

D.C. – A.C. Plug-connector

2- or 3-pole with earth pin
Built-in Rectifier

12

Product group

May 1993

Type

Z KB X Z KB G Z KC X Z KC G

D.C. – Type Z KB X

2- or 3-pole and earth
DIN-43650-AF

A.C. – Type Z KB G

2-pole and earth with rectifier
DIN-43650-AF

D.C. – Type Z KC X

2-pole and earth

A.C. – Type Z KC G

2-pole and earth with rectifier

- Supply connection upto 300 V D.C./250 V A.C.
- Z KB G and Z KC G with built-in silicon full-wave bridge rectifier
Mains voltage peak damping metallic oxide
Maximum voltage 240 V 50/60 Hz supply
- Cable connection with sealing gland
 - Type Z KB X or Z KB G in 4 settings (x 90°)
 - Type Z KC X or Z KC G in 2 settings (x 180°)
 - Terminals for connectors max. 1.5 mm²
 - Central screw fixing, M 3
- Leakage path and air gap in accordance with VDE-0110 insulation group C
- Protection classification – DIN VDE 0470/60529 – IP 65 (mounted with sealing gasket)
- Ambient temperature max. 90° C (With special seal 125° C)
- Z KB X and Z KB G, Z KC X and Z KC G are interchangeable
- Over-voltage rectifier plug available (list S 114)
- Connection plugs for pin bases on MSM
D.C. and A.C.
Solenoids, shotbolts, magnets, vibrators, clutches, brakes



Fig. 1
Type Z KB X 211 B 01
Z KB X 311 B 01

Type Z KB G 211 A 02
with rectifier



Fig. 2
Type Z KC X 209 B 01

Type Z KC G 209 B 01
with rectifier

Performance tables for plug-connector Z KB X, Z KB G, Z KC X, Z KC G

Plug-connectors must **not** be connected or disconnected, when energised – (DIN VDE-0627).

Temperature resistance of plug-connector Z KB X and Z KB G – 25 up to + 90° C
with special seal – 25 up to + 125° C

Temperature resistance of plug-connector Z KC X and Z KC G – 25 up to + 90° C
with special seal – 25 up to + 125° C

Type	plug contacts			cable-gland size ²⁾	cable-diam. (mm) ²⁾	max. cross section of conductor wire	rectifier input ~ 220 V max. ~ 240 V	colour ³⁾	dim. Fig.
	number	constant current (A)	rated Volt. (V)						
Z KB X 211 B 01 311 B 01	2+ Earth	20 ¹⁾	~ 250 --- 300	PG 11	4,5 – 11	3 x 1,5 mm ²	–	black	9
	3+ Earth					4 x 1,5 mm ²			
Z KB G 211 A 02	2+ Earth	2 ⁴⁾	–	PG 11	4,5 – 11	3 x 1,5 m ²	output --- 196 V	black	9
Z KC X 209 B 01	2+ Earth	16 ¹⁾	~ 250 --- 300	PG 9	4,5 – 7	3 x 1,5 mm ²	–	black	10
Z KC G 209 B 01	2+ Earth	2 ⁴⁾	–	PG 9	4,5 – 7	3 x 1,5 mm ²	output --- 196 V	black	10

Notes:

¹⁾ Current rating

Table lists current with connector cross section 1,5 mm² and maximum ambient temperature: Z KB X – 75° C ; Z KC X – 45° C
Current at higher temperatures are given in fig. 3 (Z KB X) and fig. 4 (Z KC X).

²⁾ Cable diameter

Varying cable diameters may be accommodated by modification of the cable gland rubber sealing ring.

³⁾ Colour

The standard colour is black, but can be provided in grey.

⁴⁾ Plug rectifier current

Table lists current for maximum ambient temperature of 30° C and currents at higher temperatures are given in fig. 6 (Z KB G) and fig. 7 (Z KC G).

Plug rectifier – Z KB G – Z KC G

The supply circuit should be arranged to avoid voltage peaks, and if large capacitance or inductance is in circuit the solenoid should be appropriately protected by chokes etc.

Load diagram for plug Z KB X, Z KC X

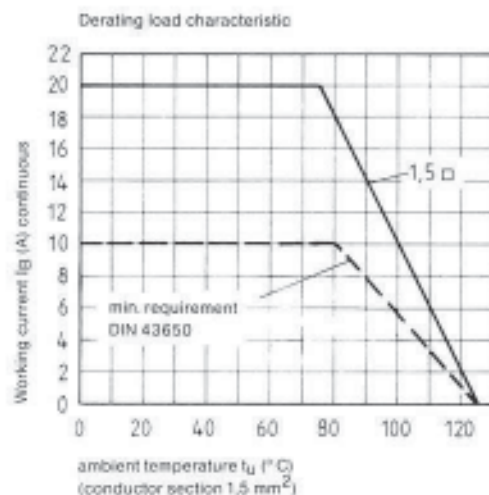


Fig. 3
Derating load characteristic for
plug-connector Z KB X
Temperature/current

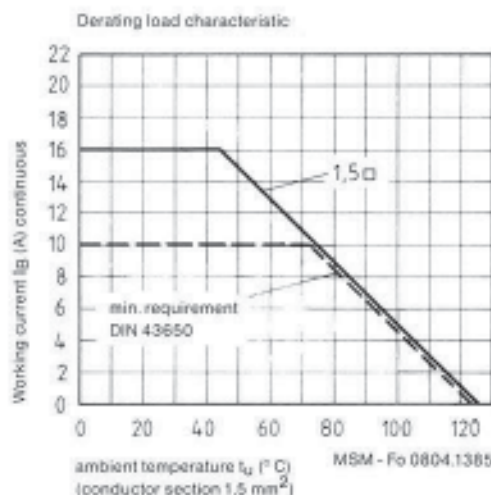


Fig. 4
Derating load characteristic for
plug-connector Z KC X
Temperature/current

Performance and dimension tables for plug-connector Z KB X, Z KB G, Z KC X, Z KC G

Load and connection diagram for rectifier plug Z KB G, Z KC G

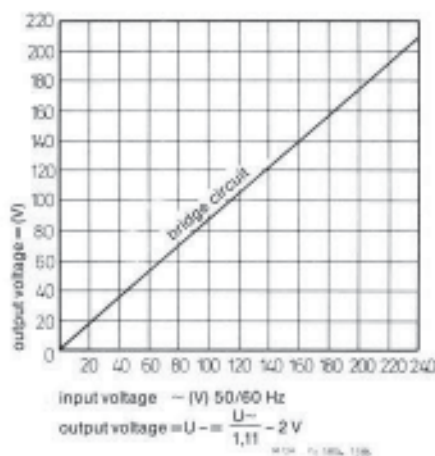


Fig. 5
Output/input voltage
for plug-connector with
rectifier Type Z KB G 211 A 02
Type Z KC G 209 B 01

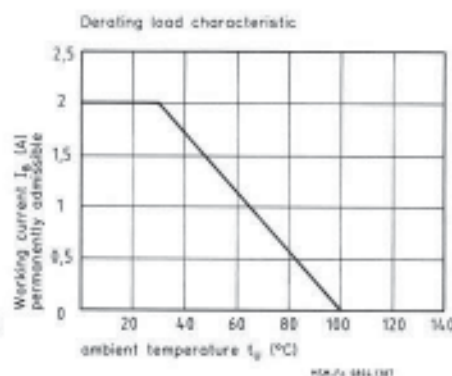


Fig. 6
Derating load characteristic
ED 100 % for plug-connector with
rectifier Type Z KB G 211 A 02
Temperature/current

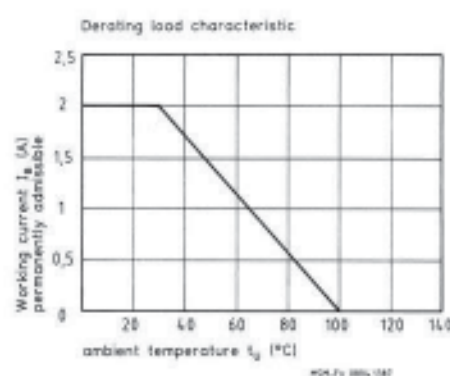


Fig. 7
Derating load characteristic
ED 100 % for plug-connector with
rectifier Type Z KC G 209 B 01
Temperature/current

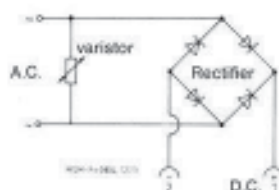


Fig. 8
Connections
for plug
rectifier
Type Z KB G 211 A 02
Type Z KC G 209 B 01

Conversion factors

1 N = 0.102 kp ≈ 0.1 kg
1 kg = 2.2 lb
1 mm = 0.039 in
1 Ncm = 0.086 in lb

Dimensions (mm)

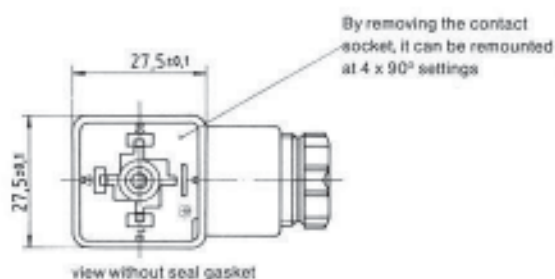


Fig. 9
Type Z KB X 211 B 01
Z KB X 311 B 01
Z KB G 211 A 02

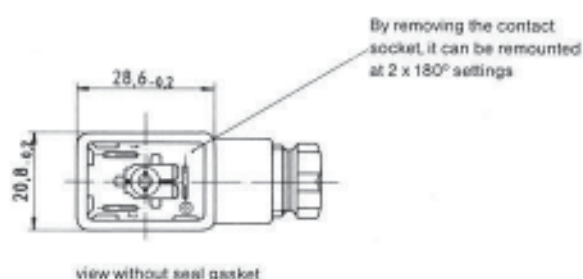
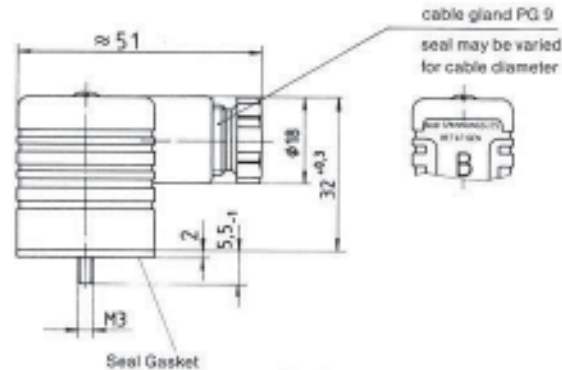
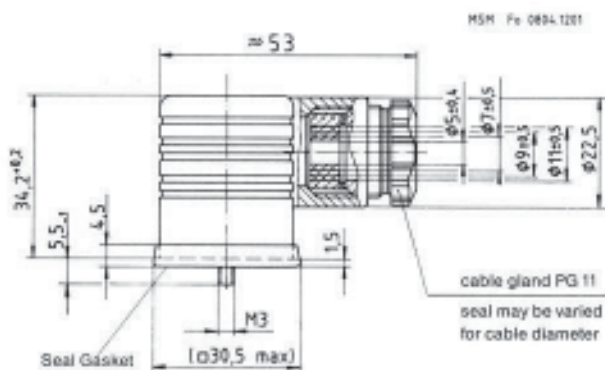


Fig. 10
Type Z KC X 209 B 01
Z KC G 209 B 01



Classification for plug connectors Z KB X, Z KB G, Z KC X, Z KC G

Type Code

	Z	KB	X	2	11	B 01
equipment group						
basic construction						
modifications						
number of contacts						
cable gland						
design number						

Order Example

- Type Z KB X 211 B 01
2 pole, earth, gland Pg. 11
- Type Z KB X 311 B 01
3 pole, earth, gland Pg. 11
- Type Z KB G 211 A 02
2 pole, earth, gland Pg. 11
rectifier, full-wave, max. 240 V 50/60 Hz
- Type Z KC X 209 B 01
2 pole, earth, gland Pg. 9
- Type Z KC G 209 X B 01
2 pole, earth, gland Pg. 9
rectifier, full-wave, max. 240 V 50/60 Hz

Special

Plugs are available to meet various requirements
such as, high temperature
crimp or other connections
different cable size
knurled nut fixing
indicator lights
built-in electronics
over voltage

Plug bases are available