

RFM Series

Rack and Panel Blind Mating Modular Connector
EN45545-2 & NF F 61-032 Qualified





NOTES

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ABOUT AMPHENOL SOCAPEX



Proven excellence in interconnect solutions

Since **1947**, Amphenol Socapex has prescribed, designed and manufactured reliable and innovative interconnection solutions for **harsh environments**, specializing in standard and customized electrical and fiber optic connectors, contacts, accessories and cabling solutions. Located in the **Mont Blanc** region of France and Pune in India, Amphenol Socapex has a presence in over 100 countries around the world. Amphenol Socapex is part of the international **Amphenol Corporation**.



1000+ employees



Net Sales 2019: **86,6 M€**
69% Export - 31% France



Two facilities :
Thyez (France), **Pune** (India)

OUR HISTORY

1947



- Socapex creation in Suresnes, France
- 1st radio connector

1956-57



- Manufacturing unit in Cluses (74), France
- Thomson-CSF becomes primary shareholder

Early 1960's



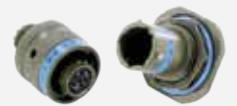
- 1st board level connectors: HE8
- 1st "licence Bendix" manufactured connectors
- SL Series launch

1973



- New factory 13 000 m² in Thyez (74) France with 250 people

1975



- Production of 38999 connectors

2014-2017



Quadrax Contacts



Cable Assembly

- New Cable Assembly workshop
- New Contact Manufacturing workshop

Today and tomorrow | New technologies



Miniaturization
 High-speed signals
 Rugged Ethernet
 Fiber optics
 Power
 Rugged Ethernet
 ROHS solutions
 Power
 Fiber optics
 ROHS solutions
 Advanced Materials (composite)
 Power
 Miniaturization
 ROHS solutions

INTERNATIONAL EXPERTISE



Our expertise has no boundaries

Integrated Production in France & India

- **24 000 m²** manufacturing capacity on 2 sites
- Design centers in **France** and **India**
- State-of-the-art manufacturing technology



Our markets



Military

Communication Systems - Radios - C4ISR /
Ground vehicles - Vetronics / Marine / Missiles



Aviation

Commercial & military / Avionics /
Engines / Landing gear / Actuators

1986	1995-96	2004	2005	2010's
<p>- Amphenol becomes primary shareholder</p>	<p>- Expanded Beam connector CTOS launch - Headquarters transferred to Thyez</p>	<p>- RJ Field launch, "Award Electronica"</p>	<p>- Opening of manufacturing site in Pune, India</p>	<p>- LuxBeam™ and HDAS launch</p>

Today and tomorrow | Sustainable development



Respect for nature and the environment
 Optimization of natural resources
 Recycling
 Waste Management
 Goodwill

PRODUCING FASTER, SMALLER, STRONGER CONNECTORS...



Technologies & innovation

Technological Center

Engineering Laboratory for product testing and qualification, product expertise and metrology

- Mechanical and electrical skills
- RF and fiber optics expertise

High-Speed Expertise

Strong expertise in high-speed signals

- 3D EM simulation software & EM models
- Time Domain and frequency domain (VNA 20GHz, TDR and eye diagram)

Materials Expertise

Focus on materials expertise and manufacturing techniques to produce faster, smaller and stronger products

- 3D CAD mechanical software, simulation & analysis
- Disruptive metal alloys, additive manufacturing

Eco-responsibility

Sustainable environment approach, with pro-active management of regulations (REACH / RoHS / Conflict minerals...)

- New materials development, plating, and suitable processes
- Recycling and rational resources consumption

Our workshops

Our workshops located in France & India provide consistent quality adapted to your volume requirements.

- Tooling :** Tools for our different activities : molding, machining, assembly
- Molding :** Solid expertise in thermoplastic elastomer and thermoset molding
- Machining :** Manufacturing of cylindrical shells from 10 to 90 mm in diameter and rectangular shells
- Screw Machining :** Cylindrical production parts up to 10 mm in diameter
- Plating :** Plating with cadmium, nickel, electroless nickel, silver, black zinc nickel, gold
- Assembly :** Connector and harness assembly (electrical & optical)

Our certifications

Product certifications : MIL-DTL38999, EN3645, EN3155, VG

Our memberships

Member of CMG (Connecting Manufacturing Group) Consortium

DELIVERING GREAT CUSTOMER EXPERIENCE



► We have a strong reputation for helping customers solve their toughest challenges. This approach of serving your needs is ingrained in our company – from our sales team to our product development engineers.

A partner you can trust

Customer Proximity	Design Expertise	Quality Commitment	On Time Delivery Performance	Compliance manager

Buy our solutions

You can access our solutions through our global network of sales offices or through our distributors.

- Field Sales Team :**
 - 12 in France
 - 15 in Europe
 - 100+ in North America and rest of the world.
 - 5 Business Development Managers supporting local sales force Europe, North America and the rest of the world

- Technical Support & Multilingual Customer Service :**
 - 15 people

- Worldwide Distribution Network :**
 - Including qualified distributors (QPL approved) for assembling : MIL-DTL-38999, PT/451/VG95328 & Fiber Optics connectors



MARKETS AND APPLICATIONS



Industrial

Automation
Transportation
Nuclear power station
Robotics



C4ISR

Threat detection system
Soldier wearable equipment
Rugged computer & digital radio
Satellite reception unit



Military vehicles

Ground radios shelters
Ground vehicles
Battlefield
Communication systems



Military Avionics & Airframe

Power unit
Aircraft
Radar
Display unit
Flight control system



Missiles & UAVS

Air missiles and UAVS
Ground control station & launchers



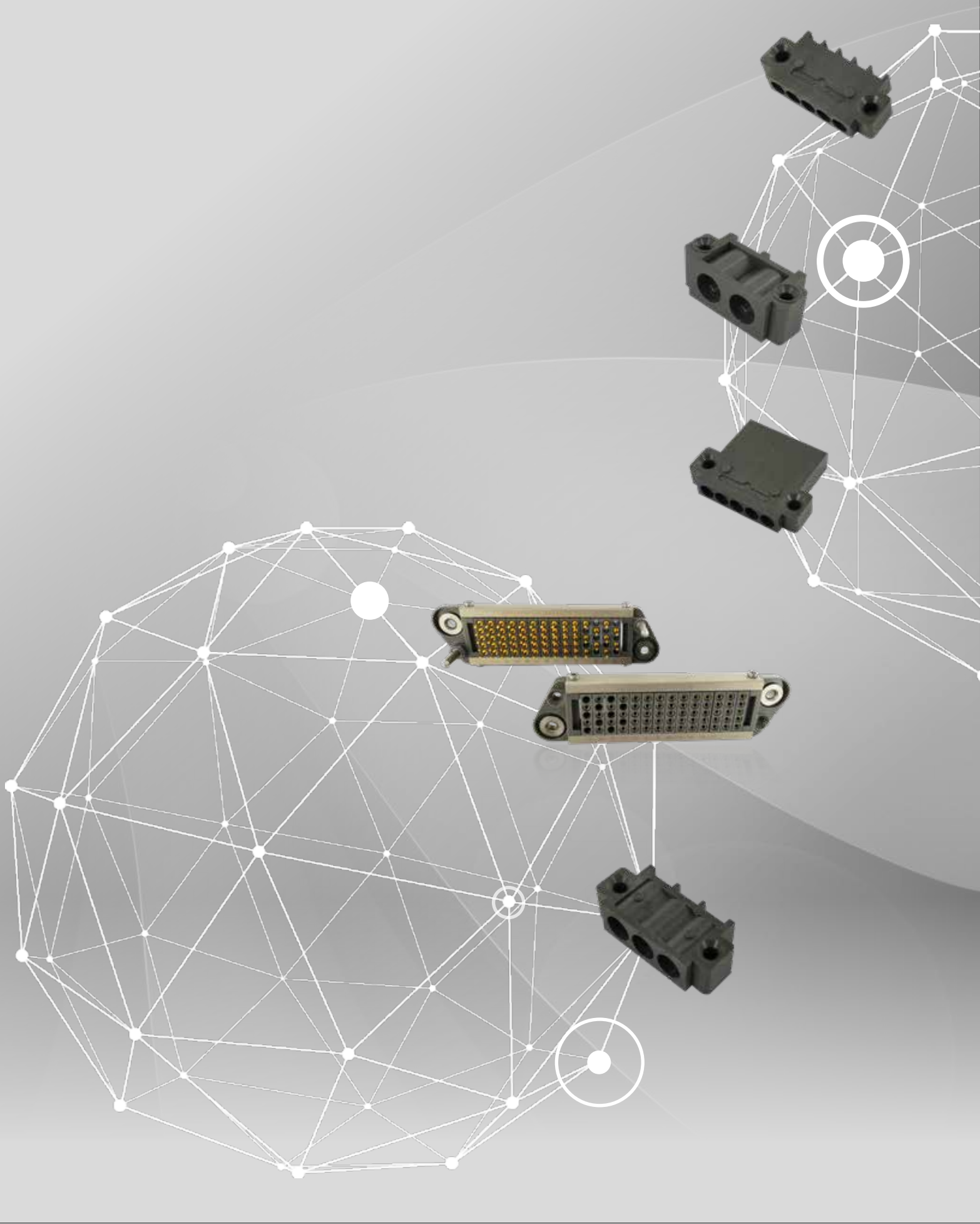
Navy

Navigation guidance



NOTES

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RFM STANDARD



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THE RFM STANDARD SERVES VARIOUS MARKETS, INCLUDING:



- Industrial**
- Railway Racks
- Shelters
- Cabinets
- Power Racks
- Modular equipment
- Automatic assembly machines

GENERAL CHARACTERISTICS - RFM STANDARD



NF F 61-032
Qualified product

Blind mate modular floating rack connector

Benefits

- Plug and receptacle with floating fixing.
- RoHS Compliant ✓.
- Low insertion forces.
- Male & female contacts can be mounted on both sides.
- Meets NF F 61-032 requirements: vibrations, salt spray, temperature.

GENERAL CHARACTERISTICS

Qualification	NF F 61-032
Mating cycles	500
Misalignment allowance around each fixing screw	±1,25 mm
Contact type	Crimp contacts

MATERIALS

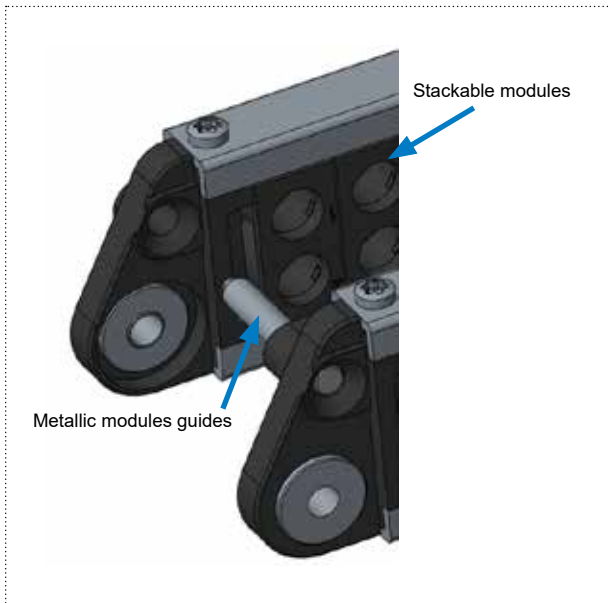
Housing & modules (2 options)	GREY LEXAN BLACK LEXAN (recommended)
Lateral rails	Nickel over aluminium

MAIN ENVIRONMENTALS CHARACTERISTICS

Temperature range	-55°C to +125°C
Fire behavior GREY LEXAN BLACK LEXAN (recommended)	EN 45545-2 HL1 (R22) & I2-F2 NF F16-102 EN 45545-2 HL3 (R22) & I3-F1 NF F16-102
Salt spray	96 hours (following NFC 20711)
Chemical behavior	HCl 1N 5min; NaOH 1N 5min

1.Guiding system

Guiding pin & chamfered holes



2. Floating system

Around the fixing screw



GENERAL CHARACTERISTICS - RFM STANDARD

2. Contacts module



3. Contacts module



5. Contacts short module



5. Contacts long module

(Plug 2XX & Receptacle 3XX)
 Avoid to put heat shrink boots around the contact crimping area.

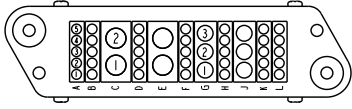


MODULE	5 contacts	3 contacts	2 contacts
MAIN ELECTRICAL VALUES			
Contact diameter	Ø1.5 mm	Ø2.5 mm	Ø3.5 mm
Current (nom.)	8 A	15 A	60 A
Insulation resistance under 500 Vrms	>10 ³ MΩ		
Contact resistance	<2,5 mΩ	<1 mΩ	<0,80 mΩ
DWV:			
- Between contacts	1500 Vrms	2000 Vrms	3000 Vrms
- Between contacts & ground	1600 Vrms	2000 Vrms	2800 Vrms
Max. Contact mating forces	2 N	4 N	6 N

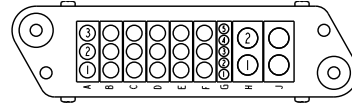
ARRANGEMENTS - RFM STANDARD

View: receptacle, cable connection side.

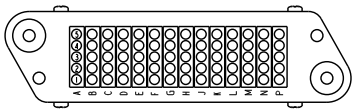
All standardized arrangement from NF F 61-032 are showed. If other arrangements needed, see page 38.



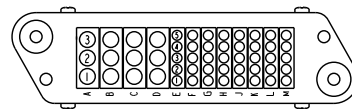
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	1	201	35	6	4
Receptacle	101	301			



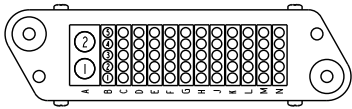
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Plug	6	206	5	18	4
Receptacle	106	306			



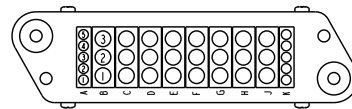
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Plug	2	202	70	-	-
Receptacle	102	302			



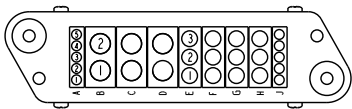
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Plug	7	207	40	12	-
Receptacle	107	307			



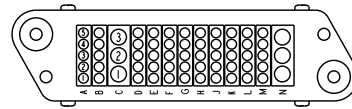
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Plug	3	203	60	-	2
Receptacle	103	303			



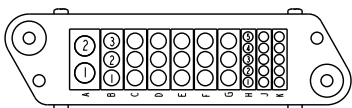
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	8	208	10	24	-
Receptacle	108	308			



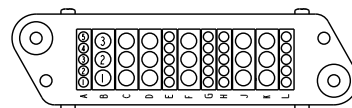
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	4	204	10	12	6
Receptacle	104	304			



	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	9	209	55	6	-
Receptacle	109	309			



	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	5	205	15	18	2
Receptacle	105	305			



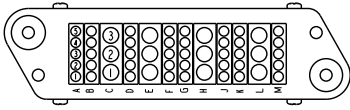
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	10	210	25	18	-
Receptacle	110	310			

* 5 contacts modules (Ø1.5 mm contacts) only are longer

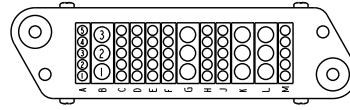
ARRANGEMENTS - RFM STANDARD

View: receptacle, cable connection side.

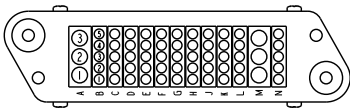
All standardized arrangement from NF F 61-032 are showed. If other arrangements needed, see page 38.



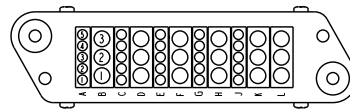
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	11	211	40	12	-
Receptacle	111	311			



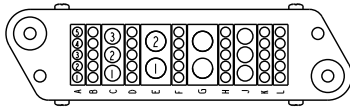
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	16	216	40	12	-
Receptacle	116	316			



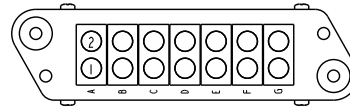
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	12	212	55	6	-
Receptacle	112	312			



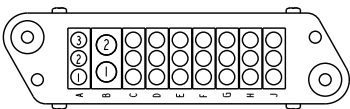
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	17	217	25	18	-
Receptacle	117	317			



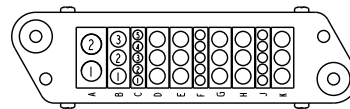
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	13	213	35	6	4
Receptacle	113	313			



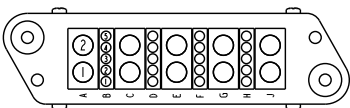
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	18	-	-	-	14
Receptacle	118	-	-	-	



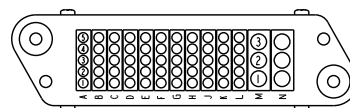
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	14	-	-	24	2
Receptacle	114	-			



	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	19	219	15	18	2
Receptacle	119	319			



	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	15	215	20	-	10
Receptacle	115	315			



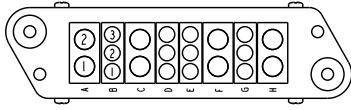
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	20	220	55	6	-
Receptacle	120	320			

* 5 contacts modules (Ø1.5 mm contacts) only are longer

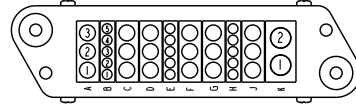
ARRANGEMENTS - RFM STANDARD

View: receptacle, cable connection side.

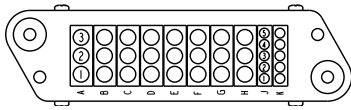
All standardized arrangement from NF F 61-032 are showed. If other arrangements needed, see page 38.



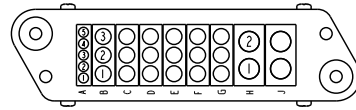
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	21	-	-	12	8
Receptacle	121	-	-	-	-



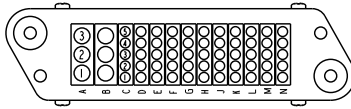
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	26	226	-	-	-
Receptacle	126	326	15	18	2



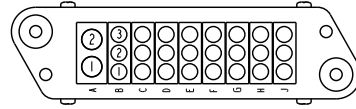
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	22	222	-	-	-
Receptacle	122	322	10	24	-



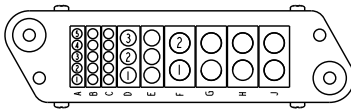
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	27	227	-	-	-
Receptacle	127	327	5	18	4



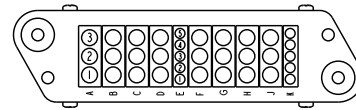
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	23	223	-	-	-
Receptacle	123	323	55	6	-



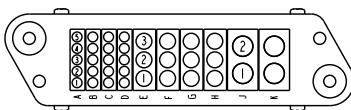
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	28	-	-	-	-
Receptacle	128	-	-	24	2



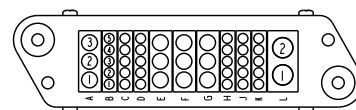
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	24	224	-	-	-
Receptacle	124	324	15	6	8



	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	29	229	-	-	-
Receptacle	129	329	10	24	-



	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	25	225	-	-	-
Receptacle	125	325	20	12	4



	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	30	230	-	-	-
Receptacle	130	330	30	12	2

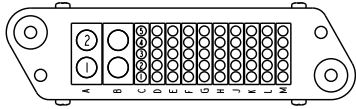
* 5 contacts modules (Ø1.5 mm contacts) only are longer

ARRANGEMENTS - RFM STANDARD

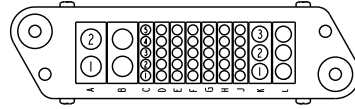
View: receptacle, cable connection side.

All standardized arrangement from NF F 61-032 are showed. If other arrangements needed, see page 38.

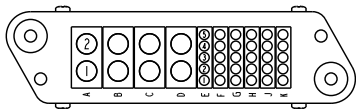
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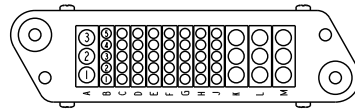
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Plug	32	232			
Receptacle	132	332	55	-	4



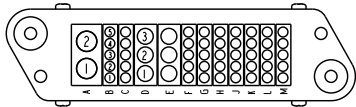
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Plug	37	237			
Receptacle	137	337	35	6	4



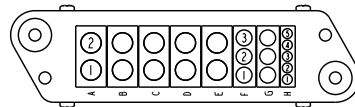
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Plug	33	233			
Receptacle	133	333	30	-	8



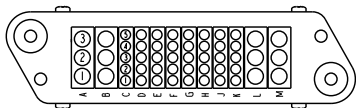
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Plug	38	228			
Receptacle	138	338	40	12	-



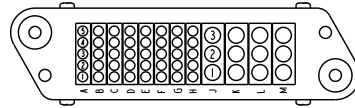
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Plug	34	234			
Receptacle	134	334	45	6	2



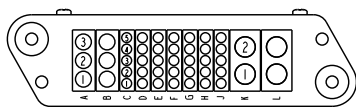
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	39	239			
Receptacle	139	339	5	6	10



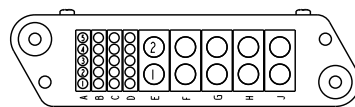
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	35	235			
Receptacle	135	335	40	12	-



	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	40	240			
Receptacle	140	340	45	12	-



	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	36	236			
Receptacle	136	336	36	6	4



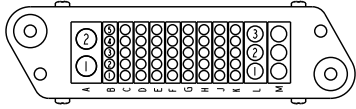
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	41	241			
Receptacle	141	341	20	-	10

* 5 contacts modules (Ø1.5 mm contacts) only are longer

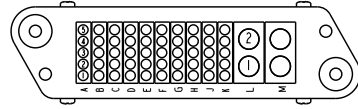
ARRANGEMENTS - RFM STANDARD

View: receptacle, cable connection side.

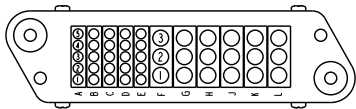
All standardized arrangement from NF F 61-032 are showed. If other arrangements needed, see page 38.



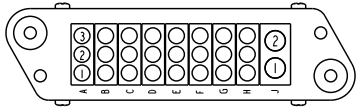
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	42	242	9	6	2
Receptacle	142	342			



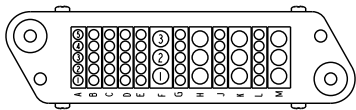
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	47	247	50	-	4
Receptacle	147	347			



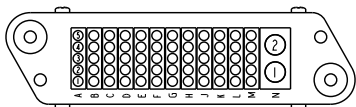
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	43	243	25	18	-
Receptacle	143	343			



	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	44	-	-	24	2
Receptacle	144	-			



	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	45	245	40	12	-
Receptacle	145	345			



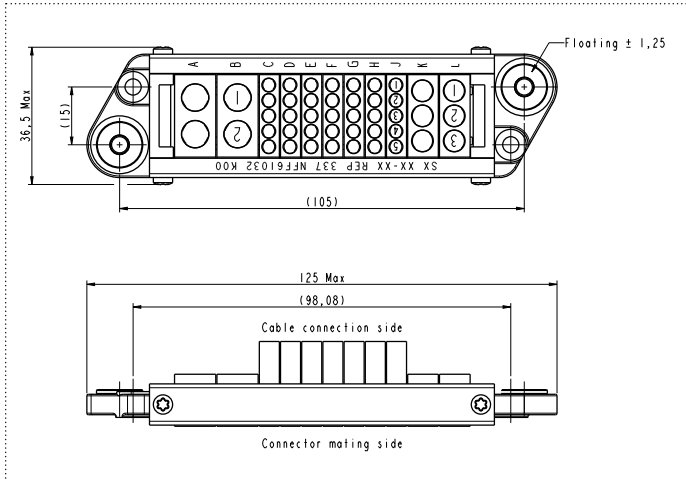
	SHORT	LONG*	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5
Plug	46	246	60	-	2
Receptacle	146	346			

* 5 contacts modules (Ø1.5 mm contacts) only are longer

CONNECTOR INTEGRATION - RFM STANDARD

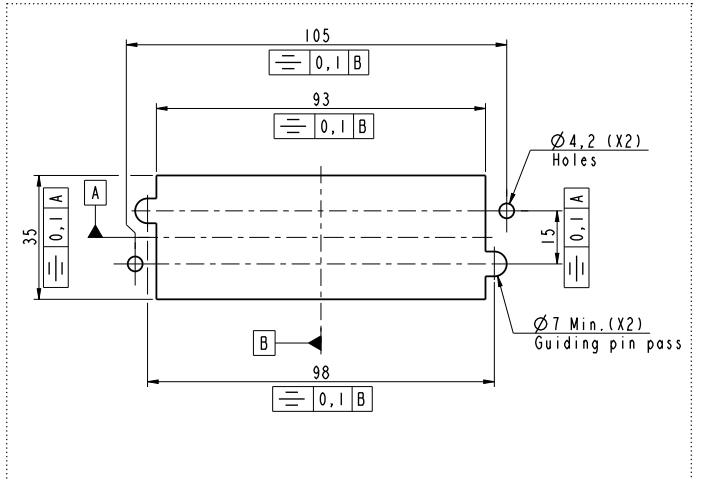
Example arrangement 337 & 237.

External dimension

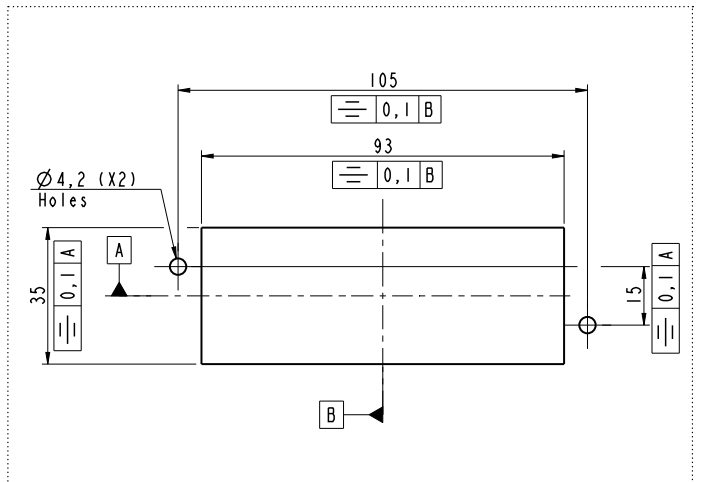
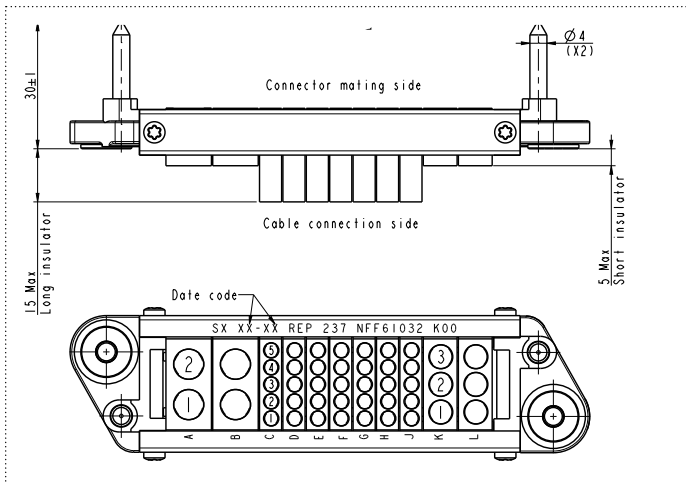


RECEPTACLE

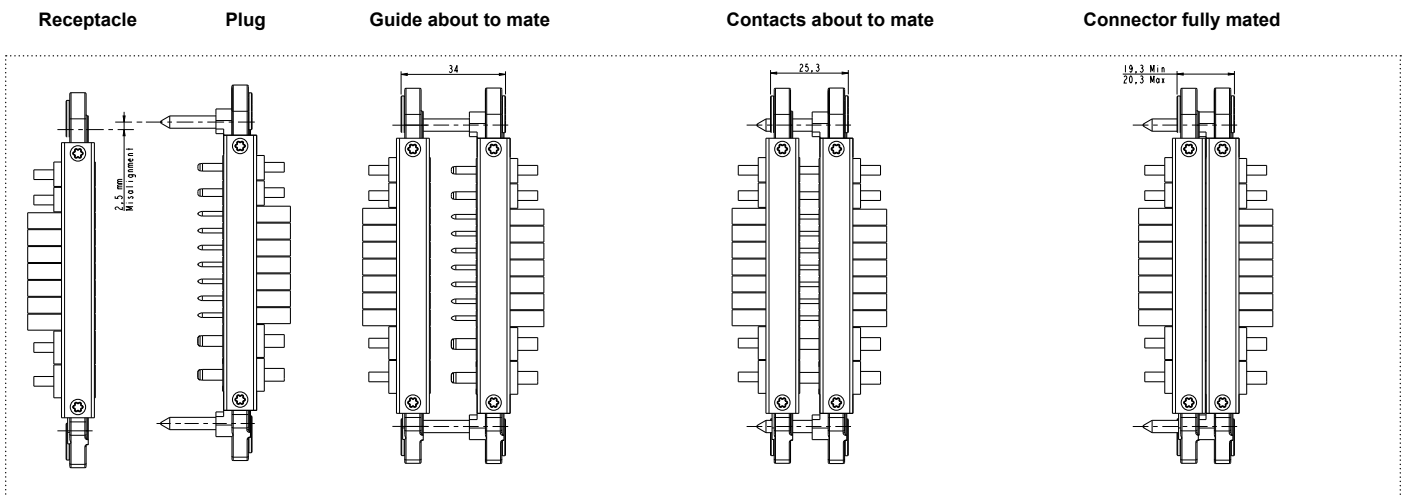
Panel cutout



PLUG



MATING SEQUENCE



All dimensions are in mm

Due to technical modifications, all information provided is subject to change without prior notice
Designed by Amphenol Socapex

HOW TO ORDER - RFM STANDARD

Nota:

Modules cannot be delivered separately. Connectors delivered without contacts, see page 21.

1.	2.	3.	4.	5.
Series	Connector type	Representation	Layout	Housing material
RFM	E	REP	302	

1. Series name
RFM

2. Connector type

E	Receptacle
F	Plug

3. Representation
REP

4. Layout – Choose from column 1 to 4

PLUG (F)		RECEPTACLE (E)		5CTS module (Ø 1.5 mm)	3CTS module (Ø2.5 mm)	2CTS module (Ø3.5 mm)
SHORT 1	LONG* 2	SHORT 3	LONG* 4			
2	202	102	302	14		
3	203	103	303	12		1
4	204	104	304	2	4	3
5	205	105	305	3	6	1
6	206	106	306	1	6	2
7	207	107	307	8	4	
8	208	108	308	2	8	
9	209	109	309	11	2	
10	210	110	310	5	6	
11	211	111	311	8	4	
12	212	112	312	11	2	
13	213	113	313	7	2	2
14	214	114	314		8	1
15	215	115	315	4		5
16	216	116	316	8	4	
17	217	117	317	5	6	
18	218	118	318			7
19	219	119	319	3	6	1
20	220	120	320	11	2	
21	221	121	321		4	4
22	222	122	322	2	8	
23	223	123	323	11	2	
24	224	124	324	3	2	4
25	225	125	325	4	4	2
26	226	126	326	3	6	1
27	227	127	327	1	6	2
28	228	128	328		8	1
29	229	129	329	2	8	
30	230	130	330	6	4	1

*5 contacts modules (Ø1.5 mm contacts) only are longer

5. Housing material

BLANK	GREY LEXAN
K00	BLACK LEXAN

4. Layout – Choose from column 1 to 4

PLUG (F)		RECEPTACLE (E)		5CTS module (Ø 1.5 mm)	3CTS module (Ø2.5 mm)	2CTS module (Ø3.5 mm)
SHORT 1	LONG* 2	SHORT 3	LONG* 4			
32	232	132	332	10		2
33	233	133	333	6		4
34	234	134	334	9	2	1
35	235	135	335	8	4	
36	236	136	336	7	2	2
37	237	137	337	7	2	2
38	238	138	338	8	4	
39	239	139	339	1	2	5
40	240	140	340	8	4	
41	241	141	341	4		5
42	242	142	342	9	2	1
43	243	143	343	5	6	
44	244	144	344		8	1
45	245	145	345	8	4	
46	246	146	346	12		1
47	247	147	347	10		2

CONTACTS - RFM STANDARD

Nota:

All connectors are delivered without contacts. Contacts must be ordered separately.



Pin contacts

Designation	P/N	Current	Admissible Section	Termination
Pin Contact Ø 1,5 mm	30526	8A	0,34 to 1,5 mm ² S1 S2 AWG 16-22	Crimp
Pin Contact Ø 2,5 mm	30517	15A	1,34 to 2 mm ² S4 AWG 14-16	
Pin Contact Ø 3,5 mm	30518	20A	1,34 to 2 mm ² S4 AWG 14-16	
	30532	20A	1,91 to 2,5 mm ² AWG 14-16	
	30533	60A	4 to 10 mm ² AWG 8-10	



Socket contacts

Designation	P/N	Current	Admissible Section	Termination
Pin Contact Ø 1,5 mm*	30521	8A	0,34 to 1,5 mm ² S1 S2 AWG 16-22	Crimp
Pin Contact Ø 2,5 mm	30519	15A	1,34 to 2 mm ² S4 AWG 14-16	
Pin Contact Ø 3,5 mm	30520	20A	1,34 to 2 mm ² S4 AWG 14-16	
	30534	60A	4 to 10 mm ² AWG 8-10	

* Socket Contacts Ø 1,5 mm are equipped with Hyperboloid technology which provide the best performances in harsher environments.

TOOLS - RFM STANDARD

Crimping tool

	Plier	Selector position	Gauge AWG	Locator	Color code
Contacts Ø1,5 mm 30521 30526	OCETA FT. 8	3 to 6	22 to 16	OCETA SH 463	RED
	COJACK TGV 101			COJACK TGV 201	
Contacts Ø2,5 mm 30517 30519	OCETA FT. 8	6 to 7	16 to 14	OCETA SH 463	BLUE
	COJACK TGV 101			COJACK TGV 201	
Contacts Ø3,5 mm 30520 30518 30532	OCETA M 317	2 to 3	16 to 14	OCETA TP 805	-
	COJACK TGV 515			COJACK TGV 503	-
Contacts Ø3,5 mm 30533 30534	OCETA M 317	5 to 8	10 to 8	OCETA TP 805	-
	COJACK TGV 515			COJACK TGV 503	-



Insertion / extraction tools

Nota:
In accordance with the NF F 61 032 standard, extraction tools have to be inserted on the front side of the connector for contact extraction on the rear side of the connector.

		Contact Ø 1.5	Contact Ø 2.5	Contact Ø 3.5
Insertion	Pin & Socket	DAK32*	DAK126-12A*	DAK87-8*
Extraction	Pin	DAK602*	DAK126-12A*	
	Socket		DAK382*	DAK397*

* DMC tools for sale in distribution.



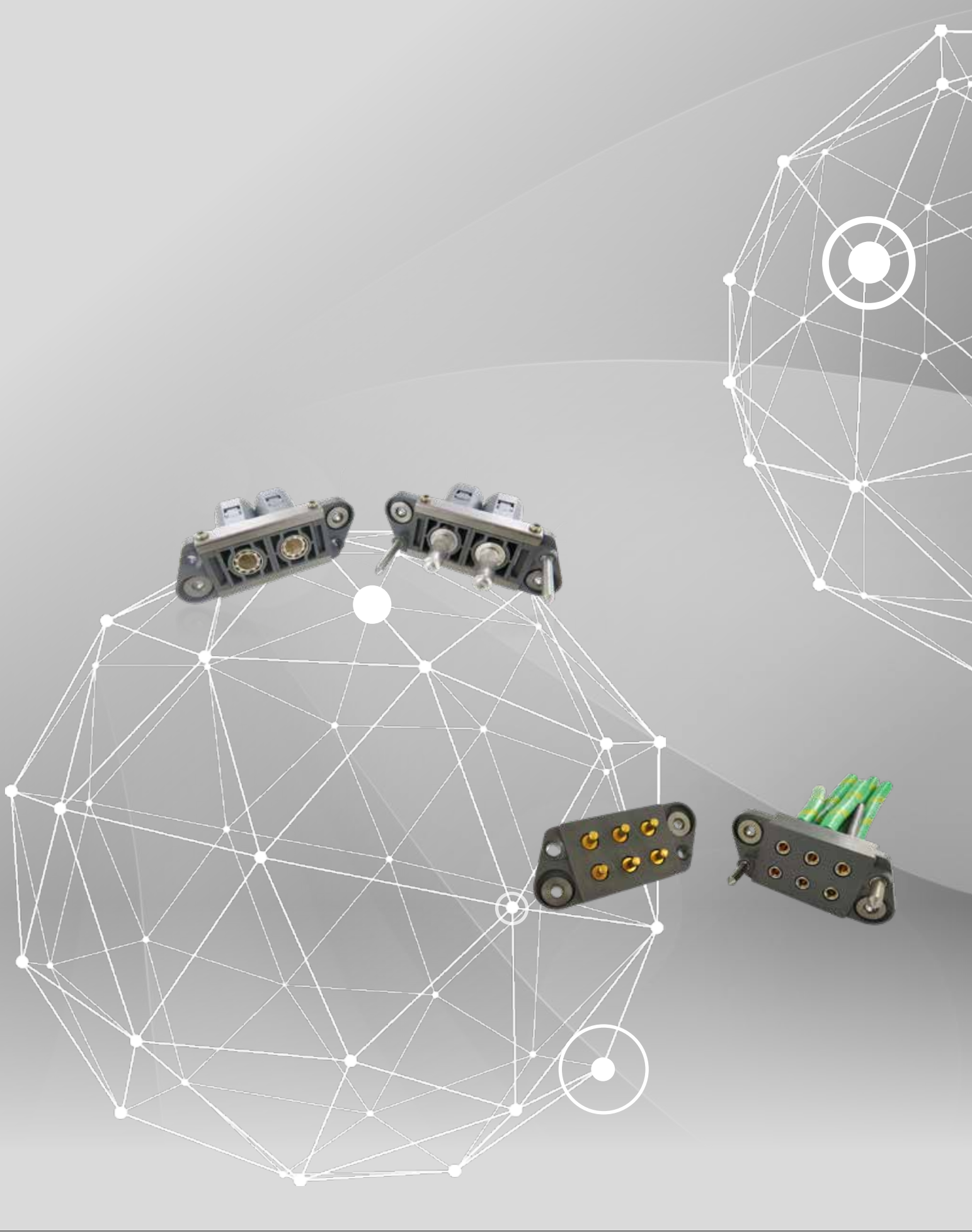
NOTES

Area with horizontal dotted lines for notes.

RFM Standard

RFM Power

RFM Quadrx



RFM POWER



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RFM Power	25
General characteristics	26
Monolithic 6 x 60 A	27
200 A Module	29
200 A Module Contacts	30

RFM Standard
RFM Power
RFM Quadtrax

THE RFM SERIES SERVES VARIOUS MARKETS, INCLUDING:



Industrial
 Railway Racks (cars batteries)
 Battery Racks
 Base stations

GENERAL CHARACTERISTICS - RFM

Blind mate modular floating rack with high voltage contacts



Benefits

- Blind mate, floating fixing.
- Low insertion forces.
- High mating / unmating cycles.
- Power contacts – Male & Female contacts can be mounted on both sides.
- Socket contacts 200 Amps are equipped with RADSOK® Technology (see features page 30).
- Modular 2 modules of one crimp contact and monolithic 6 cavities for removable crimp contacts .
- Meets NF F61-032 requirements: vibrations, salt spray, temperature.

	6 x 60 A Monolithic	2 x 200 A Module
MAIN ELECTRICAL VALUES		
Current (nom.)	60 A	200 A
Insulation resistance under 500 Vrms	>10 ³ MΩ	
Contact resistance	<2,5 mΩ	<0.5 mΩ
DVV: - Between contacts - Between contacts & ground	1500 Vrms 1600 Vrms	2600 Vrms 2600 Vrms
Insertion forces per contacts	≤6 N	≤32 N
Pin contact diameter	3.5 mm	8 mm
MAIN ENVIRONMENTALS CARACTERISTICS		
Temperature range	-55°C to +125°C	
Fire behavior (standard version in GREY LEXAN*)	EN 45545-2 HL1(R22) I2-F2 following NF F16-102	
Salt spray	96 hours following NFC 20711	
Chemical behavior	HCl 1N 5min; NaOH 1N 5min	



* For BLACK LEXAN, please consult us

MONOLITHIC 6 X 60 A - RFM POWER



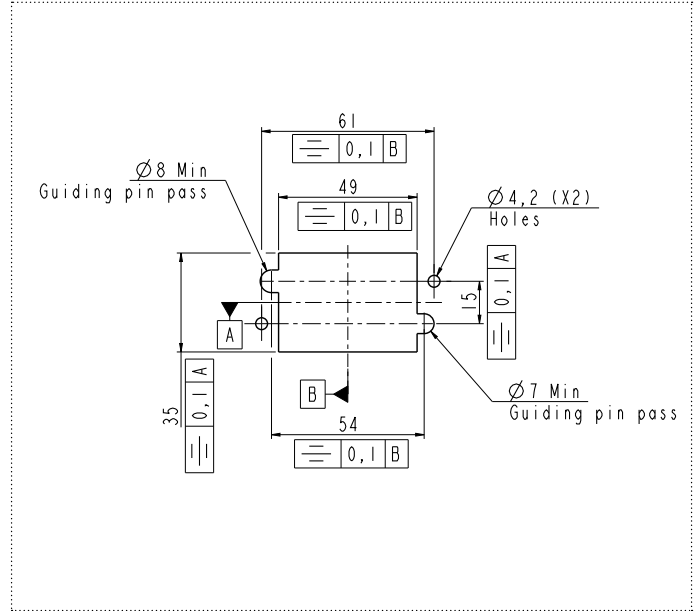
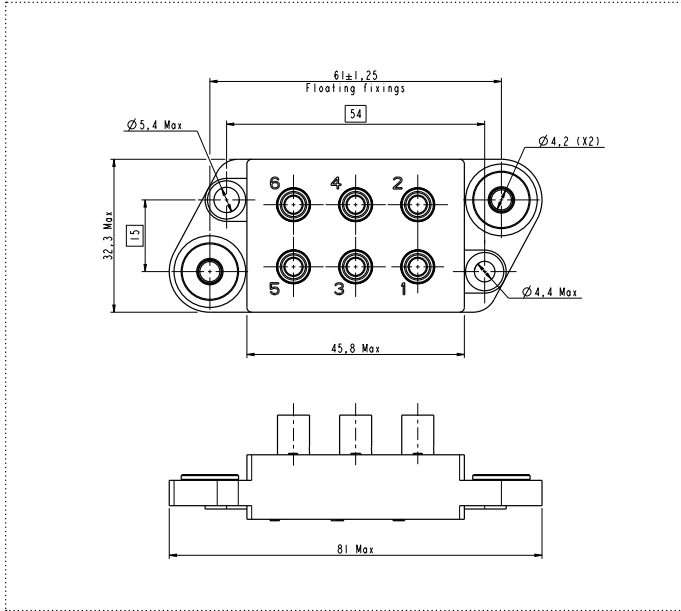
Nota:

Plug or receptacle can be equipped with pins or sockets, the contacts must be ordered separately.

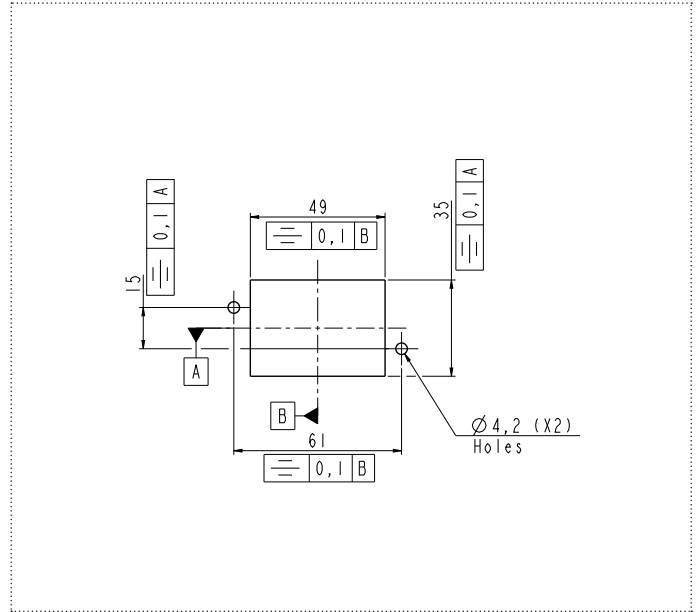
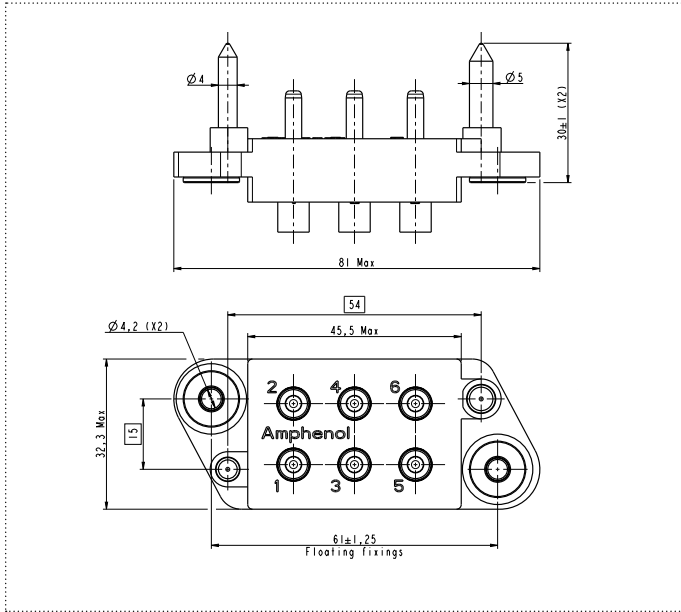
External dimension

Panel cutout

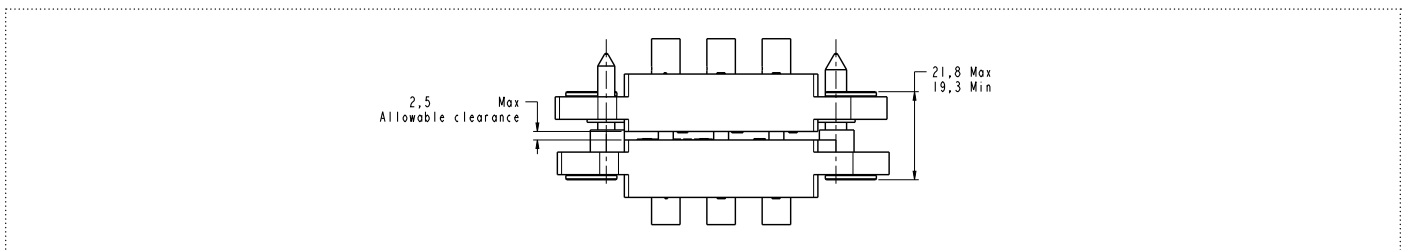
RECEPTACLE P/N 507688



PLUG P/N 507687



MATED CONNECTORS



All dimensions are in mm

Due to technical modifications, all information provided is subject to change without prior notice
Designed by Amphenol Socapex

MONOLITHIC 6 X 60 A - RFM POWER

Contacts

Designation	P/N	Current	Admissible Section	Termination
Pin Contact Ø 3,5 mm	30501	60A	13 mm ² AWG 6	Crimp
	30533		4 à 10 mm ² AWG 8-10	
Socket Contact Ø 3,5 mm	30502	60A	13 mm ² AWG 6	Crimp
	30534		4 à 10 mm ² AWG 8-10	

Tooling

- Crimping:

	Plier	Selector position	Gauge awg	Locator
Contacts Ø3,5 mm 30501 30502	OCETA M 317	6	6	OCETA TP 805
	COJACK TGV 515			COJACK TGV 503
Contacts Ø3,5 mm 30533 30534	OCETA M 317	5 to 8	10 to 8	OCETA TP 805
	COJACK TGV 515			COJACK TGV 503

Contact Ø 3.5 mm		
Insertion	Pin & Socket	DAK590*
Extraction	Pin	DAK126-12A*
	Socket	DAK397*

* DMC tools for sale in distribution



200 A MODULE - RFM POWER



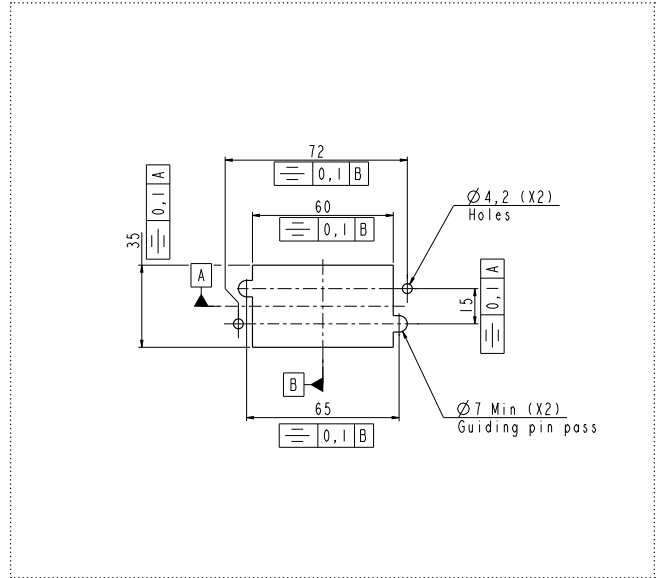
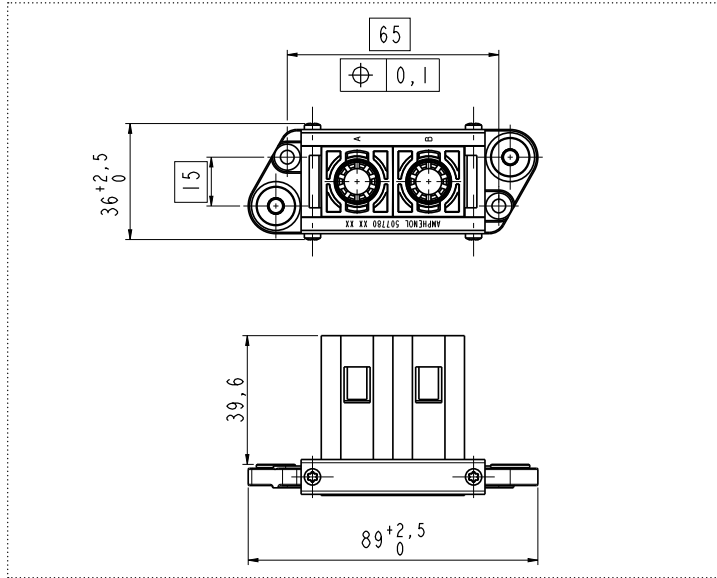
Nota:

This 200 A module can be used into standard RFM modular connectors.
 Plug to be equipped with pin & receptacle with sockets. Contacts must be ordered separately.

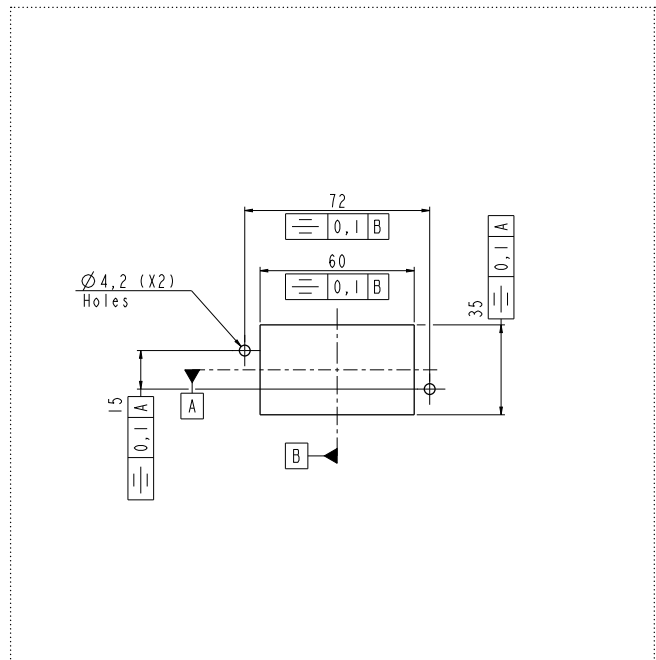
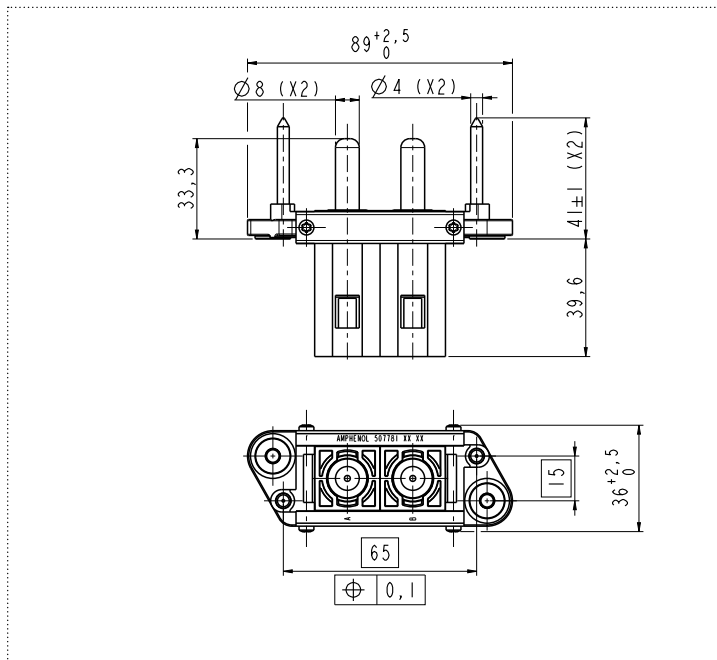
External dimension

RECEPTACLE P/N 507780

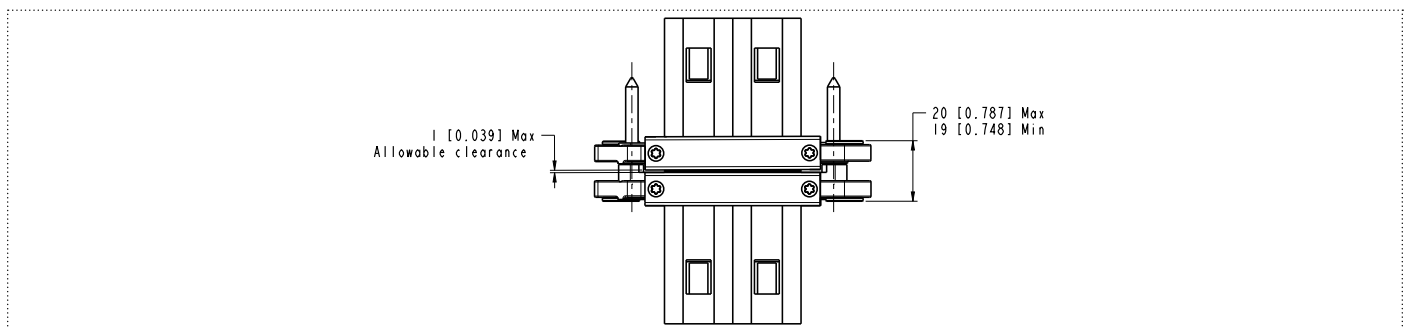
Panel cutout



PLUG P/N 507781



MATED CONNECTORS



All dimensions are in mm

200 A MODULE CONTACTS - RFM POWER

Contacts radsok®

P/N	Designation	Current	Admissible Section	Termination
30279	Pin contact Ø 8mm	200A	50 mm ² AWG 0	Crimp
30280	Socket contact Ø 8mm			



RADSOK® contacts features:

- Low contact engagement/separation forces.
 - Hyperbolic lamella socket contact.
- Low contact resistance.
 - Large interface area between socket & pin.
- High mating cycle durability.
 - Demonstrated survival of 20,000 mating cycles.



Tooling



- Crimping Hydraulic tool (pins and sockets contacts)
P/N: **809947**

- Crimping Dies (pins and sockets contacts)
P/N: **809948**

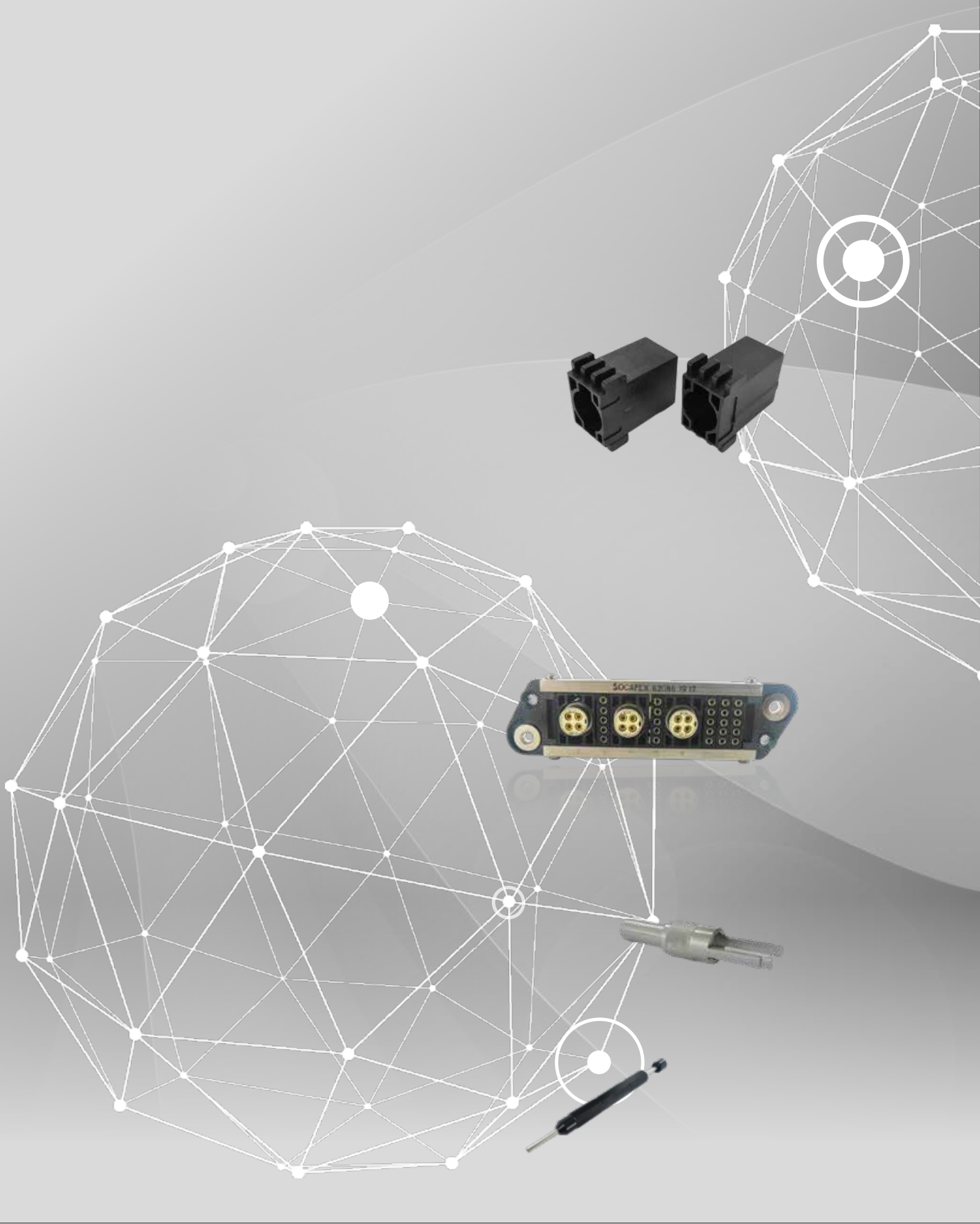


- Removal tool
P/N: **809982**

NOTES

Area with horizontal dotted lines for notes.

RFM Standard
RFM Power
RFM Quadrax



RFM QUADRAX



Table of contents

RFM Quadrax	34
General characteristics	34
Arrangements	35
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Contacts	37

THE RFM QUADRAX SERVES VARIOUS MARKETS, INCLUDING:



- Industrial**
- Railway Racks
- Shelters
- Modular equipment
- Automatic assembly machines

GENERAL CHARACTERISTICS - RFM QUADRAX

Blind mate modular floating rack connector
with Quadrax contacts for high speed applications.



Benefits

- Plugs and receptacles with floating fittings.
- Male & female signals contacts can be mounted on both sides.
- Low insertion forces.
- Customs available on demand.
- Meets NF F 61-032 requirements: vibrations, salt spray, temperature.

RFM Standard

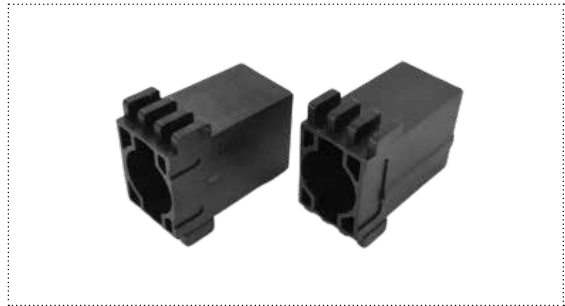
RFM Power

RFM Quadrax

MATERIALS	
Housing and modules	BLACK LEXAN
Lateral Rails	Nickel over aluminium
MAIN ENVIRONMENTALS CHARACTERISTICS	
Temperature range	-55°C to +125°C
Fire behavior (standard version in BLACK LEXAN*)	EN45545-2 HL3 (R22) I3-F1 NF F 16102
Salt spray	96 hours following NFC 20711
Chemical behavior	HCl 1N 5min; NaOH 1N 5min

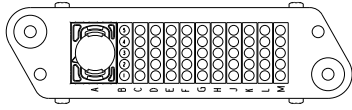
* For grey lexan, please consult us.

MAIN ELECTRICAL VALUES		Quadrax module
Pin diameter		Ø1.6 mm (inner contact)
Current (nom.)		13 A
Insulation resistance under 500 Vrms		≥ 2000 MΩ
Contact resistance		≤ 2.5 mΩ
DWV		AC 1500 Vrms
Attenuation		<0.4dB@100MHz
Crosstalk		>43dB@100MHz

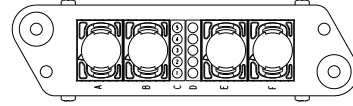


ARRANGEMENTS - RFM QUADRAX

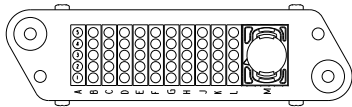
View: receptacle, connection side



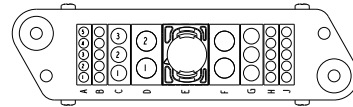
	P/N	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5	Nb Quadrax Cts
Plug	508600	55	-	-	1
Receptacle	508601				



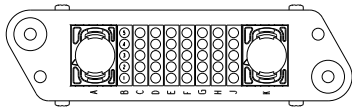
	P/N	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5	Nb Quadrax Cts
Plug	508608	10	-	-	4
Receptacle	508609				



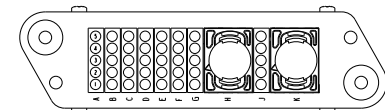
	P/N	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5	Nb Quadrax Cts
Plug	508602	55	-	-	1
Receptacle	508603				



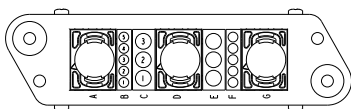
	P/N	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5	Nb Quadrax Cts
Plug	508610	20	6	4	1
Receptacle	508611				



	P/N	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5	Nb Quadrax Cts
Plug	508604	40	-	-	2
Receptacle	508605				



	P/N	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5	Nb Quadrax Cts
Plug	508612	40	-	-	2
Receptacle	508613				



	P/N	Nb Cts Ø1.5	Nb Cts Ø 2.5	Nb Cts Ø 3.5	Nb Quadrax Cts
Plug	508606	10	6	-	3
Receptacle	508607				

Signal contacts can be equipped on plug or receptacle.

Quadrax contacts:

- Male on plug only
- Female on receptacle only

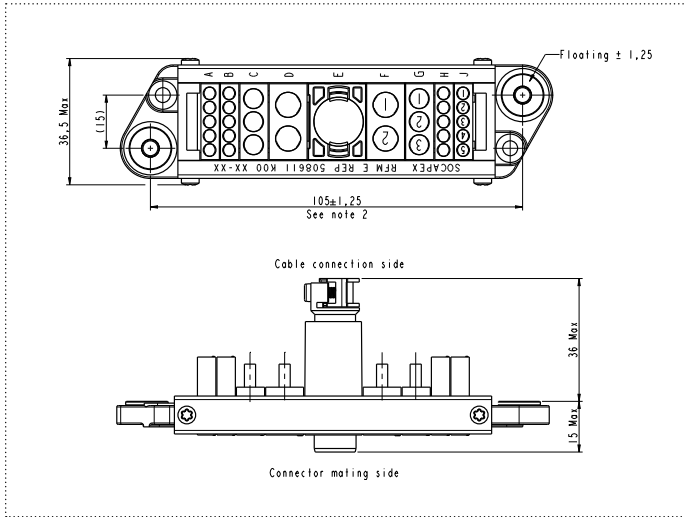
5 contacts modules (Ø1,5 mm contacts) are only available in long version.

If other configuration needed, please consult us.

EXTERNAL DIMENSIONS - RFM QUADRAX

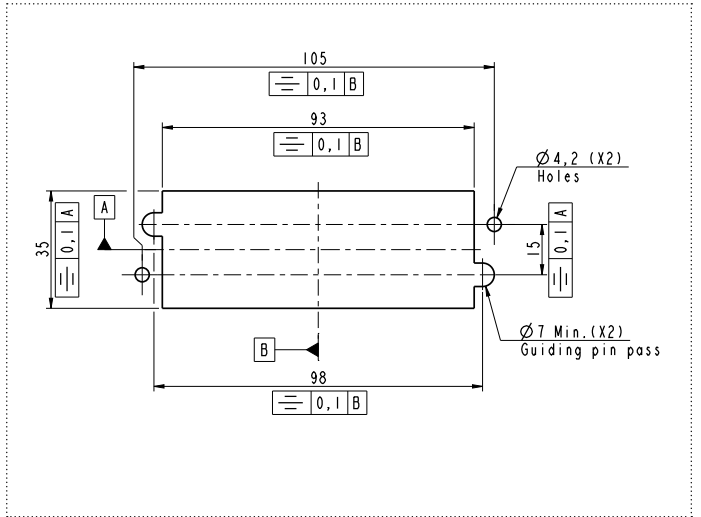
Nota:
Example arrangement 508611 - 508610

External dimension

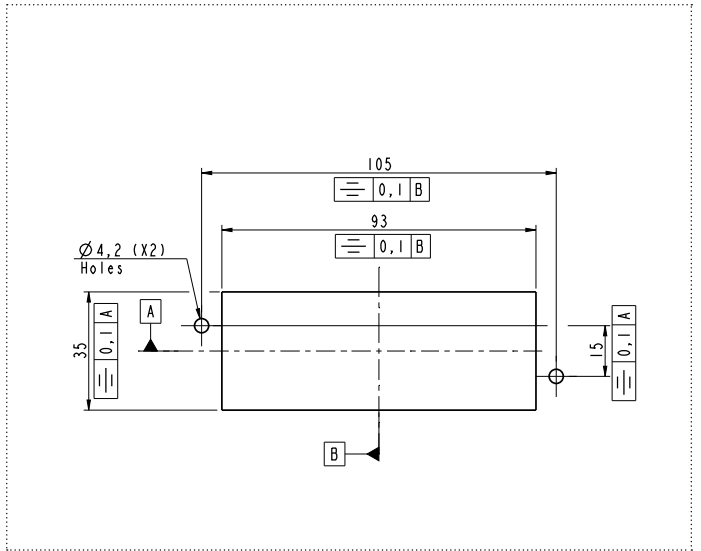
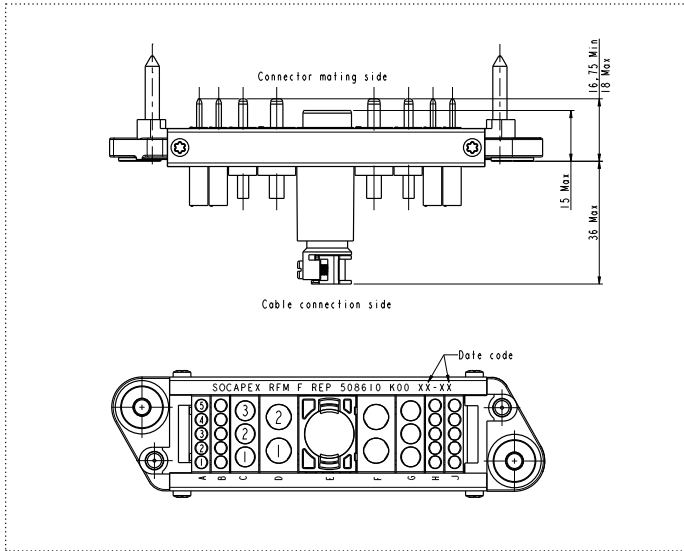


Panel cutout

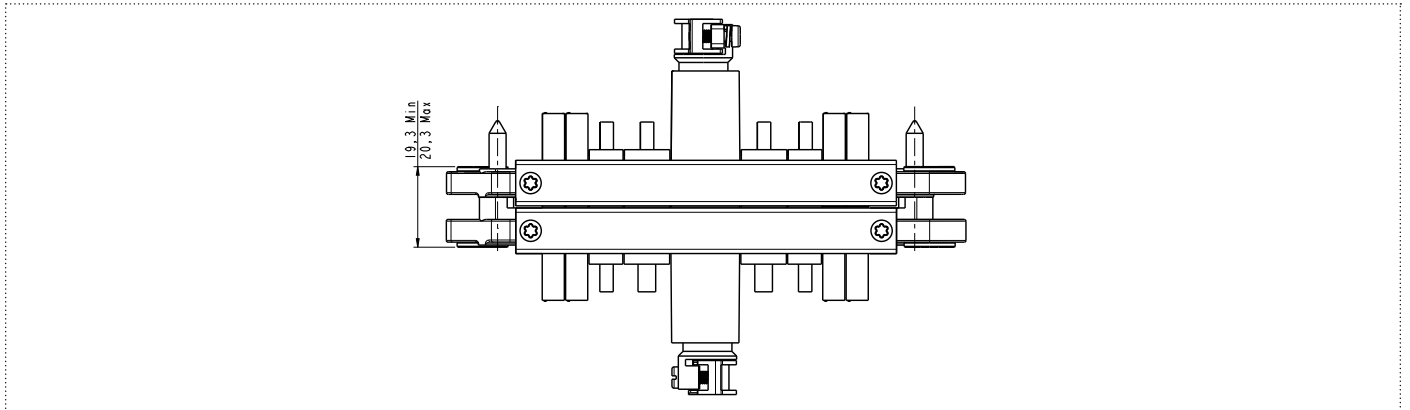
RECEPTACLE



PLUG



MATED CONNECTORS



All dimensions are in mm

CONTACTS - RFM QUADRAX



Quadrax contact

Body		Inner contact		
P/N	Designation	Admissible section 0.13-0.3mm ²	Admissible section 0.3-0.6mm ²	Admissible section 0.6-1.5mm ²
612089	Male body (with inner pin contacts)	612083	612085	612087
612090	Female body (with inner socket contacts)	612084	612086	612088

Insertion / extraction tools



Extraction tool – Quadrax contact
RFM ODE Q



Extraction tool – Inner contacts
RFM ODE Q4

Crimping tools



Crimping tool
M22520/1-01



Positioner *
DMC UH2-5



For Quadrax contact crimping method, see datasheet DOC-001022-ANG.

* For sale in distribution

BUILD YOUR OWN - RFM CUSTOM POSSIBILITES

Choose the better options to fit your needs.

- Meets NF F 61-032 requirements: vibrations, salt spray, temperature
- 2 housing materials

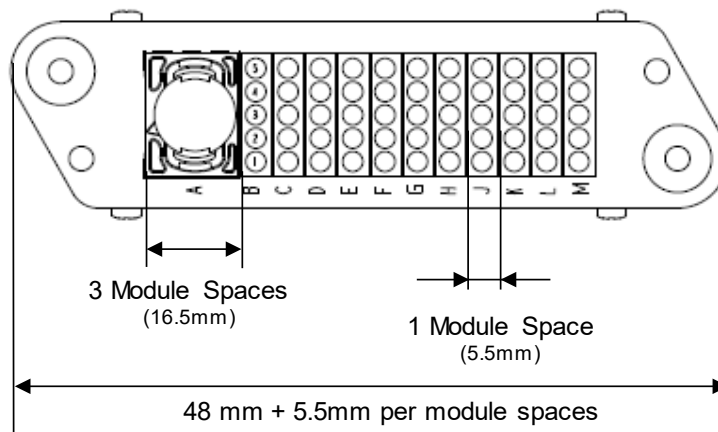
	Grey lexan	Black lexan
Product		
Fire Behaviour (EN45545-2)	HL1 (R22)	HL3 (R22)

- Several configurations possibilities: up to 14 module spaces

Build the RFM following your needs.

Add the appropriate modules you need, using up to the 14 module spaces available.

Receptacle view (cable connection side)



	Modules				
	5 contacts	3 contacts	2 contacts	Quadrax	200 A
Contact diameter	Ø1.5 mm	Ø2.5 mm	Ø3.5 mm	Ø1.6 mm (inner contact)	Ø8 mm
Current (nom.)	8 A	15 A	60 A	13 A	200 A
Module space	1	1.5	2	3	4
Contact mating forces	2 N	4 N	6 N	35 N	32 N
GREY LEXAN	✓	✓	✓	X	✓
BLACK LEXAN	✓	✓	✓	✓	✓

For others contact types, LEXAN material or styles please consult Amphenol SOCAPEX.

ABOUT AMPHENOL

Founded in 1932, **Amphenol** is one of the largest manufacturers of interconnect products in the world. The company designs, manufactures, and markets electrical, electronic, and fiber optic connectors, interconnect systems, and coaxial and specialty cables.

Amphenol has a diversified presence as a leader in high growth areas of the interconnect industry and provides solutions for customers in the automotive, broadband, industrial, information technology and data communications, military and aerospace, mobile devices, and mobile networks markets.

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