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ISO 9001 : 2015 Certified

LCSO

**Electronic Components  
Standardisation Organisation  
Electronics & Radar Development  
Establishment**

Govt of India, Ministry of Defence  
Defence Research & Development Organisation  
P.B. No.9324, C V Raman Nagar  
Bengaluru – 560 093, India

Ref. No.: 05610/34/SUYG/ 67 /LCSO

Date : 06 MAR 2023

इलेक्ट्रॉनिक घटक मानकीकरण संगठन  
इलेक्ट्रॉनिक्स तथा रेडार विकास स्थापना  
भारत सरकार – रक्षा मंत्रालय  
रक्षा अनुसंधान तथा विकास संगठन  
पो.बा.स. 9324, सी.वी. रामन नगर  
बेंगलूर – 560 093, भारत

Phone : +91-80-25025270, 25025275  
E-Mail : lcs0.lrde@gov.in

To

**SUYOG ELECTRICALS LTD.**

A/2, 2204, 2005, 1701/2 GIDC Industrial Estate  
Halol, Panchmahal, **GUJARAT - 389350**

( Kind attn.: Shri **AYUSH D**, Senior Engineer, Business Development )

**QUALIFICATION APPROVAL CERTIFICATE Nos. 4978, 4979 AND 4980**

Dear Sirs,

Qualification Approval Certificate Nos. 4978 for Wires, Electrical, High Temperature (JSS 51034), 4979 for Wires, Fluorocarbon, Polyimide (JSS 51037) and 4980 for Cables, Multicore, Shielded and Unshielded (JSS 51038), are enclosed. It may kindly be noted that the Certificates are subject to the conditions specified in JSS 5999-10 (Procedure for Qualification Approval / Maintenance of Qualification Approval of Electronic Components).

- Kindly inform your Marketing Department that enquiry / supply order for the cable may quote the Style Reference(s) listed against Item 4 of the Certificate.
- In order to enable LCSO to assess the usage of the Approved components, you are required to forward the following information to LCSO every time supply order quoting JSS is received by you:
  - Address of the Indentor
  - Number and date of the supply order
  - Quantity on order and
  - Date of supply.

LCSO shall write to these indentors to ascertain user satisfaction regarding quality of the cable supplied by you. It may please be noted that non-submission of the above information by you would lead LCSO to presume that the cable for which approval was accorded is not required by any consumer and, therefore, there is no need to revalidate the Qualification Approval.

- Please acknowledge receipt.

Yours faithfully,

(SUBIND R)

Technical Officer 'B'  
for Officer-in-Charge

Encl. : As above.

Earlier Approval

Number

Year

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Certificate No. : 4978

Date of Issue : 01 JAN 2023

Date of Expiry : 01 JAN 2026

**GOVERNMENT OF INDIA**  
**Ministry Of Defence**

**ELECTRONIC COMPONENTS STANDARDISATION ORGANISATION (LCSO)**  
**QUALIFICATION APPROVAL**  
(UNDER THE PROVISIONS OF JSS 5999- 10)

*Grant of this Approval\* confirms the competence of*

**SUYOG ELECTRICALS LTD.**

A/2, 2204, 2005, 1701/2 GIDC Industrial Estate

Halol, Panchmahal, **GUJARAT - 389350**

*to manufacture the Component(s) described below :*

1. Component : Wires, Electrical, insulated, High Temperature
2. Manufacturer's Code : As in Addendum No.1
3. Joint Services Specification : JSS 51034
4. Style Reference : As in Addendum No.1
5. Range : **Colour of Insulator:** Single Colour Code No. 0 to 9 as per Table 22, Appendix 'A' of JSS 51034.
6. JSS 50101 Severities
  - Temperature : T 65/200
  - Damp Heat : Not applicable
  - Air Pressure (Low) : Not applicable
  - Acceleration (Steady state) : Not applicable
  - Impact (Shock) : Not applicable
  - Vibration : Not applicable
7. Special features : Insulator : PTFE  
Thickness of Coating on conductors :- Silver : 1.0 µm (min.)  
- Nickel : 1.27 µm (min.)

*R. M. Kembhavi*  
(RENUKA M KEMHAVI)  
Sr. DGM  
BEL, BANGALORE  
Chairman  
LCSO Panel

*(JERY VARGHESE K)*  
Scientist 'F'  
Officer-in-Charge, LCSO

**Defence Research and Development Organisation**  
LRDE, C V Raman Nagar, BANGALORE – 560 093  
**For Electronics Standardisation Sub-Committee**

Place : BANGALORE

Date : 04 MAR 2023

*\* Note 1 : This Approval does not obviate the need for Batch Acceptance tests.*

*Note 2 : Failure of this component during usage may be reported to OIC, LCSO.*





GOVERNMENT OF INDIA

MINISTRY OF DEFENCE

ELECTRONIC COMPONENTS STANDARDISATION ORGANISATION

Addendum No. 1 to LCSO Approval Certificate No. 4978

Sheet : 1 of 1

Date of Issue: 01 JAN 2023

Sl. No.	Manufacturer's Code	Style Reference	Sl. No.	Manufacturer's Code	Style Reference	Sl. No.	Manufacturer's Code	Style Reference
1	SEPL WH1P - 1A 128	WH1P-1A 128	44	SEPL WH3P - 1A 120	WH3P-1A 120	87	SEPL WH2P - 1B 734	WH2P-1B 734
2	SEPL WH1P - 1A 126	WH1P-1A 126	45	SEPL WH3P - 1A 118	WH3P-1A 118	88	SEPL WH2P - 1B 1938	WH2P-1B 1938
3	SEPL WH1P - 1A 124	WH1P-1A 124	46	SEPL WH3P - 1A 116	WH3P-1A 116	89	SEPL WH2P - 1B 732	WH2P-1B 732
4	SEPL WH1P - 1A 122	WH1P-1A 122	47	SEPL WH3P - 1A 734	WH3P-1A 734	90	SEPL WH2P - 1B 1936	WH2P-1B 1936
5	SEPL WH1P - 1A 120	WH1P-1A 120	48	SEPL WH3P - 1A 1938	WH3P-1A 1938	91	SEPL WH2P - 1B 730	WH2P-1B 730
6	SEPL WH1P - 1A 734	WH1P-1A 734	49	SEPL WH3P - 1A 732	WH3P-1A 732	92	SEPL WH2P - 1B 1934	WH2P-1B 1934
7	SEPL WH1P - 1A 1938	WH1P-1A 1938	50	SEPL WH3P - 1A 1936	WH3P-1A 1936	93	SEPL WH2P - 1B 728	WH2P-1B 728
8	SEPL WH1P - 1A 732	WH1P-1A 732	51	SEPL WH3P - 1A 730	WH3P-1A 730	94	SEPL WH2P - 1B 1932	WH2P-1B 1932
9	SEPL WH1P - 1A 1936	WH1P-1A 1936	52	SEPL WH3P - 1A 1934	WH3P-1A 1934	95	SEPL WH2P - 1B 726	WH2P-1B 726
10	SEPL WH1P - 1A 730	WH1P-1A 730	53	SEPL WH3P - 1A 728	WH3P-1A 728	96	SEPL WH2P - 1B 1930	WH2P-1B 1930
11	SEPL WH1P - 1A 1934	WH1P-1A 1934	54	SEPL WH3P - 1A 1932	WH3P-1A 1932	97	SEPL WH2P - 1B 1929	WH2P-1B 1929
12	SEPL WH1P - 1A 728	WH1P-1A 728	55	SEPL WH3P - 1A 726	WH3P-1A 726	98	SEPL WH2P - 1B 1927	WH2P-1B 1927
13	SEPL WH1P - 1A 1932	WH1P-1A 1932	56	SEPL WH3P - 1A 1930	WH3P-1A 1930	99	SEPL WH2P - 1B 1925	WH2P-1B 1925
14	SEPL WH2P - 1A 132	WH2P-1A 132	57	SEPL WH3P - 1A 1929	WH3P-1A 1929	100	SEPL WH2P - 1B 3728	WH2P-1B 3728
15	SEPL WH2P - 1A 130	WH2P-1A 130	58	SEPL WH3P - 1A 2630	WH3P-1A 2630	101	SEPL WH2P - 1B 3726	WH2P-1B 3726
16	SEPL WH2P - 1A 128	WH2P-1A 128	59	SEPL WH3P - 1A 1927	WH3P-1A 1927	102	SEPL WH3P - 1B 132	WH3P-1B 132
17	SEPL WH2P - 1A 126	WH2P-1A 126	60	SEPL WH3P - 1A 1925	WH3P-1A 1925	103	SEPL WH3P - 1B 130	WH3P-1B 130
18	SEPL WH2P - 1A 124	WH2P-1A 124	61	SEPL WH3P - 1A 3728	WH3P-1A 3728	104	SEPL WH3P - 1B 128	WH3P-1B 128
19	SEPL WH2P - 1A 122	WH2P-1A 122	62	SEPL WH3P - 1A 6530	WH3P-1A 6530	105	SEPL WH3P - 1B 126	WH3P-1B 126
20	SEPL WH2P - 1A 120	WH2P-1A 120	63	SEPL WH3P - 1A 3726	WH3P-1A 3726	106	SEPL WH3P - 1B 124	WH3P-1B 124
21	SEPL WH2P - 1A 118	WH2P-1A 118	64	SEPL WH3P - 1A 13329	WH3P-1A 13329	107	SEPL WH3P - 1B 122	WH3P-1B 122
22	SEPL WH2P - 1A 116	WH2P-1A 116	65	SEPL WH1P - 1B 128	WH1P-1B 128	108	SEPL WH3P - 1B 120	WH3P-1B 120
23	SEPL WH2P - 1A 734	WH2P-1A 734	66	SEPL WH1P - 1B 126	WH1P-1B 126	109	SEPL WH3P - 1B 118	WH3P-1B 118
24	SEPL WH2P - 1A 1938	WH2P-1A 1938	67	SEPL WH1P - 1B 124	WH1P-1B 124	110	SEPL WH3P - 1B 116	WH3P-1B 116
25	SEPL WH2P - 1A 732	WH2P-1A 732	68	SEPL WH1P - 1B 122	WH1P-1B 122	111	SEPL WH3P - 1B 734	WH3P-1B 734
26	SEPL WH2P - 1A 1936	WH2P-1A 1936	69	SEPL WH1P - 1B 120	WH1P-1B 120	112	SEPL WH3P - 1B 1938	WH3P-1B 1938
27	SEPL WH2P - 1A 730	WH2P-1A 730	70	SEPL WH1P - 1B 734	WH1P-1B 734	113	SEPL WH3P - 1B 732	WH3P-1B 732
28	SEPL WH2P - 1A 1934	WH2P-1A 1934	71	SEPL WH1P - 1B 1938	WH1P-1B 1938	114	SEPL WH3P - 1B 1936	WH3P-1B 1936
29	SEPL WH2P - 1A 728	WH2P-1A 728	72	SEPL WH1P - 1B 732	WH1P-1B 732	115	SEPL WH3P - 1B 730	WH3P-1B 730
30	SEPL WH2P - 1A 1932	WH2P-1A 1932	73	SEPL WH1P - 1B 1936	WH1P-1B 1936	116	SEPL WH3P - 1B 1934	WH3P-1B 1934
31	SEPL WH2P - 1A 726	WH2P-1A 726	74	SEPL WH1P - 1B 730	WH1P-1B 730	117	SEPL WH3P - 1B 728	WH3P-1B 728
32	SEPL WH2P - 1A 1930	WH2P-1A 1930	75	SEPL WH1P - 1B 1934	WH1P-1B 1934	118	SEPL WH3P - 1B 1932	WH3P-1B 1932
33	SEPL WH2P - 1A 1929	WH2P-1A 1929	76	SEPL WH1P - 1B 728	WH1P-1B 728	119	SEPL WH3P - 1B 726	WH3P-1B 726
34	SEPL WH2P - 1A 1927	WH2P-1A 1927	77	SEPL WH1P - 1B 1932	WH1P-1B 1932	120	SEPL WH3P - 1B 1930	WH3P-1B 1930
35	SEPL WH2P - 1A 1925	WH2P-1A 1925	78	SEPL WH2P - 1B 132	WH2P-1B 132	121	SEPL WH3P - 1B 1929	WH3P-1B 1929
36	SEPL WH2P - 1A 3728	WH2P-1A 3728	79	SEPL WH2P - 1B 130	WH2P-1B 130	122	SEPL WH3P - 1B 2630	WH3P-1B 2630
37	SEPL WH2P - 1A 3726	WH2P-1A 3726	80	SEPL WH2P - 1B 128	WH2P-1B 128	123	SEPL WH3P - 1B 1927	WH3P-1B 1927
38	SEPL WH3P - 1A 132	WH3P-1A 132	81	SEPL WH2P - 1B 126	WH2P-1B 126	124	SEPL WH3P - 1B 1925	WH3P-1B 1925
39	SEPL WH3P - 1A 130	WH3P-1A 130	82	SEPL WH2P - 1B 124	WH2P-1B 124	125	SEPL WH3P - 1B 3728	WH3P-1B 3728
40	SEPL WH3P - 1A 128	WH3P-1A 128	83	SEPL WH2P - 1B 122	WH2P-1B 122	126	SEPL WH3P - 1B 6530	WH3P-1B 6530
41	SEPL WH3P - 1A 126	WH3P-1A 126	84	SEPL WH2P - 1B 120	WH2P-1B 120	127	SEPL WH3P - 1B 3726	WH3P-1B 3726
42	SEPL WH3P - 1A 124	WH3P-1A 124	85	SEPL WH2P - 1B 118	WH2P-1B 118	128	SEPL WH3P - 1B 13329	WH3P-1B 13329
43	SEPL WH3P - 1A 122	WH3P-1A 122	86	SEPL WH2P - 1B 116	WH2P-1B 116			

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(RENUKA M KEMBAVI)  
Sr.DGM  
BEL, BANGALORE  
Chairman  
LCSO Panel

(JERY VARGHESE K)  
Scientist 'F'  
Officer-in-Charge, LCSO  
Defence Research and Development Organisation  
CV Raman Nagar, BANGALORE-560093  
For Electronics Standardisation Sub-committee



Earlier Approval  
Number                      Year  
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Certificate No. : 4979  
Date of Issue : 01 JAN 2023  
Date of Expiry : 01 JAN 2026

**GOVERNMENT OF INDIA**  
**Ministry Of Defence**

**ELECTRONIC COMPONENTS STANDARDISATION ORGANISATION (LCSO)**  
**QUALIFICATION APPROVAL**  
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*Grant of this Approval\* confirms the competence of*

**SUYOG ELECTRICALS LTD.**

A/2, 2204, 2005, 1701/2 GIDC Industrial Estate  
Halol, Panchmahal, **GUJARAT - 389350**

*to manufacture the Component(s) described below :*

1. Component : Wire, Fluorocarbon / Polyimide Insulated
2. Manufacturer's Code : SEPL WAL-1A 1936, SEPL WAL-1A 1934, SEPL WAL-1A 1932, SEPL WAL-1A 1930  
SEPL WAL-1A 1929, SEPL WAL-1A 1927, SEPL WAL-1A 3728, SEPL WAL-1A 3726
3. Joint Services Specification : JSS 51037
4. Style Reference : WAL-1A 1936, WAL-1A 1934, WAL-1A 1932, WAL-1A 1930, WAL-1A 1929  
WAL-1A 1927, WAL-1A 3728, WAL-1A 3726
5. Range : Nil
6. JSS 50101 Severities  
Temperature : T 65/200  
Damp Heat : Not applicable  
Air Pressure (Low) : Not applicable  
Acceleration (Steady state) : Not applicable  
Impact (Shock) : Not applicable  
Vibration : Not applicable
7. Special features : Nil

*R. M. Kembhavi*  
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**Defence Research and Development Organisation**  
LRDE, C V Raman Nagar, BANGALORE – 560 093  
For Electronics Standardisation Sub-Committee

Place : BANGALORE  
Date : 04 MAR 2023

\* Note 1 : This Approval does not obviate the need for Batch Acceptance tests.  
Note 2 : Failure of this component during usage may be reported to OIC, LCSO.

Earlier Approval

Number

Year

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Certificate No. : 4980

Date of Issue : 01 JAN 2023

Date of Expiry : 01 JAN 2026

**GOVERNMENT OF INDIA**  
**Ministry Of Defence**

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A/2, 2204, 2005, 1701/2 GIDC Industrial Estate

Halol, Panchmahal, **GUJARAT - 389350**

*to manufacture the Component(s) described below :*

1. Component : Cables, Multicore, Shielded and unshielded
2. Manufacturer's Code : -----
3. Joint Services Specification : JSS 51038
4. Style Reference : C1 (AA) to C12 (AA), C1 (AB) to C12 (AB), C1 (AC) to C12 (AC)  
C1 (BB) to C4 (BB)
5. Range : As in Addendum No.1
6. JSS 50101 Severities  
Temperature : T 65/200  
Damp Heat : Not applicable  
Air Pressure (Low) : Not applicable  
Acceleration (Steady state) : Not applicable  
Impact (Shock) : Not applicable  
Vibration : Not applicable
7. Special features : Nil

*R.M. Kembhavi*  
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GOVERNMENT OF INDIA

MINISTRY OF DEFENCE

ELECTRONIC COMPONENTS STANDARDISATION ORGANISATION

Addendum Sheet No. 1 to LCSO Approval Certificate No. 4980

Sheet : 1 of 1

Date of Issue : 01 JAN 2023

Sl. No. 5 Range :

No. of Cores : 1 to 12.

Basic Wires (Table 1 of JSS 51038) :

JSS 51034 Style References \*

WH1P-1A 120 to WH1P-1A 128 (250 V)  
WH2P-1A 116 to WH2P-1A 132 (600 V)  
WH3P-1A 116 to WH3P-1A 132 (1000 V)  
WH1P-1B 120 to WH1P-1B 128 (250 V)  
WH2P-1B 116 to WH2P-1B 132 (600 V)  
WH3P-1B 116 to WH3P-1B 132 (1000 V)  
WAL -1A 1936 to WAL-1A- 1929 (600V)

WH1P-1A 734 to WH1P-1A 1932 (250 V)  
WH2P-1A 734 to WH2P-1A 3726 (600 V)  
WH3P-1A 734 to WH3P-1A 13329 (1000 V)  
WH1P-1B 734 to WH1P-1B 1932 (250 V)  
WH2P-1B 734 to WH2P-1B 3726 (600 V)  
WH3P-1B 734 to WH3P-1B 13329 (1000 V)  
WAL-1A- 1927 to WAL-1A-3726 (600V)

(\* Single wires and twisted pairs).

Size of Basic Wires : 08 to 32 (Table 2 of JSS 51038).

Shield : Shielded (Letter Code S, N ) and Unshielded ( Type U) of Table 3 of JSS 51038.

Construction of Shield (for shielded type) : Single shielded; Double Shielded; shield in the form of Braid, woven from Silver Coated copper wire, Nickel coated Copper wire and Tin coated copper wire

Jacket : Unjacketed (Digit Code 00) and PTFE Jacketed , Polyimide (Digit Code 06,12 ) of Table 4 of JSS 51038.

Shield Coverage and Identification Method of Wires : 85 % , Letter Code B ;  
90 % , Letter Code D ; and  
Table 9A of JSS 51038, for twisted pair  
cores.

*R. M. Kembhavi*

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