VNA/VNB/VNC/VND Series

Cables specification: PR EN 4682-003

General purpose high-performance hook-up cables. Designed for aerospace and other applications requiring excellent thermal stability and light weight.

Cable characteristics

-55 +180°C

Excellent

FAR25_ ABD0031

Environmental

- Operating temperature: -55°C to 180°C (ambient temperature + current heating)
- Resistant to Aircraft fluids (oils, hydrocarbons, kerosene, skydrols...), Chemical agents
- Arc Tracking resistant

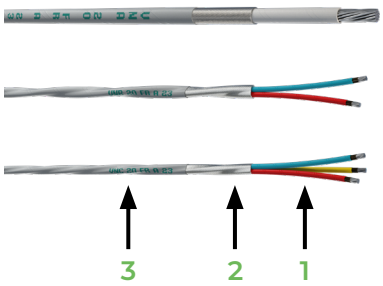
Electrical

Maximum operating voltage:

- 115V (phase to neutral) or 200V (phase to phase) AC Electrical systems of aircraft
- 230/400V AC in pressurized zones with specific installation rules to take account of possible short circuit effects.

Operating frequency: up to 2000Hz

Cable design



1. Cores: PR EN 4681-004 (analogy with ABS1354)
2. Helicoidal Shield: Nickel-plated Copper (coverage > 90%)
3. Jacket: Polyimide + PTFE Tape, UV-Laser sensitive

Identification

- 1 Core: Grey
- 2 Cores: Red and Blue
- 3 Cores: Red, Blue and Yellow
- 4 Cores: Red, Blue, Yellow and Green
- Jacket: Grey

Marking (example)

VNx yy FR A zz

1 2 3 4 5

e.g. VNB 24 FRA 23

1. Short Designation
2. Gauge
3. Country of Origin
4. Manufacturer (A: Draka)
5. Manufacturing Year

Specifications

Conductors
PR EN 4681-004 (analogy with ABS1354)

Wires Specifications
PR EN 4682-003 (analogy with ABS1356)

Technical Specification
PR EN 4682-001 (analogy with ABS1355)

Compliant to ABD0031
Flammability, Smoke and Toxicity requirements and 14 CFR FAR25-1713

Dimensional

For VNA

Short designation	Number of cores	Nominal cross section	AWG*	Linear resistance max. at 20°C		Screen strands nom. Ø		Outer diameter max.		Weight max.	
		mm²		Ω/km	*Ω/ 1000ft*	mm	*inch*	mm	*inch*	kg/km	*Lbs/ 1000ft*
VNA24	1	0.25	24	145	*44.2*	0.08	*0.0031*	1.45	*0.0571*	4.80	*3.2254*
VNA22	1	0.40	22	90.2	*27.49*	0.08	*0.0031*	1.60	*0.0630*	5.86	*3.9377*
VNA20	1	0.60	20	49.6	*15.12*	0.08	*0.0031*	1.87	*0.0736*	7.75	*5.2077*
VNA18	1	1	18	33.2	*10.12*	0.08	*0.0031*	2.11	*0.0831*	10.4	*6.9885*
VNA16	1	1.2	16	23	*7.01*	0.10	*0.0039*	2.48	*0.0976*	14.75	*9.9115*
VNA14	1	2	14	15.5	*4.73*	0.10	*0.0039*	2.79	*0.1098*	17.96	*12.0686*
VNA12	1	3	12	10.9	*3.32*	0.10	*0.0039*	3.20	*0.1260*	24.30	*16.3288*
VNA10	1	5	10	5.8	*1.77*	0.12	*0.0047*	3.89	*0.1531*	36.07	*24.2379*

For VNB

VNB24	2	0.25	24	149.4	*45.54*	0.08	*0.0031*	2.40	*0.0945*	8.15	*5.4765*
VNB22	2	0.40	22	92.9	*28.32*	0.08	*0.0031*	2.70	*0.1062*	10.16	*6.8272*
VNB20	2	0.60	20	51.1	*15.58*	0.10	*0.0039*	3.27	*0.1287*	14.88	*9.9989*
VNB18	2	1	18	34.2	*10.42*	0.10	*0.0039*	3.75	*0.1476*	20.20	*13.5738*
VNB16	2	1.2	16	23.7	*7.22*	0.12	*0.0047*	4.44	*0.1748*	28.48	*19.1377*
VNB14	2	2	14	16.0	*4.88*	0.15	*0.0059*	5.13	*0.2020*	37.27	*25.0443*
VNB12	2	3	12	11.2	*3.42*	0.20	*0.0079*	6.09	*0.2397*	55.78	*37.4824*
VNB10	2	5	10	6.0	*1.83*	0.20	*0.0079*	7.39	*0.2909*	78.19	*52.5412*

For VNC

VNC24	3	0.25	24	149.4	*45.54*	0.10	*0.0039*	2.59	*0.1019*	11.59	*7.7881*
VNC22	3	0.40	22	92.9	*28.32*	0.10	*0.0039*	2.91	*0.1146*	14.52	*9.7570*
VNC20	3	0.60	20	51.1	*15.58*	0.12	*0.0047*	3.52	*0.1385*	21.15	*14.2121*
VNC18	3	1	18	34.2	*10.42*	0.12	*0.0047*	4.05	*0.1594*	28.80	*19.3527*
VNC16	3	1.2	16	23.7	*7.22*	0.15	*0.0059*	4.80	*0.1889*	41.42	*27.8329*
VNC14	3	2	14	16.0	*4.88*	0.15	*0.0059*	5.47	*0.2153*	50.80	*34.1360*
VNC12	3	3	12	11.2	*3.42*	0.20	*0.0079*	6.50	*0.2559*	75.81	*50.9420*
VNC10	3	5	10	6.0	*1.83*	0.20	*0.0079*	7.90	*0.3110*	107.60	*72.3039*

*Closest American Wire Gauge

For VND

Short designation	Number of cores	Nominal cross section	AWG*	Linear resistance max. at 20°C		Screen strands nom. Ø		Outer diameter max.		Weight max.	
		mm²		Ω/km	*Ω/ 1000ft*	mm	*inch*	mm	*inch*	kg/km	*Lbs/ 1000ft*
VND24	4	0.25	24	149.4	*45.54*	0.10	*0.0039*	2.84	*0.1118*	14.29	*9.6024*
VND22	4	0.40	22	92.9	*28.32*	0.10	*0.0039*	3.19	*0.1256*	18.06	*12.1357*
VND20	4	0.60	20	51.1	*15.58*	0.12	*0.0047*	3.86	*0.1512*	26.39	*17.7332*
VND18	4	1	18	34.2	*10.42*	0.12	*0.0047*	4.46	*0.1756*	36.22	*24.3387*
VND16	4	1.2	16	23.7	*7.22*	0.15	*0.0059*	5.30	*0.2087*	52.12	*35.0230*
VND14	4	2	14	16.0	*4.88*	0.20	*0.0079*	6.16	*0.2425*	70.0	*47.0378*

*Closest American Wire Gauge

Bending radius

Permissible bend radius (recommendation following EN3197)	AWG
	24 to 10
Static use	6xØ
Dynamic use	12xØ

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