

TECHNICAL REPORT

ISO
TR 12178

First edition
1994-04-01

Industrial automation — Time-critical communications architectures — User requirements

*Automatisation industrielle — Architectures des communications en
temps réel — Prescriptions des utilisateurs*



Reference number
ISO/TR 12178:1994(E)

ISO/TR 12178:1994(E)

Contents

	Page
Foreword	iii
Introduction	iv
Section 1: General	1
1.1 Scope	1
1.2 Normative references	1
1.3 Definitions	1
Section 2: User requirements for time-critical communications in discrete parts manufacturing	5
2.1 Introduction	5
2.2 Application models	7
2.3 Integration issues	9
2.4 Message differentiation and PDU attributes	12
2.5 Timing related issues	14
2.6 Resilience	20
2.7 Topology aspects	22
2.8 Management and sovereignty	22
Section 3: User requirements for metrics and benchmarks	24
3.1 Introduction	24
3.2 Standard metrics	25
3.3 Benchmarks for TCCA	29
3.4 Quality of Service Parameters	36

© ISO 1994

All rights reserved. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland