

HIGH-PERFORMANCE MIL-C-83733 QUALIFIED
Temperature Ranges of - 65 C to +200 C
Environment - Resistant

The Cannon DPK series are high performance environment-resistant, rectangular connectors qualified to MIL-C-83733 (USAF). They feature crimp snap-in contacts in the dependable LITTLE CAESAR® rear release contact retention assembly. This field-proven assembly permits contacts to be inserted and extracted at the rear of the connector. Contacts are qualified to military specifications and are crimped with MIL-C-22520 crimp tools, using standard locators.

The versatile DPK Connector is suitable for many applications, particularly where environment or thermal protection is mandatory and high reliability is a design requirement.

These high performance connectors are available in two shell sizes with a variety of mounting configurations. There are 13 contact arrangements available accommodating from 18 to 185 standard contacts. The standard contacts are available in sizes 12, 16, 20 and 22D. Shells are a die-cast aluminum alloy with electroless nickel finish. Insulators are a high grade, glass reinforced, resin conforming to MIL-M-14 which meets or exceeds the requirements of MIL-C-83733. Silicone rubber is used for wire sealing grommets, interfacial and peripheral seals.



How to Order

*RoHS Finish
Electroless Nickel
PEC FS 4971 Code R

RoHS version
R - RoHS compatible

SHELL SIZE
A - Small shell
B - Large shell

CONTACT MODIFICATION
G-MIL-C-38999 contacts. Size 22D for DPKA-131 and DPKB-185 contact arrangements only.
W-MIL-C-38999 type contacts. Size 22D wrap posts for DPKA-131 and DPKB-185 layouts. .025 (0.63) square posts for .340(8.64); extension from grommet face.

CONTACT ARRANGEMENT
Shell Size A-18, 32, 51 and 131 (MIL-STD-1531).
Shell Size B-48, 64, 78, 101 59W7, 71, 71C15, 161 and 185 (MIL-STD-1532).

CONTACT TYPE
P-Pin (Receptacle Connectors)
S-Socket (Plug Connectors)

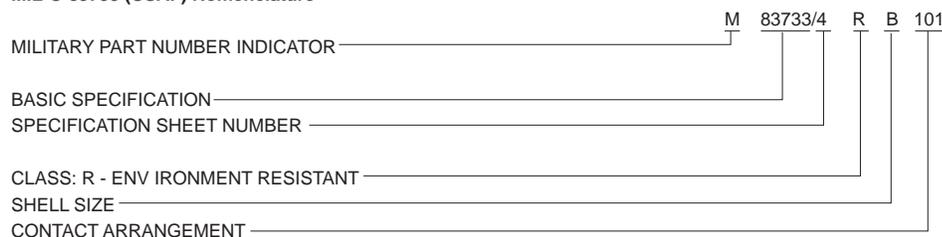
POLARIZATION
Six-position shell polarization accomplished with Polarizing pins mounted on each end of shell flange. Available on mounting style A only.

MOUNTING STYLES
A - Two mounting holes .197(5.00) diameter (for either nuts or jackscrews ordered separately) and two polarizing posts. (Replaces Mounting Style B.)
C - Four MS24700-2 bushings, included for the receptacle (M83733/5).

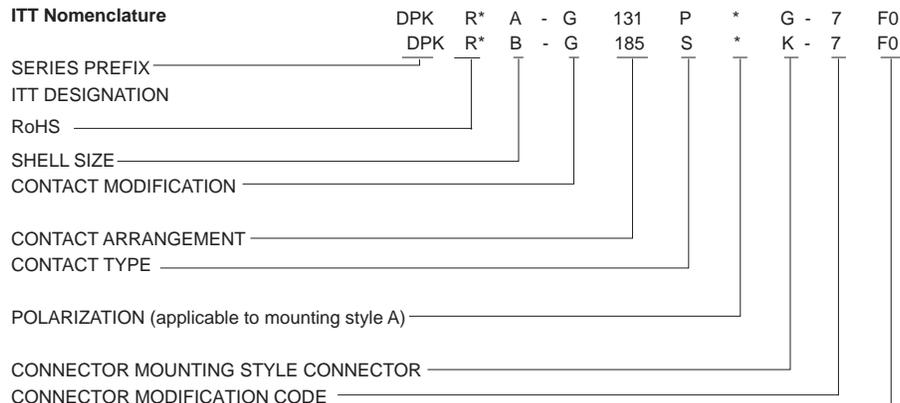
F - Four (4) clinch nuts jNo. 6-32 thread M83733/6.

Dimensions shown in inches (mm)
Specifications and dimensions subject to change

MIL-C-83733 (USAF) Nomenclature



ITT Nomenclature



FURNISHED LESS CONTACTS ———
(will not be stamped on connector).

G - Four .281(7.14) diameter holes (for MS24700-2 bushings or 231-0019-000 spring mounts) (M83733/1).

H- Two mounting hole flange. Two (231-0019-000) spring mounts on the plug and two MS24700-2 bushing mounts on the receptacle (M83733/10/12).

K - Four captivated, non-rotating spring mounts on the plug (M83733/4).

M- Two mounting hole flange. Two mounting holes .281(7.14) diameter (for MS24700-2 bushings or 231-0019-000 spring mounts) (M83733/9).

X - Two guide pins with two (231-0019-000) spring mounts on the plug and two guide sockets with two .197(5.00) diameter holes on the receptacle (M83733/2; /3)

Y - Two guide sockets with two (231-0019-000) spring mounts on the plug and two guide pins with .197(5.00) diameter holes on the receptacle (M83733/7; /8).

Z - Two staggered clinch nuts on the receptacle (No. 6-32 thread) (M83733/11).

CONNECTOR MODIFICATION CODE
- 7 standard product line, environment resistant per MIL-C-83733(USAF). QPL M83733

Ref JDrive Product Information



Weights

The following are weights for DPK connector assemblies, mounting hardware, contacts, and sealing plugs. All connector weights are listed less contacts (FO) and mounting hardware. The total connector weight is obtained by adding mounting hardware, contacts, and sealing plugs weight to the connector assembly weight.

Example:

DPKB-101SK-7 (with 90 contacts and 11 sealing plugs)

	Weight Pounds	Weight Grams
DPKB-101SG-7-FO	.2332	105.78
Type K Spring Mount	.0825	37.42
90 Number 20 Socket Contacts	.0639	28.98
11 Number 20 Sealing Plugs	.0020	.88
	.3816	173.06

Maximum Connector Weight

Part Number (Description)	Maximum Weight	
	Lbs.	Grams
DPKA-18PG-7-F0	.1474	66.86
DPKA-18SG-7-F0	.1496	67.86
DPKA-32PG-7-F0	.1496	67.86
DPKA-18SG-7-F0	.1518	68.86
DPKA-51PG-7-F0	.1529	69.35
DPKA-51SG-7-F0	.1551	70.35
DPKA-G131PG-7-F0	.1045	47.40
DPKA-G131SG-7-F0	.1077	48.85
DPKB-48PG-7-F0	.2398	108.77
DPKB-48SG-7-F0	.2486	112.76
DPKB-59W7PG-7-F0	.2354	106.78
DPKB-59W7SG-7-F0	.2442	110.78
DPKB-64PG-7-F0	.2354	106.78
DPKB-64SG-7-F0	.2442	110.78
DPKB-71PG-7-F0	.2288	103.78
DPKB-71SG-7-F0	.2332	105.78
DPKB-71C15PG-7-F0	.2288	103.78
DPKB-71C15SG-7-F0	.2332	105.78
DPKB-78PG-7-F0	.2266	102.78
DPKB-78SG-7-F0	.2288	103.78
DPKB-101PG-7-F0	.2288	103.78
DPKB-101SG-7-F0	.2332	105.78
DPKB-G185PG-7-F0	.1628	73.85
DPKB-G185SG-7-F0	.1650	74.85
#12 Pin, 030-9185-003	.00298	1.353
#12 Skt, 030-9186-003	.00291	1.318
#16 Pin, 030-9205-007	.00135	.611
#16 Skt, 030-9206-006	.00146	.664
#20 Pin, 030-9173-006	.00062	.280
#20 Skt, 031-9174-004	.00071	.322
#22D Pin, 030-2042-000	.00021	.093
#22D Skt, 031-1147-000	.00025	.111
#12 Shielded Pin, 249-1825-001	.00206	.943
#12 Shielded Skt, 249-1826-000	.00258	1.168
#8 Coaxial Pin, 59W7 Layout	.00420	1.910
#8 Coaxial Skt, 59W7 Layout	.00650	2.948
Type C Bushing, 012-0515-000 (4 reqd)	.00606	2.750
Type K Spring Mtg Captive (non-rotate)	.08250	37.42
Type F Nut (4 reqd)	.00072	.325
Type G Spring Mtg 231-0019-000 (4 reqd)	.01180	5.350
Size 22; 225-1013-000	.00006	.027
Size 20; 225-0070-000	.00018	.080
Size 16; 225-0071-000	.00036	.163
Size 12; 225-0072-000	.00064	.291
SEALING PLUGS		



H

Rack and Panel

Mounting Styles/Applications

DPK connectors for rectangular or staggered mounting are available in both two- and four-spring mount assemblies, or the same shelf style may be ordered to accommodate bushing assemblies. In the spring mount version the spring-loaded mechanism will compensate for a panel space variation of up to .070(1.78) while insuring electrical and environmental integrity.

DPK connectors are also available with polarizing posts, accommodations for jackscrews, and coupling nuts for cord-to-card and cord-to-panel applications. Another shelf style has two or four mounting holes fitted with captive clinch nuts. For mounting dimensions of the various mounting styles shown here please refer to page 91.

Style A
Mounting style A is designed for cord-to-panel and cord-to-cord applications. Connectors are supplied with two polarizing posts installed and provisions for installation of two jackscrew assemblies or two coupling nut assemblies. (Replaces Mounting Style B.)



Plug
Socket Contacts



Receptacle
Pin Contacts

Ordered Separately



Jackscrew Assembly
305-0007-000

Coupling Nut Assembly
335-0002-000

Style C
Mounting style C is designed for cord-to-panel or rack-to-panel applications. Connectors are supplied with (4) MS24700-2 bushings on the receptacle and 4 spring mount assemblies on the plug.

M83733/5



Receptacle
Pin Contacts

Supplied with Connector



Bushing MS247000-2
(Self-Locking)
012-0515-000



Spring Mount Assembly
MIL-C-83733/17
231-00019-000

Style F
Mounting Style F is designed for rack-to-panel applications. Connectors are supplied with four captive clinch nuts installed.

M83733/6



Receptacle
Pin Contacts

Style G
Mounting style G is designed for rack-to-panel applications. Connectors are supplied with four .281(7.14) diameter holes which will accommodate either four MS24700-2 bushings or four 231-0019-000 spring mounts,

M83733/1



Plug
Socket Contacts



Receptacle
Pin Contacts

Ordered Separately



Bushing MS24700-2
(Self-Locking)
012-0515-000



Spring Mount Assembly
MIL-C-83733/17
231-0019-000

Style H
Mounting style H is designed for rack-to-panel applications. Connectors are supplied with two .281(7.14) diameter holes which are staggered. Two spring mounts are on the plug end two MS24700-2 bushings are on the receptacle.

M83733-12



Plug
Socket Contacts

M83733-10



Receptacle
Pin Contacts

Supplied with Connector



Bushing MS247000-2
(Self-Locking)
012-0515-000



Spring Mount Assembly
MIL-C-83733/17
231-0019-000

Style K
Mounting style K is designed for rack-to-panel applications. Connectors are supplied with four captive, non-rotating spring mounts on the plug.

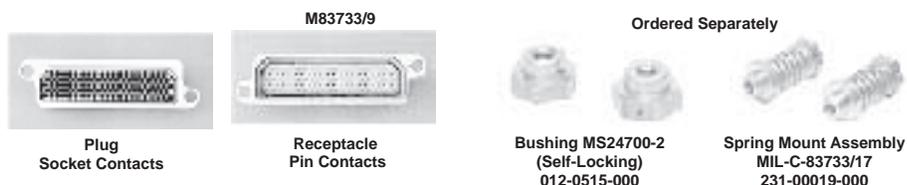
M83733/4



Plug
Socket Contacts

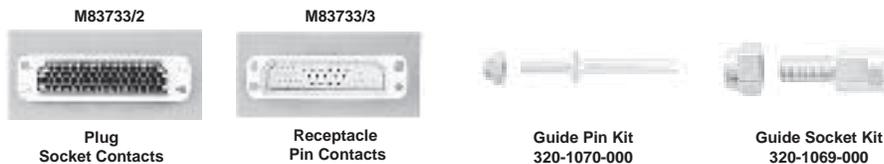
Style M

Mounting style M is designed for rack-to-panel applications. Connectors are supplied with two .281 (7,14) diameter holes which are staggered and will accommodate eight two MS24700-2 bushings or two 231-0019-000 spring mounts.



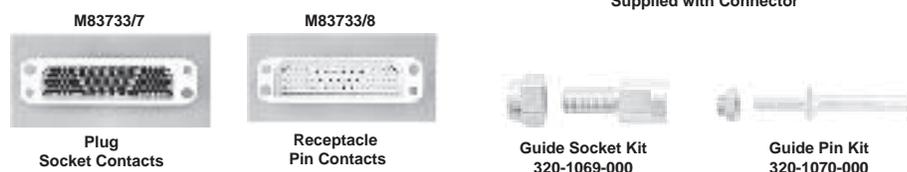
Style X

Mounting style X is designed for rack-to-panel applications where positive alignment is required before connectors are mated. Plug has two guide pins and two spring mounts (MIL-STO-1533); receptacle has two guide sockets and two .197 (5.00) dia. holes.



Style Y

Mounting style Y is identical to mounting style X, except the guide sockets are on the plug and the guide pin and springs are on the receptacle.



Style Z

Mounting style Z is designed for use in rack-to-panel applications. Connectors are supplied with two captive clinch nuts which are staggered.



MIL-C-83733 Connector Type	DPK Mtg. Style	Mating MIL-C-83733 Connector	DPK Mtg. Style
M83733/1 RECEPTACLE	G	M83733/4	K
M83733/2 PLUG	X	M83733/3	X
M83733/3 RECEPTACLE	X	M83733/2	X
M83733/4 PLUG	K	M83733/1	G
		M83733/5	C
		M83733/6	F
M83733/5 RECEPTACLE	C	M83733/4	K
M83733/6 RECEPTACLE	F	M83733/4	K
M83733-07 PLUG	Y	M83733/8	Y
M83733-08 RECEPTACLE	Y	M83733/7	Y
M83733-09 RECEPTACLE*	M	M83733/12	H
M83733-10 RECEPTACLE*	H	M83733/12	H
M83733-11 RECEPTACLE*	Z	M83733/12	H
M83733-12 RECEPTACLE	H	M83733/9	M
		M83733/10	H
		M83733/11	Z

*Not recommended for G131 and G185 layouts.