

# 3M™ ROUND, JACKETED, FLAT CABLE, HF759 SERIES

.050" 28 AWG STRANDED, MASS TERMINATED, HALOGEN FREE PO/PO



Ø .035±.005 [ .89 ]  
PO JACKET THICKNESS



- \* LOW SMOKE ZERO HALOGEN (LSZH) INSULATION. ADVANTAGES OF LSZH INSULATION ARE THE LOW SMOKE (IEC 61034-2-2005) AND LOW TOXICITY OF COMBUSTION GASES (NF X 70-100-2-2006), REDUCING THE RISK TO FIREFIGHTERS AND REDUCING THE SOOT AND CORROSION DAMAGE TO NEARBY EQUIPMENT.
- \* ROUND CONSTRUCTION PERMITS MORE EASY ROUTING.
- \* 28 AWG WIRE ON .050 INCH CENTERS PERMITS MASS TERMINATION TO BROAD LINE OF IDC CONNECTORS.
- \* CONTINUOUS SPLIT/BOND REPEAT ALLOWS FOR MASS TERMINATIONS OF IDC CONNECTORS.
- \* PRIMARY CABLE IS ZIPPABLE FOR BRANCHING OR DISCRETE TERMINATION.

- NOTES
- REGULATORY INFORMATION: VISIT 3M.com/regs OR CONTACT YOUR 3M REPRESENTATIVE TO FIND THE RoHS COMPLIANCE STATUS OF THE 3M PART YOU ARE INTERESTED IN.
  - IN THE EVENT OF CONFLICT BETWEEN THIS DATA AND THAT CONTAINED IN THE PRODUCT SPECIFICATION, THE PRODUCT SPECIFICATION TAKES PRECEDENT.
  - BLUE MARKING ON ONE EDGE OF PRIMARY CABLE DESIGNATES WIRE #1.
  - DIMENSION "B" PERTAINS TO BONDED AREA ONLY.

## ORDERING INFORMATION

HF759/XX XX XX

NUMBER OF CONDUCTORS (SEE TABLE 1)

BLANK = STANDARD  
SF = SPLICE FREE

BLANK = STANDARD  
SO = CONTINUOUSLY BONDED WIRE (NO SPLIT)

NOTE:  
AVAILABLE IN STANDARD 275FT ROLLS. CONTACT 3M FOR AVAILABILITY OF ADDITIONAL CONDUCTOR COUNTS AND/OR CUSTOM ROLL LENGTHS.

NUMBER OF CONDUCTORS	3M PART NUMBER	DIM. "A"	DIM. "B" SEE NOTE 4
9	HF759/09	0.26 [6.6]	0.40 [10.2]
10	HF759/10	0.26 [6.6]	0.45 [11.4]
14	HF759/14	0.27 [6.9]	0.65 [16.5]
15	HF759/15	0.27 [6.9]	0.70 [17.8]
16	HF759/16	0.27 [6.9]	0.75 [19.1]
20	HF759/20	0.30 [7.6]	0.95 [24.1]
24	HF759/24	0.33 [8.4]	1.15 [29.2]
25	HF759/25	0.33 [8.4]	1.20 [30.5]
26	HF759/26	0.33 [8.4]	1.25 [31.8]
30	HF759/30	0.37 [9.4]	1.45 [36.8]
34	HF759/34	0.37 [9.4]	1.65 [41.9]
36	HF759/36	0.39 [9.9]	1.75 [44.5]
37	HF759/37	0.39 [9.9]	1.80 [45.7]
40	HF759/40	0.39 [9.9]	1.95 [49.5]
50	HF759/50	0.44 [11.2]	2.45 [62.2]
60	HF759/60	0.47 [11.9]	2.95 [74.9]
64	HF759/64	0.50 [12.7]	3.15 [80.0]

## 2 PHYSICAL :

JACKET MATERIAL : HALOGEN FREE POLYOLEFIN (PO)  
COLOR : DARK GRAY  
PRIMARY MATERIAL : HALOGEN FREE POLYOLEFIN (PO)  
COLOR : DARK GRAY

MARKING :  
STANDARD : NONE  
CONDUCTORS : 28 AWG, 7 X 36 AWG (7 X Ø .127) TINNED STRANDED COPPER  
SHIELDING : POLYESTER FILM

## 2 ELECTRICAL :

VOLTAGE RATING : USA 150V CANADIAN 150V EU : <50V  
INSULATION RESISTANCE : (PRIMARY CABLE) >1 X 10<sup>10</sup>Ω/10ft. [3m]

	UNBALANCED	BALANCED
CHARACTERISTIC IMPEDANCE :	75Ω	136Ω
CAPACITANCE :	22.6 pF/ft [74.3 pF/m]	12.4 pF/ft [40.6 pF/m]
INDUCTANCE :	.13μH/ft [.43μH/m]	.23μH/ft [.75μH/m]
PROPAGATION DELAY :	1.69 ns/ft [5.54 ns/m]	1.69 ns/ft [5.54 ns/m]
VELOCITY OF PROPAGATION :	60%	60%

NOTE : UNBALANCED IS MEASURED BETWEEN GROUND-SIGNAL-GROUND CONDUCTORS.  
BALANCED IS MEASURED BETWEEN CONDUCTORS WITHIN A PAIR.  
"MEASURED VALUES ARE TYPICAL"

## 2 ENVIRONMENTAL :

TEMPERATURE RATING : -40°C TO +105°C (EIA-364-32G, METHOD A, TEST CONDITION 2)  
-10°C TO +75°C (UL TEMPERATURE RATING)

FLAMMABILITY RATING : INTERNAL : HORIZONTAL FLAME PER UL758  
EXTERNAL : CABLE FLAME (VERTICAL) PER UL758

HALOGEN FREE IS DEFINED AS BOTH 1) NO HALOGEN COMPOUNDS THAT ARE INTENTIONALLY ADDED TO THE PRODUCT OR USED IN THE MANUFACTURING PROCESS FOR THE PRODUCT AND 2) ANY IMPURITIES PRESENT ARE LESS THAN 900ppm BROMINE, LESS THAN 900ppm CHLORINE AND/OR LESS THAN 1500ppm TOTAL BROMINE AND CHLORINE. THE LATTER ARE THE LEVELS SET FORTH IN CERTAIN INDUSTRY STANDARDS FOR PRINTED CIRCUIT BOARDS, SUCH AS THE INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC) 61249-2-21 STANDARDS. THIS INFORMATION REPRESENTS 3M'S KNOWLEDGE AND BELIEF WHICH MAY BE BASED IN WHOLE OR IN PART ON INFORMATION PROVIDED BY 3RD PARTY SUPPLIERS TO 3M.

3M ELECTRONICS MATERIALS SOLUTIONS DIVISION  
INTERCONNECT SOLUTIONS  
<http://www.3mconnectors.com>

3M IS A TRADEMARK OF 3M COMPANY.  
FOR TECHNICAL, SALES OR ORDERING  
INFORMATION CALL 800-225-5373



UL FILE NO : E42769  
STYLE NO : 22170

INCH [ MM ]		
TOLERANCE - UNLESS NOTED		
.X	.XX	.XXX
INCH ±.1 ±.05 ±.010		
[ ] = DIM. FOR REFERENCE ONLY		

DESIGN REFERENCE	NEXT ASSEMBLY	REV	ECO	ISSUE DATE AND DESCRIPTION	DRFT	CHKD
				JUN 14, 2018		
DIVISION		DIVISION CODE		DATE		
		EMSD		JUN 14, 2018		
DO NOT SCALE DRAWING	SCALE	TOLERANCES EXCEPT AS NOTED		DATE		
				JUN 14, 2018		
THIRD ANGLE PROJECTION	INTERPRET PER ASME Y14.5 - 2009	MILLIMETERS		DATE		
				JUN 14, 2018		
MAX SURFACE ROUGHNESS	DEF SURFACES	INCHES		DATE		
				JUN 14, 2018		
MARKED ONLY	ANGLES	CAGE NUMBER		REV.		
		D 78-5100-2336-5		E		
		MODEL		SHT 1 OF 2		
		HF759				

78-5100-2336-5  
 DRAWING NUMBER  
 Time 8/1/2018 11:54:00 AM  
 UTC Offset (hrs) 6  
 Imaged: Central Standard

8 7 6 5 4 3 2 1

3M™ ROUND, JACKETED, FLAT CABLE, HF759 SERIES  
 .050" 28 AWG STRANDED, MASS TERMINATED, HALOGEN FREE PO/PO

Regulatory: For regulatory information about this product, visit 3M.com/regs or contact your 3M representative.

Technical Information: The technical information, recommendations and other statements contained in this document are based upon tests or experience that 3M believes are reliable, but the accuracy or completeness of such information is not guaranteed.

Product Use: Many factors beyond 3M's control and uniquely within user's control can affect the use and performance of a 3M product in a particular application. Given the variety of factors that can affect the use and performance of a 3M product, user is solely responsible for evaluating the 3M product and determining whether it is fit for a particular purpose and suitable for user's method of application.

Warranty, Limited Remedy, and Disclaimer: Unless an additional warranty is specifically stated on the applicable 3M product packaging or product literature, 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY IMPLIED WARRANTY OR CONDITION ARISING OUT OF A COURSE OF DEALING, CUSTOM OR USAGE OR TRADE. If the 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

Limitation of Liability: Except where prohibited by law, 3M will not be liable for any loss or damage arising from the 3M product, whether direct, indirect, special, incidental or consequential, regardless of the legal theory asserted, including warranty, contract, negligence or strict liability.

3M Electronics Materials Solutions Division  
 6801 River Place Blvd.  
 Austin, TX 78726-9000  
 1-800-225-5373  
 www.3M.com/interconnect

DESIGN REFERENCE		NEXT ASSEMBLY		REV	ECO	ISSUE DATE AND DESCRIPTION		DRFT	CHKD
E 79568		JUL 31, 2018		JNC	BM	REVISED & REDRAWN			
OFF		DATE		MFG		DATE			
CASTIGLIONE		JUN 14, 2018							
CHKD		DATE		APPRV		DATE			
				B. MIZE		JUN 14, 2018			
DIVISION		DIVISION CODE		 © 3M COPYRIGHT 2018 This document and the information it contains are 3M property and may not be reproduced or further distributed without 3M permission, or used or disclosed other than for 3M authorized purposes. All rights reserved.					
DO NOT SCALE DRAWING		SCALE		TOLERANCES EXCEPT AS NOTED INCHES .00 ± .000 ± .0000 ±					
THIRD ANGLE PROJECTION		MILLIMETERS		0 ± .0 ± .00 ± .00 ±					
INTERPRET PER ASME Y14.5 - 2009		MILLIMETERS		0 ± .0 ± .00 ± .00 ±					
MAX SURFACE ROUGHNESS		SURFACES		CAGE NUMBER		DRAWING NO.		REV.	
<input type="checkbox"/> MARKED ONLY		ANGLE ±		D 78-5100-2336-5		E			
				MODEL		HF759		DET. <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO SHT 2 OF 2	

78-5100-2336-5 DRAWING NUMBER  
 Time 8/1/2018 11:51:00 AM UTC Offset (hrs) 6