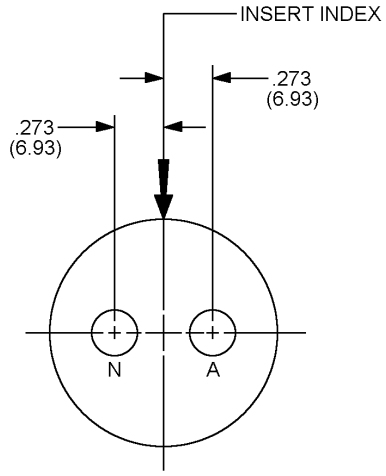
INCH-POUND
MS14054E
26 October 2005
SUPERSEDING
MS14054D
20 December 1982

DETAIL SPECIFICATION SHEET

INSERT ARRANGEMENTS, ELECTRICAL CONNECTOR, SIZE 28, CLASS L, 40 AMPS

This specification is approved for use by all Departments
and Agencies of the Department of Defense

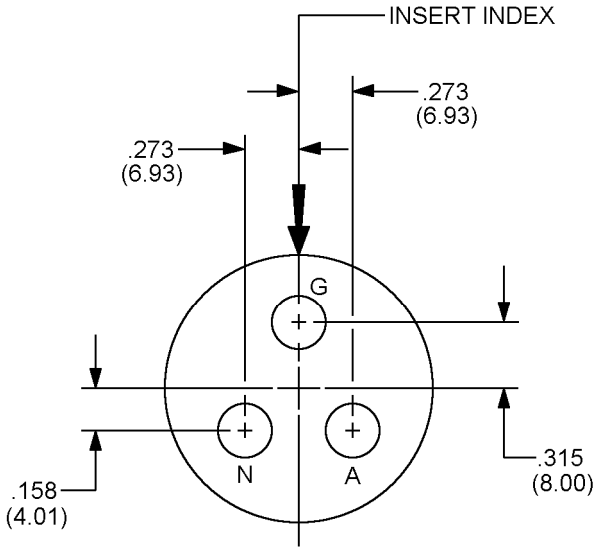
The requirements for acquiring the product described herein shall
consist of this specification sheet and MIL-DTL-22992.



Quantity	Contact	Size	Socket SAE-AS39029/49-	Pin SAE-AS39029/48-
1	A	6	329	317
1	N	6N	329 (see note 6)	318

NOTES:
1. Dimensions are in inches. Metric equivalents are given for information only. Unless otherwise specified, tolerance is ± .002 (.05 mm).
2. Unless otherwise specified, front face of pin insert pattern is shown. Socket inserts are the reverse.
3. -02-Cable IPCEA 2-NO 8 conductor round type W.
4. -03-Cable-C0-02-HDF (2/6) 0930 in accordance with MIL-DTL-3432.
5. Mark 28-02 on 28-03 insert. Trademark and 28-( ) shall appear in available space. Contact identifying letter shall be located so as to identify relative contact.
6. Only the pin contact is lengthened and has the N (neutral) designation. The mating socket contact is the same as the power contact.

FIGURE 1. 28 volt DC two wire, -02 and -03 insert arrangements, service D.



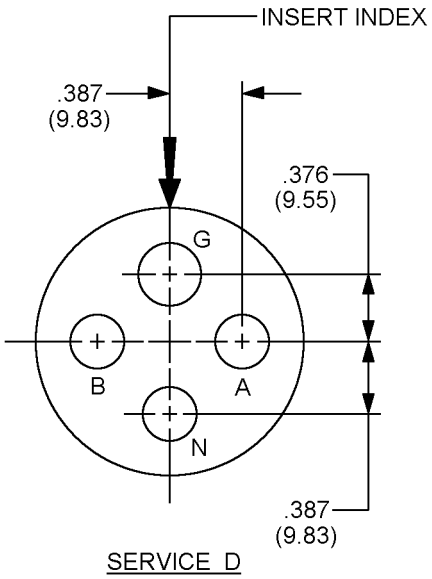
SERVICE D

Quantity	Contact	Size	Socket SAE-AS39029/49-	Pin SAE-AS39029/48-
1	A	6	329	317
1	G, N	6N	329 (see note 6)	318

NOTES:

1. Dimensions are in inches. Metric equivalents are given for information only. Unless otherwise specified, tolerance is ± .002 (.05 mm).
2. Unless otherwise specified, front face of pin insert pattern is shown. Socket inserts are the reverse.
3. -04-Cable IPCEA 2-NO 8 conductor round type G.
4. -05-Cable-C0-02-HDF (2/6-2/10R) 0930 in accordance with MIL-DTL-3432.
5. Mark 28-04 on 28-05 insert. Trademark and 28-( ) shall appear in available space. Contact identifying letter shall be located so as to identify relative contact.
6. Only the pin contact is lengthened and has the N (neutral) designation. The mating socket contact is the same as the power contact.

FIGURE 2. AC single phase two wire grounding, -04 and -05 insert arrangements, service D.



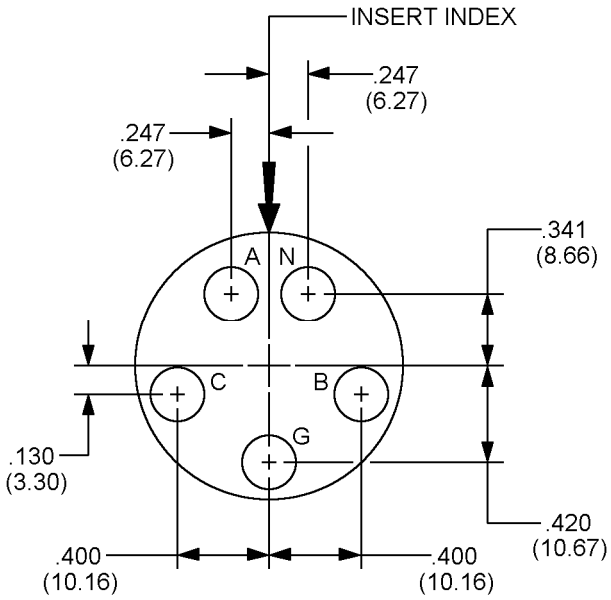
SERVICE D

Quantity	Contact	Size	Socket SAE-AS39029/49-	Pin SAE-AS39029/48-
2	A, B	6	329	317
1	N	6N	329 (see note 6)	318
1	G	4N	331 (see note 6)	321

NOTES:

1. Dimensions are in inches. Metric equivalents are given for information only. Unless otherwise specified, tolerance is ± .002 (.05 mm).
2. Unless otherwise specified, front face of pin insert pattern is shown. Socket inserts are the reverse.
3. -06-Cable IPCEA 3-NO 8 conductor round type G.
4. -07-Cable-C0-03-HDF (3/6-3/10R) 1000 in accordance with MIL-DTL-3432.
5. Mark 28-06 on 28-07 insert. Trademark and 28-( ) shall appear in available space. Contact identifying letter shall be located so as to identify relative contact.
6. Only the pin contact is lengthened and has the N (neutral) designation. The mating socket contact is the same as the power contact.

FIGURE 3. AC single phase three wire grounding, -06 and -07 insert arrangements, service D.



SERVICE D

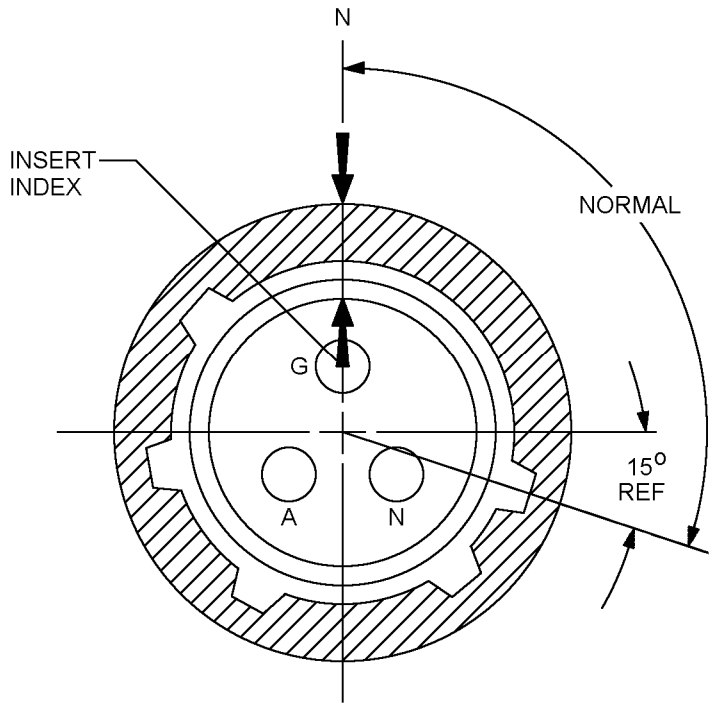
Quantity	Contact	Size	Socket SAE-AS39029/49-	Pin SAE-AS39029/48-
3	A, B, C	6	329	317
2	N, G	6N	329 (see note 6)	318

NOTES:
1. Dimensions are in inches. Metric equivalents are given for information only. Unless otherwise specified, tolerance is ± .002 (.05 mm).
2. Unless otherwise specified, front face of pin insert pattern is shown. Socket inserts are the reverse.
3. -12-Cable IPCEA 4-NO 8 conductor round type G.
4. -13-Cable-C0-04-HDF (4/6-4/12R) 1090 in accordance with MIL-DTL-3432.
5. Mark 28-12 on 28-13 insert. Trademark and 28-( ) shall appear in available space. Contact identifying letter shall be located so as to identify relative contact.
6. Only the pin contact is lengthened and has the N (neutral) designation. The mating socket contact is the same as the power contact.

FIGURE 4. AC three phase four wire grounding, -12 and -13 insert arrangements, service D.

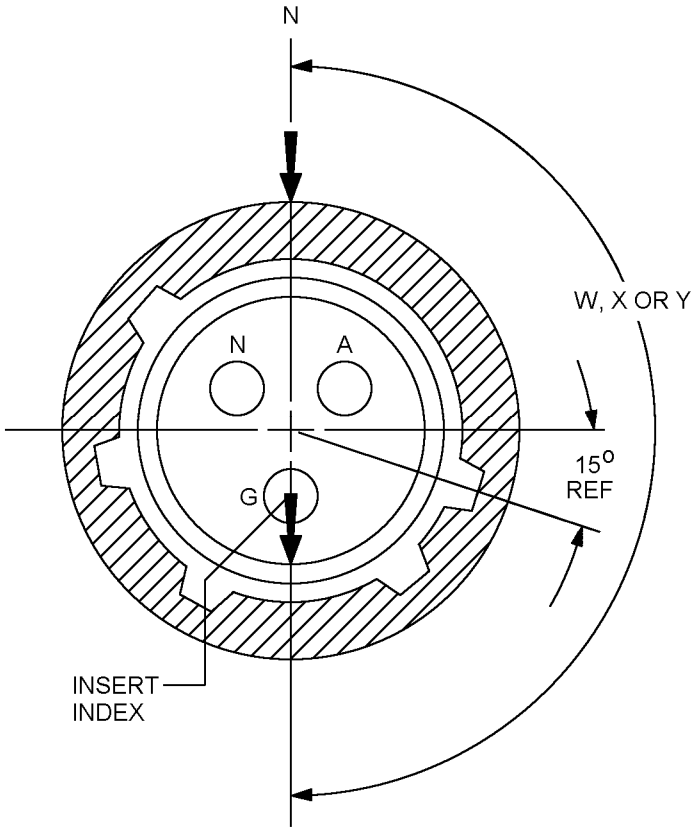
Insert rotation (degrees from normal)				
Arrangement Number	Normal DC or 60 Hz (see figures 6 through 9)	Alternate (see figures 6 through 9) 400 Hz		
		W	X	Y
28 – 04 28 – 05	0 °	---	---	180°
28 – 06 28 – 07	0°	---	---	---
28 – 12 28 – 13	0°	---	---	180°
28 – 03 28 – 02	0°	---	---	---

FIGURE 5. Insert arrangements and rotations.



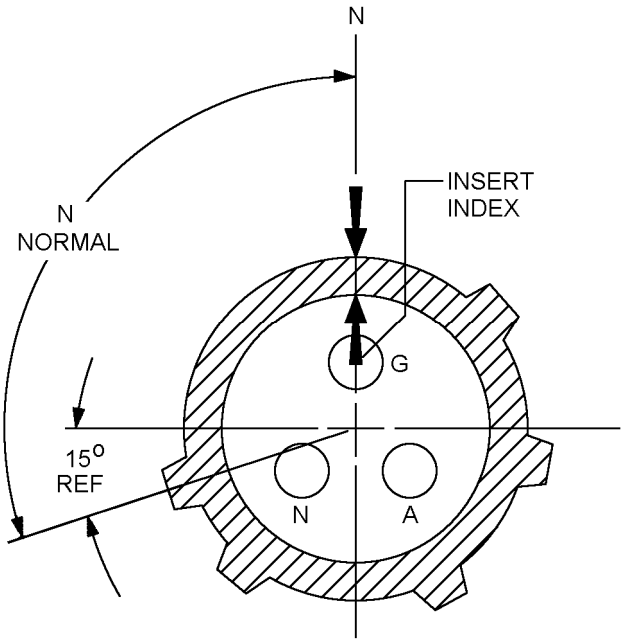
NOTES:
1. For use with connectors under MS90555 and MS90557 utilizing socket contacts and normal keying.
2. Front face of socket insert shown.

FIGURE 6. Socket contact pattern and polarization, insert in normal position (60 Hz power only).



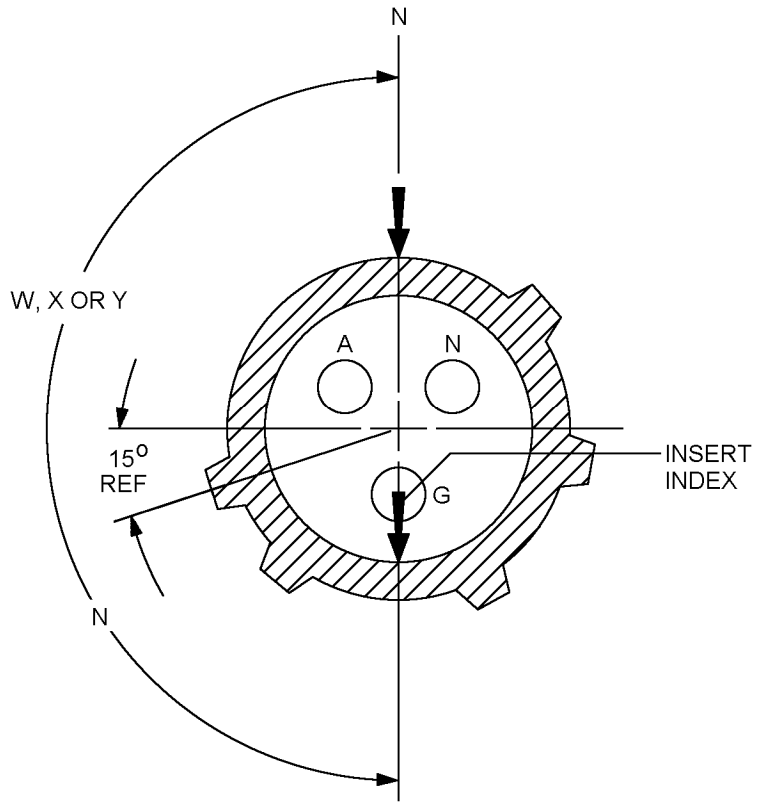
NOTES:
1. For use with connectors under MS90555 and MS90557 utilizing socket contacts and alternate (Y) keying.
2. Front face of socket insert shown.

FIGURE 7. Socket contact pattern and polarization, insert in alternate position (400 Hz power only).



NOTES:
1. For use with connectors under MS90556 and MS90558 utilizing pin contacts and normal keying.
2. Front face of pin insert shown.

FIGURE 8. Socket contact pattern and polarization, insert in normal position (60 Hz power only).



NOTES:
1. For use with connectors under MS90556 and MS90558 utilizing pin contacts and alternate (Y) keying.
2. Front face of pin insert shown.

FIGURE 9. Socket contact pattern and polarization, insert in alternate position (400 Hz power only).

REQUIREMENTS:

Design and construction, see figures 1 through 9 and table I.

Neutral pin (N) is not connected to shell.

Grounding pin (G) is connected to shell.

Applicable SAE-AS33481 crimp bushings shall be supplied with the contacts for insert arrangements as specified.

TABLE I. Accessories.

Insert arrangement	Contacts		Cable conductors MS90556 & MS90557 1/		Contact bushings required	
	Quantity	Size	Quantity	Size	Quantity	PIN SAE- AS33481-
28 – 02	2	6	2	B	2	6-BL
28 – 04	2	6	2	8	2	6-8L
	1	6	2	10(G)	-	-
28 – 06	3	6	3	8	3	6-8L
	1	4	3	12(G)	1	4-8L
28 – 07	3	6	3	7	-	-
	1	4	3	10(G)	1	4-6L
28 – 12	4	6	4	8	4	6-8L
	1	6	4	12G	-	-

1/ (G) designates grounding.

Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

Referenced documents. In addition to MIL-DTL-22992, this document references the following:

MIL-DTL-3432
MS90555
MS90556
MS90557
MS90558
SAE-AS33481

CONCLUDING MATERIAL

Custodians:
Army – CR
Navy – EC
Air Force – 11
DLA – CC

Preparing activity:
DLA – CC

Review activities:
Army – AT, AV, CR4, MI
Navy – AS, CG, MC, OS, YD
Air Force – 19

(Project 5935–4719–001)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at http://assist.daps.dla.mil.