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REPORT

on

COMPONENT - Connectors for Use in
Data, Signal, Control and Power Applications

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MIDDLETOWN PA 17057-3170

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DESCRIPTION

PRODUCT COVERED:

USR, CNR Component Connector,

Cat. No. HDC, followed by -HA, followed by -003, -004, -010, -016 or -032, followed by M, F.

Cat. No. HDC, followed by -HA, followed by -003, -004, followed by MS, FS.

Cat. No. HDC, followed by -HA, followed by -010, -016 or -032, followed by MC, FC.

Cat. No. HDC, followed by -HA, followed by -016, followed by M, F, MC, FC, followed by 17-32.

Cat. No. HDC, followed by -HD, followed by -007, -008, followed by M, F.

Cat. NO. HDC, followed by -HD, followed by -007, followed by M1.

Cat. No. HDC, followed by -HQ, followed by -005, -007, -008, -012, -017, followed by M or F.

Cat. No. HDC, followed by -HQ, followed by 4/2, followed by -M or -F.

USR Component Connector,

Cat. No. HDC, followed by -HD, followed by -015, -025, -040, -050, -064, -080 or -128, followed by M, F or FJ; Cat. Nos. HDC-HD-025M/Z, HDC-HD-025F/Z.

Cat. No. HDC, followed by -HD, followed by -025, followed by M, F, followed by 26-50.

Cat. No. HDC, followed by -HD, followed by -040, followed by M, F or FJ, followed by 41-80.

Cat. No. HDC, followed by -HD, followed by -064, followed by M, F or FJ, followed by 65-128.

Cat. No. HDC, followed by -HDD, followed by -016, -072, -108, -144 or -216, followed by M, F.

Cat. No. HDC, followed by -HDD, followed by -072, followed by M, F, followed by 73-144.

Cat. No. HDC, followed by -HDD, followed by -108, followed by M, F, followed by 109-216.

Cat. No. HDC, followed by -HDD, followed by -024, -042, followed by M, F, FJ.

USR, CNR Component Connector,

Cat. No. HDC-HQ, followed by -002, followed by M or F.

Cat. No. HDC-HQ, followed by -002, followed by PM or PF.

Cat. No. HDC-HQ, followed by -003, followed by M or F.

Cat. No. HDC-HQ, followed by -003, followed by PM or PF.

Cat. No. HDC-HQ, followed by -021, followed by M or F.

Cat. Nos. HQ-D-032-M, HQ-D-032-F.

GENERAL:

These devices are multi-pole connectors intended for factory assembly on copper wire sizes as indicated in Ratings table below where the acceptability of combinations is determined by UL LLC. The devices are identified as follows:

*USR indicates investigation to United States Standards as noted in the Test Record.

*CNR indicates investigation to Canadian National Standards as noted in the Test Record.

RATINGS:

Cat. Nos.	Voltage Vac/Vdc	USR Ampere (A)	CNR Ampere (A)
HDC-HA-003M HDC-HA-003F	250	1	1
HDC-HA-004M HDC-HA-004F	250	10	10
HDC-HA-003MS HDC-HA-003FS	400	1	1
HDC-HA-004MS HDC-HA-004FS	400	10	10
HDC-HA-010M HDC-HA-010F	600	1 16	1 16
HDC-HA-016M HDC-HA-016F HDC-HA-032M HDC-HA-032F	600	1 16	1 16

Cat. Nos.	Voltage Vac/Vdc	USR Ampere (A)	CNR Ampere (A)	Conductor Sizes, AWG Str
HDC-HA-010MC	600	1	1	24, 20-12
HDC-HA-010FC	600	16	16	14-12
HDC-HA-016MC	600	1	1	24, 20-12
HDC-HA-016FC	600	16	16	14-12
HDC-HA-032MC	600	16	16	14-12
HDC-HA-032FC	600	16	16	14-12
HDC-HD-007M	250	1	1	24, 20-14
HDC-HD-007F	250	10	10	14
HDC-HD-007M1	250	10	10	14
HDC-HD-008M	50	1	1	24, 20-14
HDC-HD-008F	50	10	10	14
HDC-HD-015M	250	10	-	14
HDC-HD-015F	250	10	-	14
HDC-HD-015FJ	250	10	-	14
HDC-HD-025M	250	10	-	14
HDC-HD-025F	250	10	-	14
HDC-HD-025FJ	250	10	-	14
HDC-HD-050M	250	10	-	14
HDC-HD-050F	250	10	-	14

Cat. Nos.	Voltage Vac/Vdc	USR Ampere (A)	CNR Ampere (A)	Conductor Sizes, AWG Str
HDC-HD-025M/Z HDC-HD-025F/Z	250	10	-	14
HDC-HD-040M HDC-HD-040F HDC-HD-040FJ HDC-HD-080M HDC-HD-080F HDC-HD-080FJ	250	10	-	14
HDC-HD-064M HDC-HD-064F HDC-HD-064FJ HDC-HD-128M HDC-HD-128F HDC-HD-128FJ HDC-HDD-024FJ HDC-HDD-042FJ	250	10	-	14
HDC-HDD-016M HDC-HDD-016F	600	10	-	14
*HDC-HDD-024M HDC-HDD-024F	600	10	-	14
*HDC-HDD-042M HDC-HDD-042F	600	10	-	14
HDC-HDD-072M HDC-HDD-072F HDC-HDD-144M HDC-HDD-144F	600	10	-	14
HDC-HDD-108M HDC-HDD-108F HDC-HDD-216M HDC-HDD-216F	600	10	-	14
HDC-HQ-005M HDC-HQ-005F	400	1	1	24, 20-12
	400	16	16	14-12
HDC-HQ-007M HDC-HQ-007F	400	1	1	24, 20-14
	400	10	10	14
HDC-HQ-008M HDC-HQ-008F	600	1	1	24, 20-12
	600	16	16	14-12
HDC-HQ-012M HDC-HQ-012F	400	1	1	24, 20-14
	400	10	10	14
HDC-HQ-017M HDC-HQ-017F	250	1	1	24, 20-14
	250	10	10	14
HDC-HQ4/2-M HDC-HQ4/2-F	Power: 600 Signal: 250	Power: 10 Signal: 1 Power: 40 Signal: 10	Power: 10 Signal: 1 -	Power: 16-8 Signal: 24, 20-14 Power: 10-8 Signal: 14

Cat. Nos.	Voltage Vac/Vdc	USR Ampere (A)	CNR Ampere (A)	Conductor Sizes, AWG Str
HDC-HQ-002M HDC-HQ-002F	400	40	-	10-8
		40	-	10-8
	400	10	10	18-12
		10	10	18-12
HDC-HQ-002PM HDC-HQ-002PF	830	40	-	10-8
		40	-	10-8
	830	10	10	18-12
		10	10	18-12
HDC-HQ-003M HDC-HQ-003F	400	40	35	8 AWG, 10 mm ²
HDC-HQ-003PM HDC-HQ-003PF	830	40	35	8 AWG, 10 mm ²
HDC-HQ-021M HDC-HQ-021F	50V AC, 120V DC	6.5	5	20 AWG
HDC-HQ-021M HDC-HQ-021F	50V AC, 120V DC	6.5	-	0.5 mm ²
HQ-D-032-M HQ-D-032-F	32	2.2	2.2	22
HQ-D-032-M HQ-D-032-F	-	-	-	24-30

Disconnecting Use - see Sec Gen for required marking

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

Use - For use only in or with complete equipment where the acceptability of the combination is determined by UL LLC.

Conditions of Acceptability - The following are among the considerations to be made when evaluating the device in the end-use product.

Interruption of Current

1. These devices are not suitable for interrupting the flow of current by connecting or disconnecting the mating connector.

Current-Carrying Capability and Current Ratings

2. These devices have been subjected to the Temperature test with the rated currents and maximum temperature rise and recorded temperature (adjusted to 25°C ambient) values tabulated below:

Cat Nos.	Contact	Wire size AWG	Current, A	Maximum Temperature, °C		Represent
				Rise	Recorded Temperature	
HDC-HA-004MS mating with HDC-HA-004FS	Pin	24	1	2.3	27.3	HDC-HA-003 HDC-HA-004
	Socket			1.9	26.9	
	Pin	14	10	17.7	42.7	
	Socket			15.6	40.6	
HDC-HA-016MC mating with HDC-HA-016FC	Pin	24	1	3.9	28.9	HDC-HA-010 HDC-HA-016
	Socket			4.3	29.3	
	Pin	14	16	29.6	55	
	Socket			28.0	55.8	
HDC-HD-008M mating with HDC-HD-008F	Pin	24	1	3.2	28.2	HDC-HD
	Socket			2.7	27.7	
	Pin	14	10	14.7	39.7	
	Socket			14.2	39.2	
HDC-HDD-108M mating with HDC-HDD-108F	Pin	14	10	-	70.5	HDC-HD HDC-HDD
	Socket			-	71.4	
HDC-HQ-008M mating with HDC-HQ-008F	Pin	24	1	2.2	27.2	HDC-HQ-005 HDC-HQ-008
	Socket			2.1	27.1	
	Pin	14	16	25.2	50.2	
	Socket			24.3	49.3	
HDC-HQ-017M mating with HDC-HQ-017F	Pin	24	1	4.1	29.1	HDC-HQ-007 HDC-HQ-012 HDC-HQ-017
	Socket			4.1	29.1	
	Pin	14	10	19.1	44.1	
	Socket			19.0	44.0	

Cat Nos.	Contact	Wire size AWG	Current, A	Maximum Temperature, °C	
				Rise	Recorded Temperature
HDC-HQ-002M	Male	10	40	-	57.1
HDC-HQ-002F	Female	10	40	-	56.5
HDC-HQ-002M	Male	18	10	11.9	36.9
HDC-HQ-002F	Female	18	10	12.8	37.8
HDC-HQ-002PM	Male	10	40	-	69.4
HDC-HQ-002PF	Female	10	40	-	64.9
HDC-HQ-002PM	Male	18	10	14.0	39.0
HDC-HQ-002PF	Female	18	10	14.0	39.0
HQ-D-032-M	Male	22	2.2	14.7	39.7
HQ-D-032-F	Female	22	2.2	15.3	40.3

Cat Nos.	Contact	Wire size	Current, A	Maximum Temperature, °C		Represent
				Rise	Recorded Temperature	
HDC-HQ-003PM mating with HDC-HQ-003PF	Pin	8 AWG	USR: 40	30.7	55.7	HDC-HQ-003M HDC-HQ-003F
	Socket	8 AWG	USR: 40	30.9	55.9	
	Pin	10 mm ²	USR: 40	27.6	52.6	
	Socket	10 mm ²	USR: 40	28.3	53.3	
	Pin	8 AWG	CNR: 35	21.2	46.2	
	Socket	8 AWG	CNR: 35	21.9	46.9	
	Pin	10 mm ²	CNR: 35	19.4	44.4	
	Socket	10 mm ²	CNR: 35	20.9	45.9	
HDC-HQ-021M mating with HDC-HQ-021F	Pin	20 AWG	USR: 6.5	41.4	66.4	-
	Socket	20 AWG	USR: 6.5	41.1	66.1	
	Pin	0.5 mm ²	USR: 6.5	81.4	106.4	
	Socket	0.5 mm ²	USR: 6.5	79.6	104.6	
	Pin	20 AWG	CNR: 5	22.5	47.5	
	Socket	20 AWG	CNR: 5	22.2	47.2	