HMS31-KY Reverse-Bayonet Crimp Connectors for Rail Vehicles, IP67

Rail vehicles · NF F 61-030 · IP67 · crimp contacts



Coupling	Reverse bayonet
Shell sizes	10SL to 40
Insert arrangements	90
Current rating	13–46 A
Temperature	–55 to +125 °C
Protection	IP67

Key features

- Built to MIL-DTL-5015 (type) and NF F 61-030 for rail vehicles
- Reverse-bayonet quick coupling; crimp contacts
- IP67; NF F 16-102 fire behavior
- Resistant to petrol, mineral oil, acids and alkalis
- 90 standard insert arrangements, shells 10SL to 40
- Full range of straight and 90° backshells: cable clamp, conduit, sealed, shielded and PG thread
- Olive-drab or black zinc finish

Specifications

Electrical

Parameter	Value	Condition
Test voltage	1000–7000 V	By service rating — see service ratings
Insulation resistance	≥ 5000 MΩ	

Mechanical and environmental

Parameter	Value	Condition
Ingress protection	IP67	
Fire	NF F 16-102	
Fluid resistance	Petrol, mineral oil, acids, alkalis	
Salt spray	96 h	Zinc finish
Humidity	5–95 %	
Dry heat	+100 °C, 96 h	
Operating temperature	–55 to +125 °C	
Durability	500 mating cycles	
Vibration	Sine 5–150 Hz, 60 m/s²	
Shock	50 m/s²	

Versions

Series code	Version	Notes
HMS3106...KY	Straight plug	
HMS3102...KY	Box-mount square-flange receptacle	
FJ...	Backshells: RS, CS, SS, KS, TS, JS, WS, PS, US (straight); CE, SE, KE, TE, JE, BE (90°)	

Contact sizes and current ratings

Contact size	Engaging diameter	Contact resistance	Current rating	Contact retention
16	1.6 mm	≤ 2.5 mΩ	13 A	89 N
12	2.4 mm	≤ 1.3 mΩ	23 A	111 N
8	3.6 mm	≤ 0.9 mΩ	46 A	133 N

Service ratings

Each insert arrangement has a service rating that sets its working and test voltage.

Service rating	Test voltage	Working voltage DC	Working voltage AC
Instrument	1000 V	250 V	200 V
A	2000 V	700 V	500 V
D	2800 V	1250 V	900 V
E	3500 V	1750 V	1250 V
B	4500 V	2450 V	1750 V
C	7000 V	4200 V	3000 V

How to order

HMS [type] [finish] KY [shell]-[arrangement] [contact] [key]

Example: **HMS3106GKY22-14PW** — Straight plug, olive-drab, reverse bayonet crimp, shell 22, arrangement 22-14, pin contacts, key W

Code segment	Options
Type	**3106** Straight plug
Type	**3102** Box-mount receptacle
Finish	**G / B** Olive drab / black
Shell	**10SL 14S 16S 18 20 22 24 28 32 36 40** Shell size
Contact	**P / S** Pin / socket
Key	**N W X Y Z** Key positions

Service rating column shows the rating of the main contacts; some layouts have a different rating between specific contacts — shown on the drawing.

Insert arrangements

Arrangement	Contacts	Contact sizes	Service rating
10SL-3	3	3 × size 16	Instrument
14S-2	4	4 × size 16	Instrument
14S-7	3	3 × size 16	A
16S-1	7	7 × size 16	A
16S-3	1	1 × size 16	B
16S-4	2	2 × size 16	D
16S-5	3	3 × size 16	A
16S-8	5	5 × size 16	A
18-1	10	10 × size 16	Instrument
18-4	4	4 × size 16	D
18-5	3	1 × size 16, 2 × size 12	D
18-8	8	7 × size 16, 1 × size 12	A
18-10	4	4 × size 12	D
18-11	5	5 × size 12	A
18-12	6	6 × size 16	A
18-15	4	4 × size 12	A
18-16	1	1 × size 12	C
18-19	10	10 × size 16	A
20-4	4	4 × size 12	D
20-7	8	8 × size 16	A
20-8	6	4 × size 16, 2 × size 8	Instrument
20-9	8	7 × size 16, 1 × size 12	A
20-14	5	3 × size 12, 2 × size 8	A
20-16	9	7 × size 16, 2 × size 12	A
20-17	6	1 × size 16, 5 × size 12	A
20-18	9	6 × size 16, 3 × size 12	A
20-21	9	8 × size 16, 1 × size 12	A
20-22	6	3 × size 16, 3 × size 8	A
20-24	4	2 × size 16, 2 × size 8	A
20-27	14	14 × size 16	A
22-2	3	3 × size 8	D
22-5	6	4 × size 16, 2 × size 12	D
22-14	19	19 × size 16	A
22-15	6	1 × size 16, 5 × size 12	A
22-17	9	8 × size 16, 1 × size 12	A
22-18	8	8 × size 16	D

Arrangement	Contacts	Contact sizes	Service rating
22-19	14	14 × size 16	A
22-23	8	8 × size 12	A
22-27	9	8 × size 16, 1 × size 8	A
22-36	8	8 × size 12	A
24-2	7	7 × size 12	D
24-6	8	8 × size 12	A
24-7	16	14 × size 16, 2 × size 12	A
24-10	7	7 × size 8	C
24-11	9	6 × size 12, 3 × size 8	A
24-20	11	9 × size 16, 2 × size 12	D
24-21	10	9 × size 16, 1 × size 8	D
24-22	4	4 × size 8	D
24-27	7	7 × size 16	E
24-28	24	24 × size 16	Instrument
24-80	23	23 × size 16	Instrument
20-29	17	17 × size 16	A
20-33	11	11 × size 16	A
22-9	3	3 × size 12	E
22-10	4	4 × size 16	E
22-11	2	2 × size 16	B
22-12	5	3 × size 16, 2 × size 8	D
22-22	4	4 × size 8	A
24-16	7	3 × size 16, 3 × size 12, 1 × size 8	A
28-1	9	6 × size 12, 3 × size 8	A
28-9	12	6 × size 16, 6 × size 12	D
28-11	22	18 × size 16, 4 × size 12	A
28-18	12	12 × size 16	C
28-19	10	6 × size 16, 4 × size 12	B
28-20	14	4 × size 16, 10 × size 12	A
28-21	37	37 × size 16	A
32-7	35	28 × size 16, 7 × size 12	Instrument
32-13	23	18 × size 16, 5 × size 12	D
28-2	14	12 × size 16, 2 × size 12	D
28-3	3	3 × size 8	E
28-12	26	26 × size 16	A
28-15	35	35 × size 16	A
28-17	15	15 × size 16	A

Arrangement	Contacts	Contact sizes	Service rating
28-8	12	10 × size 16, 2 × size 12	A
32-8	30	24 × size 16, 6 × size 12	A
32-73	46	46 × size 16	A
32-76	19	19 × size 12	A
36-52	52	52 × size 16	A
40-1	30	24 × size 16, 6 × size 12	D
40-2	23	23 × size 16	B
40-35	35	35 × size 12	D
36-66	56	52 × size 16, 4 × size 12	A
40-9	47	24 × size 16, 22 × size 12, 1 × size 8	A
40-56	85	85 × size 16	A
40-62	60	60 × size 16	A
36-3	6	3 × size 12, 3 × size 0	D
36-7	47	40 × size 16, 7 × size 12	A
36-8	47	46 × size 16, 1 × size 12	A
36-10	48	48 × size 16	A
36-15	35	35 × size 16	A

Standards

- **MIL-DTL-5015 (type)** — Insert arrangements and service ratings.
- **NF F 61-030** — French standard for rail vehicle connectors.
- **NF F 16-102** — Fire behavior of materials for rail vehicles.

Request a quote or drawing: https://sinoxh.com/request-a-quote/?product=HMS31-KY