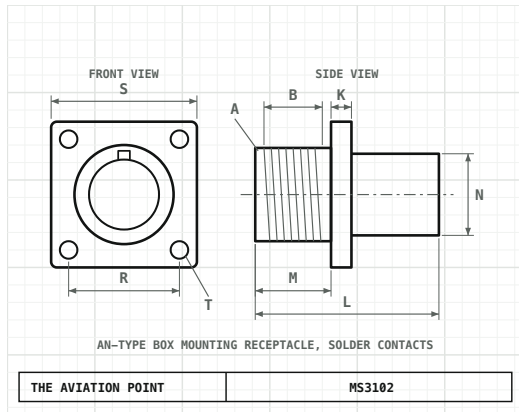
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MS3102 — AN-type box mounting receptacle, solder contacts

MS3102: box mounting AN-type receptacles with solder contacts in classes A (solid shell), C (pressurized), K (firewall) and E and R (environment resistant), with shell and flange dimensions by shell size.



Engineering drawing · dimensions in inches

Specification

Item	Value
Type	Circular connector receptacle, box mounting, solder contacts
Status	Cancelled by Notice 3 (December 2009) and replaced by SAE-AS31021; inactive for new design since Notice 1 (19 June 1999). Check the current issue before design use.

Dimensions by size

Dimension, in	8S	10S	10SL	12S	12	14S	14	16S	16	18	20	22	24	28	32	36	40	44	48
A — A coupling thread	1/2-28	5/8-24	5/8-24	3/4-20	3/4-20	7/8-20	7/8-20	1-20	1-20	1-1/8-18	1-1/4-18	1-3/8-18	1-1/2-18	1-3/4-18	2-18	2-1/4-16	2-1/2-16	2-3/4-16	3-16
B — B usable thread, min	.375	.375	.375	.375	.625	.375	.625	.375	.625	.625	.625	.625	.625	.625	.625	.625	.625	.625	.625
D — D dia inside, +.015 -.000	.370	.448	.448	.557	.557	.682	.682	.807	.807	.932	1.058	1.182	1.307	1.526	1.776	1.995	2.245	2.495	2.745
I — I dia insert, max	.250	.320	.448	.448	.448	.525	.525	.650	.650	.770	.925	1.020	1.145	1.365	1.615	1.830	2.045	2.300	2.550

Classes A and C, dimensions in inches; letters as on the standard's drawing. Classes K, E and R follow below.

Showing 4 of 15 rows. Complete table: theaviationpoint.com/parts/electrical/ms3102/

Part numbers

8S 5 part numbers

Part no.	Class	Coupling thread
MS3102A8S	A	1/2-28
MS3102C8S	C	1/2-28
MS3102K8S	K	1/2-28
MS3102E8S	E	1/2-28

10S 5 part numbers

Part no.	Class	Coupling thread
MS3102A10S	A	5/8-24
MS3102C10S	C	5/8-24
MS3102K10S	K	5/8-24
MS3102E10S	E	5/8-24

10SL 5 part numbers

Part no.	Class	Coupling thread
MS3102A10SL	A	5/8-24
MS3102C10SL	C	5/8-24
MS3102K10SL	K	5/8-24
MS3102E10SL	E	5/8-24

12S 5 part numbers

Part no.	Class	Coupling thread
MS3102A12S	A	3/4-20
MS3102C12S	C	3/4-20
MS3102K12S	K	3/4-20
MS3102E12S	E	3/4-20

12 5 part numbers

Part no.	Class	Coupling thread
MS3102A12	A	3/4-20
MS3102C12	C	3/4-20
MS3102K12	K	3/4-20
MS3102E12	E	3/4-20

14S 5 part numbers

Part no.	Class	Coupling thread
MS3102A14S	A	7/8-20
MS3102C14S	C	7/8-20
MS3102K14S	K	7/8-20
MS3102E14S	E	7/8-20

14 5 part numbers

Part no.	Class	Coupling thread
MS3102A14	A	7/8-20
MS3102C14	C	7/8-20
MS3102K14	K	7/8-20
MS3102E14	E	7/8-20

16S 5 part numbers

Part no.	Class	Coupling thread
MS3102A16S	A	1-20
MS3102C16S	C	1-20
MS3102K16S	K	1-20
MS3102E16S	E	1-20

16 5 part numbers

Part no.	Class	Coupling thread
MS3102A16	A	1-20
MS3102C16	C	1-20
MS3102K16	K	1-20
MS3102E16	E	1-20

18 5 part numbers

Part no.	Class	Coupling thread
MS3102A18	A	1-1/8-18
MS3102C18	C	1-1/8-18
MS3102K18	K	1-1/8-18
MS3102E18	E	1-1/8-18

20 5 part numbers

Part no.	Class	Coupling thread
MS3102A20	A	1-1/4-18
MS3102C20	C	1-1/4-18
MS3102K20	K	1-1/4-18
MS3102E20	E	1-1/4-18

22 5 part numbers

Part no.	Class	Coupling thread
MS3102A22	A	1-3/8-18
MS3102C22	C	1-3/8-18
MS3102K22	K	1-3/8-18
MS3102E22	E	1-3/8-18

24 5 part numbers

Part no.	Class	Coupling thread
MS3102A24	A	1-1/2-18
MS3102C24	C	1-1/2-18
MS3102K24	K	1-1/2-18
MS3102E24	E	1-1/2-18

28 5 part numbers

Part no.	Class	Coupling thread
MS3102A28	A	1-3/4-18
MS3102C28	C	1-3/4-18
MS3102K28	K	1-3/4-18
MS3102E28	E	1-3/4-18

32 5 part numbers

Part no.	Class	Coupling thread
MS3102A32	A	2-18
MS3102C32	C	2-18
MS3102K32	K	2-18
MS3102E32	E	2-18

36 5 part numbers

Part no.	Class	Coupling thread
MS3102A36	A	2-1/4-16
MS3102C36	C	2-1/4-16
MS3102K36	K	2-1/4-16
MS3102E36	E	2-1/4-16

40 5 part numbers

Part no.	Class	Coupling thread
MS3102A40	A	2-1/2-16
MS3102C40	C	2-1/2-16
MS3102K40	K	2-1/2-16
MS3102E40	E	2-1/2-16

44 2 part numbers

Part no.	Class	Coupling thread
MS3102A44	A	2-3/4-16
MS3102C44	C	2-3/4-16

48 2 part numbers

Part no.	Class	Coupling thread
MS3102A48	A	3-16
MS3102C48	C	3-16

Showing 72 of 89 rows. Complete table: theaviationpoint.com/parts/electrical/ms3102/

Reference data. The aircraft manufacturer's documentation (SRM / IPC) takes precedence.

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How to read the part number

Part	Meaning
Format	MS3102<cls><dash>-(insert)<style><pos>
A	Cls: Solid shell
C	Cls: Pressurized
K	Cls: Firewall
E	Cls: Environment resistant
R	Cls: Environment resistant (replaces class E)
P	Style: Pin insert
S	Style: Socket insert
	Pos: Normal insert position
W	Pos: Alternate insert position W
X	Pos: Alternate insert position X
Y	Pos: Alternate insert position Y
Z	Pos: Alternate insert position Z
Example	MS3102R18-5SY — Class R (environment resistant) receptacle, shell size 18, insert arrangement 18-5 (MIL-STD-1651), socket insert, alternate insert position Y

Class K, firewall: dimensions

Shell size	A coupling thread	B usable thread, min	D dia inside +.015 −.000	I dia insert, max	JJ insert location +.031 −.000	K flange thickness, min	L overall length, max	M flange location +.031 −.000	N dia outside +.000 −.188	O dia mounting hole (ref.)	P key height +.015 −.000	R hole centers ±.005	S side length ±.031	T dia bolt hole +.010 −.005
8S	1/2-28	.375	.370	.250	.562	.062	1.375	.562	.532	.562	.130	.594	.875	.150
10S	5/8-24	.375	.448	.320	.562	.062	1.438	.562	.656	.688	.165	.719	1.000	.150
10SL	5/8-24	.375	.448	.448	.562	.062	1.438	.562	.782	.812	.165	.719	1.000	.150
12S	3/4-20	.375	.557	.448	.562	.062	1.438	.562	.782	.812	.224	.812	1.094	.150

Showing 4 of 17 rows. Complete table: theaviationpoint.com/parts/electrical/ms3102/

Class E, environment resistant: dimensions

Shell size	A coupling thread	B usable thread, min	D dia inside +.015 −.000	I dia insert, max	J internal shell shoulder +.031 −.000	JJ insert location ±.031	K flange thickness, max	K flange thickness, min	L overall length, max	M flange location +.031 −.000	N dia outside +.000 −.188	O dia mounting hole (ref.)	P key height +.015 −.000	R hole centers ±.005	S side length ±.031	T dia bolt hole +.010 −.005
8S	1/2-28	.375	.370	.250	.562	.484	.156	.078	1.188	.562	.532	.562	.130	.594	.875	.120
10S	5/8-24	.375	.448	.320	.562	.484	.156	.078	1.188	.562	.656	.688	.165	.719	1.000	.120
10SL	5/8-24	.375	.448	.448	.562	.484	.156	.078	1.188	.562	.782	.812	.165	.719	1.000	.120
12S	3/4-20	.375	.557	.448	.562	.484	.156	.078	1.188	.562	.782	.812	.224	.812	1.094	.120

N: shell sizes 36 and 40, +.000 -.250.

Showing 4 of 17 rows. Complete table: theaviationpoint.com/parts/electrical/ms3102/

Class R, environment resistant: dimensions

Shell size	A coupling thread	B usable thread, min	D dia inside +.015 −.000	I dia insert, max	J internal shell shoulder +.031 −.000	JJ insert location ±.031	K flange thickness, max	K flange thickness, min	L overall length, max	M flange location +.031 −.000	N dia outside +.000 −.188	O dia mounting hole (ref.)	P key height +.015 −.000	R hole centers ±.005	S side length ±.031	T dia bolt hole +.010 −.005
8S	1/2-28	.375	None	.250	.562	.484	.156	.078	1.219	.562	.532	.562	.130	.594	.875	.120
10S	5/8-24	.375	.448	.320	.562	.484	.156	.078	1.219	.562	.656	None	.165	.719	1.000	.120
10SL	5/8-24	.375	.448	.448	.562	.484	.156	.078	1.219	.562	.782	.812	.165	.719	1.000	.120
12S	3/4-20	.375	.557	.448	.562	.484	.156	.078	1.219	.562	.782	.812	.224	.812	1.094	.120

N: shell sizes 36 and 40, +.000 -.250.

Showing 4 of 17 rows. Complete table: theaviationpoint.com/parts/electrical/ms3102/

Notes

- Dimensions in inches. Unless otherwise specified, tolerances: decimals ±.016.
- Insert arrangements per MIL-STD-1651. Style P is a pin insert, S a socket insert; W, X, Y or Z marks an alternate insert position (no letter for the normal position).
- Classes A and C: a socket insert of hard material is .016 maximum beyond or .032 maximum below the shell face; a socket insert of resilient material extends .047 +.000 −.047 beyond the shell. Where resilient inserts are used, JJ may be .109 less than shown.
- Classes A, C, E and R: N tolerance for shell sizes 36 and 40 is +.000 −.250.
- Classes A and C in sizes 8S to 40 and class E were cancelled after 1 Jan 1991; replacement: MS3102R (supply allowed until 1 Jan 1992 or until inventories were exhausted, whichever came first). Classes A and C in sizes 44 and 48 are inactive for new design; classes K and R are inactive for new design after 1 Jan 1991. For new design: MS3452W (classes A, C, E and R) or MS3452K (class K); for shipboard jacketed cable: MS3402.
- MS3102A (or C) replaces and is interchangeable with AN3102A (or C); MS3102K with AN3102K; MS3102E with AN3102E; MS3102R with MS3102E and AN3102E.
- Approved data governs. Use the part the drawing, SRM or IPC calls for.

SOURCES · MS3102 Rev. E, 20 Aug 1992 — Connector, Receptacle, Electric, Box Mounting, Solder Contacts, AN Type

SCAN · OPEN THIS DATA SHEET
theaviationpoint.com/parts/electrical/ms3102/

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