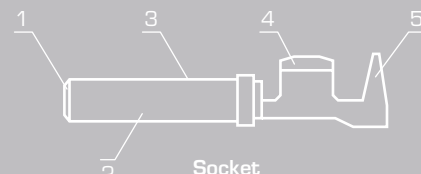
Socket

1 – Closed entry to prevent probe damage and prevent misalignment, chamfered lead-in to prevent misalignment.
2 – Durable tines for superior electrical performance.
3 – Stainless steel sleeve for maximum socket tine protection.
4 – Conductor wings for minimal contact resistance.
5 – Insulation wings for insulation support.

Contacts & Tools

HDT-48-00

- Wide range of crimping tools to suit both Solid and Stamped & Formed contacts.
- Tight, complete crimp with minimal effort.
- HDT-48-00 crimps a wide range of contact sizes with no need to change out dies or locators.
- Ratcheting tools will not release contact until a full crimp is completed.

D2682

DET12

DTT-16-00

Made in North America

Double hinged for parallel crimping

HT-4220
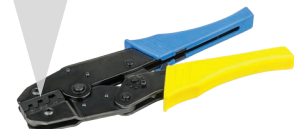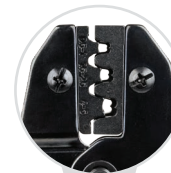
HT-4560

D7000

D7000
6 Removable Dies

| **Die 1** 14, 12AWG	**Die 2** 10, 12AWG
Die 3 18, 16, 14AWG	**Die 4** 20, 18, 16AWG
Die 5 20, 18-16AWG	**Die 6** 16, 14, 12AWG

Crimping Tools – Stamped & Formed (F-Crimp) Contacts

Part No.	Description	Crimp Range
DTT-16-00	Ratcheting. 1 indent crimper "U" crimp	16, 14 AWG
HT-4220	Double hinged. 1 indent crimper "U" crimp	24–22, 24–20, 20–18, 18–14, 16–14 AWG
HT-4560	Ratcheting. 1 indent crimper "U" crimp	0.5–1, 1.5–2.5, 4–6mm²
D7000	Ratcheting crimp tool set with 6 removable dies. 1 indent crimper "U" crimp	

IONNIC

DET48

Made in North America

HDT-04-08

1 Indent "U" Crimp	2 Indent Crimp	4 Indent Crimp

DET12, DET16, DET20

D2681

D2682

HDT-50-00

HDT-48-00

Crimping Tools – Solid Contacts

Part No.	Description	Contact Size (TE DEUTSCH)	Crimp Style
DET48	Two handed	8, 4	2 indent
HDT-04-08	Two handed	8, 4	2 indent
DET12*	Ratcheting	12	4 indent
DET16*	Ratcheting	16	4 indent
DET20*	Ratcheting	20	4 indent
D2681	Ratcheting	20, 16, 12	2 indent
D2682	Ratcheting	20, 16, 12	2 indent
HDT-50-00	Ratcheting	20, 16, 12	1 indent
HDT-48-00	Ratcheting	20, 16, 12	4 indent

* Not made in North America.

Contacts & Tools

Crimping with the DET12, DET16 & DET20

Step 1

1. Ensure tool is reset by completely depressing handles.

2. Strip insulation from wire.

3. Insert contact into the appropriate size tool barrel up.

Step 2

Depress handles until contact is held but not crimped.

Step 3

Place the stripped end of the wire in the crimp barrel, ensuring there are no stray wire strands, and fully depress tool handles.

Crimping with the HDT-48-00

Step 1

1. Strip insulation from wire.

2. Raise selector knob and rotate until arrow is aligned with contact size to be crimped.

3. Loosen locknut, turn adjusting screw in until it stops.

Step 2

1. Insert contact with barrel up.

2. Turn adjusting screw counter clockwise until contact is flush with indenter cover. Tighten locknut.

Step 3

1. Insert wire into contact, ensuring there are no stray wire strands.

Contact must be centred between indenters. Close handles until crimp cycle is completed.

2. Release handles and remove crimped contact.

Crimping with the HDT-50-00

Step 1

1. Ensure tool is reset by completely depressing handles.

2. Strip insulation from wire.

3. Position the contact into the matching sized grove, see markings 20, 18, 12.

Step 2

1. Make sure the shoulder of the contact is flush on the outside of the crimping tool.

2. Depress handles until contact is held but not crimped.

Step 3

Place the stripped end of the wire in the crimp barrel, ensuring there are no stray wire strands, and fully depress tool handles.

TE connectivity DEUTSCH

Also available on request

Ocean Series Applicators

- 3 feed options: Mechanical, Pneumatic, and Servo.
- Pre-feed and post-feed cams.
- Cut and no-cut carrier options.
- Adjustable terminal stripper.
- Adjustable spring-loaded terminal hold down.
- Mechanical counter.
- Fine adjust tool-less crimp height mechanisms.
- Robust, reliable construction.
- Same feed units can be used on Side-Feed and End-Feed style applicators.
  All units can be easily removed and interchanged for upgrades if desired.
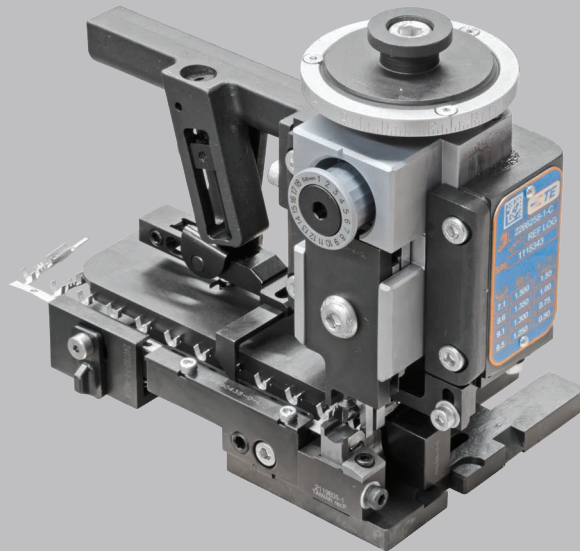
AMP 5K/40 Terminators

- 5000lb (2268kg) max. crimp force.
- Tool-less removal of applicators and guards for quick and simple maintenance and product change over.
- Jog capability.
- Quiet and fast operation: 80/76 dBa and cycle time less than 0.400 seconds.
- Accepts heavy-duty mini style applicators.
- Wide range of optional equipment such as tool-less precision crimp height adjust, batch counter, CQM capability and work light.
- Universal electrical input: 100-240 VAC, 50/60 Hz.
- Cannot be operated during normal production with guards open.
- Produced under an ISO 9001 Certified Quality System.
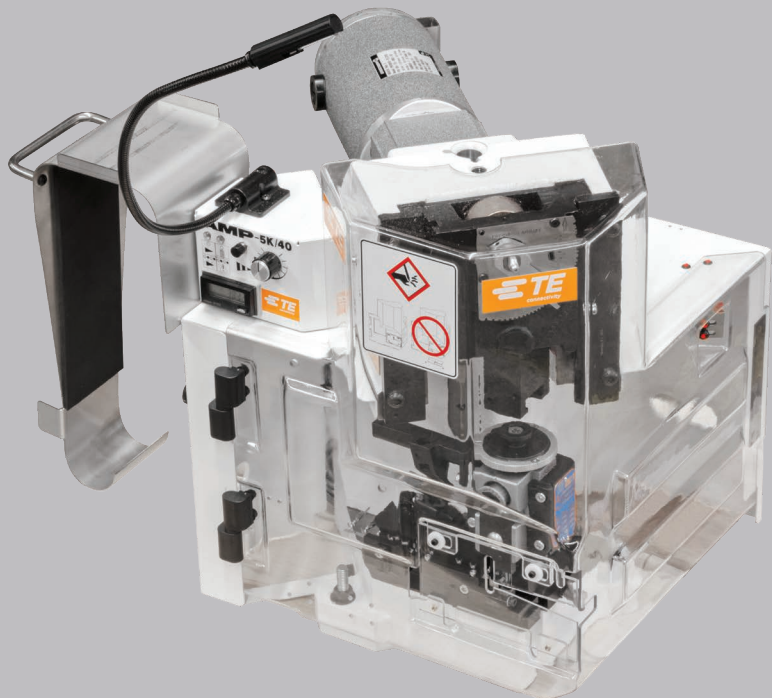
For further information ask your local reseller or enquire online at ionnic.com

Contacts & Tools

D2683

- Removes contact from connector without damage to the wire, insulation, connector seals, or connector body.
- Removal tools are required for wire removal in the DTHD, HD10, HDP20, HD30 and DRC series.
- Simplifies contact removal and field service repair.
- Usable with all connectors that utilise a round shoulder contact retention system.
- Compact and easy to use.

DET-RT

0411-204-1605

0411-337-1205

D08   D12   D14   D16   D20

D2683

DET-RT   DET-RT1
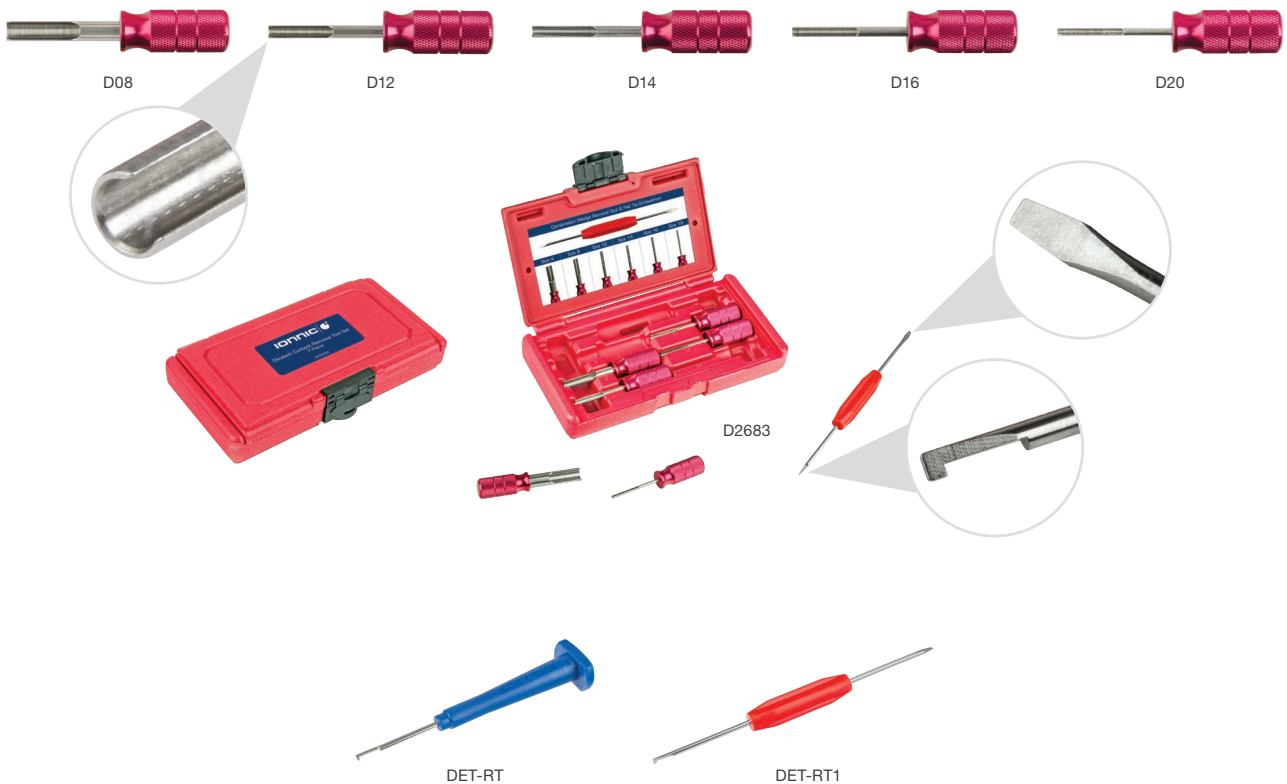
Heavy-duty Removal Tools & Muti-use Tools

Size 8	Size 12	Size 14	Size 16	Size 20
D08	**D12**	**D14**	**D16**	**D20**

D2683   Complete removal tool set including multi-use hook tool & flat-head screw driver. Removal tool for sizes 4, 8, 12, 14, 16, 20

DET-RT   Multi-use hook tool

DET-RT1   Multi-use hook tool & flat-head screw driver

DEUTSCH

114009 114008 0411-353-0805 114010 0411-337-1205 0411-291-1405

0411-310-1605 0411-336-1605 0411-204-1605 0411-240-2005

Removal Tools

Part No.	Contact Size	Wire Gauge Size (AWG)	Colour	Notes
114009	4	6	White	
114008	8	10, 8	Green	
0411-353-0805	8	10, 8	Green	Extended
114010	12	12	Yellow	
0411-337-1205	12	14, 12	Orange	Extra Thin Wall (E-Seal)
0411-291-1405	14	16, 14	Green	
0411-310-1605	16	18, 16	Light Blue	Reduced wire seal
0411-336-1605	16	18, 16	Blue	Extra Thin Wall (E-Seal)
0411-204-1605	16	18, 16	Dark Blue	
0411-240-2005	20	24, 20	Red	

Removal Tool Instructions

Step 1
With the rear insert toward you, snap appropriate size removal tool over the wire of contact to be removed.
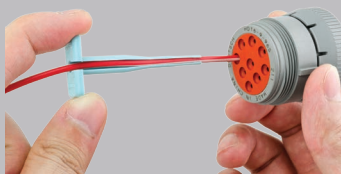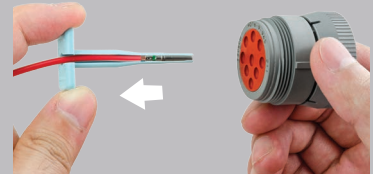
Step 2
Slide tool along the wire into the insert cavity until it engages the contact and resistance is felt.

Step 3
Pull contact wire assembly and removal tool out of connector. Do not twist the removal tool when inside the connector.

DET-RT Multi-use Tool

Removing Internal Wedgelocks   **Removing Individual Contacts**