


Feb.1.2026 Copyright 2026 HIROSE ELECTRIC CO., LTD. All Rights Reserved.
In case of consideration for using Automotive equipment / device which demand high reliability, kindly contact our sales window correspondents.

Rev.	Count	Description of rev.	BY	CHKD	Date	Rev.	Count	Description of rev.	BY	CHKD	Date
△0	-	Released(RE-2-2859)	OSW	LHJ	25.09.12						
Applicable standard		Universal Serial Bus Type-C Connectors and Cable Assemblies Compliance Document Revision 2.1b									
Rating	Voltage	48V AC/DC									
	Current	1.25A max. for each power pin (i.e., A1, A4, A9, A12, B1, B4, B5, B9, B12) 0.25A max. for the others.									
Operating condition		-40°C to +105°C(Including temp. rise), 95% R.H. max.(Non-condensing)									
Storage condition		-10°C to +60°C(With packing), 15% to 70% R.H.									

SPECIFICATIONS					
No	TEST ITEM	TEST METHOD	TEST REQUIREMENT	QT	AT
CONSTRUCTION					
1	General examination	EIA 364-18 Visual inspection	No evidence of physical damage.	O	O
ELECTRICAL CHARACTERISTICS					
2	Low level contact resistance	EIA 364-23 Measure at 20mV max open circuit at 100mA max. (DC or 1000Hz) 4-wire measurement is required and the resistance of PCB termination shall be deducted from the reading.	Initial : 40mΩ max After test : 50mΩ max	O	-
3	Dielectric withstanding voltage	EIA 364-20, Method B Measure with unmated condition. 100V AC RMS for 1 minute at sea level.	No disruptive discharge.	O	-
4	Insulation resistance	EIA 364-21 500V DC with unmated and mated condition.	100MΩ min	O	-
5	Contact current rating	EIA 364-70, Method B A current of 5.0A shall be applied collectively to Vbus pins (i.e., pins A4, A9, B4, and B9) and 1.25A applied to the Vconn pin (i.e., B5 of the plug connector) with the return path through the corresponding GND pins (i.e., pins A1, A12, B1, and B12). A minimum current of 0.25A shall also be applied individually to all the other contacts.	Temperature rise shall not exceed 30°C above the ambient temperature.	O	-


Remarks	Drawn	Designed	Checked	Approved	Release
	S.W.OH 25.09.12	Y.G.KIM 25.09.12	H.J.LEE 25.09.12	H.J.LEE 25.09.12	

[Note] QT : Qualification test, AT : Assurance test, O : Applicable, - : Not applicable

Drawing No. ELC4-634588-00	CL No. CL 6246-0005-8-000	Part No. CX90B5-16P
--------------------------------------	-------------------------------------	-------------------------------


No	TEST ITEM	TEST METHOD	TEST REQUIREMENT	QT	AT
MECHANICAL CHARACTERISTICS					
6	Insertion force	EIA 364-13 Measure at 12.5mm/minute min.	5N to 20N	O	-
7	Extraction force	EIA 364-13 Measure at 12.5mm/minute min.	1) Initial & After 25 cycles : 8N to 20N 2) After 10,000 cycles : 6N to 20N (with virgin plug)	O	-
8	Durability	EIA 364-09 Perform a total of 10,000 plug/unplug cycles Cycle rate : 500±50 cycles/hr Mating stroke : 2.75mm Flip interval : Every 2,500 cycles	No evidence of physical damage.	O	-
9	Durability*1 (Preconditioning)	EIA 364-09 Perform 50 plug/unplug cycles Cycle rate : 500±50 cycles/hr Mating stroke : 2.75mm	No evidence of physical damage.	O	-
10	Durability*2 (Preconditioning)	EIA 364-09 Perform 25 plug/unplug cycles Cycle rate : 500±50 cycles/hr Mating stroke : 2.75mm	No evidence of physical damage.	O	-
11	Durability*3 (Preconditioning)	EIA 364-09 Perform 4 plug/unplug cycles Cycle rate : 500±50 cycles/hr Mating stroke : 2.75mm	No evidence of physical damage.	O	-
12	Vibration	EIA 364-28 Test condition VII, Test condition letter D Grms : 3.10g Frequency : 20 to 500Hz 15 minutes in each of 3 mutually perpendicular planes.	No physical damage. No discontinuity of over than 1μs.	O	-
13	4-Axis Continuity	Receptacle connector mounted on PCB shall be fixed. Under condition of connector mating. And connector shall be gained to load. Load direction : Up, Down, Left, Right Load force : 20N Load time : 10 sec per direction Refer to [Fig.1]	No discontinuities greater than 1μs.	O	-
14	Reseating	Manually unplug/plug the connector or socket. Perform 3 such cycles.	No evidence of physical damage.	O	-

[Note] QT : Qualification test, AT : Assurance test, O : Applicable, - : Not applicable

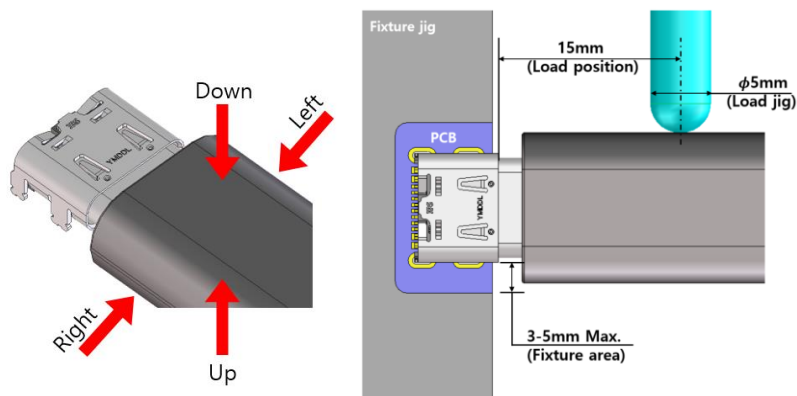
Drawing No. ELC4-634588-00	CL No. CL 6246-0005-8-000	Part No. CX90B5-16P
 HIROSE KOERA.CO.,LTD		PRODUCT SPECIFICATION
		2/5

No	TEST ITEM	TEST METHOD	TEST REQUIREMENT	QT	AT
ENVIRONMENTAL CHARACTERISTICS					
15	Temperature life	EIA 364-17, Method A 105°C without applied voltage for 120 hours.	No evidence of physical damage.	O	-
16	Temperature life (Preconditioning)	EIA-364-17, method A 105°C without applied voltage for 72 hours when used as preconditioning.	None.	O	-
17	Thermal shock	EIA 364-32 10 cycles -55°C and +105°C	No evidence of physical damage.	O	-
18	Cyclic temperature and humidity	EIA 364-31 25±3°C/80±3% R.H. for 1 hour. 65±3°C/50±3% R.H. for 1 hour. Ramp time : 0.5 hour Number of cycles : 24 cycles	No evidence of physical damage.	O	-
19	Mixed flowing gas	EIA 364-65 Measure Environment 30°C/70% R.H. Cl ₂ 10±3ppb, NO ₂ 200±50ppb, H ₂ S 10±5ppb, SO ₂ 100±20ppb Expose half of sample mated for 1/3 days and then unmated for 2/3 days .The others are exposed mated for full 7 days test period.	Low level contact resistance meets spec before and after the mixed flowing gas test.	O	-
20	Thermal disturbance	Cycle the connector between 15±3°C and 85±3°C Ramp : Minimum 2°C/minute Dwell : 5 minutes, 10 cycles	None.	O	-
21	Solderability	EIA 364-52 Dwell in 245±5°C of the solder bath for 5 sec.	Solder coverage shall be 95% min. of the immersed surfaces.	O	-
22	High temperature and humidity	EIA-364-31 High-temperature 85°C/85% R.H. for 120 hours.	No evidence of physical damage.	O	-
23	Salt spray	EIA 364-26 5% of NaCl in 35°C for 48 hours. Test with soldered condition on the PCB. Progress of soldering area masking.	No corrossions that affect to the connector operation.	O	-
24	Reflow heat	Reflow profile [Fig.2] Peak 250°C max for 2 times.	No deformation of mold. No shape of blister and Popcorn	O	-

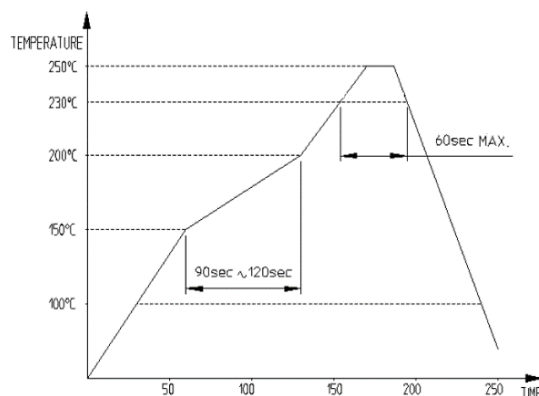
[Note] QT : Qualification test, AT : Assurance test, O : Applicable, - : Not applicable

Drawing No. ELC4-634588-00	CL No. CL 6246-0005-8-000	Part No. CX90B5-16P
		PRODUCT SPECIFICATION
		3/5


REMARKS



[Fig.1] 4-Axis continuity test condition




[Fig.2] Reflow profile

[Note] QT : Qualification test, AT : Assurance test, O : Applicable, - : Not applicable			
Drawing No. ELC4-634588-00	CL No. CL 6246-0005-8-000	Part No. CX90B5-16P	
 HIROSE KOERA.CO.,LTD		PRODUCT SPECIFICATION	4/5

Test Sequence Table											
No	Test item	Test Group									
		A	B	C	D	E	F	G	H	I	J
1	General examination	1,9	1,11	1,9	1,13	1,15	1,4	1,4	1,3	1,6	1,6
2	Low level contact resistance	3,6,8	3,6,8,10	3,6,8	3,6,8,10,12	4,12				3,5	3,5
3	Dielectric withstanding voltage					3,13					
4	Insulation resistance					14					
5	Contact current rating							3			
6	Insertion force					6					
7	Extraction force					7,9,11					
8	Durability					10					
9	Durability*1 (Preconditioning)	4	4	4	4						
10	Durability*2 (Preconditioning)					8					
11	Durability*3 (Preconditioning)					5					
12	Vibration			7							
13	4-Axis Continuity						3				
14	Reseating	7	9		11						
15	Temperature life	5									
16	Temperature life (Preconditioning)			5	5						
17	Thermal shock		5								
18	Cyclic temperature and humidity		7								
19	Mixed flowing gas				7						
20	Thermal disturbance				9						
21	Solderability								2		
22	High temperature and humidity									4	
23	Salt spray										4
24	Reflow heat	2	2	2	2	2	2	2	2	2	2

REMARKS

1) Numbers in the table above indicate the sequence corresponding to each test group.

[Note] QT : Qualification test, AT : Assurance test, O : Applicable, - : Not applicable			
Drawing No.	CL No.	Part No.	
ELC4-634588-00	CL 6246-0005-8-000	CX90B5-16P	
 HIROSE KOERA.CO.,LTD		PRODUCT SPECIFICATION	5/5