

DWG NO
439-5200/5239-000

SH
1

| REVISIONS | | | |
|-----------|---|----------|------|
| LTR | DESCRIPTION | DATE | APVD |
| J | AW9302 - MISCELLANEOUS | 93-11-11 | GAR |
| K | AZ3958 - OBSOLETE 439-5228-000 -5229, -5230, -5232, THROUGH -5239. NONPREFER DRAWING. MISC. | 96-11-27 | SJK |
| L | BW8453 - A&C CONSOLIDATION REINTATED 439-5228, -5229, -5230, -5232 THROUGH -5239. REINSTATED DOCUMENT TO PREFERRED | 98-05-21 | JMD |
| M | BW3931 - MISCELLANEOUS | 98-08-31 | JMD |

NOTES:
DRAWING PREPARED IN
ACCORDANCE WITH
DOD-STD-100.

STATEMENT A, UNLIMITED

1.0 **SCOPE:** THIS DRAWING DETAILS A SINGLE SHIELDED AND JACKETED
POLYTETRAFLUOROETHYLENE (PTFE) INSULATED HOOK-UP WIRE.

THE PART NUMBER IS AS SPECIFIED IN TABLE I.

PARAGRAPH(S), TABLE(S), AND/OR FIGURE(S) FOLLOWED BY "I" INDICATE A
CHANGE BY THE LATEST REVISION.

| SUGGESTED SOURCES OF SUPPLY | CAGE CODE | VENDOR PART NO. | CAL |
|-------------------------------------|-----------|-----------------|-----|
| BELDEN WIRE AND CABLE, RICHMOND, IN | 16428 | SEE TABLE II | TA |
| QUIRK WIRE, W. BROOKFIELD, MA | 24868 | SEE TABLE II | TA |
| THERMAX, FLUSHING, NY | 12814 | SEE TABLE II | TA |
| HARBOUR IND., SHELBURNE, VT | 27478 | SEE TABLE II | TA |

U/M: SEE 6.2 SPECIFICATION CONTROL DRAWING

| | | | | | |
|---------------------------------|------------------|-------------------------------|---|------------------------|--|
| CONTRACT NO | | ROCKWELL COLLINS, INC. | | | |
| PREP J. MICHALOWSKI 62-10-10 | | 400 COLLINS ROAD NE | | CEDAR RAPIDS, IA 52498 | |
| CHK P. CLARK 62-10-15 | | CABLE, ELECTRICAL | | | |
| APVD J. MCDANIEL 62-10-15 | SIZE A | CAGEC 13499 | DWG NO 439-5200-000 THRU 439-5239-000 | REV M | |
| SCALE NONE | | | SHEET 1 OF 5 | | |

RE-IMAGED WITHOUT CHANGE ON 2011-7-5- PDM RELEASED

2.0 APPLICABLE DOCUMENTS: THE FOLLOWING DOCUMENT, OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BIDS FORMS A PART OF THIS DRAWING TO THE EXTENT SPECIFIED HEREIN.

MILITARY STANDARDS

MIL-STD-202

TEST METHODS FOR ELECTRONIC AND ELECTRICAL COMPONENT PARTS

3.0 REQUIREMENTS:

3.1 ELECTRICAL:

3.1.1 VOLTAGE RATING: 600 VOLTS ROOT MEAN SQUARE (RMS) MAXIMUM.

3.2 MECHANICAL:

3.2.1 CONDUCTOR: SILVER PLATED SOFT DRAWN COPPER.

3.2.2 WIRE SIZE: 22 AMERICAN WIRE GAUGE (AWG).

3.2.3 MINIMUM STRANDING COMBINATION: 7 STRANDS OF 30 AWG.

3.2.4 INSULATION: EXTRUDED PTFE.

3.2.5 COLOR: SEE TABLE I.

3.2.6 SHIELD: A SINGLE BRAID OF 36 AWG SILVER-PLATED SOFT OR DRAWN AND ANNEALED COPPER WIRE WITH 90% MINIMUM COVERAGE.

3.2.7 OUTER JACKET: EXTRUDED FEP, COLOR WHITE.

3.2.8 SOLDERABILITY: IN ACCORDANCE WITH MIL-STD-202, METHOD 208.

3.2.9 OVERALL DIAMETER: O.D. OVER INSULATION 0.054 INCH MAXIMUM. FINISHED 0.101 INCH MAXIMUM.

3.3 ENVIRONMENTAL:

3.3.1 TEMPERATURE RATING: 200°C.

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|------------------|-----------------------|---|-----------------|
| SIZE A | CAGEC 13499 | DWG NO 439-5200-000 THRU 439-5239-000 | REV M |
| SCALE NONE | | SHEET 2 | |

4.0 QUALITY ASSURANCE PROVISIONS:

4.1 QUALITY CONFORMANCE INSPECTION: THE SUPPLIERS SHALL BE RESPONSIBLE FOR THOSE IN-PROCESS CONTROLS AND INSPECTIONS NECESSARY TO SUPPLY A PRODUCT CONSISTENTLY CONFORMING TO THE REQUIREMENTS OF THIS DRAWING.

THE PROCURING ACTIVITY RESERVES THE RIGHT TO INSPECT FOR ANY OF THE REQUIREMENTS OF THIS DRAWING TO DETERMINE THE ACCEPTABILITY OF A LOT AND TO REJECT NONCONFORMING PARTS, OR LOTS CONTAINING NONCONFORMING PARTS, ON THE BASIS OF TEST RESULTS SO OBTAINED.

4.2 DESIGN CHANGE APPROVAL: ANY CHANGES IN FORM, FIT, FUNCTION, MATERIALS, OR PERFORMANCE THAT AFFECT THE PART OR MATERIALS DEFINED BY THIS DRAWING, MUST BE APPROVED BY THE COGNIZANT PROCURING ACTIVITY PRIOR TO THE INCORPORATION OF THE PROPOSED CHANGES.

5.0 PREPARATION FOR DELIVERY:

5.1 THE PARTS SHALL BE PACKAGED IN A MANNER THAT WILL AFFORD ADEQUATE PROTECTION AGAINST CONTAMINATION, DETERIORATION, CORROSION, AND PHYSICAL DAMAGE DURING SHIPMENT AND STORAGE. PARTS SHALL BE PACKAGED SO THEY WILL BE EASILY ACCESSIBLE WITHOUT DAMAGING THE PARTS.

6.0 NOTES: THE INFORMATION CONTAINED IN THIS SECTION IS FOR REFERENCE ONLY.

6.1 IDENTIFICATION OF THE SUGGESTED SOURCE(S) OF SUPPLY HEREON IS NOT TO BE CONSTRUED AS A GUARANTEE OF PRESENT OR CONTINUED AVAILABILITY AS A SOURCE OF SUPPLY FOR THE ITEM(S).

6.2 UNIT OF MEASURE: FEET

| | | | |
|------------------|-----------------------|---|-----------------|
| SIZE A | CAGEC 13499 | DWG NO 439-5200-000 THRU 439-5239-000 | REV M |
| SCALE NONE | | SHEET 3 | |

TABLE I
PART NUMBER, BODY COLOR, TRACER

| ROCKWELL/COLLINS PART NUMBER | BODY COLOR | 1ST TRACER | 2ND TRACER | 3RD TRACER |
|---------------------------------|---------------|---------------|---------------|---------------|
| 439-5200-000 | BLACK | | | |
| 439-5201-000 | BROWN | | | |
| 439-5202-000 | RED | | | |
| 439-5203-000 | ORANGE | | | |
| 439-5204-000 | YELLOW | | | |
| 439-5205-000 | GREEN | | | |
| 439-5206-000 | BLUE | | | |
| 439-5207-000 | VIOLET | | | |
| 439-5208-000 | GRAY | | | |
| 439-5209-000 | WHITE | | | |
| 439-5210-000 | WHITE | BLACK | | |
| 439-5211-000 | WHITE | BROWN | | |
| 439-5212-000 | WHITE | RED | | |
| 439-5213-000 | WHITE | ORANGE | | |
| 439-5214-000 | WHITE | GREEN | | |
| 439-5215-000 | WHITE | BLUE | | |
| 439-5216-000 | WHITE | BLACK | RED | |
| 439-5217-000 | WHITE | BLACK | ORANGE | |
| 439-5218-000 | WHITE | BLACK | GREEN | |
| 439-5219-000 | WHITE | BLACK | BLUE | |
| 439-5220-000 | WHITE | BROWN | RED | |
| 439-5221-000 | WHITE | BROWN | ORANGE | |
| 439-5222-000 | WHITE | BROWN | GREEN | |
| 439-5223-000 | WHITE | BROWN | BLUE | |
| 439-5224-000 | WHITE | RED | ORANGE | |
| 439-5225-000 | WHITE | RED | GREEN | |
| 439-5226-000 | WHITE | RED | BLUE | |
| 439-5227-000 | WHITE | ORANGE | GREEN | |
| 439-5228-000 | WHITE | ORANGE | BLUE | |
| 439-5229-000 | WHITE | GREEN | BLUE | |
| 439-5230-000 | WHITE | BLACK | RED | ORANGE |
| 439-5231-000 | WHITE | BLACK | RED | GREEN |
| 439-5232-000 | WHITE | BLACK | RED | BLUE |
| 439-5233-000 | WHITE | BROWN | RED | ORANGE |
| 439-5234-000 | WHITE | BROWN | RED | GREEN |
| 439-5235-000 | WHITE | BROWN | RED | BLUE |
| 439-5236-000 | WHITE | RED | ORANGE | GREEN |
| 439-5237-000 | WHITE | RED | ORANGE | BLUE |
| 439-5238-000 | WHITE | RED | GREEN | BLUE |
| 439-5239-000 | WHITE | ORANGE | GREEN | BLUE |



TABLE II
ROCKWELL PART NUMBER, VENDOR PART NUMBER

| ROCKWELL/ COLLINS PART NUMBER | QUIRK WIRE PART NUMBER | BELDEN PART NUMBER | THERMAX PART NUMBER | HARBOUR PART NUMBER |
|-------------------------------------|---------------------------|-----------------------|------------------------|------------------------|
| 439-5200-000 | 439-5200-000 | 439-5200-000 | 439-5200-000 | 439-5200-000 |
| 439-5201-000 | 439-5201-000 | 439-5201-000 | 439-5201-000 | 439-5201-000 |
| 439-5202-000 | 439-5202-000 | 439-5202-000 | 439-5202-000 | 439-5202-000 |
| 439-5203-000 | 439-5203-000 | 439-5203-000 | 439-5203-000 | 439-5203-000 |
| 439-5204-000 | 439-5204-000 | 439-5204-000 | 439-5204-000 | 439-5204-000 |
| 439-5205-000 | 439-5205-000 | 439-5205-000 | 439-5205-000 | 439-5205-000 |
| 439-5206-000 | 439-5206-000 | 439-5206-000 | 439-5206-000 | 439-5206-000 |
| 439-5207-000 | 439-5207-000 | 439-5207-000 | 439-5207-000 | 439-5207-000 |
| 439-5208-000 | 439-5208-000 | 439-5208-000 | 439-5208-000 | 439-5208-000 |
| 439-5209-000 | 439-5209-000 | 439-5209-000 | 439-5209-000 | 439-5209-000 |
| 439-5210-000 | 439-5210-000 | 439-5210-000 | 439-5210-000 | 439-5210-000 |
| 439-5211-000 | 439-5211-000 | 439-5211-000 | 439-5211-000 | 439-5211-000 |
| 439-5212-000 | 439-5212-000 | 439-5212-000 | 439-5212-000 | 439-5212-000 |
| 439-5213-000 | 439-5213-000 | 439-5213-000 | 439-5213-000 | 439-5213-000 |
| 439-5214-000 | 439-5214-000 | 439-5214-000 | 439-5214-000 | 439-5214-000 |
| 439-5215-000 | 439-5215-000 | 439-5215-000 | 439-5215-000 | 439-5215-000 |
| 439-5216-000 | 439-5216-000 | 439-5216-000 | 439-5216-000 | 439-5216-000 |
| 439-5217-000 | 439-5217-000 | 439-5217-000 | 439-5217-000 | 439-5217-000 |
| 439-5218-000 | 439-5218-000 | 439-5218-000 | 439-5218-000 | 439-5218-000 |
| 439-5219-000 | 439-5219-000 | 439-5219-000 | 439-5219-000 | 439-5219-000 |
| 439-5220-000 | 439-5220-000 | 439-5220-000 | 439-5220-000 | 439-5220-000 |
| 439-5221-000 | 439-5221-000 | 439-5221-000 | 439-5221-000 | 439-5221-000 |
| 439-5222-000 | 439-5222-000 | 439-5222-000 | 439-5222-000 | 439-5222-000 |
| 439-5223-000 | 439-5223-000 | 439-5223-000 | 439-5223-000 | 439-5223-000 |
| 439-5224-000 | 439-5224-000 | 439-5224-000 | 439-5224-000 | 439-5224-000 |
| 439-5225-000 | 439-5225-000 | 439-5225-000 | 439-5225-000 | 439-5225-000 |
| 439-5226-000 | 439-5226-000 | 439-5226-000 | 439-5226-000 | 439-5226-000 |
| 439-5227-000 | 439-5227-000 | 439-5227-000 | 439-5227-000 | 439-5227-000 |
| 439-5228-000 | 439-5228-000 | 439-5228-000 | 439-5228-000 | 439-5228-000 |
| 439-5229-000 | 439-5229-000 | 439-5229-000 | 439-5229-000 | 439-5229-000 |
| 439-5230-000 | 439-5230-000 | 439-5230-000 | 439-5230-000 | 439-5230-000 |
| 439-5231-000 | 439-5231-000 | 439-5231-000 | 439-5231-000 | 439-5231-000 |
| 439-5232-000 | 439-5232-000 | 439-5232-000 | 439-5232-000 | 439-5232-000 |
| 439-5233-000 | 439-5233-000 | 439-5233-000 | 439-5233-000 | 439-5233-000 |
| 439-5234-000 | 439-5234-000 | 439-5234-000 | 439-5234-000 | 439-5234-000 |
| 439-5235-000 | 439-5235-000 | 439-5235-000 | 439-5235-000 | 439-5235-000 |
| 439-5236-000 | 439-5236-000 | 439-5236-000 | 439-5236-000 | 439-5236-000 |
| 439-5237-000 | 439-5237-000 | 439-5237-000 | 439-5237-000 | 439-5237-000 |
| 439-5238-000 | 439-5238-000 | 439-5238-000 | 439-5238-000 | 439-5238-000 |
| 439-5239-000 | 439-5239-000 | 439-5239-000 | 439-5239-000 | 439-5239-000 |