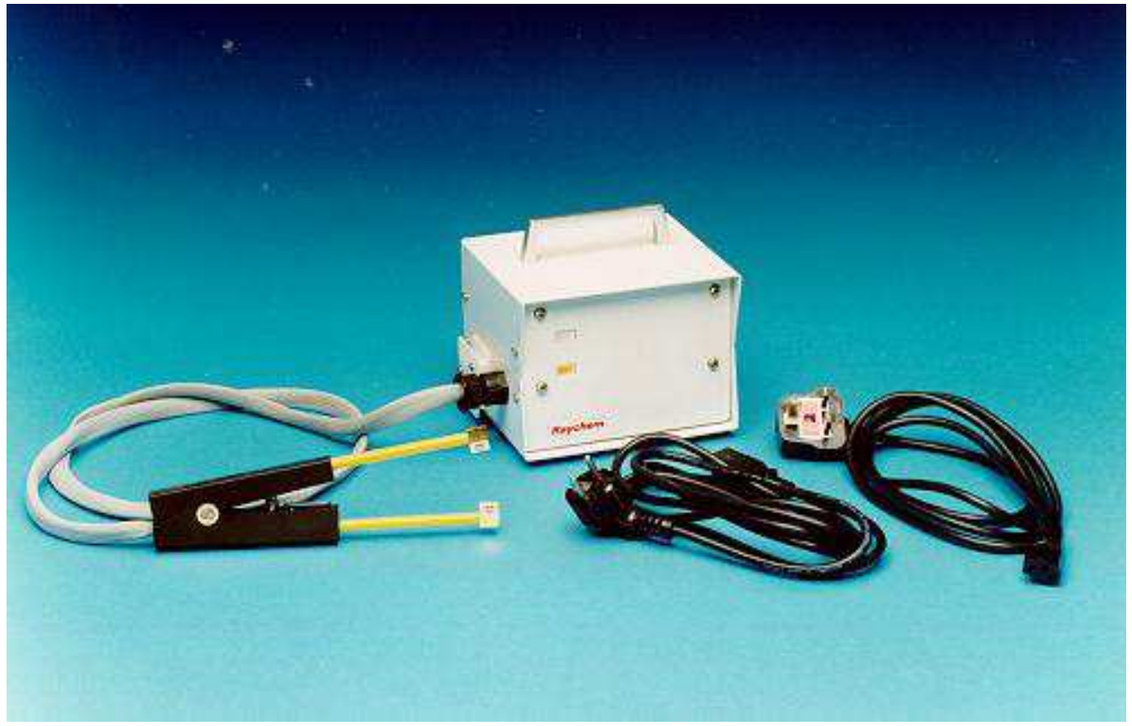
EVERY
CONNECTION
COUNTS

RoHS 2 TECHNICAL FILE

TINEL INSTALLATION TOOL
AD-5000-TINEL-ASSY



All black text is written as generic as possible and is intended to be ready for use in your technical file.

All red italic text provides extra instructions and is intended to be deleted in your technical file.

CONTENT

•This technical file contains following sections :

PRODUCT IDENTIFICATION

DESCRIPTION

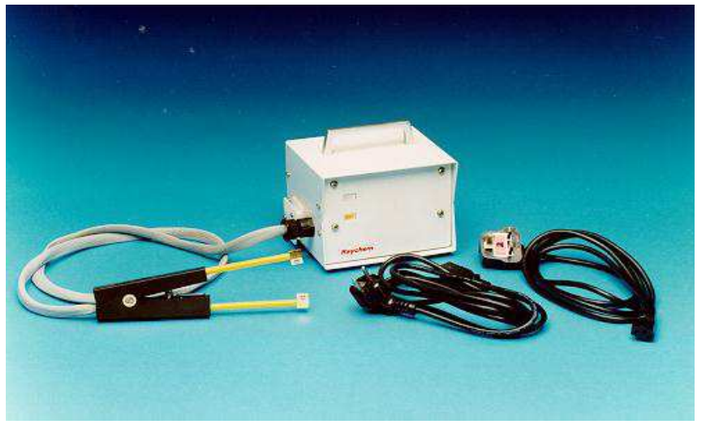
product group AD-5000-TINEL-ASSY : GPL 729
type :

serial number : -

batch : -
part number(s) :

AD-5000-TINEL-ASSY	411993-000	
Hand Tool Assembly	AD-5000-TINEL-HAND-TOOL	795257-000
Standard Electrodes (TR04 to TR24 RINGS)	AD-5000-TINEL-STD-ELECT	180245-000
Conduit Electrodes	AD-5000-TINEL-COND-ELECT	747235-000
(Conduit systems or TR rings on double braid)		
Square Profile Electrodes (TC02-TC03 RINGS)	AD-5000-TINEL-SQ-EXT-ELEC	065583-000

PICTURE (optional)



• Make sure that identification info matches with the identification info provided on the Declaration of Conformity.

LIST OF COMPONENTS

All components are listed in the overview table.

LIST OF SUPPLIERS

All suppliers are listed in the overview table.

APPLICABLE EEE CATEGORY

6.electrical and electronic tools
• list applicable EEE category the product belongs to (see Annex 1 of Directive 2011/65/EU)

APPLICABLE EXEMPTIONS (if any)

• list applicable exempted substance applications

RISK ASSESSMENT

GENERAL APPROACH

• TE Connectivity considers following levels of technical documentation, ranked by effectiveness :

1. internal or third party test reports
2. full material declarations (FMD)
3. part specific statements of compliance (SoC)
4. generic statements of compliance — *not used by TE*
5. generic contractual agreements — *not used by TE*

• TE Connectivity is never relying on generic contractual agreements or generic statements of compliance to fulfill technical documentation requirements.

• The necessity of a detailed risk assessment will be based on the availability of test data :
- if TE already has test data available : no need for a detailed risk assessment; the test data, being the highest possible level of documentation, will be used by default.
- if TE has no test data availabe : a detailed risk assessment, as described below, will determine the required technical documentation.

DETAILED RISK ASSESSMENT METHODOLOGY

• MATERIAL RISK + SUPPLIER RISK ⇨ PART INCOMPLIANCE RISK ⇨ REQUIRED TECHNICAL DOCUMENTATION

• The different building blocks of this methodology are explained below.

RISK ASSESSMENT (continued)

MATERIAL RISK

- Following TE's corporate compliance validation specification TEC-138-703 or Business Unit specific compliance specifications, TE Business Units evaluate their material risk.

- Although assessment procedures and scoring systems may differ between BU's, in the end all scores are to be transferred to a low - medium - high material risk evaluation.

- This material risk evaluation for every part is documented in the overview table.

SUPPLIER RISK

- Following TE's corporate compliance validation specification TEC-138-703 or Business Unit specific quality, supplier auditing or compliance specifications, TE Business Units assess their supply chain and evaluate their suppliers.

- Although assessment procedures and scoring systems may differ between BU's, in the end all scores are to be transferred to a low - medium - high supplier compliance risk evaluation.

- This supplier compliance risk evaluation for every supplier is documented in the overview table.

RISK ASSESSMENT (continued)

PART INCOMPLIANCE RISK index (PIR-index)

- The PIR-index combines the material risk evaluation and the supplier risk evaluation into an overall low-medium-high part incompliance risk ranking.

- The material risk is the main driving factor for the PIR-index, with a beneficial influence for thrustworthy suppliers.

PIR-index			SUPPLIER COMPLIANCE RISK EVALUATION		
			LOW	MEDIUM	HIGH
MATERIAL RISK EVALUATION	LOW	⇨	LOW	LOW	LOW
	MEDIUM	⇨	LOW	MEDIUM	MEDIUM
	HIGH	⇨	LOW	MEDIUM	HIGH

- The PIR-index for every part/supplier-combination is documented in the overview table.

RISK ASSESSMENT (continued)

REQUIRED LEVEL OF TECHNICAL DOCUMENTATION

• Different levels of technical documentation, ranked by effectiveness, are :

1. internal or third party test reports
2. full material declarations (FMD)
3. part specific statements of compliance (SoC)
4. generic statements of compliance — *not used by TE*
5. generic contractual agreements — *not used by TE*

• TE Connectivity is never relying on generic contractual agreements or generic statements of compliance.

• The PIR-index (material risk X supplier risk) determines the required level of technical documents for documenting the part's compliance with the RoHS substance restrictions.

required MINIMUM level of technical documentation			SUPPLIER RISK		
			LOW	MEDIUM	HIGH
MATERIAL RISK	LOW	⇨	supplier SoC	supplier SoC	supplier SoC
	MEDIUM	⇨	supplier SoC	supplier FMD or supplier test report	supplier FMD or supplier test report
	HIGH	⇨	supplier SoC	supplier FMD or supplier test report	internal *or* 3rd party test report

• The required technical documentation for every part is documented in the overview table.

Note:

Drawing ref and complete component list see Evaluation of documentaion

EVALUATION OF DOCUMENTATION

PRINCIPLE

• All technical documentation needs to be evaluated wether the document is of sufficient quality to be included and can be used to confirm that the component meets the substance restrictions of RoHS2.

• The evaluation is documented in the overview table.

EVALUATION CRITERIA

• Following is a non-exhaustive list of criteria to take into account for the evaluation of supplier anwers/test reports :

- clear identification of supplier or test lab / letterhead
- date of answer/test report
- location of test lab and name of tester
- analytical test method used for the test
- applicable legislation stated
- clear product identification
- ISO 17025 certification of test lab
- contact for further information
- no unacceptable waiver statements
- description of the conclusion of the testing / confirmation that all results actually meet substance restrictions limits
- signature

TE Documentation of compliance. Exceptions EMS manufacture's /supplies TE THE Tinel tool AD 5000 products and components referenced in the documentation.
TE own the dsign of this tool and are responsible for this tool to be CE compliant and RoHS 2.

C.E. Conformity

Overview table

Assembly No: **TY** **PCN411993-000**

component_whouse	component_code	usage_quantity	long_description	
TY	TAE/020/000 ISS7	1.00000	TINEL LOCK INSTALLATION TOOL ASSY	
TY	TAE/020/001 ISS6	1.00000	TINEL LOCK INST HAND TOOL ASSY	ISS 7
TY	TAE/020/02 ISS2	1.00000	CARRY CASE ASSY	
TY	12480	1.00000	PCB ASSY	
TY	TAE/020/01 ISS2	2.00000	STANDARD ELECTRODE ASSY	

Assembly No: TY **TAE/020/000 ISS7** **COMMENTS**

	component_whouse	component_code	usage_quantity	long_description	
1	TY	303-0375	1.00000	READ MANUAL LABEL TAE/020/16 ISS1	
2	TY	303-0376	1.00000	FUSE RATING LABEL TAE/020/14 ISS1	
3	TY	181-0098	2.00000	FUSE S506/2 AMP F1123244 RS5371341	
4	TY	305-0478	1.00000	REAR PANEL TAE/020/1 ISS3	
5	TY	303-0377	1.00000	CAUTION LABEL TAE/02/2 ISS2	
6	TY	303-0378	1.00000	PCN LABEL TAE/020/3 ISS5	
7	TY	305-0479	1.00000	BOTTOM COVER TAE/020/4 ISS3	
8	TY	305-0480	1.00000	TOP COVER TAE/020/5 ISS2	
9	TY	303-0379	1.00000	EARTH LABEL V172 (NEW REF: 8215E)	
10	TY	303-0380	1.00000	PE LABEL TAE/020/17 ISS1	
11	TY	305-0481	1.00000	FRONT PANEL TAE/020/6 ISS2	
12	TY	305-0482	1.00000	TRANSFORMER MTG ANGLE TAE/020/7 ISS2	
13	TY	305-0483	1.00000	RELAY MTG PLATE TAE/020/8 ISS3	ISS4 HOLES ADDED FOR New Rohs relay
14	TY	305-0484	2.00000	INSULATOR BUSH TAE/020/9 ISS2	* ROHS
15	TY	305-0485	1.00000	INSULATOR BLOCK TAE/020/10 ISS2	* ROHS
16	TY	305-0486	2.00000	CONTACT TAE/020/11 ISS2	
17	TY	305-0487	1.00000	GUARD TAE/020/12 ISS2	
18	TY	305-0488	1.00000	INSULATOR PLATE TAE/020/13 ISS2	
19	TY	181-0100	1.00000	FUSE COVER 12760 BULGIN F471677 L/F	* ROHS
20	TY	950-0180	4.00000	FEET 223-821 RS	* ROHS
21	TY	301-0419	1.00000	MAINS CABLE 2 PIN 112-4379 FEC	* ROHS
22	TY	301-0207	1.00000	MAINS CABLE 112-4382	* ROHS
23	TY	529-0562	1.00000	INLET BZV03/Z0000/06 BULGIN F9996923 LF	* ROHS
24	TY	529-0563	2.00000	SOCKET WHITE F110-1119	* ROHS
25	TY	950-0304	1.00000	CABINET HANDLE 456-535	* ROHS
26	TY	301-0555	1.00000	CABLE GLAND RS365-8472 PKS 5	* ROHS
27	TY	205-0195	2.00000	SPACER M3 X 16 TAPPED -R30-1001602	* ROHS
28	TY	205-0162	2.00000	SPACER R6397-02	* ROHS
29	TY	890-0050	1.00000	RELAY G2R-1-T 24VDC RS2111275/F909968	* ROHS
30	TY	181-0099	1.00000	FUSE S506-32-R Cooper Bussman	* ROHS
31	TY	814-0097	1.00000	TRANSFORMER CE2207 ISS4 ROHS	
32	TY	814-0098	1.00000	TRANSFORMER CE2208 ISS4 ROHS	
33	TY	202-0214	1.00000	M2 CRINKLEWASHER BE	
34	TY	200-0713	1.00000	M2X12 POZI PAN HD* ROHS	
35	TY	200-0714	8.00000	M3X10 PAN HD POZI ZP&P * ROHS	
36	TY	200-0725	2.00000	M6X8 PAN HD POZI* RO	
37	TY	200-0715	4.00000	M4X20 PAN HD POZI * ROHS	
38	TY	200-0375	7.00000	M4X10 PN HD POZI ZP	
39	TY	200-0718	2.00000	M3X25 PAN HD POZI* ROHS	
40	TY	200-0719	2.00000	M3X16 PAN HD POZI * ROHS	
41	TY	200-0379	2.00000	M4X20 BRASS SLOT CSK HD SCREW	
42	TY	201-0188	22.00000	M4 HEX NUT ZP&P * ROHS	
43	TY	201-0189	3.00000	M3 FULL NUT * ROHS	
44	TY	202-0346	13.00000	M4 PLAIN WASHER ZINC * ROHS	
45	TY	202-0215	1.00000	M2 WASHER PLAIN	* ROHS
46	TY	202-0348	3.00000	M3 PLAIN WASHER * ROHS	
47	TY	202-0190	13.00000	M4 CRINKLE WASHER ZP	* ROHS
48	TY	202-0190	15.00000	M4 CRINKLE WASHER ZP	* ROHS
49	TY	202-0217	2.00000	M6 CRINKLEWASHER BE CU	* ROHS
50	TY	301-0208	2.20000	WIRE 24/0.2 TYPE 2 BROWN	* ROHS
51	TY	301-0209	1.60000	WIRE 24/0.2 TYPE2 BLUE	* ROHS
52	TY	301-0210	0.90000	WIRE 24/0.2 TYPE2 GREEN/YELLOW	* ROHS
53	TY	301-0211	0.95000	WIRE 16/0.2 TYPE2 WHITE - 047402X	* ROHS

54	TY	301-0212	0.50000	WIRE 16/0.2 TYPE2 RED		* ROHS
55	TY	301-0213	0.50000	WIRE 16/0.2 TYPE2 BLACK		* ROHS
56	TY	301-0214	1.15000	WIRE 16/0.2 TYPE2 PINK		* ROHS
57	TY	301-0215	0.95000	WIRE 32/0.2 TYPE2 PINK		* ROHS
58	TY	303-0383	1.00000	LABEL 240V 463-759		
59	TY	305-0489	1.00000	FUSE INSULATION PAD TAE/020/15 ISS1		* ROHS
60	TY	181-0101	1.00000	FUSEHOLDER FX0267 BULGIN F319510 L/F		* ROHS
61	TY	950-0305	1.00000	MANUAL THFIT/MR116 LATEST ISS		
62	TY	895-0081	1.00000	SWITCH C1350VQAAB RS199144/F149901		* ROHS
63	TY	205-0197	4.00000	CRIMP YELLOW M4 534-452		* ROHS
64	TY	205-0198	12.00000	CRIMP RED M4 534-216		* ROHS
65	TY	205-0199	7.00000	CRIMP RED 534-351		* ROHS
66	TY	205-0200	2.00000	CRIMP HL114-0035		* ROHS
67	TY	205-0201	1.00000	CRIMP RED M6 534-193		* ROHS
68	TY	200-0385	0.08000	SCREW CAP BLACK - 549-117 WATCH		* ROHS
69	TY	303-0382	1.00000	WARNING LABEL463-784		
70	TY	303-0381	1.00000	LABEL WF11A/S SIGNS & LABELS RS556159	New number 763-2143	
71	TY	201-0190	1.00000	M2 FULL NUT* ROHS		
72	TY	200-0724	3.00000	M3X20 CAP HD ZP&P * ROHS		

Assembly No: **TY** **TAE/020/001 ISS6**

component_whouse	component_code	usage_quantity	long_description	
TY	305-0490	1.00000	CONDUCTOR TAE/020/25 ISS2	
TY	305-0491	1.00000	BUSH TAE/020/26 ISS2	
TY	305-0492	1.00000	PIN TAE/020/27 ISS2	
TY	305-0493	1.00000	TONG HANDLE TAE/020/28 ISS3	
TY	305-0494	1.00000	CABLE CLAMP TAE/020/29 ISS2	
TY	305-0495	1.00000	TONG HANDLE TAE/020/30 ISS2	
TY	305-0496	1.00000	CONDUCTOR TAE/020/31 ISS2 * ROHS	
TY	313-0319	0.20000	SHRINK SLEEVE 399-524 * ROHS	
TY	313-0320	0.20000	SHRINK SLEEVE RS 399-619	
TY	101-0168	0.60000	BRAID 408-249 * ROHS	
TY	313-0321	3.50000	STRANDED WIRE 44-A0-111-26-5 * ROHS	
TY	313-0322	3.50000	STRD WIRE SILICONE SIF STRAND 0054001 * ROHS	
TY	950-0306	1.00000	SPRING D21780/ C40169	
TY	895-0082	1.00000	MICRO SWITCH DB1C-A1AA CHERRRY RS1594584	* ROHS
TY	303-0384	1.00000	CAUTION LABEL TAE/020/33 ISS1	
TY	303-0385	1.00000	DUTY CYCLE LABEL TAE/020/34 ISS1	
TY	200-0720	4.00000	M3X4 SKT HD SET * ROHS	
TY	200-0721	2.00000	M3X14 CAP HD ZP*P * ROHS	
TY	200-0722	2.00000	M3X12 CAP HD * ROHS	
TY	200-0723	2.00000	M2.5X16 CAP HD ZP&P * ROHS	
TY	200-0724	2.00000	M3X20 CAP HD ZP&P * ROHS	

Assembly No: **TY** **TAE/020/02 ISS2**

component_whouse	component_code	usage_quantity	long_description
TY	310-0038	1.00000	CASES 114525
TY	303-0388	1.00000	TECHNI BAG LABEL TAE/020/48 ISS2

18/06/2013 **Assembly No: TY** **12480**

component_whouse	component_code	usage_quantity	long_description
TY	900-0398	1.00000	PCB 12480 ISSUE 1
TY	811-0265	1.00000	RECTIFIER KBU4D-E4 VISHAY RS629-4475 ROHS
TY	788-0170	1.00000	DIODE BZX85C24 F984-4147* ROHS
TY	788-0129	1.00000	DIODE 1N4004 F956-5027 RoHS
TY	873-0034	1.00000	LED GREEN FEC: 102-1088 * ROHS
TY	873-0035	1.00000	LED YELLOW 102-1089 * ROHS
DD	617-0062	2.00000	RES 2K2 1% MFR4/LR1 * ROHS
TY	617-0478	1.00000	RESISTOR MFR4 100R 109-9867 * ROHS
TY	617-0479	1.00000	WH50 0R47 RESISTOR 950-8040 * ROHS
DD	205-0130	4.00000	TERMINAL PIN 18-0217G * ROHS

REFERENCES

EU documents

- Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment
- EN 50581 (2012) : Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

TE Connectivity corporate compliance documents

- TEC-138-703 : Product Compliance Validation Specification

ORDERING INFORMATION	Description	Raychem PCN
TINEL INSTALLATION TOOL	AD-5000-TINEL-ASSY	411993-000
RECOMMENDED SPARES :		
Hand Tool Assembly	AD-5000-TINEL-HAND-TOOL	795257-000
Standard Electrodes (TR04 to TR24 RINGS)	AD-5000-TINEL-STD-ELECT	180245-000
Conduit Electrodes (Conduit systems or TR rings on double braid)	AD-5000-TINEL-COND-ELECT	747235-000
Square Profile Electrodes (TC02-TC03 RINGS)	AD-5000-TINEL-SQ-EXT-ELEC	065583-000

IDENTIFICATION			TEST RESULTS AVAILABLE ?	RISK ASSESSMENT (RA)				EVALUATION OF DOCUMENTATION
MATERIALS		SUPPLIERS	yes = no RA(*)	material	supplier	CONCLUSION		quality check OK ?
TE part number	part description	supplier name	no = RA needed	risk	risk	PIR-index	required technical document	yes/no
411993-000	AD-5000-TINEL-ASSY	Exceptions EMS	YES	LOW	LOW			yes
795257-000	AD-5000-TINEL-HAND-TOOL		YES	LOW	LOW			yes
180245-000	AD-5000-TINEL-STD-ELECT		YES	LOW	LOW			yes
747235-000	AD-5000-TINEL-COND-ELECT		YES	LOW	LOW			yes
065583-000	AD-5000-TINEL-SQ-EXT-ELEC		YES	LOW				yes

(*) the technical documentation will by default be the test result (= highest level documentation)

411993-000	AD-5000-TINEL-ASSY

CE DECLARATION OF CONFORMITY
NAME OF MANUFACTURER OR SUPPLIER
TE Connectivity
FULL POSTAL ADDRESS INCLUDING COUNTRY OF ORIGIN
Tyco Electronics U.K. Ltd
Faraday Rd,
Dorcan, Swindon,
Wiltshire,SN3 5HH, U.K
DESCRIPTION OF PRODUCT
Machine for installing resistance heat shrinkable Tinel rings.
NAME: TYPE OR MODEL.
AD-5000-TINEL-ASSY
STANDARDS USED, INCLUDING NUMBER, TITLE, ISSUE DATE
AND OTHER RELATIVE DOCUMENTS
The Electrical Equipment (Safety) Regulations
EN 60335 - 1: 1995,EN60335-1:1996, 2002+A2 /2011 EN 60204-1:2006/2009
EN 60742-1:1995EN 292-2/A1: 1 BS EN ISO 12100:2010995 EN 294: 1992
Self - certified by Raychem/TE, following external assessment
by BSi LTD, as detailed in their report Nos. EM000879/2-2 &
EM000975, and Raychem report Nos. THFIT/ER044 &
THFIT/ER045.
EN-50081-1 EMC EMISSIONS RESIDENTIAL COMMERCIAL AND
LIGHT INDUSTRIAL TO RAYCHEM REPORT SRP/5/0109/D
2011/65/EU (RoHS Directive
PLACE / DATE OF ISSUE
Swindon Wiltshire AUG 2013
NAME OF AUTHORISED REPRESENTATIVE (PLEASE PRINT)
Mark Taylor
POSITION OF AUTHORISED REPRESENTATIVE

EPS Systems Group Product Manager for A/E
FULL POSTAL ADDRESS IF DIFFERENT FROM MANUFACTURERS
Country of origin. As postal address
Declaration
I declare that as the authorised representative, the above information in relation to the supply/manufacture of this product is in conformity with the stated standards and other related documents following the provisions of the Low Voltage Directive 73/23/EEC /2006/95/EC
Authorised Representative

Note:
Drawing ref and complete co Evaluation of documentaion