



Fraunhofer

TESTED[®] DEVICE

LS Cable Co., Ltd.
Cable ROFHU / ROIREU
Report No. LS 0901-469

DUPLICATE

Statement of
Qualification

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Customer: LS Cable Co., Ltd.
555 Hogyedong, Dongan-gu
Anyang-si, Gyeonggi-do
431-831, Korea

Components tested: Power and control cable;
Signal cable

Type: ROFHU-SB 4C x 0.75 mm²;
ROIREU-SB 4C x 2.0 mm²

Tests performed: Random sample measurements of particle emission (airborne) at representative points

Test parameters: Stroke length: 820 mm
Set of parameters 1 : $v_1 = 0.5 \text{ m/s}$; $a_1 = 1.0 \text{ m/s}^2$
Set of parameters 2 : $v_2 = 1.0 \text{ m/s}$; $a_2 = 2.0 \text{ m/s}^2$
Set of parameters 3 : $v_3 = 2.0 \text{ m/s}$; $a_3 = 5.0 \text{ m/s}^2$

Test results / classification: When the below mentioned test piece is being operated at the conditions of the following table, they are suitable for use in cleanrooms fulfilling the air cleanliness specifications according to ISO 14644-1.

Type	Air Cleanliness Class (in accordance with ISO 14644-1)		
	$v_1=0.5 \text{ m/s}$	$v_2=1.0 \text{ m/s}$	$v_3=2.0 \text{ m/s}$
ROFHU-SB 4C x 0.75 mm ²	ISO Class 2	ISO Class 2	ISO Class 2
ROIREU-SB 4C x 2.0 mm ²	ISO Class 1	ISO Class 1	ISO Class 2

Standards / guidelines used for the qualification: VDI 2083 Part 1, 4 and 9.1; ISO 14644-1

Test parameters of the cleanroom environment: Cleanroom of Air Cleanliness Class ISO Class 1 (according to ISO 14644-1)

Air flow velocity: 0.45 m/s

Air flow guidance: vertical unidirectional air flow from ceiling to floor (raised floor)

Temperature: $22^\circ\text{C} \pm 0.5^\circ\text{C}$ ($71.6^\circ\text{F} \pm 0.9^\circ\text{F}$)

Relative humidity: $45\% \pm 5\%$

The measuring equipment used for the qualification is regularly calibrated and is based on national and international standards. In the case where no national standards exist, the measuring procedure used corresponds with technical regulations and norms valid at the time of the measurement. The documents drawn up for this procedure are available for viewing.

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