

ATEX Safety SCHENCK DISOMAT B plus Ex

- Introduction 94/9 EC
- DISOMAT B plus Ex
for ATEX Zone 1
- DISOMAT B Plus
for ATEX Zone 2,21,22



ATEX - DISOMAT B plus

DISOMAT B plus Ex
VKG 20490E für
ATEX Zone 1

DISOMAT B plus
VKG 20400-E21 für
ATEX Zone 2,21,22



What Is New?

- Directive 94/9EC (ATEX) considers the explosion protection of both electrical and mechanical equipment.
- The zonal classification of dust explosive atmospheres is more varied (Zones 20, 21, 22)

User Obligations

- The transition period expired (01.07.03), no equipment must go into operation in the European Community in potentially explosive atmospheres that does not comply with Directive 94/9EC.
- Any equipment used must be approved for use in the particular zone.

Manufacturer Obligations

- Manufacturers of equipment used in potentially explosive atmospheres are required to subject their equipment to a formal analysis with regard to ignition hazards (ignition hazard assessment).
- The action taken to avoid/control the ignition sources must be documented (verification documentation).
- The manufacturer must supply the user with any information required for safe operation of the equipment (manuals, Spec Sheets, etc.)

ATEX Zone Definition

Zone	Category	Atmosphere	Frequency
0	1G	Gas (G)	continuously, for long periods, frequently
1	2G		occasionally
2	3G		seldom, for a short period
20	1D	Dust (D)	continuously, for long periods, frequently
21	2D		occasionally
22	3D		seldom, for a short period

continuously, for long period, frequently: > 100 h / year
 occasionally: 10...100 h / year
 seldom, for a short period: 1.....10 h / year

ATEX Zone Definition (Examples)

Zone	Example
0	Inside hoppers and installations, e.g. evaporators, reactor vessels
1	In the vicinity of fill and discharge units, pumps, valves, gates, gas pipes etc. around Zone 0
2	Rooms and environment around Zones 0 and 1
20	Inside hoppers, pipings, installations, etc.
21	In the vicinity of dust discharge points and filling stations, areas where dust deposits can be whirled up in normal operation
22	Environments of dust-containing installations where dust can escape from leaks, accumulate and whirl up

Schenck DISOMAT B plus Ex Product Presentation



SCHENCK PROCESS Weighing Electronics Intrinsically Safe - Why ?

Increasing number of hazardous area applications ('multi-purpose plants')

Increased modernisation and automation requirements (appr. 5000 mechanical scales in German chemical plants)

Suction effect on other systems (clients desire consistent solutions)

Downward pressure on prices not as strong as in other applications

Many Ex customers are already PROCESS customers

Opportunity to open up new markets

Schenck DISOMAT B plus Ex - Basic Data

ATEX Zone 1

- (ATEX II 2G EEx ib IIC T4)

Stainless steel IP 65

Power supplies

115/230 VAC (Ex power supply)

24 VDC (Ex power supply)

Battery (Ex > 15h)

115/230 VAC (non-Ex)

24 VDC (non-Ex)



DISOMAT B plus Ex - Interfaces

1 scale (1 measuring input)

2 serial interfaces

(1 x RS 232, 1 x RS 232/422/485)

for

- printer
- EDP
- bar code reader
- secondary display

Binary I/O (TTL)

- 3 inputs
- 4 outputs

Expansion port (coming later)

- I/O card
- further interface(s)
- analog output
- fieldbus



DISOMAT B plus Ex - Measuring System

1 scale

- L/C supply 5.5 VAC
- Sensitivity 0.44 $\mu\text{V/d}$

- Max. 6250 d
- Multi-Interval / Multi-Range (3125 d per range)

DISOMAT B plus Ex - Summary

Menu tree

6-line visualisation

Function blocks

Batching

Multi-interval / multi-range

DISOPLAN B plus (unchanged)

Language selection

Legal-for-trade memory

SMALL-software



(1) **EC-TYPE EXAMINATION CERTIFICATE**

(2) Equipment or protective system intended for use in potentially explosive atmospheres – Directive 94/9/EC

(3) EC-Type Examination Certificate Number: **KEMA 03ATEX1471 X**

(4) Equipment or protective system: **Weighing Indicator DISOMAT B plus Ex type VKG 20490**

(5) Manufacturer: **SCHENCK PROCESS GmbH**

(6) Address: **Landwehrstraße 55, 64293 Darmstadt, Germany**

(12) The marking of the equipment or protective system shall include the following:





II 2G EEx ib IIC T4

EG Konformitätserklärung EC Declaration of Conformity

Hersteller /
Manufacturer:

SCHENCK PROCESS GmbH
Landwehrstraße 55
64293 Darmstadt
Germany

Beschreibung des Gerätes /
Description of the equipment:

Wägeindikator Disomat Bplus Ex
VKG 20490E  **II 2 G**
Weighing Indicator Disomat Bplus Ex
VKG 20490E  **II 2 G**

Mat.-Nr. / *Mat.-No.:* V024295.B01

Einschlägige Bestimmungen /
Relevant provisions:

Das Gerät entspricht den Bestimmungen der ATEX-Richtlinie 94/9/EG für Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen.

The equipment fulfills the provisions of the ATEX directive 94/9/EC on equipment and protective systems intended for use in potentially explosive atmospheres.

Benannte Stelle
Notified Body

KEMA Quality B.V.
Utrechtseweg 310
6812 AR Arnhem
The Netherlands

Kenn-Nr.:
Ident-no. 0344

EG-Baumusterprüfscheinigung Nr.
EG-type examination certificate no.



KEMA 03 ATEX 1471 X

EG Konformitätserklärung EC Declaration of Conformity

Hersteller /
Manufacturer:

SCHENCK PROCESS GmbH
Landwehrstraße 55
64293 Darmstadt
Germany

Beschreibung des Gerätes /
Description of the equipment:

Wägeterminal Bplus VKG20400-E21  **II2D/3G**
Wägetransmitter Bplus VKG20400-E21  **II2D/3G**
Mat.-Nr./Mat.No.: V032453.B01

Einschlägige Bestimmungen /
Relevant provisions:

Das Gerät entspricht den Bestimmungen der ATEX-Richtlinie 94/9/EG für Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen.
The equipment fulfills the provisions of the ATEX directive 94/9/EC on equipment and protective systems intended for use in potentially explosive atmospheres.

Benannte Stelle /
Notified body:

EXAM
BBG Prüf- und Zertifizier GmbH
Dinnendahlstraße 9
44809 Bochum
Germany

Kenn-Nr. / Identif. no.: 0158

EG-Baumusterbescheinigung Nr. /
EC-type-examination certificate
no.:

BVS 04 ATEX E093

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin



EG-Bauartzulassung

EC type-approval certificate

Zulassungsinhaber:

Schenck Process GmbH

Issued to:

Landwehrstr. 55
64293 Darmstadt

Bauart:


Nichtselbsttätige elektromechanische Waage mit oder ohne Hebelwerk
*Nonautomatic electromechanical weighing instrument with or without
lever work*


In respect of:

Typ / *Type:*

DISOMAT B plus Ex

Max 2 kg ... 600 t

 $n \leq 6250$

 $n \leq 1000$

Option: Mehrbereichs- und Mehrteilungswaage
multi-interval and multiple range instrument

ATEX - DISOMAT B plus

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Ex II 2G / ATEX Zone 1

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VKG 20400-E21 für
Ex II 2D/3G / ATEX Zone 2,21,22

