



Applications

Indirect P.C.B. connector for all purposes in electronic area

Standards

UTE N.F.C. 93424
He 801 - He 802 (838N)
He 804 - He 805 (839)

Description

- Include two alternate rows of contacts with a 2.54 mm staggered pitch, that is to say, a 1.27 mm pitch.

Characteristics

- Insulator :
in diallyl phtalate category UL 94 VO
- Guides : stainless steel
- Contacts :
stamped monobloc in copper alloy
- Plating : gold over nickel underlayer
- Nominal voltage : 1000 V Rms at 50 Hz

- Limit voltage : 1000 V Rms
- Nominal current per contact : 3A
- Contact resistance : $\leq 12 \text{ m}\Omega$
- Insulation resistance : 5000 M Ω
- Insertion force per contact : 1.6 N maxi
- Extraction force per contact : 0.14 N mini
- Climatic category :
- He 801 - He 804 : 434 (-55°C +125°C)
- He 802 - He 805 : 655 (-25°C +85°C)

Ordering information

basic series 838 - 839	838	29	MY	•	001	N
size	17-29-33-41-53-65-72-84-96					
type of contact	M - male F - female					
class	without code - standard plating 500 matings min. code 3 - plating 0.8 microns Au code 6 - standard plating 100 matings min. - For other types of plating please consult us.					
variants	- type of guides + marking : see below table					
specifications	N - for 838 N series only P - with removable back seal T - with compound back seal operating temp -55°C +175°C R - with supporting bar for 72 - 84 - 96 sizes E - with electrolytic tinned exit lead					

Matings in conformance with the UTE 93424 standard

UTE-NF.C 93 424						Plugs : male guides							
Model of the norm UTE 93424						HE 801 - HE 802				HE 804 - HE 805			
U.T.E. Contacts						(F) Y	(M) Y	(F) Uc	(M) Uc	(F) Y	(M) Y	(F) Ud	(M) Uc
Connectral Contacts						(F) L	(M) L	(F) U	(M) U	(F) L	(M) L	(F) U	(M) U
(1)						FB	FP	FB	FP	FB	FP	FD	FP
(2)						002	002	028	028	002	002	028	028
Sockets : female guides	HE 801 HE 802	(M) Z-Y-W-S	(M) Z-Y-W-S	EN	001	*		*					
		(F) Z-Y-W	(F) Z-Y-W	ES	001		*		*				
	HE 804 HE 805	(M) Z-Y-W-S	(M) Z-Y-W-S	EN	001					*		*	
		(R) Z-Y-W	(F) Z-Y-W	ES	001						*		*

Nota : (1) Connector type as per UTE 93 424 standard : EN : male socket - ES : female socket - FB - FC - FD : female plugs - FP : male plug

(2) Variant: Type of guides + marking



Insulators

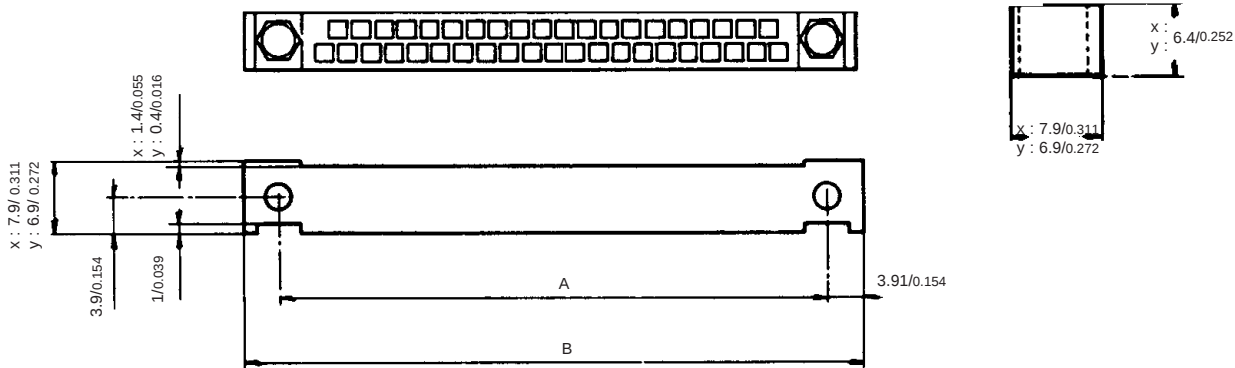
Dimensions

Coding : 6 positions

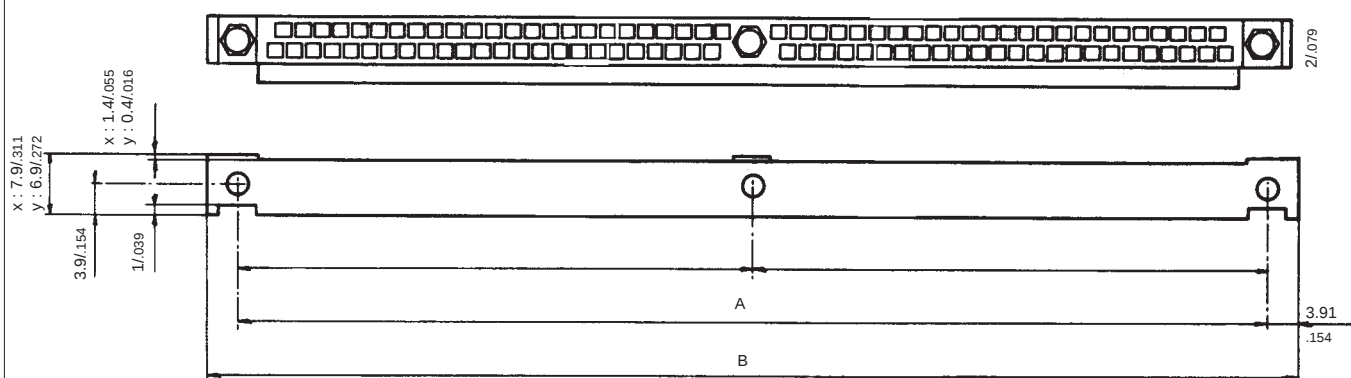
X : For 838 N series

Y : For 839 series

17, 29, 33, 41, 53, 65 contacts



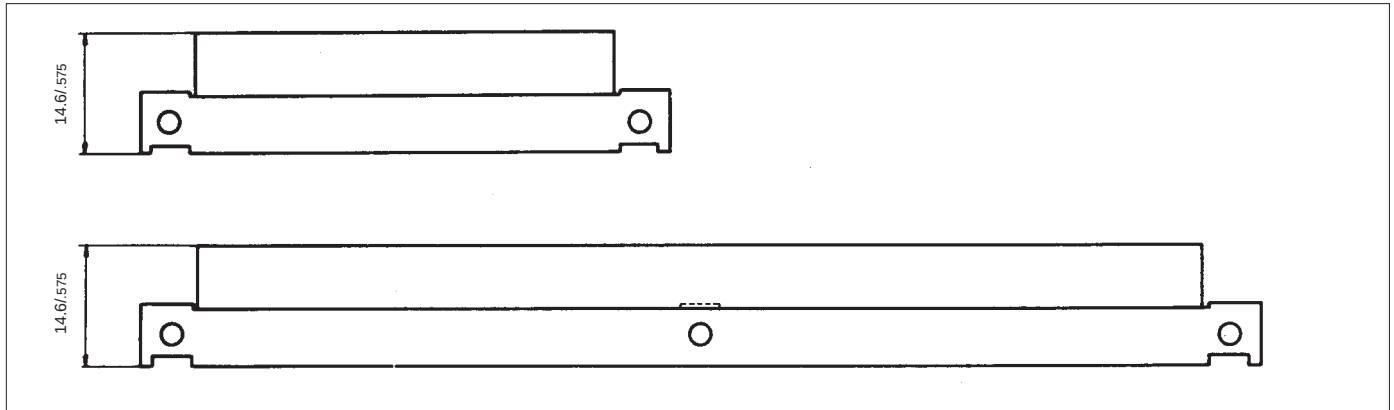
72, 84, 96 contacts



Contacts	17	29	33	41	53	65	72	84	96
A	30.48/1.20	45.72/1.80	50.8/2	60.96/2.40	76.2/3.00	91.44/3.60	106.68/4.20	121.92/4.80	137.16/5.40
B	38.3/1.508	53.5/2.106	58.5/2.303	68.8/2.709	84/3.307	99.3/3.909	114.5/4.508	129.9/5.114	145.20/5.717



Insulator with rear extension for the MS exit leads.

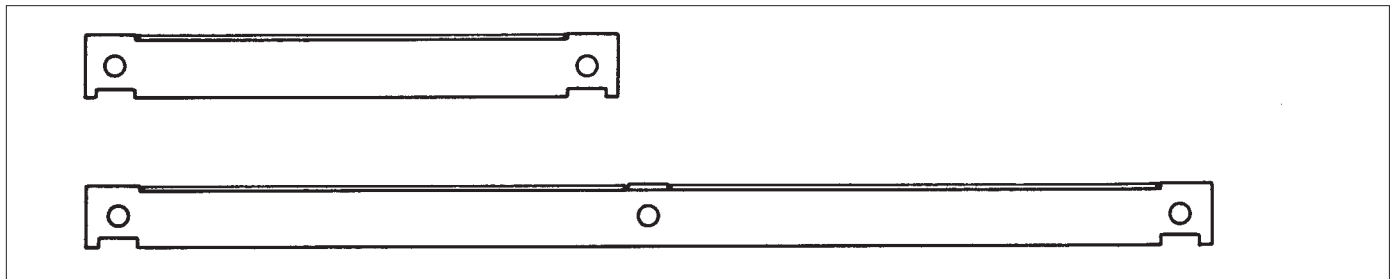


Back - sealed version

2 types

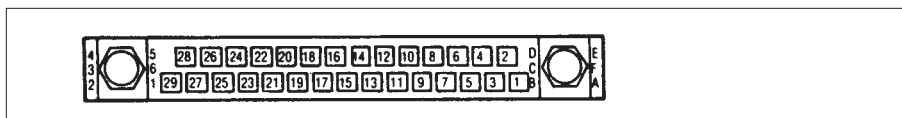
a : by removable seal (see references)

b : by compounding (see references)



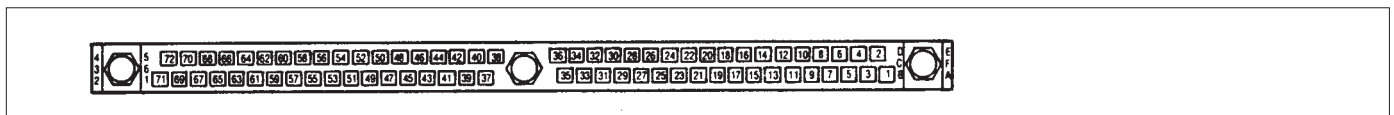
Marking

Socket

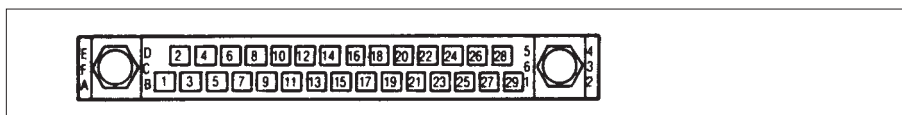


Socket marking from the mating face :
N°1 at the bottom right hand side.

Nota : the insulator is marked on both sides.

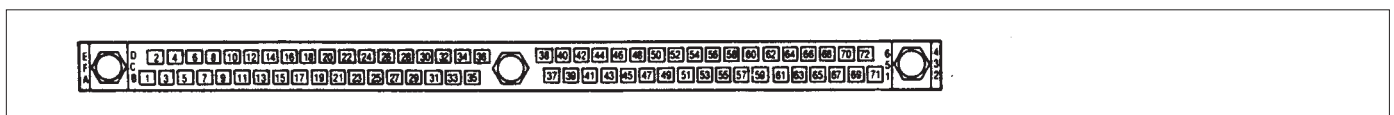


Plug



Plug marking from the mating face :
N°1 at the bottom left hand side.

Nota : the insulator is marked only on the front side.



For information : reversed socket marking is similar to a plug marking and vice-versa.



838 N contacts

Male contact : round $\varnothing$ 0.6 mm/.024

Female contact : cage

Male		Female
ML	Right angle exits - Solder on single or double face P.C.B. For CI of 2.4 to 3.2 specified MLL or FLL. Rear extraction	FL
MW	For 3 mini-wrap gauge 30 or 28. $\square : 0.6 \times 0.6 - 0.787 \leq \square \leq 0.864$ For 2 wrap specified MWR or FWR. Front extraction	FW
MY	Solder on mother board. Central contacts exits For CI of 1.6 to 2.4 specified MYR or FYR Front extraction	FY
MZ	Solder eyelet $\varnothing$ 1 mm max. (0.78 mm ²) Rear extraction	FZ
MU	Solder on double face P.C.B. P.C.B. centered in the connector axis. Front extraction	FU
MS	Male contact : To crimp on cable gauges 22-24-26 Section 0.38 mm ² to 0.14 mm ² Rear extraction	



839 contacts

Male contact : flat, rectangular section 0.6 x 0.8 mm (.024 x .032)

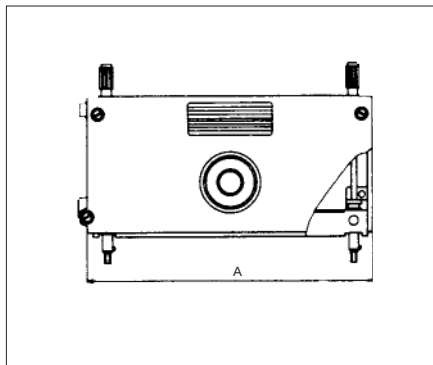
Female contact : cage

Male		Female
ML	Right angle exits - Solder on single or double face P.C.B. Rear extraction	FL
MW	For 3 mini-wrap gauge 30 or 28. $\square : 0.6 \times 0.6 - 0.787 \leq \square \leq 0.864$ Front extraction	FW
MY	Solder on mother board. Female contact : decentered exits of 0.6 mm Front extraction	FY
MZ	Solder eyelet $\varnothing$ 1 mm max. (0.78 mm ²) Rear extraction	FZ
MU	Solder on double face P.C.B. Female contact : decentered exits of 0.8 mm Rear extraction	FU
MS	Male contact - To crimp on cable gauges 22-24-26 Section 0.38 mm ² to 0.14 mm ² Rear extraction	



Plug connectors equipped with covers with locking screw and coding (17 to 65 contacts)

Axial exit covers



603



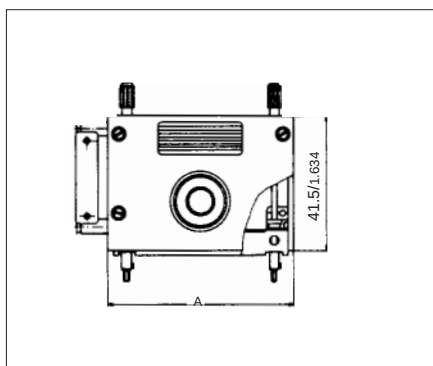
For bunched cable

605



For ribbon cable and flat cable

Radial exit covers



604



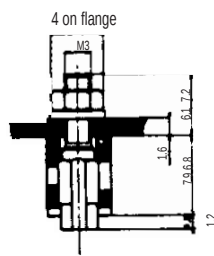
For bunched cable

contacts	A
17	42.5 1.773
29	57.85 2.276
41	73 2.874
53	88.2 3.472
65	103.5 4.075

Sockets

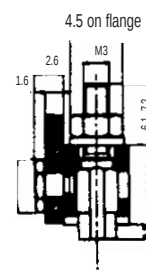
These sockets can be mated with the plugs 603 - 604 - 605

601



Vertical mounting

602



Right angle mounting

Nota : For 839 series only print dimensions in large types

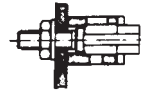
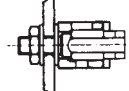
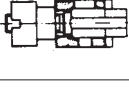
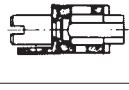
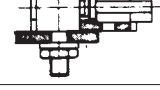


Table of variants (possible combinations)

Table N°1 : with or without coding and without locking

Males guides - Plug marking

Females guides - Sockets marking

			GUIDES							
			CTS							
			FL - FZ ML - MZ		FU MU		FZ - FY - FW MZ - MY - MW - MS			
	001	FZ - FY - FW MZ - MY - MW - MS	*		*		*	*		*
	132		*		*		*	*		*
	018		*		*		*	*		*
	037		No	*	No	*			*	
	214	FU MU								*
	133	FL - FZ ML - MZ					*	*		*
	029						*	*		*
	206						*	*		*

* : recommended mounting

No : Impossible mounting



Table N°2 : with coding and locking

Female guides - Sockets marking

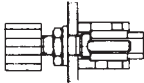
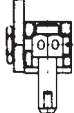
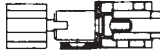
Male guides - Plug marking						
						
110		140	FZ - FY - FW MZ - MY - MW - MS	111	130	114
				FL - FZ ML - MZ	FU MU	FZ - FY - FW MZ - MY - MW - MS
131		141	FL - FZ ML - MZ	*	*	*

Table N°3 : with coding and 1/4 turn locking

Male guides - Plug marking

Female guides - Socket marking

Male guides - Plug marking						
						
		501	FZ - FY - FW MZ - MY - MW - MS	503		
				FZ MZ - MS		
	505	FL - FZ ML - MZ	*			
	517	FU MU	*			

Table N°4 : without coding - with locking

Female guides - Socket marking

Male guides - Plug marking

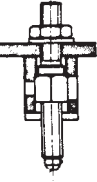
Male guides - Plug marking						
						
						
				034	024	022
				302		
				FU MU	FL - FZ ML - MZ	FZ - FY - FW MZ - MY - MW - MS
	031	FZ - FY - FW MZ - MY - MW - MS	*	*	*	*



Table N°5 : Plug connectors equipped with covers with 1/4 turn locking and corresponding sockets.

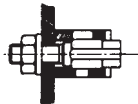
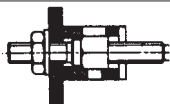
Male guides - Plug marking

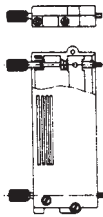
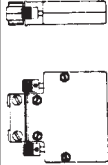
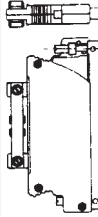
Female guides - Socket marking							
			507	509	511	538	538
			FZ	MZ	FU MU	FZ	MZ
		501	FZ - FY - FW MZ - MY - MW - MS	*	*	*	*
	505	FL - FZ ML - MZ	*	*	*		
	517	FU MU	*	*	*	*	*

Table N°6 : Plug connectors equipped with covers with locking screw + coding and corresponding sockets.

Male guides - Plug marking

Female guides - Socket marking

	601	MZ - MY - MW MS - FZ - FY - FW	*	*	*	*	No	No
	602	FL - FZ ML - MZ	*	*	*	*	No	No
	559	FZ - FY - FW MZ - MY - MW - MS	No	No	No	No	*	*

					
603	604	605	556	558▲	558▲
FZ- MZ		FU MU	FZ - MZ		

▲ : without coding



Tooling

Extraction tool

Extraction tool for female contacts from the front

REF. : 839 S 001

Contacts : **FY - FW - FU**

Extraction tool for female contacts from the rear

REF. : 839 S 002

Contacts : **FL - FZ**

Extraction tool for male contacts from the front

REF. : 839 S 003

Contacts : **MY - MW - MU**

Extraction tool for male contacts from the rear

REF. : 839 S 004

Contacts : **ML - MZ - MS**

Manual crimping tool

For crimping contacts gauge 26 - core section 0.14 mm² - insulator diameter 1 mm max.

REF. CONNECTRAL : 839 S 008

REF. Norme : HE 8 20053

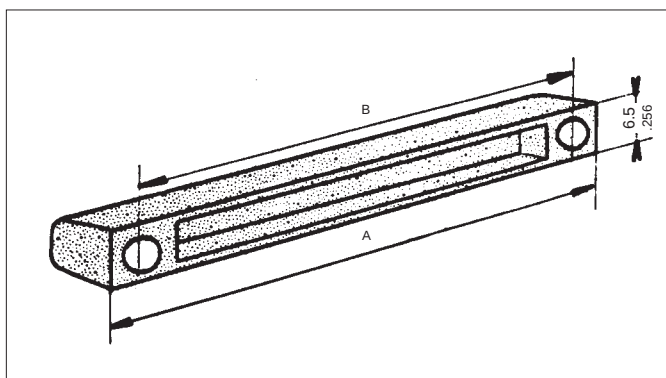
For crimping contacts gauges 22 - 24 - core section 0.22 mm² to 0.38 mm² - insulator diameter 1.7 mm max.

REF. CONNECTRAL : 839 S 007

REF. Norme : HE 8 20052

Protecting covers

The purpose of these covers is to protect the contacts.



Size	part number	dimensions	
		A	B
17	838 MD 017	38.5 1.516	30.5 1.201
29	838 MD 029	53.7 2.114	45.7 1.799
41	838 MD 041	69 2.717	61 2.402
53	838 MD 053	84.2 3.315	76.2 3.00
65	838 MD 065	99.5 3.917	91.5 3.602
72	838 MD 072	114.7 4.516	106.9 4.209
84	838 MD 084	129.9 5.114	121.9 4.799
96	838 MD 096	145.2 5.716	137.1 5.398