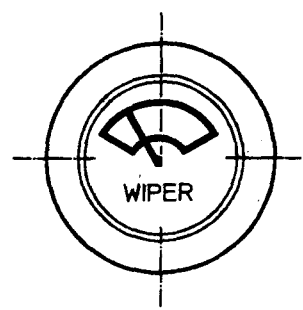
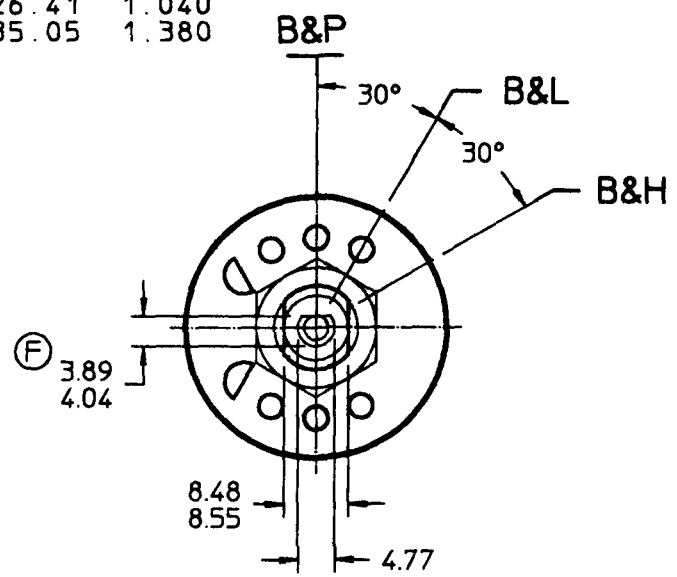
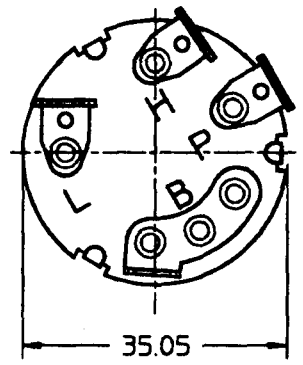
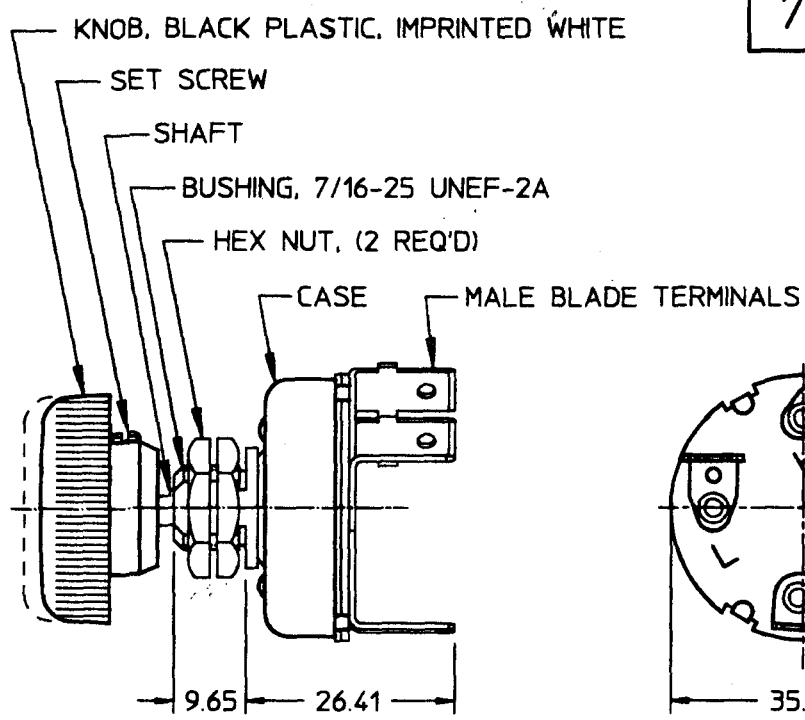


75212-04

MM	IN
3.89	0.153
4.04	0.159
4.77	0.188
8.48	0.344
8.55	0.337
9.65	0.380
26.41	1.040
35.05	1.380



FRONT VIEW OF KNOB



- NOTES:
1. COPPER ALLOY CONTACTS.
 2. NUMBER OF POLES-1
NUMBER OF THROWS-2
 3. SEALING-NONE
 4. ALL STEEL PARTS PLATED
 5. RATING:

	RESISTIVE	INDUCTIVE
12V	10 AMPS	8 AMPS
24V	7 AMPS	5 AMPS

LIFE @ RATED CURRENT

MAKE & BRAKE
12V - 100,000 MIN
24V - 50,000 MIN

P	PARK
L	LOW
H	HIGH
B	BATTERY
LEGEND	

METRIC

DO NOT SCALE

LET.	WAS	DATE	BY	LET.	WAS	DATE	BY	MATERIAL	DRAWN	CHK	APVD	SCALE	75212-01 WITH 81298-29 KNOB	DATE DRAWN 9/10/74
									BW	AP		1:1		
								FINISH						
				F	ECN # 25936	8/16/95	MB	TOLERANCES DECIMAL ± 0.25 ANGLE ±						
				E	PUT ON CAD	10/4/94	MB							

 **Cole Hersee Co.**
20 OLD COLONY AVENUE, BOSTON, MA., U.S.A., 02127

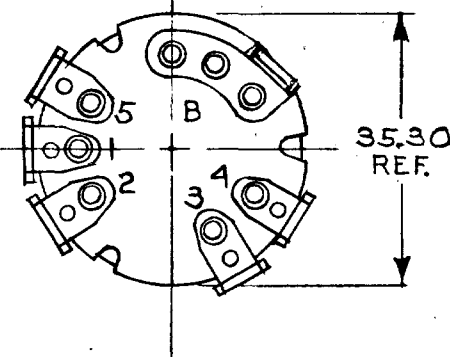
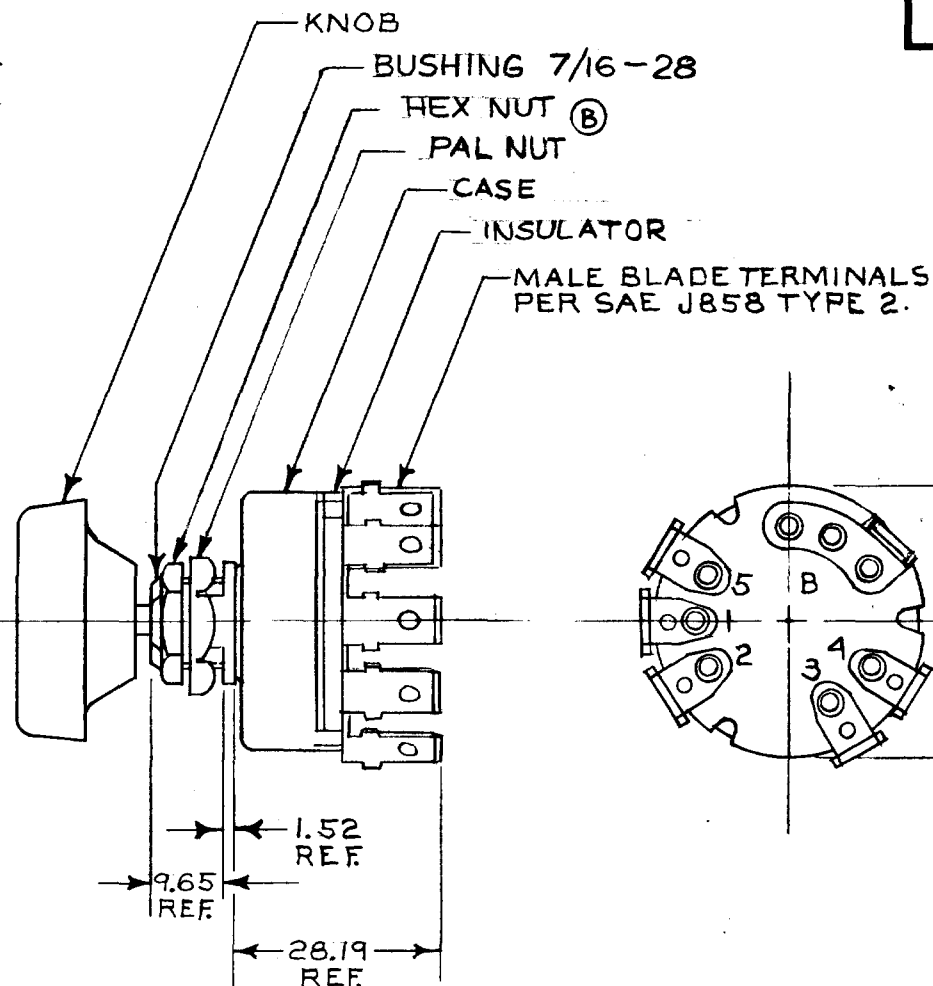
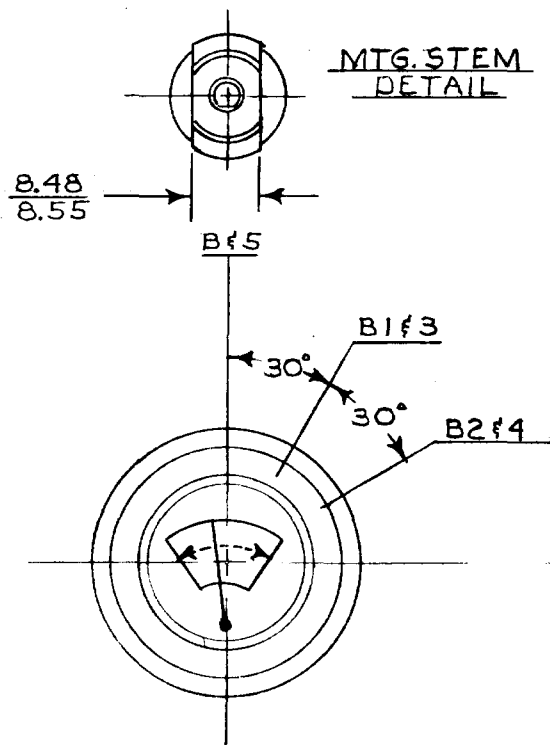
SW, WINDSHIELD WIPER

75212-04

MM IN
 1.52 .06
 8.48 .334
 8.55 .337
 9.65 .380
 28.19 1.111
 35.30 1.390

APPLICABLE SAE STANDARD OR
 RECOMMENDED PRACTICE SAE J112

75217-04



LEGEND	
B	BATTERY
1	WIPER 1 LOW SPEED
3	WIPER 2 LOW SPEED
2	WIPER 1 HI SPEED
4	WIPER 2 HI SPEED
5	PARK

NOTES:
 1. ALL STEEL PARTS PLATED
 2. CURRENT RATING: 10AMP @ 12 VOLT

METRIC

DO NOT SCALE

LET.	WAS	DATE	BY	LET.	WAS	DATE	BY	MATERIAL	DRAWN	CHECKED	APPR'D.	SCALE	DATE DRAWN
								<i>EA</i>	<i>EA</i>	<i>EA</i>		1:1	10-2-74
								FINISH					DATE BLUEPRINT
								<i>EA</i>					
				B	ECN 233 44	12-12-86	ZU	TOLERANCES					
				A	REDRAWN	12-11-89	<i>EA</i>	DECIMAL ±					
								METRIC ±					

CH Cole Hersee Co.
 20 OLD COLONY AVENUE SOUTH BOSTON, MA U.S.A. 02127

SWITCH,
 WINDSHIELD WIPER

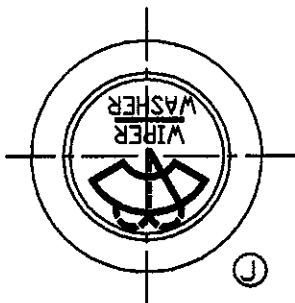
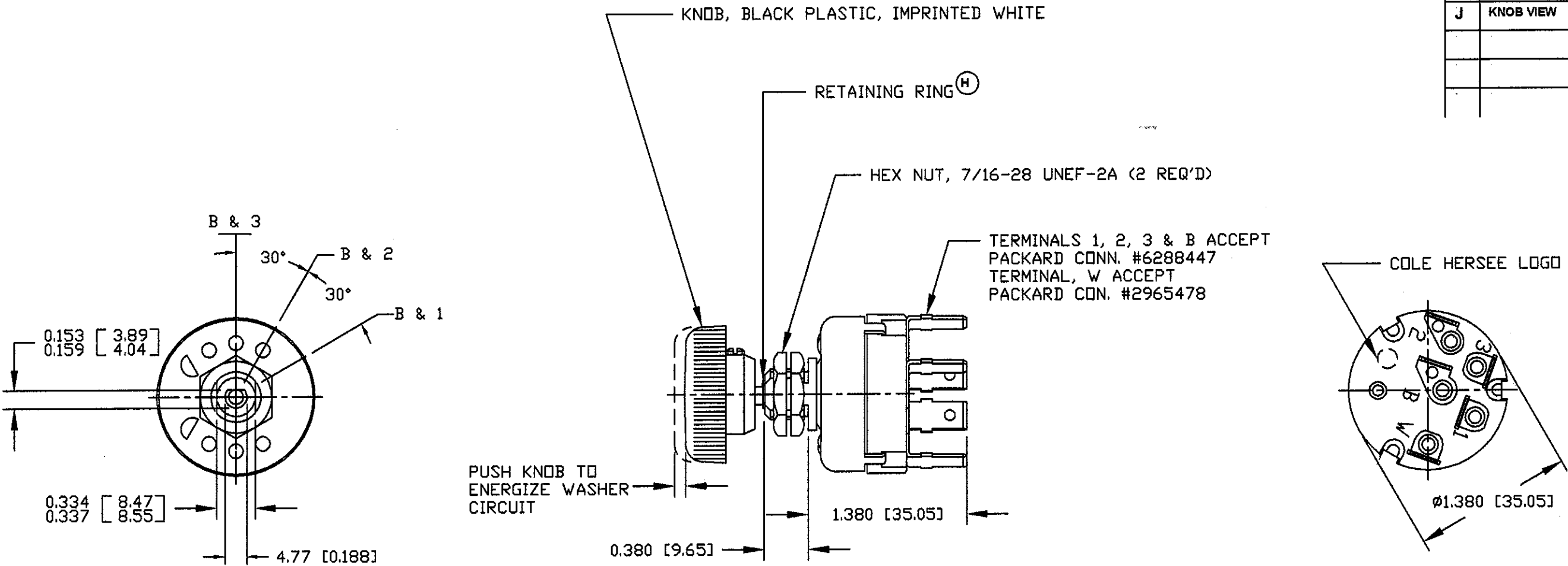
75217-04

CH-188(4-78)

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Revision Control Record

Rev.	Description of Change	ECN No.	Date
H	SHOW RETAINING RING	01744	12/20/01
J	KNOB VIEW	06340	10/05/06



FRONT VIEW
OF KNOB

3	PARK
2	LOW
1	HIGH
W	WASHER
B	BATTERY
LEGEND	

- NOTES:
1. COPPER ALLOY CONTACTS.
 2. NUMBER OF POLES-1, NUMBER OF THROWS-2
 3. SEALING-NON
 4. ALL STEEL PARTS PLATED
 4. INTEGRAL CIRCUIT BREAKER 6 AMP PER SAE J258
 6. RATING: WIPE-6 AMP @ 12VDC
(GOVERNED BY CIRCUIT BREAKER)
WASH-5 AMP@ 12VDC, LIFE @ RATED
CURRENT MAKE & BREAK 12V-100,000 MIN
 7. APPLICABLE SAE STANDARD OR RECOMMENDED PRACTICE
WINDSHIELD WIPER J112A & WINDSHIELD WASHER J234
 8. ALL DIMENSIONS REFERENCE ONLY UNLESS NOTED OTHERWISE.

Tolerances Unless otherwise specifically noted, the following are default tolerances:
• 2-place Decimal Dimensions ± 0.02
• 3-place Decimal Dimensions ± 0.005
• Angular Dimensions ± 1.0 Deg.
• Metric: Refer to equivalent English Dimension Tolerance
»» NOTE: All tolerances are Non-Cumulative. ««

Dimensional Units All dimensions are expressed in inches except those shown in brackets (xxx) are expressed in millimeters

REF. or an Asterisk (*) = Non-Toleranced Reference Dimension, shown for clarification purposes only.

Used On: BASIC W/NEW SHAFT, BUSHING & KNOB

PROPRIETARY INFORMATION This Engineering Drawing, and the information contained herein, is proprietary to Cole Hersee Company and may not be disclosed, re-produced, or in any other way transferred or communicated to any other party without the express written consent of an authorized representative of Cole Hersee Company.

DESIGN CONTROL It is the responsibility of the individual using / referencing this drawing to ensure that the noted design revision level agrees with the revision level of the Controlled Document (Master Drawing). This is a NON-CONTROLLED DOCUMENT unless otherwise specifically noted.

DO NOT SCALE Dimensional variation may occur during printing / reproduction.

Scale: 1:1

Drawn By: KG

Date: 04/22/77

Key for Special Characteristics:

- ◆ Critical Characteristic, relating to Safety and/or Regulatory Compliance
- X Significant Characteristic relating to Process Control (SPC)
- Ⓢ Control Dimension relating to Form - Fit - Function as defined by Cole Hersee Company and/or the Customer

(Note that the identification of any Characteristics as being "Special" does not alter the requirement that ALL specified dimensions & tolerances must be met.)

Responsible Engineer: NA

Pg. 1 of 1

Cole Hersee Co.
20 Old Colony Ave., South Boston, MA, 02127
Phn: 617-268-2100 Web: www.colehersee.com

Description:
SW, WINDSHIELD WIPER 12V

Drawing / Part No.: 75221-09

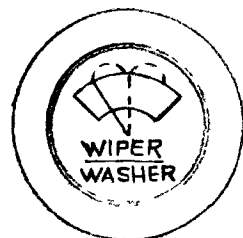
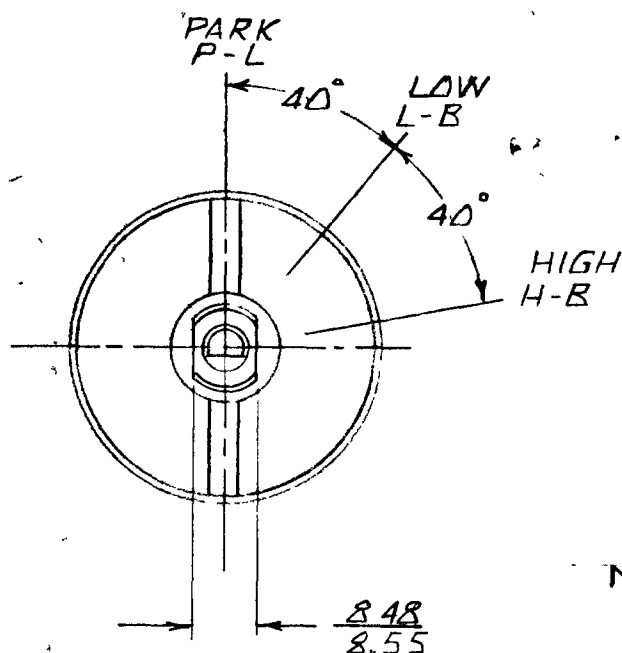
Current Rev.: J

MM IN
 8.48 .334
 8.55 .337
 11.43 .45
 6.35 .25
 34.92 1.375
 41.27 1.625

METRIC

75228-03

EX 19874



FRONT VIEW OF KNOB

NOTE 1
 (A)

11.43

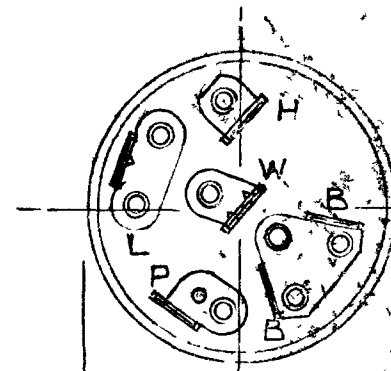
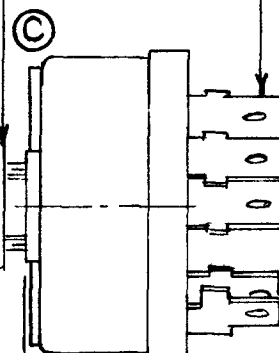
RETAINER (B)

7/16 - 28 UNEF MTG. STEM

HEX NUT

5' PROOF L' WASHER

6 35 MALE BLADE TERMS. TYP



41.27
 REF.

NOTE:

1. PUSH KNOB TO ACTIVATE WASHER CIRCUIT
 PARK, LOW, HIGH POSITIONS
- 2 ALL STEEL PARTS PLATED

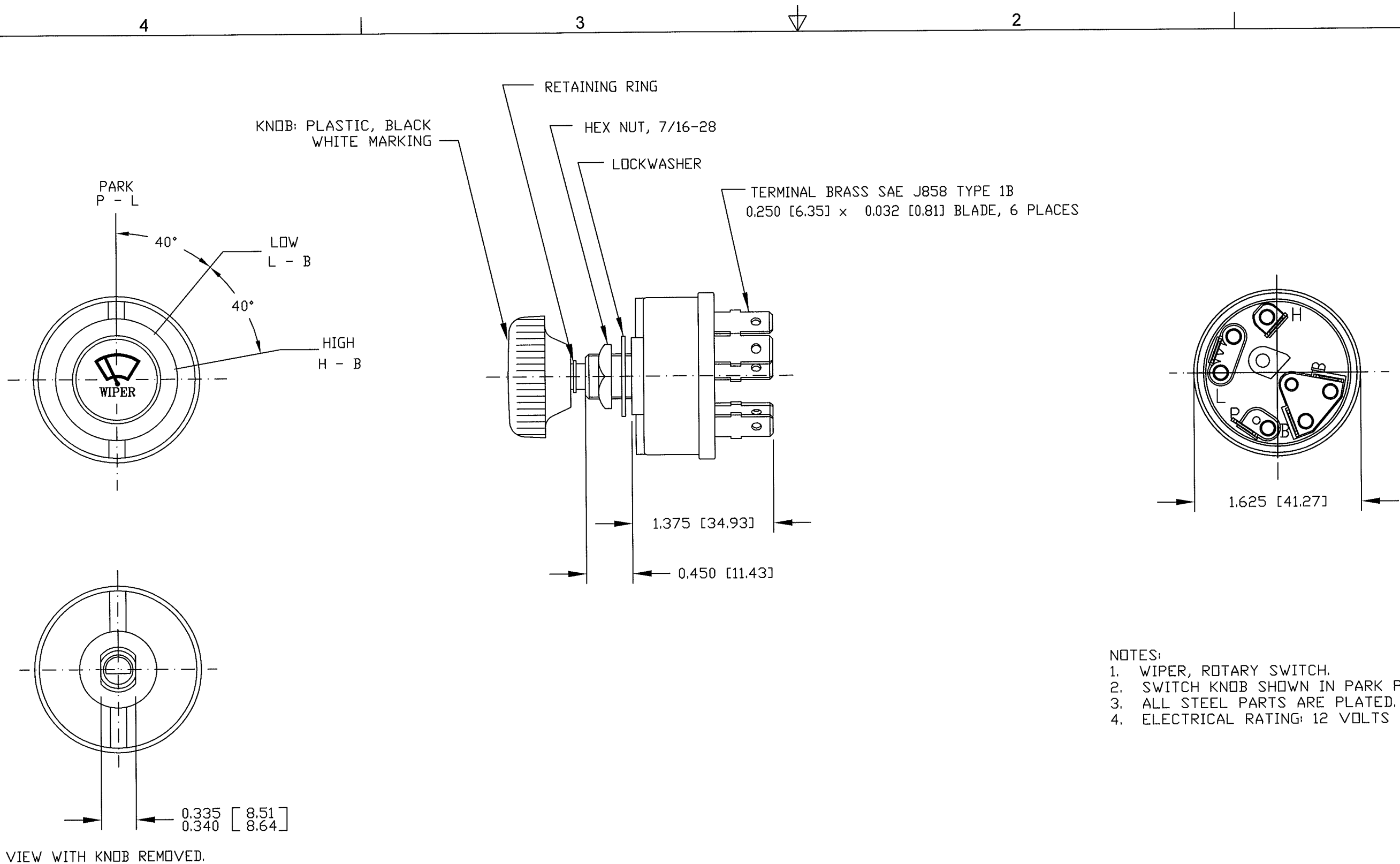
12VOLTS @ 10 AMPS

DO NOT SCALE

LET	WAS	DATE	BY	LET	WAS	DATE	BY	MATERIAL	DRAWN	CHECKED	APPR'D	SCALE	BASIC 02 WITH KNOB	DATE DRAWN
									EA	RFB		1=1		3-25-83
				C	ECN 24372	6/7/90	BL	FINISH						DATE BLUEPRINT
				B	SEN 23542	12-12-86	2U							
				A	22545	10-5-84	AK	TOLERANCES						
					ISSUED	1/2/83	RFB	DECIMAL ± .010 METRIC ± .25						
													3 POS ROTARY SW	75228-03

CH-188(4-78)

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- NOTES:
1. WIPER, ROTARY SWITCH.
 2. SWITCH KNOB SHOWN IN PARK POSITION.
 3. ALL STEEL PARTS ARE PLATED.
 4. ELECTRICAL RATING: 12 VOLTS AT 10 AMPS.

Revision Control Record				Rev.	Description of Change	ECN No.	Date	Tolerances Unless otherwise specifically noted, the following are default tolerances:			PROPRIETARY INFORMATION This Engineering Drawing, and the information contained herein, is proprietary to Cole Hersee Company and may not be disclosed, re-produced, or in any other way transferred or communicated to any other party without the express written consent of an authorized representative of Cole Hersee Company.			Special Characteristics:			Cole Hersee Co. 20 Old Colony Ave., South Boston, MA, 02127 Phn: 617-268-2100 Web: www.colehersee.com		
Rev.	Description of Change	ECN No.	Date					2-places +/- 0.02"	3-places +/- 0.005"	Angular +/- 1°				CC Critical Characteristic, relating to Safety and/or Regulatory Compliance			Description: ROTARY SW 3 POS		
C	BOM CHANGED	11043	3/10/11											X Significant Characteristic relating to Process Control					
								Metric: Shown in [] refers to equivalent English Dim Tol						KC Control Dimension relating to Form - Fit - Function as defined by Cole Hersee Company and/or the Customer			Drawing / Part No.: 75228-04		
								"REF." or an Asterisk (*) = Non-Toleranced Reference Dimension, shown for clarification purposes only.									Current Rev. C		
								NOTE: All tolerances are Non-Cumulative.											
								FORM CHT-6 (2/07)	Used On or Ref.:		Scale: 1:1	Drawn BY: DPS	Date Drawn: 4/21/83	Pg. 1 of 1					

LEGEND

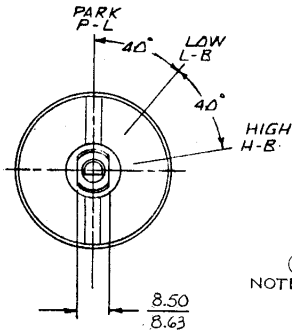
BAT	BATTERY	P	PARK
H	HIGH	W	WASH
L	LOW		

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75228-07

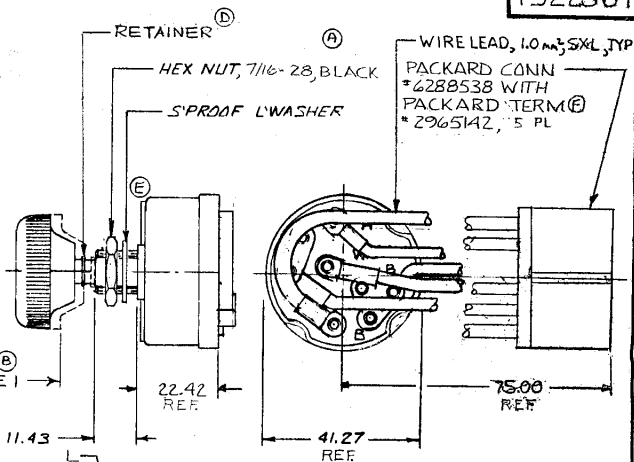
MM IN
8.50 .335
8.63 .340
11.43 .450
22.42 .883
41.27 1.625
75.00 2.952
1.0mm .039

EX20445



FRONT VIEW OF KNOB

METRIC



FRONT VIEW OF CONN

NOTES

1. PUSH KNOB TO ACTIVATE WASHER CIRCUIT PARK, LOW, HIGH POSITIONS
2. ALL STEEL PARTS PLATED
3. 10 AMPS @ 12 V.D.C.

DO NOT SCALE

LET.	WAS	DATE	BY	LET	WAS	DATE	BY	MATERIAL	DRAWN	CHECKED	APPROV'D	SCALE	BASIC-03 WITH WIRE LEADS	DATE DRAWN
				D	22542	12-12-86	ZU	FINISH	P3	CS	8-17-84	1:1		11-23-83
				C	ADD NOTE 3	11/21/85	WB							
				B	22545	10-5-84	AK							
F	ECN 00848	12/1/86	BL	A	22539	9-24-84	CS	TOLERANCES						
E	ECN 24372	6/7/90	BL		ISSUED	8-17-84	CS	DECIMAL ±						
								METRIC ±						

CH Cole Hersee Co.
BUILT FOR THE AUTOMOTIVE INDUSTRY

WINDSHIELD WASHER SW

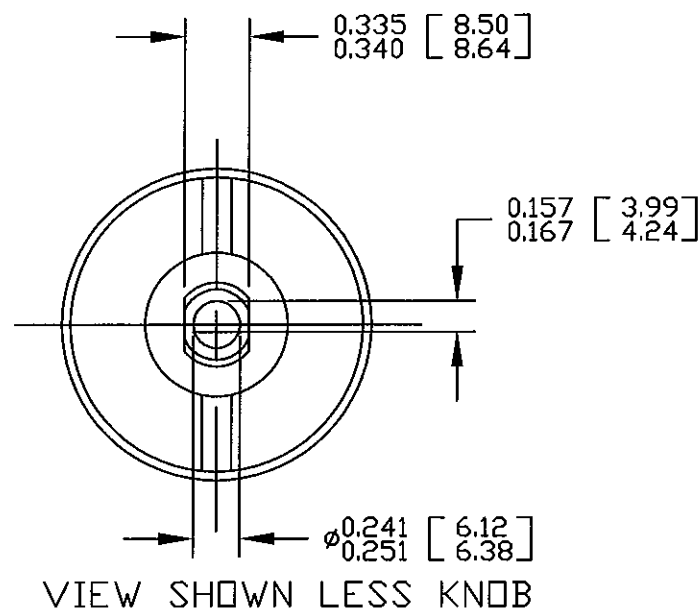
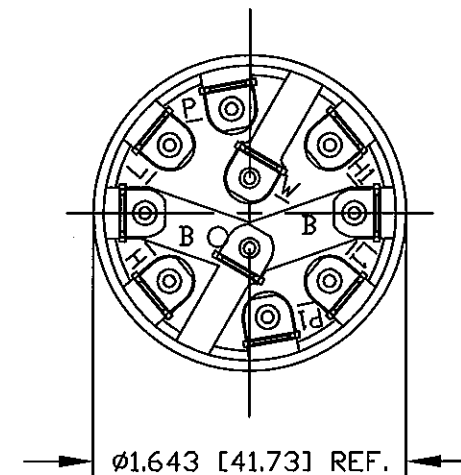
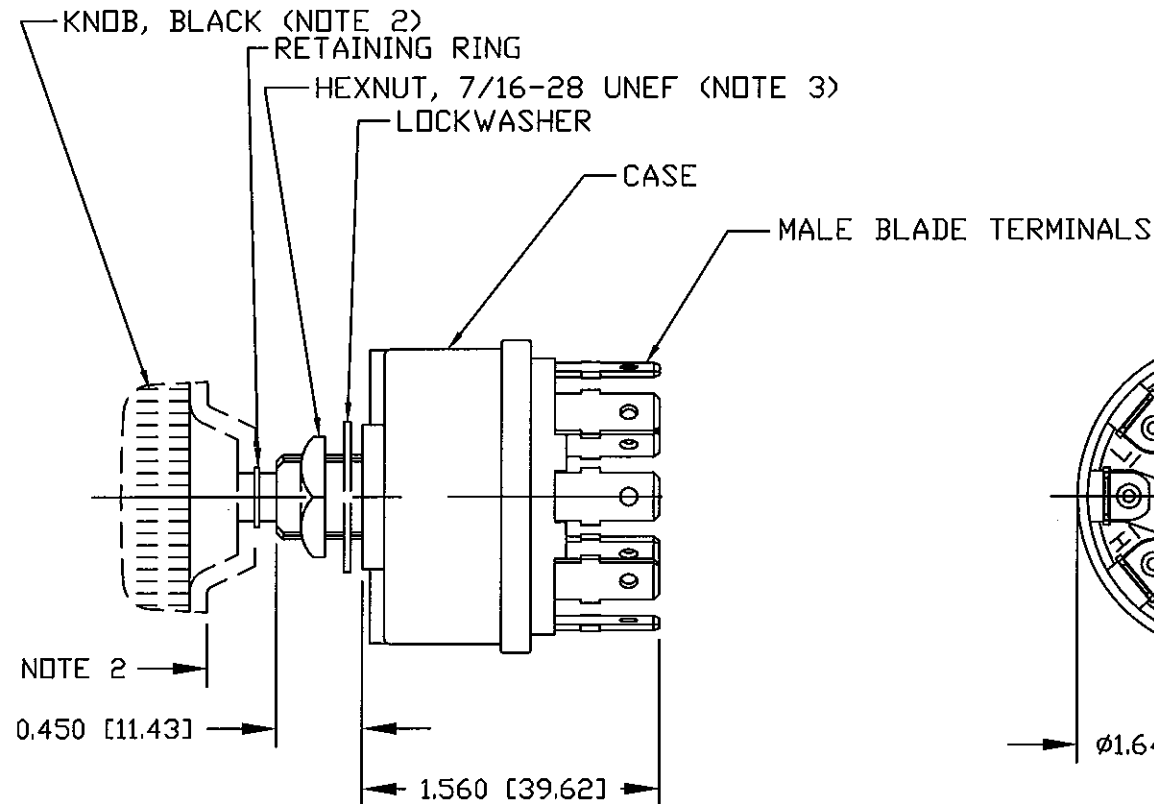
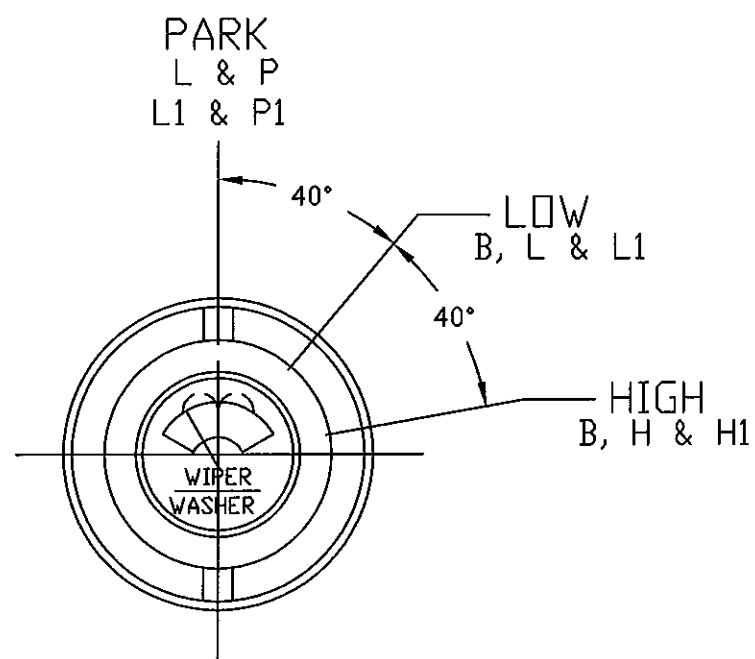
75228-07

4

3

2

1



P	PARK
P1	
L	LOW
L1	
H	HIGH
H1	
B	BATTERY
W	WASHER
CIRCUIT	DESCRIPTION
LEGEND	

NOTES:

1. ALL STEEL PARTS PLATED
2. PUSH KNOB TO WASH-"PARK", "LOW" & "HIGH"
3. INSTALLATION TORQUE 2.7Nm (2 FT. LBS.)
4. 20 AMPS @ 12 V.D.C.
5. OPERATING TEMP RANGE -40°C TO + 85°C
6. USE APPROPRIATE FEMALE TERMINALS THAT MATE TO STANDARD 1/4" X 0.032" BLADE TERMINALS

Revision Control Record				Rev.	Description of Change	ECN No.	Date	Tolerances Unless otherwise specifically noted, the following are default tolerances:			PROPRIETARY INFORMATION This Engineering Drawing, and the information contained herein, is proprietary to Cole Hersee Company and may not be disclosed, re-produced, or in any other way transferred or communicated to any other party without the express written consent of an authorized representative of Cole Hersee Company.		Special Characteristics:		Cole Hersee Co.	
Rev.	Description of Change	ECN No.	Date					2-places +/- 0.02"	3-places +/- 0.005"	Angular +/- 1°	 Critical Characteristic, relating to Safety and/or Regulatory Compliance	 Significant Characteristic relating to Process Control	 Control Dimension relating to Form - Fit - Function as defined by Cole Hersee Company and/or the Customer	 20 Old Colony Ave., South Boston, MA, 02127 Phn: 617-288-2100 Web: www.colehersee.com		
D	ADD NOTE 5 & 6	09253	04/15/09											Description: DUAL W/W & WASHER SW, P.M MOTOR WITH DYNAMIC PARKING		
														Drawing / Part No.: 75236		
														Current Rev. D		
FORM CHT-6 (2/07)								Used On or Ref.: EX-20879			Scale: 1:1		Drawn BY: RJF		Date Drawn: 04/22/85 Pg. 1 of 1	

4

3

2

1

Mouser Electronics

Authorized Distributor

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Littelfuse:

[75228-03](#) [75212-04](#) [75228-04](#)