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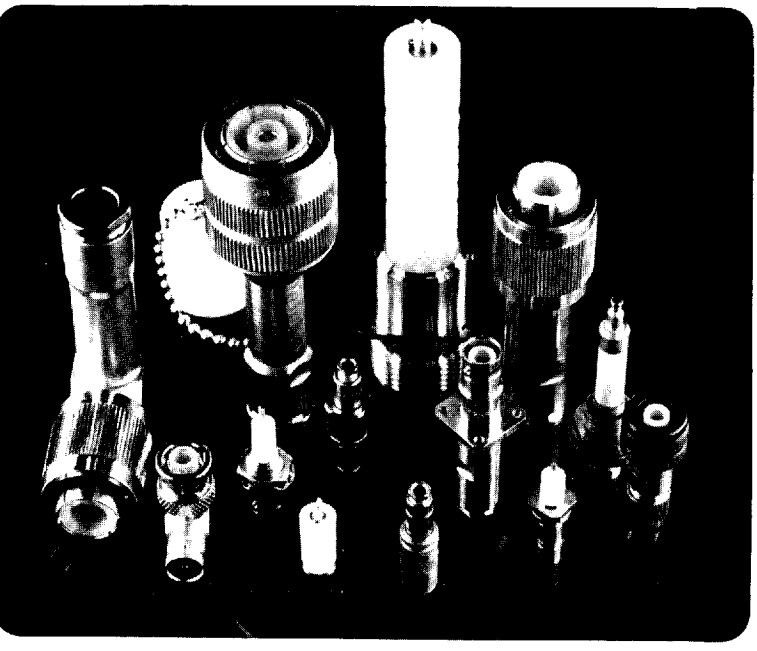
HIGH VOLTAGE COAXIAL CONNECTORS



M.HT
BNC.HT
SHV
MQ.HT
THT.20
THT.40

series

INTRODUCTION

This catalogue features 6 series of high voltage coaxial connectors from the miniature M - HT series up to the large THT - 40 series, varying in voltage from withstanding continuous voltages from 10 000 V to 40 000 V.

TEST VOLTAGES

The test voltages quoted in this catalogue are given as an indication only. The figures correspond to those made under normal atmospheric conditions during a test period of 1 minute as specified in the French standard NF - C - 20 600.

OPERATING VOLTAGES

The operating voltage chosen is the responsibility of the user depending on the conditions under which the connectors are to be used (environmental, safety factor, etc. . .). The cables listed on page 4 are recommended for their mechanical and dimensional suitability with our connectors. As to the electrical characteristics of the cables and in particular the maximum voltage capability, it is necessary to conform with the recommendations of the cable manufacturer.

CABLES SUITABLE

The cable groups are classified by ext. dia (mm) / impedance (Ω)

Other special cables, not listed below can also be used with certain connector series.

Cable Refs.	CODE No.	Page
CABLE 5/12		
	R 331 007	20
CABLE 2,6/50		
RG. 174/U RG. 188 A/U RG. 316/U URM 95 URM 109 URM 116	**R 310 002** **R 310 322** **R 317 003**	7 7 13
CABLE 5/50		
RG. 58 C/U RG. 141 A/U RG. 142 B/U RG. 223/U RG. 303/U RG. 400/U URM 43 URM 72 URM 76 URM 108 URM 301	**R 316 007** **R 316 207** **R 316 257** **R 317 005** **R 317 072** **R 317 255** **R 317 270** **R 321 007** **R 321 257**	9 9 9 13 13 13 13 16 16
CABLE 6/75		
RG. 59 B/U RG. 140/U URM 70 URM 90 KX. 6A KX. 25 KX. 52 KX. 53 Filotex 17950	**R 316 011** **R 316 211** **R 316 261** **R 317 074** **R 321 011** **R 321 014** **R 321 261**	9 9 9 13 16 16 16

Cable Refs.	CODE No.	Page
CABLE 10/50		
	R 321 020	16
	R 321 085	16
UG. 165/U	**R 331 018**	20
RG. 213/U	**R 331 168**	20
RG. 215/U ★	**R 331 218**	20
URM 67	**R 331 268**	20
	R 346 018	25
	R 346 268	25
CABLE 10/75		
RG. 11 A/U	**R 331 018**	20
RG. 12 A/U ★	**R 331 168**	20
RG. 144 A/U	**R 331 218**	20
URM 57	**R 331 268**	20
URM 64	**R 346 018**	25
	R 346 268	25
CABLE 11/50		
	R 331 018	20
RG. 214/U	**R 331 168**	20
RG. 225/U	**R 331 218**	20
URM 91	**R 331 268**	20
URM 112	**R 346 018**	25
	R 346 268	25
CABLE 11/75		
RG. 216/U	**R 331 018**	20
URM 60	**R 331 168**	20
75 MD	**R 331 218**	20
100 MD (98 Ω)	**R 331 268**	20
	R 331 323	20

★ *Armoured cables requiring the use of armoured cable clamp R 280 115 (MX 564 A/U) in place of the connector back nut - see page 21.*

NUMERICAL LISTING OF CONNECTORS SHOWN IN THIS CATALOGUE

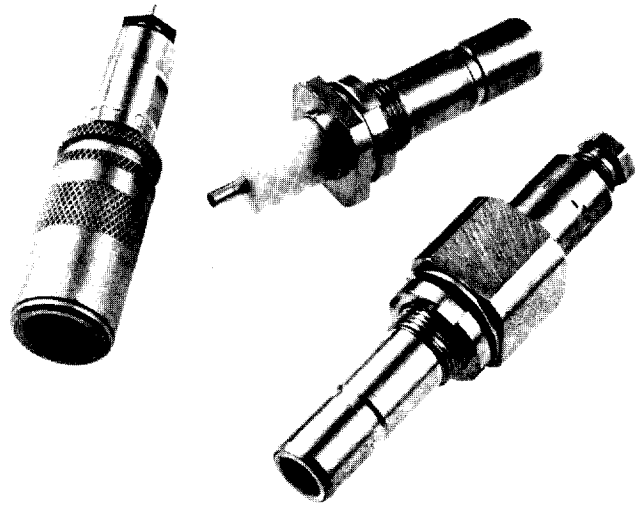
(by code no.)

Code No.	Page
R 280 115	21
R 280 503	11
R 310 002 129	7
R 310 322	7
R 310 582	7
R 310 862	7
R 316 004	9
R 316 007	9
R 316 011	9
R 316 015	9
R 316 072	9
R 316 207	9
R 316 211	9
R 316 257	9
R 316 261	9
R 316 405	10
R 316 553	10
R 316 603	10
R 316 704	10
R 316 714	10
R 316 754	11
R 316 770	11
R 316 780	11
R 316 812	11
R 317 003	13
R 317 005	13
R 317 071	13
R 317 072	13
R 317 074	13
R 317 255	13
R 317 270	13
R 317 404	14
R 317 404 290	14
R 317 405	14
R 317 580	14
R 317 580 290	14
R 317 603	14
R 317 720	14
R 317 720 160	14
R 321 007	16
R 321 011	16
R 321 014	16
R 321 020	16
R 321 085	16
R 321 257	16
R 321 261	16
R 321 405	17
R 321 603	17
R 321 620	17
R 321 703	18
R 321 704	18
R 321 710	18
R 321 812	18
R 331 007	20
R 331 018	20
R 331 168	20
R 331 218	20
R 331 268	20
R 331 323	20
R 331 405	21
R 331 603	21
R 331 803	21
R 346 018	25
R 346 268	25
R 346 405	25
R 346 603	25
R 346 803	25

HIGH VOLTAGE COAXIAL CONNECTORS

M.HT SERIES

R 310 ...



GENERAL CHARACTERISTICS

Miniature connectors designed with a dual operation coupling and locking mechanism.

1 - Automatic latching with low force push fit

2 - The connector coupling nut is then pushed forward, clamping the latching mechanism and locking the connectors. They can be seen to be locked as part of the black washer underneath the coupling nut is visible after the coupling nut has been pushed forward to lock the connectors.

Demating (and unlatching) is effected by a simple pulling movement of the coupling nut.

Materials	: metal parts	:	brass and heat treated beryllium
	insulators	:	PTFE and silicone rubber
	plating	:	centre contacts gold - other pieces : NSR nickel

ELECTRICAL CHARACTERISTICS

Frequency range		:	0 - 2 GHz			
Test voltage :	unmated connectors	:	6 000 V D.C.	For Filotex cable 38421	2000 V DC	For other cables
	mated pair	:	20 000 V D.C.		2000 V DC	
Current rating		:	5 A max.			

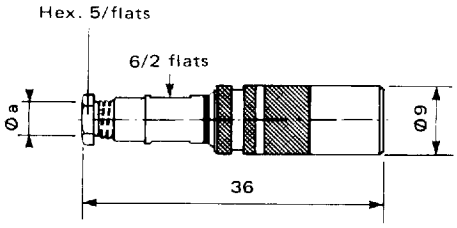
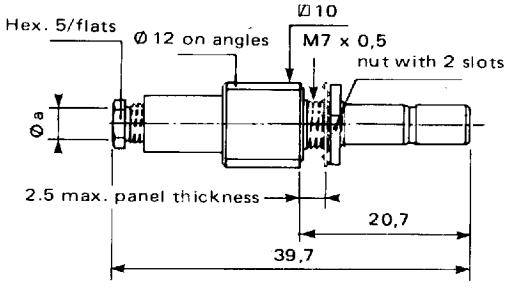
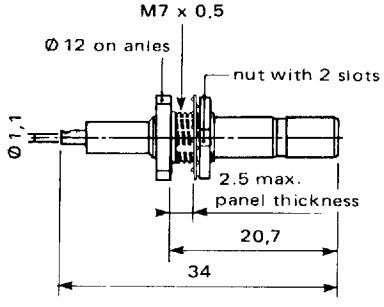
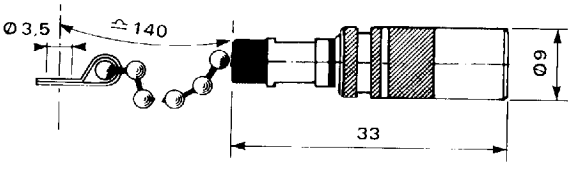
MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

Life	:	500 matings min.
Temperature range	:	-50° C $+125^{\circ}$ C
Splashproof		
Salt spray	:	96 H

COAXIAL CABLES SUITABLE

– FILOTEX Reference 38 421, edition 4

2,6 / 50 Ω					
RG 174/U	RG 188 A/U	RG 316/U	URM 95	URM 109	URM 116

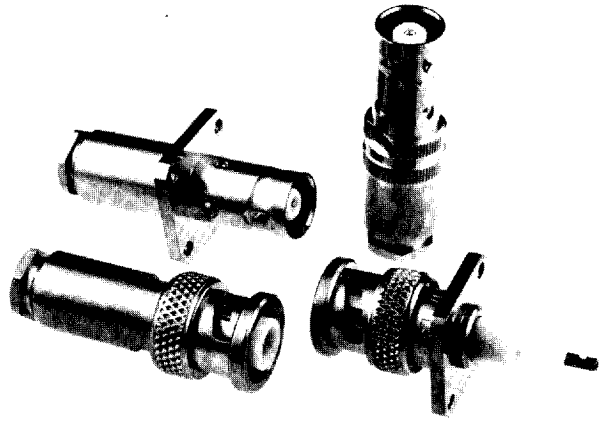
CODE No.	STYLE	Cable group Ω	max. Øa	Assembly code	Panel piercing	Weight (g)
STRAIGHT PLUG						
						
R 310 002 129•	Cable clamp	- 2,6/50 - Filotex 38421	3	K25-66		10
STRAIGHT JACK						
						
R 310 322•	Bulkhead mounting - panel seal Cable clamp	- 2,6/50 - Filotex 38421	3	K10-66	e 4	12
STRAIGHT RECEPTACLE						
						
R 310 582•	Bulkhead mounting - panel seal				e 4	8
CAPS						
						
R 310 862•	short circuit cap and chain for jacks and receptacles					14

• Manufactured upon request.

HIGH VOLTAGE COAXIAL CONNECTORS

BNC.HT series

R 316 ...



GENERAL CHARACTERISTICS

The connectors of this series are not intermateable with those of the BNC and SHV series.
2 pip bayonet coupling.

Materials	: contacts and interfaces	:	brass and heat treated beryllium copper
	other metal parts	:	brass
	insulators	:	P.T.F.E. (styles R 316 780 and R 316 770, insulator polyethylene)
	gaskets	:	silicone rubber (styles R 316 780 and R 316 770, neoprene rubber)
	plating	:	NSR nickel - centre contacts, gold

ELECTRICAL CHARACTERISTICS

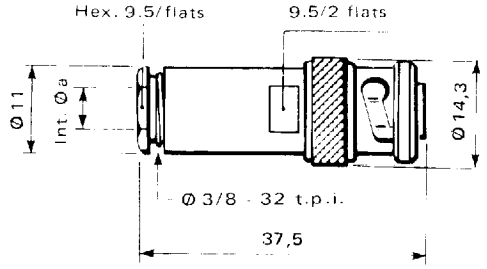
Test voltage	: unmated connectors	:	male : 6 000 V D.C. female : 8 000 V D.C.
	mated pair	:	10 000 V D.C.
Impedance		:	50 Ω
Frequency range		:	0 - 2 GHz
V.S.W.R.		:	1.20 +0.2 F (GHz) (plug and jack)
Current rating		:	10 A

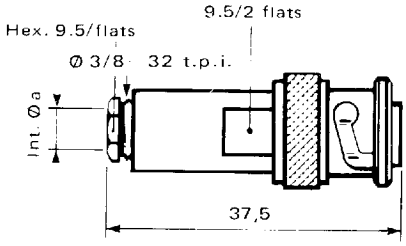
MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

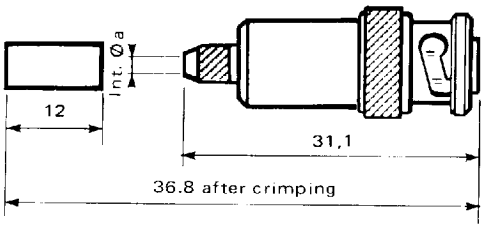
Life	:	500 mating
Vibration	:	20 g - 2 000 Hz
Shock	:	50 g
Salt spray	:	48 H
Temperature range	:	− 55°C +155°C (except styles with polyethylene insulator) : − 40°C + 70°C

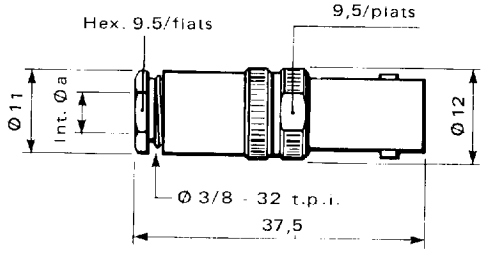
COAXIAL CABLES SUITABLE

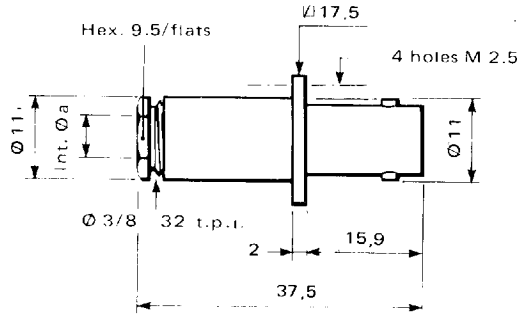
5/50 Ω	6/75 Ω
RG. 58 C/U	RG. 59 B/U
RG. 141 A/U	RG. 140/U
RG. 142 B/U	URM 70
RG. 223/U	URM 90
RG. 303/U	KX. 6 A
RG. 400/U	KX. 25
URM 43	KX. 52
URM 72	KX. 53
URM 76	
URM 108	
URM 301	







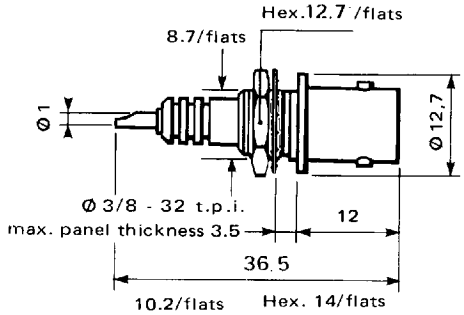


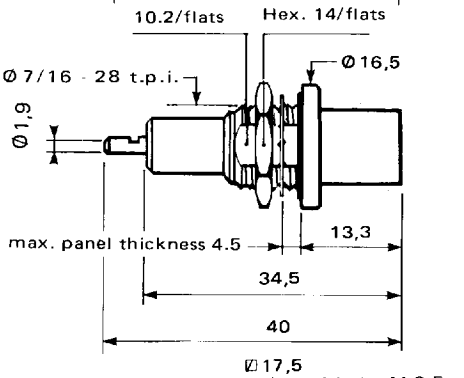


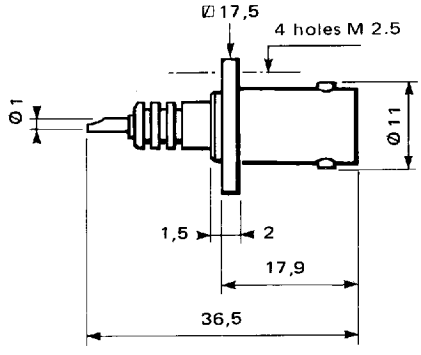
CODE No.	STYLE	Cable Group Ω	max. Øa	Assembly code	Panel piercing	Weight (g)
STRAIGHT PLUGS						
R 316 004	Cable clamp	2,6/50	3	*(not shown)*		20
R 316 007	Cable clamp	5/50	5,4	K13-67		20
R 316 011	Cable clamp Interchangeable with UG932/U	6/75	6,5	K13-67		19
R 316 015•	Cable clamp	Filotex 17950	6,5	K13-67		19
R 316 072	Crimp	RG. 58C/U KX.15 S.SCR.	3,2			15
STRAIGHT JACKS						
R 316 207	Cable clamp	5/50	5,4	K13-67		16
R 316 211	Cable clamp	6/75	6,5	K13-67		15
R 316 257	Square flange - cable clamp	5/50	5,4	K13-67	a 14	17,5
R 316 261	Square flange - cable clamp	6/75	6,5	K13-67	a14	18,5

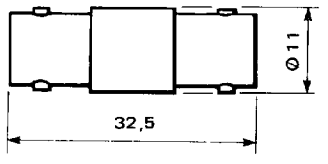
• Manufactured upon request.

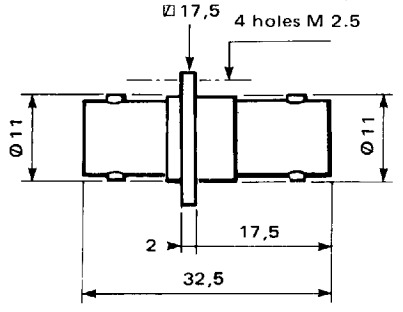
BNC.HT series



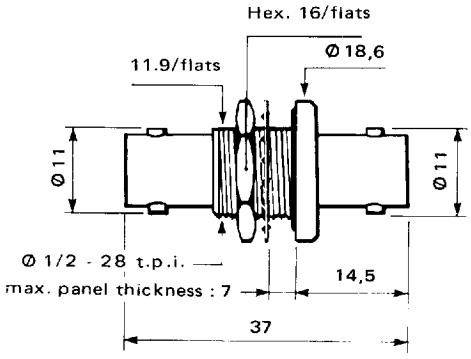


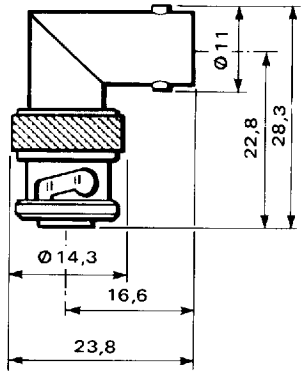


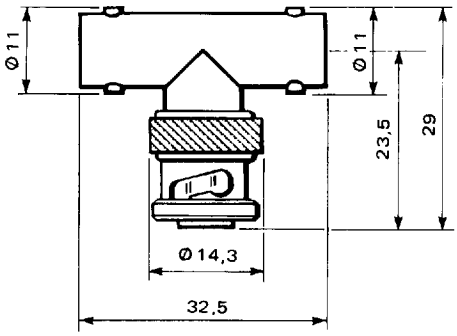


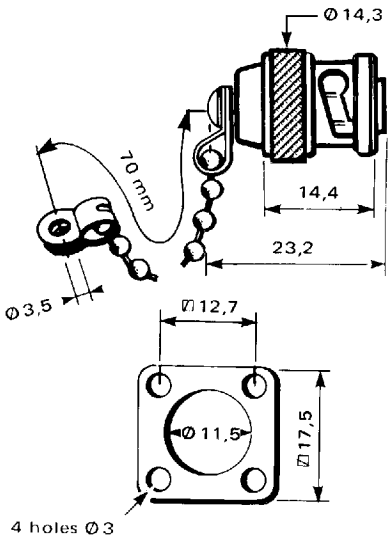


CODE No.	STYLE	Cable Group Ω		Assembly code	Panel Piercing	Weight (g)
RECEPTACLES						
R 316 553	Bulkhead mounting				d 28	8,5
R 316 603	Bulkhead mounting panel seal – Watertight : – 40°C + 70°C – at pressure : 3.5 bar max.				d 29	15
R 316 405	Square flange mounting Interchangeable with UG. 931/U				a 14	10
ADAPTORS						
R 316 704	Straight female - female					11
R 316 714	Square flange female - female				a 14	19









CODE No.	STYLE	Cable Group Ω		Assembly code	Panel piercing	Weight (g)
ADAPTORS						
R 316 754	Bulkhead female - female with panel seal – Watertight : – 40°C to +85°C – at pressure : 3.5 bar max.				d18	21
R 316 770	Elbow male - female polyethylene insulator					17
R 316 780	Tee female - female - male polyethylene insulator					19
ACCESSORIES						
R 316 812	Protection cap and chain, ensures a watertight seal and electrical insulation when mated with BNC.HT female connectors					14
R 280 503	Neoprene flange gasket					