



Certificate No. : T-0071

## ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION

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ERDA Road, Makarpura Industrial Estate, Vadodara-390 010, India.

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### TEST REPORT

SHEET 1 OF 8

<b>NAME &amp; ADDRESS OF THE CUSTOMER</b> <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD.</b>  PLOT No. : 20, 22 & 23, SURVEY No. : 165 A/2 & 3, 01 OSWAL INDUSTRIAL ESTATE, NH3, VILLAGE ASANGAON, TAL. SHAHAPUR, DIST. THANE - 421 601	<b>TEST REPORT NO. : RP-1617-063352</b> <b>DATE : 30/03/2017</b>	
	<b>CUSTOMER REF. No.</b> Nil	<b>DATED</b> 07/03/2017
	<b>DATE OF SAMPLE RECEIPT</b> 07/03/2017	<b>DATE OF TESTING</b> 22/03/2017 to 30/03/2017
	<b>SAMPLE DESCRIPTION</b>  <b>REPRESENTATIVE SAMPLE OF LV PCC PANEL</b>  Rated voltage : 415 V ± 10% Rated current (Incoming) : 3800 A Rated frequency : 50 Hz No. of Phases : TPN Quantity (tested) : 1 No. Further details as per sheet 2 to 5 of 8	
<b>SAMPLE IDENTIFICATION</b> <b>ERDA Sample code No. : ERDA-00187177</b> <b>Type designation : SAMSET</b> <b>Serial no. : SIC/STC/16/01</b> <b>Manufacturer's name :</b> M/s. Samcon Industrial Controls Pvt. Ltd., Thane <b>Drawing no. :</b> i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST DETAILS</b> 1) Resistance to corrosion (Cl. no. 10.2.2)	<b>TEST SPECIFICATIONS</b> IEC 61439-1 : 2011 & IEC 61439-2 : 2011	
<b>ENCLOSURE :</b> 1) Photograph No. : 1617-020972/D 2) Oscillogram No. : Nil 3) Drawing No. : i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST WITNESSED BY :</b> 1) Mr. Harishchandra Fegade - DGM - Design and 2) Mr. Avinash Deore - Asst. Manager - Production of M/s. Samcon Industrial Controls Pvt. Ltd.		
<b>REMARKS :</b> Representative Sample <b>conforms</b> to the requirement of above mentioned test. However, M. S. Angle <b>does not conform</b> to the requirement of above mentioned test.		
PREPARED BY 	CHECKED BY 	APPROVED BY  (G. Som)

TE 2187548

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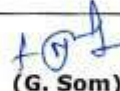
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### TEST REPORT

SHEET 1 OF 8

<b>NAME &amp; ADDRESS OF THE CUSTOMER</b> <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD.</b>  PLOT No. : 20, 22 & 23, SURVEY No. : 165 A/2 & 3, 01 OSWAL INDUSTRIAL ESTATE, NH3, VILLAGE ASANGAON, TAL. SHAHAPUR, DIST. THANE - 421 601	<b>TEST REPORT NO. : RP-1617-063354</b> <b>DATE : 30/03/2017</b>	
	<b>CUSTOMER REF. No.</b> Nil	<b>DATED</b> 07/03/2017
	<b>DATE OF SAMPLE RECEIPT</b> 07/03/2017	<b>DATE OF TESTING</b> 27/03/2017 to 28/03/2017
	<b>SAMPLE DESCRIPTION</b> <b>LV PCC PANEL</b>  Rated voltage : 415 V ± 10% Rated current (Incoming) : 3800 A Rated frequency : 50 Hz No. of Phases : TPN Quantity (tested) : 1 No. Further details as per sheet 2 to 5 of 8	
<b>SAMPLE IDENTIFICATION</b> <b>ERDA Sample code No. : ERDA-00187176</b> <b>Type designation : SAMSET</b> <b>Serial no. : SIC/STC/16/01</b> <b>Manufacturer's name :</b> M/s. Samcon Industrial Controls Pvt. Ltd., Thane <b>Drawing no. :</b> i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST DETAILS</b> 1.0 Mechanical operation (Cl.no.10.13)	<b>TEST SPECIFICATIONS</b> IEC 61439-1 : 2011 & IEC 61439-2 : 2011	
<b>ENCLOSURE :</b> 1) Photograph No. : 1617-020972/A & C (Total 02 Nos.) 2) Oscillogram No. : Nil 3) Drawing No. : i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST WITNESSED BY :</b> 1) Mr. Harishchandra Fegade - DGM - Design and 2) Mr. Avinash Deore - Asst. Manager Production of M/s. Samcon Industrial Controls Pvt. Ltd.		
<b>REMARKS :</b> Sample <b>conforms</b> to the requirement of the standard for the verification of mechanical operation test.		
 <b>PREPARED BY</b>	 <b>CHECKED BY</b>	 <b>APPROVED BY</b> (G. Som)

E 2187523

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### TEST REPORT

SHEET 1 OF 7

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	<b>CUSTOMER REF. No.</b> Nil	<b>DATED</b> 07/03/2017
	<b>DATE OF SAMPLE RECEIPT</b> 07/03/2017	<b>DATE OF TESTING</b> 22/03/2017
	<b>SAMPLE DESCRIPTION</b>  <b>LV PCC PANEL</b>  Rated voltage : 415 V ± 10% Rated current (Incoming) : 3800 A Rated frequency : 50 Hz No. of Phases : TPN Quantity (tested) : 1 No. Further details as per sheet 2 to 5 of 7	
<b>SAMPLE IDENTIFICATION</b> <b>ERDA Sample code No. : ERDA-00187176</b> <b>Type designation : SAMSET</b> <b>Serial no. : SIC/STC/16/01</b> <b>Manufacturer's name :</b> M/s. Samcon Industrial Controls Pvt. Ltd., Thane  <b>Drawing no. :</b> i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST DETAILS</b> 1) Lifting (Cl. no. 10.2.5)	<b>TEST SPECIFICATIONS</b> IEC 61439-1 : 2011 & IEC 61439-2 : 2011	
<b>ENCLOSURE :</b> 1) Photograph No. : 1617-020972/B & C (Total 02 Nos.) 2) Oscillogram No. : Nil 3) Drawing No. : i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST WITNESSED BY :</b> 1) Mr. Harishchandra Fegade - DGM - Design and 2) Mr. Avinash Deore - Asst. Manager Production of M/s. Samcon Industrial Controls Pvt. Ltd.		
<b>REMARKS :</b> Sample conforms to the requirement of the standard for the lifting test.		
 <b>PREPARED BY</b>	 <b>CHECKED BY</b>	 <b>(G. Som)</b> <b>APPROVED BY</b>

E 2187520

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### TEST REPORT

SHEET 1 OF 8

<b>NAME &amp; ADDRESS OF THE CUSTOMER</b> <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD.</b> PLOT No. : 20, 22 & 23, SURVEY No. : 165 A/2 & 3, 01 OSWAL INDUSTRIAL ESTATE, NH3, VILLAGE ASANGAON, TAL. SHAHAPUR, DIST. THANE - 421 601	<b>TEST REPORT NO. : RP-1617-063351</b> <b>DATE : 30/03/2017</b>	
	<b>CUSTOMER REF. No.</b> Nil	<b>DATED</b> 07/03/2017
	<b>DATE OF SAMPLE RECEIPT</b> 07/03/2017	<b>DATE OF TESTING</b> 25/03/2017
	<b>SAMPLE DESCRIPTION</b> <b>LV PCC PANEL</b> Rated voltage : 415 V ± 10% Rated current (Incoming) : 3800 A Rated frequency : 50 Hz No. of Phases : TPN Quantity (tested) : 1 No. Further details as per sheet 2 to 5 of 8	
<b>SAMPLE IDENTIFICATION</b> <b>ERDA Sample code No. : ERDA-00187176</b> <b>Type designation : SAMSET</b> <b>Serial no. : SIC/STC/16/01</b> <b>Manufacturer's name :</b> M/s. Samcon Industrial Controls Pvt. Ltd., Thane <b>Drawing no. :</b> i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST DETAILS</b> 1) Mechanical Impact (IK 10)		<b>TEST SPECIFICATION</b> As per customer's requirement & test procedure followed as per IEC 61439-1 : 2011 & IEC 61439-2 : 2011
<b>ENCLOSURE :</b> 1) Photograph No. : 1617-020972/A & C (Total 02 Nos.) 2) Oscillogram No. : Nil 3) Drawing No. : i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>NOTE :</b> Evaluation criteria after the mechanical impact test was specified by the customer.		
<b>TEST WITNESSED BY :</b> 1) Mr. Harishchandra Fegade - DGM - Design and 2) Mr. Avinash Deore - Asst. Manager Production of M/s. Samcon Industrial Controls Pvt. Ltd.		
<b>REMARKS :</b> Sample <b>conforms</b> to the requirements of the customer for the test carried out.		
 <b>PREPARED BY</b>	 <b>CHECKED BY</b>	 <b>APPROVED BY</b> (G. Som)

E 2187517

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SHEET 1 OF 7

<b>NAME &amp; ADDRESS OF THE CUSTOMER</b> <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD.</b> PLOT No. : 20, 22 & 23, SURVEY No. : 165 A/2 & 3, 01 OSWAL INDUSTRIAL ESTATE, NH3, VILLAGE ASANGAON, TAL. SHAHAPUR, DIST. THANE - 421 601	<b>TEST REPORT NO. : RP-1617-063350</b> <b>DATE : 30/03/2017</b>	
	<b>CUSTOMER REF. No.</b> Nil	<b>DATED</b> 07/03/2017
	<b>DATE OF SAMPLE RECEIPT</b> 07/03/2017	<b>DATE OF TESTING</b> 25/03/2017
	<b>SAMPLE DESCRIPTION</b> <b>LV PCC PANEL</b> Rated voltage : 415 V ± 10% Rated current (Incoming) : 3800 A Rated frequency : 50 Hz No. of Phases : TPN Quantity (tested) : 1 No. Further details as per sheet 2 to 5 of 7	
<b>SAMPLE IDENTIFICATION</b> <b>ERDA Sample code No. : ERDA-00187176</b> <b>Type designation : SAMSET</b> <b>Serial no. : SIC/STC/16/01</b> <b>Manufacturer's name :</b> M/s. Samcon Industrial Controls Pvt. Ltd., Thane <b>Drawing no. :</b> i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST DETAILS</b> 1) Marking (Cl. no. 10.2.7)	<b>TEST SPECIFICATIONS</b> IEC 61439-1 : 2011 & IEC 61439-2 : 2011	
<b>ENCLOSURE :</b> 1) Photograph No. : 1617-020972/A & C (Total 02 Nos.) 2) Oscillogram No. : Nil 3) Drawing No. : i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST WITNESSED BY :</b> 1) Mr. Harishchandra Fegade - DGM - Design and 2) Mr. Avinash Deore - Asst. Manager Production of M/s. Samcon Industrial Controls Pvt. Ltd.		
<b>TEST RESULT :</b> As per attached sheet.		
 <b>PREPARED BY</b>	 <b>CHECKED BY</b>	 <b>APPROVED BY</b>

IE 2187522

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<b>NAME &amp; ADDRESS OF THE CUSTOMER</b> <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD.</b> PLOT No. : 20, 22 & 23, SURVEY No. : 165 A/2 & 3, 01 OSWAL INDUSTRIAL ESTATE, NH3, VILLAGE ASANGAON, TAL. SHAHAPUR, DIST. THANE - 421 601	<b>TEST REPORT NO. : RP-1617-063353</b> <b>DATE : 30/03/2017</b>	
	<b>CUSTOMER REF. No.</b> Nil	<b>DATED</b> 07/03/2017
	<b>DATE OF SAMPLE RECEIPT</b> 07/03/2017	<b>DATE OF TESTING</b> 26/03/2017
	<b>SAMPLE DESCRIPTION</b> <b>LV PCC PANEL</b> Rated voltage : 415 V ± 10% Rated current (Incoming) : 3800 A Rated frequency : 50 Hz No. of Phases : TPN Quantity (tested) : 1 No. Further details as per sheet 2 to 5 of 7	
<b>SAMPLE IDENTIFICATION</b> <b>ERDA Sample code No. : ERDA-00187176</b> <b>Type designation : SAMSET</b> <b>Serial no. : SIC/STC/16/01</b> <b>Manufacturer's name :</b> M/s. Samcon Industrial Controls Pvt. Ltd., Thane <b>Drawing no. :</b> i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST DETAILS</b> 1) Verification of clearances and creepage distances (Cl. No. 10.4)	<b>TEST SPECIFICATIONS</b> IEC 61439-1 : 2011 & IEC 61439-2 : 2011	
<b>ENCLOSURE :</b> 1) Photograph No. : 1617-020972/A & C (Total 02 Nos.) 2) Oscillogram No. : Nil 3) Drawing No. : i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST WITNESSED BY :</b> 1) Mr. Harishchandra Fegade - DGM - Design and 2) Mr. Avinash Deore - Asst. Manager Production of M/s. Samcon Industrial Controls Pvt. Ltd.		
<b>REMARKS :</b> Sample <b>conforms</b> to the requirement of the standard for the verification of clearances and creepage distances test.		
PREPARED BY 	CHECKED BY 	APPROVED BY (G. Som)

E 2187538

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<b>NAME &amp; ADDRESS OF THE CUSTOMER</b> <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD.</b>  PLOT No. : 20, 22 & 23, SURVEY No. : 165 A/2 & 3, 01 OSWAL INDUSTRIAL ESTATE, NH3, VILLAGE ASANGAON, TAL. SHAHAPUR, DIST. THANE - 421 601	<b>TEST REPORT NO. : RP-1617-063348</b> <b>DATE : 30/03/2017</b>	
	<b>CUSTOMER REF. No.</b> Nil	<b>DATED</b> 07/03/2017
	<b>DATE OF SAMPLE RECEIPT</b> 07/03/2017	<b>DATE OF TESTING</b> 25/03/2017
	<b>SAMPLE DESCRIPTION</b>  <b>LV PCC PANEL</b>  Rated voltage : 415 V ± 10% Rated current (Incoming) : 3800 A Rated frequency : 50 Hz No. of Phases : TPN Quantity (tested) : 1 No. Further details as per sheet 2 to 5 of 7	
<b>SAMPLE IDENTIFICATION</b>  <b>ERDA Sample code No. : ERDA-00187176</b> <b>Type designation : SAMSET</b> <b>Serial no. : SIC/STC/16/01</b> <b>Manufacturer's name :</b> M/s. Samcon Industrial Controls Pvt. Ltd., Thane  <b>Drawing no. :</b> i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST DETAILS</b> 1) Effective earth continuity between the exposed conductive parts of the assembly and the protective circuit	<b>TEST SPECIFICATION</b> As per customer's requirement & test procedure followed as per IEC 61439-1 : 2011 & IEC 61439-2 : 2011	
<b>ENCLOSURE :</b> 1) Photograph No. : 1617-020972/A & C (Total 02 Nos.) 2) Oscillogram No. : Nil 3) Drawing No. : i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>NOTE :</b> Only the test asked for by the customer has been carried out.		
<b>TEST WITNESSED BY :</b> 1) Mr. Harishchandra Fegade - DGM - Design and 2) Mr. Avinash Deore - Asst. Manager Production of M/s. Samcon Industrial Controls Pvt. Ltd.		
<b>REMARKS :</b> Sample <b>conforms</b> to the requirements of the customer for the test carried out.		
 <b>PREPARED BY</b>	 <b>CHECKED BY</b>	 <b>APPROVED BY</b>

IE 2187591

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### TEST REPORT

SHEET 1 OF 20

<b>NAME &amp; ADDRESS OF THE CUSTOMER</b> <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD.</b> PLOT No. : 20, 22 & 23, SURVEY No. : 165 A/2 & 3, 01 OSWAL INDUSTRIAL ESTATE, NH3, VILLAGE ASANGAON, TAL. SHAHAPUR, DIST. THANE - 421 601	<b>TEST REPORT NO. : RP-1617-063347</b> <b>DATE : 30/03/2017</b>	
	<b>CUSTOMER REF. No.</b> Nil	<b>DATED</b> 07/03/2017
	<b>DATE OF SAMPLE RECEIPT</b> 07/03/2017	<b>DATE OF TESTING</b> 27/03/2017
	<b>SAMPLE DESCRIPTION</b> <b>LV PCC PANEL</b> Rated voltage : 415 V ± 10% Rated current (Incoming) : 3800 A Rated frequency : 50 Hz No. of Phases : TPN Quantity (tested) : 1 No. Further details as per sheet 2 to 5 of 20	
<b>SAMPLE IDENTIFICATION</b> <b>ERDA Sample code No. : ERDA-00187176</b> <b>Type designation : SAMSET</b> <b>Serial no. : SIC/STC/16/01</b> <b>Manufacturer's name :</b> M/s. Samcon Industrial Controls Pvt. Ltd., Thane <b>Drawing no. :</b> i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST DETAILS</b> 1) Dielectric properties (Cl. No. 10.9)	<b>TEST SPECIFICATIONS</b> IEC 61439-1 : 2011 & IEC 61439-2 : 2011	
<b>ENCLOSURE :</b> 1) Photograph No. : 1617-020972/A & C (Total 02 Nos.) 2) Oscillogram No. : 020972/01 & 10, 020972/11 & 20, 020972/21 & 30, 020972/31 & 40, 020972/41 & 50, 020972/51 & 60, 020972/61 & 70, 020972/71 & 80, 020972/81 & 90, 020972/91 & 100, 020972/101 & 110 (Total 22 Nos.) 3) Drawing No. : i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST WITNESSED BY :</b> 1) Mr. Harishchandra Fegade - DGM - Design and 2) Mr. Avinash Deore - Asst. Manager Production of M/s. Samcon Industrial Controls Pvt. Ltd.		
<b>REMARKS :</b> Sample conforms to the requirement of the standard for the dielectric properties test.		
 <b>PREPARED BY</b>	 <b>CHECKED BY</b>	 <b>APPROVED BY</b> (G. Som)

E 2187524

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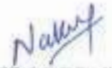

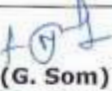
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### TEST REPORT

SHEET 1 OF 8

<b>NAME &amp; ADDRESS OF THE CUSTOMER</b> <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD.</b> PLOT No. : 20, 22 & 23, SURVEY No. : 165 A/2 & 3, 01 OSWAL INDUSTRIAL ESTATE, NH3, VILLAGE ASANGAON, TAL. SHAHAPUR, DIST. THANE - 421 601	<b>TEST REPORT NO. : RP-1617-063354</b> <b>DATE : 30/03/2017</b>	
	<b>CUSTOMER REF. No.</b> Nil	<b>DATED</b> 07/03/2017
	<b>DATE OF SAMPLE RECEIPT</b> 07/03/2017	<b>DATE OF TESTING</b> 27/03/2017 to 28/03/2017
	<b>SAMPLE DESCRIPTION</b> <b>LV PCC PANEL</b> Rated voltage : 415 V ± 10% Rated current (Incoming) : 3800 A Rated frequency : 50 Hz No. of Phases : TPN Quantity (tested) : 1 No. Further details as per sheet 2 to 5 of 8	
<b>SAMPLE IDENTIFICATION</b> <b>ERDA Sample code No. : ERDA-00187176</b> <b>Type designation : SAMSET</b> <b>Serial no. : SIC/STC/16/01</b> <b>Manufacturer's name :</b> M/s. Samcon Industrial Controls Pvt. Ltd., Thane <b>Drawing no. :</b> i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST DETAILS</b> 1.0 Mechanical operation (CI.no.10.13)	<b>TEST SPECIFICATIONS</b> IEC 61439-1 : 2011 & IEC 61439-2 : 2011	
<b>ENCLOSURE :</b> 1) Photograph No. : 1617-020972/A & C (Total 02 Nos.) 2) Oscillogram No. : Nil 3) Drawing No. : i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST WITNESSED BY :</b> 1) Mr. Harishchandra Fegade - DGM - Design and 2) Mr. Avinash Deore - Asst. Manager Production of M/s. Samcon Industrial Controls Pvt. Ltd.		
<b>REMARKS :</b> Sample conforms to the requirement of the standard for the verification of mechanical operation test.		
PREPARED BY 	CHECKED BY 	APPROVED BY (G. Som) 

E 2187523

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### TEST REPORT

SHEET 1 OF 20

<b>NAME &amp; ADDRESS OF THE CUSTOMER</b> <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD.</b> PLOT No. : 20, 22 & 23, SURVEY No. : 165 A/2 & 3, 01 OSWAL INDUSTRIAL ESTATE, NH3, VILLAGE ASANGAON, TAL. SHAHAPUR, DIST. THANE - 421 601	<b>TEST REPORT NO. : RP-1617-063356</b> <b>DATE : 30/03/2017</b>	
	<b>CUSTOMER REF. No.</b> Nil	<b>DATED</b> 07/03/2017
	<b>DATE OF SAMPLE RECEIPT</b> 07/03/2017	<b>DATE OF TESTING</b> 15/03/2017 to 30/03/2017
	<b>SAMPLE DESCRIPTION</b> <b>LV PCC PANEL</b> Rated voltage : 415 V ± 10% Rated current (Incoming) : 3800 A Rated frequency : 50 Hz No. of Phases : TPN Quantity (tested) : 1 No. Further details as per sheet 2 to 5 of 20	
<b>SAMPLE IDENTIFICATION</b> <b>ERDA Sample code No. : ERDA-00187176</b> <b>Type designation : SAMSET</b> <b>Serial no. : SIC/STC/16/01</b> <b>Manufacturer's name :</b> M/s. Samcon Industrial Controls Pvt. Ltd., Thane <b>Drawing no. :</b> i) As per INDEX PAGE drawing no. SIC/STC/16-01 (Sheet 2 of 15) (Rev. 00) [Total 15 Sheets]		
<b>TEST DETAILS</b> 1) Verification of temperature-rise (Cl.no.10.10)	<b>TEST SPECIFICATIONS</b> IEC 61439-1 : 2011 & IEC 61439-2 : 2011	
<b>ENCLOSURE :</b> 1) Photograph No. : 1617-020972/A & C (Total 02 Nos.) 2) Oscillogram No. : Nil 3) Drawing No. : i) As per INDEX PAGE drawing no. SIC/STC/16-01 (Sheet 2 of 15) (Rev. 00) [Total 15 Sheets]		
<b>NOTE :</b> During the temperature-rise test, the cooling fans were provided near bottom terminals & top terminals of 4000A ACB and heat sink provided as per drawing no. : SIC/STC/16-01 (Rev. 00) [Sheet no. 6 of 15].		
<b>TEST WITNESSED BY :</b> 1) Mr. Harishchandra Fegade - DGM - Design and 2) Mr. Avinash Deore - Asst. Manager Production of M/s. Samcon Industrial Controls Pvt. Ltd.		
<b>REMARKS :</b> Sample <b>conforms</b> to the requirement of the standard for the verification of temperature-rise tests.		
PREPARED BY 	CHECKED BY 	APPROVED BY (G. Som) 

IE 2187576

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### TEST REPORT

SHEET 1 OF 7

<b>NAME &amp; ADDRESS OF THE CUSTOMER</b> <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD.,</b>  PLOT No. : 20, 22 & 23, SURVEY No. : 165 A/2 & 3, 01 OSWAL INDUSTRIAL ESTATE, NH3, VILLAGE ASANGAON, TAL. SHAHAPUR, DIST. THANE - 421 601	<b>TEST REPORT NO. : RP-1617-063357</b> <b>DATE : 30/03/2017</b>	
	<b>CUSTOMER REF. No.</b> Nil	<b>DATED</b> 07/03/2017
	<b>DATE OF SAMPLE RECEIPT</b> 07/03/2017	<b>DATE OF TESTING</b> 19/03/2017 to 30/03/2017
	<b>SAMPLE IDENTIFICATION</b> <b>ERDA Sample code No. : ERDA-00187176</b> <b>Type designation : SAMSET</b> <b>Serial no. : SIC/STC/16/01</b> <b>Manufacturer's name :</b> M/s. Samcon Industrial Controls Pvt. Ltd., Thane <b>Drawing no. :</b> i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)	
<b>SAMPLE DESCRIPTION</b> <b>LV PCC PANEL</b>  Rated voltage : 415 V ± 10% Rated current (Incoming) : 3800 A Rated frequency : 50 Hz No. of Phases : TPN Quantity (tested) : 1 No. Further details as per sheet 2 to 5 of 7		
<b>TEST DETAILS</b> 1.0 Properties of insulating materials (Cl. no. 10.2.3) 1.1 Verification of thermal stability of enclosures (Cl. no. 10.2.3.1)		<b>TEST SPECIFICATIONS</b> IEC 61439-1 : 2011 & IEC 61439-2 : 2011
<b>ENCLOSURE :</b> 1) Photograph No. : 1617-020972/E 2) Oscillogram No. : Nil 3) Drawing No. : i) SIC/STC/16-01 (Rev. 00) [Sheet 1 of 15], ii) SIC/STC/16-01 (Rev. 00) [Sheet 3 of 15], iii) SIC/STC/16-01 (Rev. 00) [Sheet 4 of 15], iv) SIC/STC/16-01 (Rev. 00) [Sheet 5 of 15] (Total 4 sheets)		
<b>TEST WITNESSED BY :</b> 1) Mr. Harishchandra Fegade - DGM - Design and 2) Mr. Avinash Deore - Asst. Manager Production of M/s. Samcon Industrial Controls Pvt. Ltd.		
<b>REMARKS :</b> Sample <b>conforms</b> to the requirement of standard for the above mentioned test.		
 <b>PREPARED BY</b>	 <b>CHECKED BY</b>	 <b>APPROVED BY</b>

TE 2187519

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## TEST REPORT

SHEET 1 OF 6

<b>NAME &amp; ADDRESS OF CUSTOMER</b>  <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD</b> Plot No. 20, 22 & 23, Survey NO 165, A/2 & 3, Oswal Industrial Estate, National Highway No. 3, Village Asangaon, Tal. Shahapur, Dist. Thane - 421601.	<b>REPORT NO.:</b> RP-1718-003931 <b>DATE:</b> 26.04.2017	
	<b>CUSTOMER REF.NO:</b> Nil	<b>DATED:</b> 06.04.2017
	<b>DATE OF SAMPLE RECEIPT:</b> 30.03.2017	<b>DATE OF TESTING:</b> 07.04.2017 to 13.04.2017
	<b>SAMPLE DESCRIPTION</b>  <b>LOW VOLTAGE-PCC PANEL</b>  Rated Voltage (Un) : 415 V Rated Current (InA) : 4000 A Rated Frequency(fn) : 50 Hz Rated insulation voltage (Ui) : 690 V No. of Phases : TPN + Earth <b>Rated short time withstand current &amp; its duration :</b> - 65 kArms for 1 sec. with an initial peak of 143 kA between phases - 39 kArms for 1 sec. with an initial peak of 81.9 kA between nearest phase & Neutral  Quantity (Tested): 1 No. Further details as per sheet No. 3 OF 6	
<b>SAMPLE IDENTIFICATION</b>  <b>ERDA SAMPLE CODE No.:</b> ERDA-00187176  <b>TYPE DESIGNATION:</b> SAMSET  <b>SR. NO.:</b> SIC/STC/16/01  <b>DRAWING NO.:</b> SIC/STC/16-01 SHEET 1 OF 7 SIC/STC/16-01 SHEET 2 OF 7 SIC/STC/16-01 SHEET 3 OF 7 REV 00 SIC/STC/16-01 SHEET 4 OF 7 REV 00 SIC/STC/16-01 SHEET 5 OF 14 REV 00 SIC/STC/16-01 SHEET 6 OF 7 REV 00 SIC/STC/16-01 SHEET 7 OF 7 REV 00 SIC/FS/01-210W SHEET- 1 REV 0 SIC/CS/01 SHEET -02 REV 0 SIC/FS-02/210T SHEET- 3 REV 0 SIC/FS/02-410T SHEET- 4 REV 0 SIC/BBS/01 SHEET 5 REV 00		
<b>TEST DETAILS</b> Short circuit withstand Strength test (Cl. No. 10.11.5.3.3 & Cl. 10.11.5.3.5)	<b>TEST SPECIFICATIONS</b> As per customer's requirement, test procedure followed as per IEC 61439-1:2011 & IEC 61439-2:2011	
<b>ENCLOSURES:</b> NUMBER OF OSCILLOGRAM : Three NUMBER OF PHOTOGRAPH : One NUMBER OF TEST CIRCUIT DIAGRAM : Two NUMBER OF DRAWINGS : Twelve		
<b>TEST WITNESSED BY:</b> Mr. Harishchandra Fegade (DGM-Design, Samcon Industrial Controls Pvt. Ltd) Mr. Avinash Deore (Asst. Manager-Production, Samcon Industrial Controls Pvt. Ltd)		
<b>REMARKS:</b> The sample conforms to the requirements of short circuit withstand strength test as specified by the customer.		
 <b>PREPARED BY</b>	 <b>CHECKED BY</b>	 <b>(YASHINKHAN I. PATHAN)</b> <b>APPROVED BY</b>

TC 2204492

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### TEST REPORT

SHEET 1 OF 5

<b>NAME &amp; ADDRESS OF CUSTOMER</b>  <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD</b> Plot No. 20, 22 & 23, Survey NO 165, A/2 & 3, Oswal Industrial Estate, National Highway No. 3, Village Asangaon, Tal. Shahapur, Dist. Thane - 421601.	<b>REPORT NO.:</b> RP-1718-003932 <b>DATE:</b> 26.04.2017	
	<b>CUSTOMER REF.NO:</b> Nil	<b>DATED:</b> 06.04.2017
	<b>DATE OF SAMPLE RECEIPT:</b> 30.03.2017	<b>DATE OF TESTING:</b> 10.04.2017 to 13.04.2017
	<b>SAMPLE DESCRIPTION</b>  <b>LOW VOLTAGE-PCC PANEL</b> Rated Voltage (Un) : 415 V Rated Current (InA) : 4000 A Rated Frequency(fn) : 50 Hz Rated Insulation voltage (UI) : 690 V No. of Phases : TPN + Earth  <b>Rated Conditional Short Circuit current:</b> 39 kArms @ 240Vrms, Power factor = 0.25 between nearest phase & Protective conductor  Quantity (Tested): 1 No.  Further details as per sheet No. 3 OF 5	
<b>SAMPLE IDENTIFICATION</b>  <b>ERDA SAMPLE CODE No.:</b> ERDA-00187176  <b>TYPE DESIGNATION:</b> SAMSET  <b>SR. NO.:</b> SIC/STC/16/01  <b>DRAWING NO.:</b> SIC/STC/16-01 SHEET 1 OF 6 SIC/STC/16-01 SHEET 2 OF 6 SIC/STC/16-01 SHEET 3 OF 6 REV 00 SIC/STC/16-01 SHEET 4 OF 6 REV 00 SIC/STC/16-01 SHEET 5 OF 6 REV 00 SIC/STC/16-01 SHEET 6 OF 6 REV 00 SIC/FS/01-210W SHEET- 1 REV 0 SIC/CS/01 SHEET -02 REV 0 SIC/FS-02/210T SHEET- 3 REV 0 SIC/FS/02-410T SHEET- 4 REV 0 SIC/BBS/01 SHEET 5 REV 00		
<b>TEST DETAILS</b> Short circuit withstand strength test of the protective circuit (Cl. No. 10.5.3.5)  <b>ENCLOSURES:</b> NUMBER OF OSCILLOGRAM : Three NUMBER OF PHOTOGRAPH : One NUMBER OF TEST CIRCUIT DIAGRAM : One NUMBER OF DRAWINGS : Eleven  <b>TEST WITNESSED BY:</b> Mr. Harishchandra Fegade (DGM-Design, Samcon Industrial Controls Pvt. Ltd) Mr. Avinash Deore (Asst. Manager-Production, Samcon Industrial Controls Pvt. Ltd)	<b>TEST SPECIFICATIONS</b> IEC 61439-1:2011 & IEC 61439-2:2011	
<b>REMARKS:</b> The sample <b>conforms</b> to the requirements of short circuit withstand strength test of the protective circuit as per standard.		
PREPARED BY	CHECKED BY	APPROVED BY  (YASHINKHAN I. PATHAN)

TC 2230801

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### TEST REPORT

SHEET 1 OF 7

<b>NAME &amp; ADDRESS OF CUSTOMER</b>  <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD</b> Plot No. 20, 22 & 23, Survey NO 165, A/2 & 3, Oswal Industrial Estate, National Highway No. 3, Village Asangaon, Tal. Shahapur, Dist. Thane - 421601.	<b>REPORT NO.:</b> RP-1718-007226 <b>DATE:</b> 15.05.2017	
	<b>CUSTOMER REF.NO:</b> Nil	<b>DATED:</b> 13.04.2017
	<b>DATE OF SAMPLE RECEIPT:</b> 14.04.2017	<b>DATE OF TESTING:</b> 14.04.2017
	<b>SAMPLE DESCRIPTION</b>  <b>LOW VOLTAGE- PCC PANEL</b> Rated Voltage( $U_n$ ) : 415 V Rated Normal Current ( $I_n$ ) : 4000 A Rated Frequency( $f_n$ ) : 50 Hz Rated insulation voltage ( $U_i$ ): 690 V No. of Phases : TPN +Earth Extendable/Non-extendable : Extendable  <b>Rated Conditional Short Circuit current (<math>I_{cc}</math>):</b> Three Phase : 65 kArms @ 415V Single Phase : 39 kArms @ 240V  Quantity (Tested): 1 No.  Further details as per Sheet No. 3 OF 7	
<b>TEST DETAILS</b> Short circuit withstand Strength test (Conditional short circuit current test) (Cl. No. 10.11.5.4 a)	<b>TEST SPECIFICATIONS</b> As per customer's requirement, test procedure followed as per IEC 61439-1:2011 & IEC 61439-2:2011	
<b>ENCLOSURES:</b> NUMBER OF OSCILLOGRAM : Six NUMBER OF PHOTOGRAPH : One NUMBER OF TEST CIRCUIT DIAGRAM : Two NUMBER OF DRAWINGS : Eleven		
<b>TEST WITNESSED BY:</b> Mr. Harishchandra Fegade (DGM-Design, Samcon Industrial Controls Pvt. Ltd) Mr. Avinash Deore (Asst. Manager-Production, Samcon Industrial Controls Pvt. Ltd)		
<b>REMARKS:</b> The sample <b>conforms</b> to the requirements of short circuit withstand strength (Conditional short circuit current test) as specified by the customer.		
PREPARED BY	CHECKED BY	APPROVED BY (YASHINKHAN I. PATHAN)

TC 2230866

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**REPORT NO.:** RP-1718-003933

SHEET 3 OF 16

**DATE:** 26.04.2017**TECHNICAL SPECIFICATIONS ASSIGNED BY CUSTOMER**

1. Name of manufacturer : **SAMCON INDUSTRIAL CONTROLS PVT. LTD**
2. Equipment : LOW VOLTAGE- PCC PANEL
3. Standard reference : As per customer's requirement,  
test procedure followed as per  
IEC 61439-1:2011 &  
IEC 61439-2:2011
4. Rated voltage ( $U_n$ ) : 415 V
5. Rated Normal current ( $I_n$ ) : 4000 A
6. Type Designation : SAMSET
7. Rated insulation voltage ( $U_i$ ) : 690 V
8. Rated frequency ( $f_n$ ) : 50Hz.
9. No. of Phases : TPN + Earth
10. Rated short time withstand current & its duration ( $I_{cw}$ ):  
Three phase: 65 kA for 1 sec with an initial peak of 143 kA.  
Single phase: 39 kArms for 1 sec. with an initial peak of 81.9 kA between nearest  
phase and Neutral

**Size of Main Horizontal busbars with incoming 4000A ACB :**

(4 x 150mm x 10mm aluminium busbars per phase)

(2 x 150mm x 10mm aluminium busbars for neutral)

**Size of Vertical dropper busbar**

(4 x 80mm x 10mm aluminium busbars per phase)

(2 x 80mm x 10mm aluminium busbars for neutral)

11. **Rated Conditional Short Circuit current ( $I_{cc}$ ):** Three Phase : 65 kArms @ 415V  
Single Phase : 39 kArms @ 240V

12. **Details of 4000A incoming ACB** : Withdrawable
  - a. Rated Current ( $I_n$ ) : 4000 A
  - b. Rated Operational Voltage ( $U_e$ ) : 690 V
  - c. Rated Insulation Voltage ( $U_i$ ) : 1000 V
  - d. Rated Impulse withstand Voltage ( $U_{imp}$ ) : 12 kVp
  - e. Frequency : 50/60 Hz.
  - f. Type : NW40 H13P
  - g.  $I_{cw}$  : 65 kA for 1 Sec.
  - h.  $I_{cs}=I_{cu}$  : 65kA
  - i. Name of manufacturer : Schneider Electric
  - j. No. of poles : 3
  - k. Category : B

TC 2230864

  
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**REPORT NO.:** RP-1718-003933

**SHEET 4 OF 16**

**DATE:** 26.04.2017

**13. Details of 2500A Outgoing ACB**

- a. Rated Current ( $I_n$ ) : Withdrawable
- b. Rated Operational Voltage ( $U_e$ ) : 2500 A
- c. Rated Impulse withstand Voltage ( $U_{imp}$ ) : 690 V
- d. Rated Insulation voltage ( $U_i$ ) : 12 kVp
- e. Type : 1000 V
- f. Icu=Ics : NW25H13P
- g. Category : 65 kA
- h. No. of poles : B
- i. Frequency : 3
- j. Name of manufacturer : 50/60 Hz

**14. Details of 800A Outgoing ACB**

- a. Rated Current ( $I_n$ ) : Withdrawable
- b. Rated Operational Voltage ( $U_e$ ) : 800 A
- c. Rated Insulation voltage ( $U_i$ ) : 690 V
- d. Rated Impulse withstand Voltage ( $U_{imp}$ ) : 1000 V
- e. Type : NW08H13P
- f. Frequency : 50/60 Hz
- g. Name of manufacturer : Schneider Electric
- h. No. of poles : 3
- i. Icu=Ics : 65 kA
- j. Category : B

**15. Details of 250A Outgoing MCCB**

- a. Rated Current ( $I_n$ ) : Fixed
- b. Rated Operational Voltage ( $U_e$ ) : 250 A
- c. Rated Insulation voltage ( $U_i$ ) : 690 V
- d. Rated Impulse withstand Voltage ( $U_{imp}$ ) : 800 V
- e. Type : NSX250/TMD250
- f. Frequency : 50/60 Hz
- g. Name of manufacturer : Schneider Electric
- h. No. of poles : 3
- i. Icu=Ics : 70 kA
- j. Category : A

**16. Details of 400A Outgoing MCCB**

- a. Rated Current ( $I_n$ ) : Fixed
- b. Rated Operational Voltage ( $U_e$ ) : 400 A
- c. Rated Insulation voltage ( $U_i$ ) : 690 V
- d. Rated Impulse withstand Voltage ( $U_{imp}$ ) : 800 V
- e. Type : NSX400/MICROLOGIC-2.0
- f. Frequency : 50/60 Hz
- g. Name of manufacturer : Schneider Electric
- h. No. of poles : 3
- i. Icu=Ics : 70 kA
- j. Category : A

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SHEET 5 OF 16

**DATE:** 26.04.2017**17. Details of 630A Outgoing MCCB**

	: Fixed
a. Rated Current ( $I_n$ )	: 630 A
b. Rated Operational Voltage ( $U_e$ )	: 690 V
c. Rated Insulation voltage ( $U_i$ )	: 800 V
d. Rated Impulse withstand Voltage ( $U_{imp}$ )	: 8 kVp
e. Type	: NSX630/MICROLOGIC-2.0
f. Frequency	: 50/60 Hz
g. Name of manufacturer	: Schneider Electric
h. No. of poles	: 3
i. $I_{cu}=I_{cs}$	: 70 kA
j. Category	: A

  
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### TEST REPORT

SHEET 01 OF 04

<b>NAME AND ADDRESS OF CUSTOMER</b>  <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD.</b> PLOT NO. 20, 22, 23, SURVEY NO. 165 A/2 & 3, OSWAL INDUSTRIAL ESTATE, ASANGAON-421 601.	<b>TEST REPORT NO.:</b> RP-1718-003918 <b>DATE:</b> 26/04/2017	
	<b>CUSTOMER REF. NO.</b> Letter	<b>DATED</b> 17/04/2017
	<b>DATE OF SAMPLE RECEIPT</b> 14/04/2017	<b>DATE OF TESTING</b> 21/04/2017 to 25/04/2017
	<b>SAMPLE DESCRIPTION</b>  <b>LV PANEL 4000 A, STC 65kA for 1 Sec</b>  <b>Rating:</b> Rated Voltage: 415±10%, Rated Normal Current: 4000A, No. of Phase: TP+N, Rated Frequency: 50 Hz, Rated Insulation Level: 690V, Rated peak withstand current: 143kA	
<b>SAMPLE IDENTIFICATION</b>  <b>ERDA Sample Code No.:</b> ERDA-00193755  <b>Drg. No.:</b> a) SIC/STC/16-01 (Sheet 1 of 4) b) SIC/STC/16-01 (Sheet 2 of 4) c) SIC/STC/16-01 (Rev. 00) (Sheet 3 of 4) d) SIC/STC/16-01 (Rev. 00) (Sheet 4 of 4) (Total 4 sheets)  <b>Type Designation:</b> SAMSET  <b>Sr. No.:</b> Nil  <b>Manufacturer:</b> M/s. Samcon Industrial Controls Pvt. Ltd.		
<b>TEST DETAILS</b> 1.0 IP 43 tests  <b>Enclosures:</b> i) Photograph No.: 1718-001125/00193755/A & B (Total 2 Nos.) ii) Drg. No.: a) SIC/STC/16-01 (Sheet 1 of 4) b) SIC/STC/16-01 (Sheet 2 of 4) c) SIC/STC/16-01 (Rev. 00) (Sheet 3 of 4) d) SIC/STC/16-01 (Rev. 00) (Sheet 4 of 4) (Total 4 sheets)	<b>TEST SPECIFICATION</b> Cl. No. 10.3 of IEC 61439-1 & 2:2011	
<b>Test witnessed by:</b> i) Mr. Harishchandra D. Fegade (DGM-Design) of M/s. Samcon Industrial controls Pvt. Ltd., Asangaon. ii) Mr. Avinash Deore (Asst. Manager-Production) of M/s. Samcon Industrial Controls Pvt. Ltd., Asangaon.		
<b>Note:</b> i) All canopy joints & all top covers joints were sealed with silicon sealant. ii) Lifting angle & bolts were sealed with silicon sealant. iii) All corners of ACB covers were sealed with silicon sealant. iv) Fan was kept in switch OFF condition during IP 43 tests as declared by the customer.		
<b>Remarks:</b> Sample conforms to the requirement of IP 43 tests as per the standard.		
 <b>PREPARED BY</b>	 <b>CHECKED BY</b>	 <b>(G. SOM)</b> <b>APPROVED BY</b>

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## TEST REPORT

SHEET 1 OF 5

<b>NAME AND ADDRESS OF CUSTOMER</b>  <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD</b> Plot No. 20, 22 & 23, Survey NO 165, A/2 & 3, Oswal Industrial Estate, National Highway No. 3, Village Asangaon, Tal. Shahapur, Dist. Thane - 421601.	<b>REPORT NO.:</b> RP-1718-022766 <b>DATE:</b> 09.08.2017	
	<b>CUSTOMER REF. NO.:</b> Nil	<b>DATED:</b> 29.06.2017
	<b>DATE OF SAMPLE RECEIPT:</b> 11.05.2017	<b>DATE OF TESTING:</b> 19.07.2017 to 20.07.2017
<b>SAMPLE DESCRIPTION</b>  <b>LOW VOLTAGE - PCC PANEL</b> Rated operational voltage ( $U_e$ ): 415 V ac Rated Current ( $I_n$ ): 4000 A Rated Frequency( $f_n$ ): 50 Hz Rated insulation voltage ( $U_i$ ): 690 V No. of Phases : TPN + Earth Extendable/Non-extendable : Extendable Characteristics under arcing : Arcing class C conditions permissible short-circuit current under arcing conditions ( $I_p$ arc) : 50 kArms @ 415V permissible arc duration (tarc) : 0.5 sec Quantity tested: 1 No. Further details as per sheet No. 3 of 5	<b>SAMPLE IDENTIFICATION</b>  <b>ERDA SAMPLE CODE NO.:</b> ERDA-0199594  <b>TYPE DESIGNATION:</b> LV-PCC-SAMSET  <b>SR. NO.:</b> SIC/STC/16-01  <b>DRAWING NO.:</b> SIC/STC/16-01 SHEET 01 OF 05 SIC/STC/16-01 SHEET 02 OF 05 SIC/ARC/17-01 SHEET 03 OF 05 REV 00 SIC/ARC/17-01 SHEET 04 OF 05 REV 00 SIC/STC/16-01 SHEET 05 OF 05 REV 00 SIC/IAC/FLP1, -SIC/IAC/FLP2, -SIC/IAC/FLP3 SIC/FS-02/210T SHEET- 3 REV 0 SIC/FS/02-410T SHEET- 4 REV 0 SIC/BBS/01 SHEET 5 REV 0	
<b>TEST DETAILS</b> Permissible short-circuit current under arcing conditions ( $I_p$ arc) [at Left hand side end terminals of main horizontal busbar with Incoming 4000A ACB ]	<b>TEST SPECIFICATION</b> As per customer requirement, test procedure followed as per IEC TR 61641 Edition 3.0 : 2014	
<b>ENCLOSURES:</b> NUMBER OF OSCILLOGRAMS : Four NUMBER OF PHOTOGRAPH : One NUMBER OF TEST CIRCUIT DIAGRAM : One NUMBER OF DRAWINGS : Eleven		
<b>TEST WITNESSED BY:</b> Mr. Harishchandra D. Fegade (DGM-Design, Samcon Industrial Controls Pvt. Ltd)		
<b>NOTE:</b> Arc initiation point and Source point declared by the customer.		
<b>REMARKS:</b> Test Results as per enclosures.		
PREPARED BY	CHECKED BY	APPROVED BY <b>(YASHINKHAN I. PATHAN)</b>

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**REPORT NO.:** RP-1718-022766

SHEET 3 OF 5

**DATE:** 09.08.2017**TECHNICAL SPECIFICATIONS ASSIGNED BY CUSTOMER**

- |  |  |
|--|--|
| 1. Name of manufacturer  | : <b>SAMCON INDUSTRIAL CONTROLS PVT. LTD</b>   |
| 2. Equipment   | : Low Voltage – PCC Panel  |
| 3. Standard reference  | : As per customer requirement,<br>test procedure followed as per<br>IEC TR 61641, Edition 3.0 : 2014 |
| 4. Rated operational voltage ( $U_e$ )   | : 415 V ac   |
| 5. Rated current ( $I_n$ )   | : 4000 A   |
| 6. Rated insulation voltage ( $U_i$ )  | : 1000 V   |
| 7. Rated frequency ( $f_n$ )   | : 50 Hz  |
| 8. No. of Phases   | : TPN + Earth  |
| 9. Sr. No.   | : SIC/STC/16-01  |
| 10. Type Designation   | : LV-PCC-SAMSET  |
| 11. Extendable/Non-extendable  | : Extendable   |
| 12. Characteristics under arcing conditions                                    | : Arcing class C   |
| 13. Permissible short-circuit current under arcing conditions ( $I_{p\ arc}$ ) | : 50 kArms @ 415V  |
| 14. Permissible arc duration ( $t_{arc}$ )                                     | : 0.5 sec  |
| 15. Form of separation   | : Form 3b, Type 1  |
| 16. Degree of protection   | : IP 43  |
| <b>17. Details of 4000A incoming ACB</b>                                       | :  |
| a. Rated Current ( $I_n$ )   | : 4000 A   |
| b. Rated Operational Voltage ( $U_e$ )   | : 690 V  |
| c. Rated Insulation Voltage ( $U_i$ )  | : 1000 V   |
| d. Rated Impulse withstand Voltage ( $U_{imp}$ )                               | : 12 kVp   |
| e. Frequency   | : 50/60 Hz.  |
| f. Type  | : NW40 H13P  |
| g. $I_{cw}$  | : 65 kA for 1 Sec.   |
| h. $I_{cs}=I_{cu}$   | : 65kA   |
| i. Name of manufacturer  | : Schneider Electric   |
| j. No. of poles  | : 3  |
| k. Selectivity Category  | : B  |
| 18. Quantity (Tested)  | : 1 No.  |

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SHEET 5 OF 5

**DATE:** 09.08.2017**TEST AT PERMISSIBLE SHORT-CIRCUIT CURRENT UNDER ARCING CONDITIONS ( $I_{p\ arc}$ ):**

[At left hand side end terminals of main horizontal busbar with Incoming 4000A ACB]

Test at permissible short-circuit current under arcing conditions was performed on the sample connected to the source as per test circuit diagram no. OLSC/SWG/48 and as per drawing no. SIC/STC/16-01 SHEET 05 OF 05 REV 00. The arc was initiated by using a bare copper ignition wire of 1.5 sq.mm connected at at Left hand side end terminals of main horizontal busbar including Incoming 4000A ACB. Black cloth was used as indicator.

During the first shot, the arc extinguished before the half of the specified arc duration. Therefore, the sample was subjected to a second shot. The arc was initiated by using a bare copper ignition wire of 1.5 sq.mm at the same point as with the first shot.

**Test Supply position:** Bottom terminals of incoming 4000A ACB using copper braided cable of size 1000mm<sup>2</sup> per phase.

**Short circuit position:** Left hand side end terminals of main horizontal busbar using a bare copper ignition wire of 1.5 sq.mm

**NOTE:** The releases of ACB were disabled before the test.  
Supply voltage was maintained for 0.5 sec. as on request of customer.

Condition of the equipment under test: New

Supply frequency: 50.006 Hz

Oscillogram No.	Let through current (kA <sub>peak</sub> )	Duration (msecs.)	Joule integral (A <sup>2</sup> s x10 <sup>6</sup> )	Observation during test
294/03	29.197	41.621	9.904	No abnormality (1 <sup>st</sup> Shot)
	42.227	44.629	12.971	
	26.765	44.629	7.651	
294/04	30.802	31.906	9.513	No abnormality (2 <sup>nd</sup> Shot)
	42.571	34.345	13.010	
	26.605	34.345	7.034	

**Assessment of the test:**

- 1) Doors and cover did not open.
- 2) No parts of the assembly were ejected.
- 3) No holes were observed in any parts.
- 4) Indicators were not ignited.
- 5) The protective circuit for accessible part of the enclosure was still effective.
- 6) Assembly was capable of confining arc to the defined area where it ignited and there was no propagation of the arc to other areas within the assembly.
- 7) No load close open operation and Withdrawability of Incoming ACB were checked and found satisfactory. All other units were remain fully operable.
- 8) Ignition wire got blown. Flaps were operated.
- 9) After clearing of the fault, Unit withstood dielectric verification test at 1.5U<sub>e</sub> for 60 secs.

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