HEAVY DUTY CONNECTORS

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TE Connectivity's Heavy Duty Connectors (HDC) deliver outstanding, reliable performance in harsh environments. They provide data, signal and power connection solutions between different devices in various applications. The modular and standard interface design maximize the application's efficiency.

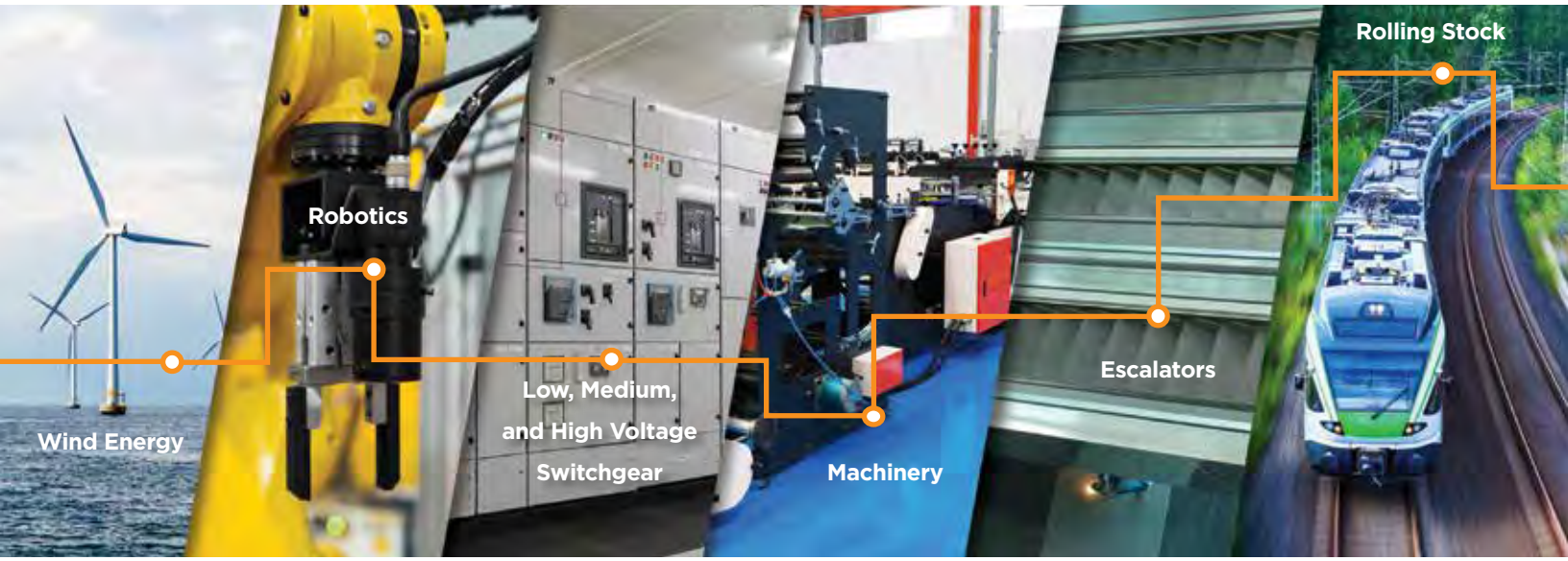
HDC products have been adopted by a wide range of industries, including the wind energy, robotics, construction machinery, packaging, printing and tobacco machinery as well as railway and automation industries.

HDC products consist of three key elements: inserts, contacts and hoods and housing. The inserts and contacts are modular and assembled together to provide electrical performance, and the hoods and housings are made of metal or thermoplastic, robustly structured to provide mechanical and environmental protection for the connector. The waterproof anti-corrosion housing ensures that TE's HDC products work under harsh environments and even meet customer's outdoor connection needs.

TE's HDC product series support a wide range of electrical requirements, e.g. a rated current from 5A to 350A. The modular system provides a high degree of flexibility for customers to customize their solutions for different applications, without the need for modifications. TE can also provide customized designs and products to meet special customer requirements.

Please contact TE personnel for details.

APPLICATIONS



SPECIFICATIONS

- IEC 664/664A
- VDE 0110
- VDE 0627
- DIN EN 175 301-801
- DIN EN 60664-1
- DIN EN 61 984

PRODUCT CERTIFICATIONS

ROBUST RELIABLE FLEXIBLE

OUR HEAVY DUTY CONNECTORS DELIVER OUTSTANDING PERFORMANCE IN HARSH ENVIRONMENTS ACROSS A WIDE RANGE OF APPLICATIONS

KEY FEATURES

- Metal and thermoplastic enclosures
- Various specifications for power, signal and data
- Modular design
- High current solution

KEY BENEFITS

- Designed for reliable performance under the most demanding operating and environmental conditions
- A variety of models provides convenience and gives customers multiple options
- Flexible designs for customers allow them to choose a DIY interface for their equipment
- The industry-standardized interface and TE'c global footprint reduces customers' supply chain risks

CONTACT SYSTEMS 10A – 16A

10A
CDM/CDF contact series silver plated
DDM/DDF contact series gold plated
0.14 mm² up to 2.5 mm²
Diameter (AWG 26–14)
Screw machined contacts
Rated current / voltage 10A/250V

16A
CEM/CEF series- silver plated
DEM/DEF series – gold plated
0.14 mm² up to 2.5 mm²
Diameter (AWG 26-12)
Screw machined contacts
Rated current / voltage 16A/250V

Crimp contacts:
highest contact density, special tools necessary, vibration proof, gas-tight termination, suitable for termination with crimping machines

Screw termination:
no special tools necessary

Spring clamp:
no special tools necessary, vibration proof

CONTACT SYSTEMS

POWER CONTACT SYSTEMS 35A – 200A

35A
Screw contact fitted
into the contact insert HSB
1.5mm² up to 6mm² (AWG 16-10)

40A
CMM/CMF contact series, silver plated
1.5mm² up to 10mm² (AWG 18-8)
Crimp contact

70A
CSM/CSF contact series, silver plated
10mm² up to 25mm² (AWG 7–3)
Crimp contact

100A
CNM/CNF contact series, silver plated
10 mm² up to 35mm² (AWG 6-2)
Crimp contact

200A
CHM/CHF contact series, silver plated
25 mm² up to 70mm² (AWG 3-0)
Crimp contact

HIGH CURRENT CONTACT SYSTEMS 250A – 350A

250A HCM250 contact
35mm² up to 70mm² (AWG 2–0)
Copper, silver plated
Crimp contact

350A HCM350 contact
35mm² up to 70mm² (AWG 2–0)
Copper, silver plated
Crimp contact

INSERTS

- Certified approval according to TÜV, UL as well as CSA
- Flame-retardant materials according to UL94-V0
- Available for screw, crimp and cage clamp termination
- Screw termination: HA, HE, HVE, HSB, HWK, HEAV and HK series (contact preassembled in the inserts)
- Crimp termination: HA, HE, HD, HDD, HEE, HEEE, HQ, HMN, HK, HVE, HWK, HCM series
- Spring clamp termination: HA, HE, HVE, HMN, HEAV series
- Combination inserts for signal and power contacts in one insert – HK/HWK series, HMN modular system
- Up to 216 pins in one connector

HOODS & HOUSINGS

Extremely impact-resistant and robust surface due to powder coating to enable the usage in harsh environment, available in many versions:

- Protection degrees IP65, IP67, IP68 and IP69k
- Standard, pressure-tight, EMC and corrosion resistant variants
- Anti-corrosion series with excellent protection against corrosion and environmental influences due to hard anodic oxidation layer (hard coating):
  - >500H salt spray test resistance (BPR/HCM)
  - >1000H salt spray test resistance (HIP-K)
- Available in standard and high construction version
- Various locking systems:
  - Double and single locking levers, made of standard metal, stainless steel and thermoplastic material
  - Tight locking system with screws, available in central and diagonal configuration

HMN MODULAR SYSTEM

- High flexibility and possibility of customization
- Combination of different technologies within one connector: Power, Signal, Pneumatic, RJ45, D-Sub, USB, Quint
- Current up to 200A
- Voltage up to 1000V
- Grounding
- One-piece frame enabling toolless assembly
- Male and female in 1 frame possible
- HMN docking frame enables Blind mating, through allowing the connectors to guide themselves into the correct mating positions in environments where direct visibility or access is limited

HCM MODULAR SYSTEM

- HCM250 - current of up to 250A
- HCM350 - current of up to 350A
- Inserts of crimping type, different wire diameter provided according to customer needs

  HCM250: 35mm^2 up to 70mm^2 (AWG 2-0)

  HCM350: 35mm^2 up to 120mm^2 (AWG 2-0000)
- Crimping contacts, excellent shock resistance capacity
- Excellent withstand voltage and insulation performance (rated voltage: 2000V, withstand voltage: 12KV)
- Insert solutions of 1-4 positions are available, suitable for IP68 hoods/housings with optional single/multiple outlets

Selection guide

TECHNICAL INFORMATION OF INSERTS

Insert	Type	Poles	Current	Voltage	Terminal	Contacts	Shells
HA	HA-003	3+PE	10A	250 V	screw	-	H3A, H3APR
	HA-004	4+PE	10A	250V	screw	-	H3A, H3APR
	HA-010	10+PE	16A	250V	screw crimp	CEM/F(16A) DEM/F(16A)	H10A
	HA-016	16+PE	16A	250V			H16A, H16BPR
	HA-032	32+PE	16A	250V			H32A
	HAS-003	003+PE	10A	400V	spring	-	H3A, H3APR
	HAS-004	004+PE	10A	400V	spring	-	H3A, H3APR
HD	HD-007	7+PE	10A	250V	crimp	CDM/F(10A) DDM/F(10A) CJM/F(10A)	H3A, H3APR
	HD-008	8	10A	50V			H3A, H3APR
	HD-015	15+PE	10A	250V			H10A
	HD-025	25+PE	10A	250V			H16A
	HD-040	40+PE	10A	250V			H16B, H16BPR
	HD-050	50+PE	10A	250V			H32A
	HD-064	64+PE	10A	250V			H24B, H24BPR
	HD-080	80+PE	10A	250V			H32B
	HD-128	128+PE	10A	250V			H48B
HDD	HDD-016	16+PE	10A	250V	crimp	CDM/F(10A) DDM/F(10A) CJM/F(10A)	H6B, H6BPR
	HDD-024	24+PE	10A	250V			H6B, H6BPR
	HDD-042	42+PE	10A	250V			H10B, H10BPR
	HDD-072	72+PE	10A	250V			H16B, H16BPR
	HDD-108	108+PE	10A	250V			H24B, H24BPR
	HDD-144	144+PE	10A	250V			H32B
	HDD-216	216+PE	10A	250V			H48B
HE	HE-006	6+PE	16A	500V	screw crimp spring double spring	CEM/F(16A) DEM/F(16A)	H6B, H6BPR
	HE-010	10+PE	16A	500V			H10B, H10BPR
	HE-016	16+PE	16A	500V			H16B, H16BPR
	HE-024	24+PE	16A	500V			H24B, H24BPR
	HE-032	32+PE	16A	500V			H32B
	HE-048	48+PE	16A	500V			H48B
HEE	HEE-010	10+PE	16A	500V	crimp	CEM/F(16A) DEM/F(16A)	H6B, H6BPR
	HEE-018	18+PE	16A	500V			H10B, H10BPR
	HEE-032	32+PE	16A	500V			H16B, H16BPR
	HEE-046	46+PE	16A	500V			H24B, H24BPR
	HEE-064	64+PE	16A	500V			H32B
	HEE-092	92+PE	16A	500V			H48B
	HEE-015	14+PE	16A	200V		CSF(16A)	-

Selection guide

TECHNICAL INFORMATION OF INSERTS

Insert	Type	Poles	Current	Voltage	Terminal	Contacts	Shells
HEEE	HEEE-020	20+PE	16A	400V	crimp	CEM/F(16A) DEM/F(16A)	H6B, H6BPR
	HEEE-032	32+PE	16A	400V			H10B, H10BPR
	HEEE-040	40+PE	16A	500V			H16B, H16BPR
	HEEE-048	48+PE	16A	400V			H16B, H16BPR
	HEEE-064	64+PE	16A	500V			H24B, H24BPR
	HEEE-072	72+PE	16A	400V			H24B, H24BPR
	HEEE-080	80+PE	16A	500V			H32B
	HEEE-096	96+PE	16A	400V			H32B
	HEEE-128	128+PE	16A	500V			H48B
	HEEE-144	144+PE	16A	400V			H48B
HVE	HVE-003	3+PE+2	16A	830V	screw crimp spring	CEM/F(16A) DEM/F(16A)	H10B, H10BPR
	HVE-006	6+PE+2	16A	830V			H16B, H16BPR
	HVE-010	10+PE+2	16A	830V			H24B, H24BPR
HSB	HSB-006	6+PE	35A	400/690V	screw	-	H16B, H16BPR
	HSB-012	12+PE	35A	400/690V	screw	-	H32B
HQ	HQ-005	5+PE	16A	400V	crimp	CEM/F(16A) DEM/F(16A)	H3A, H3APR
	HQ-007	7+PE	10A	400V		CDM/F(10A) DDM/F(10A)	H3A, H3APR
	HQ-008	8+PE	16A	500V		CEM/F(16A) DEM/F(16A)	H8A
	HQ-012	12+PE	10A	400V		CDM/F(10A) DDM/F(10A)	H3A, H3APR
	HQ-017	17+PE	10A	250V			H8A
	HQ4/2	4+PE+2	40A+10A	600V+250V		CDM/F(10A) DDM/F(10A) CMM/F(40A) DMM/F(40A)	H8A
HEAV	HEAV-006	6+PE	16A	500V	screw spring	-	H6B, H6BPR
	HEAV-010	10+PE	16A	500V		-	H10B, H10BPR
	HEAV-016	16+PE	16A	500V		-	H16B, H16BPR
	HEAV-024	24+PE	16A	500V		-	H24B, H24BPR
HMN	HMN-001	1	200A	1000V	crimp	CHM/F(200A)	-
	HMN-D2	2	100A	1000V	crimp	CNM/F(100A)	-
	HMN-002	2	70A	1000V	crimp	CSM/F(70A)	-
	HMN-003	3	40A	690V	crimp	CMM/F(40A) DMM/F(40A)	-
	HMN-004	4	40A	830V	crimp	CMM/F(40A) DMM/F(40A)	-
	HMN-004SC	4	-	-	-	-	-
	HMN-005	5	16A	400V	spring	-	-
	HMN-006	6	16A	500V	crimp	CEM/F(16A) DEM/F(16A)	-
	HMN-006P	6	16A	830V	crimp		-

TE Connectivity's Heavy Duty Connectors
Inserts

Insert	Type	Poles	Current	Voltage	Terminal	Contacts	Shells
HMN	HMN-008	8	16A	400V	crimp	CEM/F(16A) DEM/F(16A)	-
	HMN-012	12	10A	250V	crimp	CDM/F(10A) DDM/F(10A)	-
	HMN-017	17	10A	160V	crimp	CDM/F(10A) DDM/F(10A)	-
	HMN-020	20	16A	500V	crimp	CEM/F(16A) DEM/F(16A)	-
	HMN-025	25	5A	50V	crimp	CAM/F(5A) DAM/F(5A)	-
	HMN-009	9	5A	50V	crimp	CAM/F(5A) DAM/F(5A)	-
	HMN-RJ45	8	1A	50V	crimp	-	-
	HMN-Q1	1+1	16A	50V	crimp	CEM/F(16A) DEM/F(16A)	-
	HMN-Q2	4+4	10A	50V	crimp	CDM/F(10A) DDM/F(10A)	-
	HMN-Q3	8+8	5A	50V	crimp	CAM/F(5A) DAM/F(5A)	-
	PIN-Q1	1	16A	50V	crimp	CEM/F(16A) DEM/F(16A)	-
	PIN-Q2	4	10A	50V	crimp	CDM/F(10A) DDM/F(10A	-
	PIN-Q3	8	5A	50V	crimp	CAM/F(5A) DAM/F(5A)	-
	HMN-P2	2	-	-	pneumatic	Pneu-c-M Pneu-c-F	-
	HMN-P3	3	-	-	pneumatic	Pneu-c-M Pneu-c-F	-
	HMN-HD1-24	24	5A	300V	crimp	HD1 Dynamic	-
	HMN-HD1-48	48	2A	25V	crimp	HD1 Dynamic	-
	HMN-HD3-10	10	14A	400V	crimp	HD3 Dynamic	-
	HMN-HD4-6	6	25A	500V	crimp	HD4 Dynamic	-
	HMN-HD5-3	3	53A	300V	crimp	HD5 Dynamic	-
HK/ HWK	HK4/0	4+PE	80A	690V	screw	-	H16B, H16BPR
	HK4/2	4+PE+2	80A+16A	690V+400V	screw	-	H16B, H16BPR
	HK6/12	6+PE+12	40A+10A	690V+230/400V	screw	-	H16B, H16BPR
	HK12/2	12+PE+2	40A+10A	690V+250V	crimp	CMM/F(40A) DMM/F(40A) CDM/F(10A) DDM/F(10A)	H16B, H16BPR
	HK6/36	6+PE+36	40A+10A	690V+160V	crimp	CMM/F(40A) DMM/F(40A) CDM/F(10A) DDM/F(10A)	H16B, H16BPR
	HK4/8	4+PE+8	80A+16A	400V	screw	-	H24B, H24BPR
	HK8/24	8+PE+24	16A+10A	230/400V+160V	crimp	CEM/F(16A) DEM/F(16A) CDM/F(10A) DDM/F(10A	
	HWK6/6	6+PE+6	40A+16A	690V+400V	screw	-	H16B, H16BPR
	HWK3/3/6	3+PE+3+6	100A+40A+16A	400/690V+400/ 690V+250/400V	screw	-	H24B, H24BPR
HCM	HCM250	1	250A	2000V	crimp	HCM250-MC HCM250-FCM	H6BPR, H10BPR, H24BPR
	HCM350	1	350A	2000V	crimp	HCM350-MC HCM350-FC	H6BPR, H10BPR, H24BPR, H32BPR

Crimping tools and remove tools

Crimp tool Wire range: 0.5-4.0mm² Suitable for CDM/CDF and CEM/CEF contacts		**Crimp tool** Wire range: 4.0-10.0mm² Used for CMM/CMF contacts	
Type	CRIMPBOX-0.5/4	**Type**	CRIMPBOX-4.0/10.0
Part Number	T 3 10 000 0001-000	**Part Number**	T 3 10 000 1001-000
Crimp tool Wire range: 0.14-4.0mm² Suitable for CDM/CDF and CEM/CEF contacts with locator and die		**Remove tool** Used for CDM/CDF contact series	
Type	RSZ.HE-HN.D-HVT	**Type**	REMOV-HD
Part Number	1-1105851-8	**Part Number**	T 3 10 000 0003-000
Remove tool Used for CEM/CMF contact series		**Remove tool** Used for 5A contacts (Ø1mm)	
Type	REMOV-HEE / REMOV-HEEE	**Material**	Metal / Plastic
Part Number	T 310 000 / T 3 10 000 0016-000	**Part Number**	T 3 10 000 / T 3 10 000 0018-000
Remove tool Used for CMM/CMF contact series		**Tool** Used for 100A inserts	
Type	SCREWD-M3	**Type**	HEXA-D1
Part Number	T 3 10 000 0009-000	**Part Number**	T 3 10 000 0010-000
Tool Used for 40A inserts		**Crimping tool** Wire range: 10.0-120.0mm² Used for 200A - 350A contacts	
Type	HEXA-D2	**Type**	CRIMPBOX-10/120

For questions about our heavy duty connectors, please go to te.com/hdc, or contact us at:

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