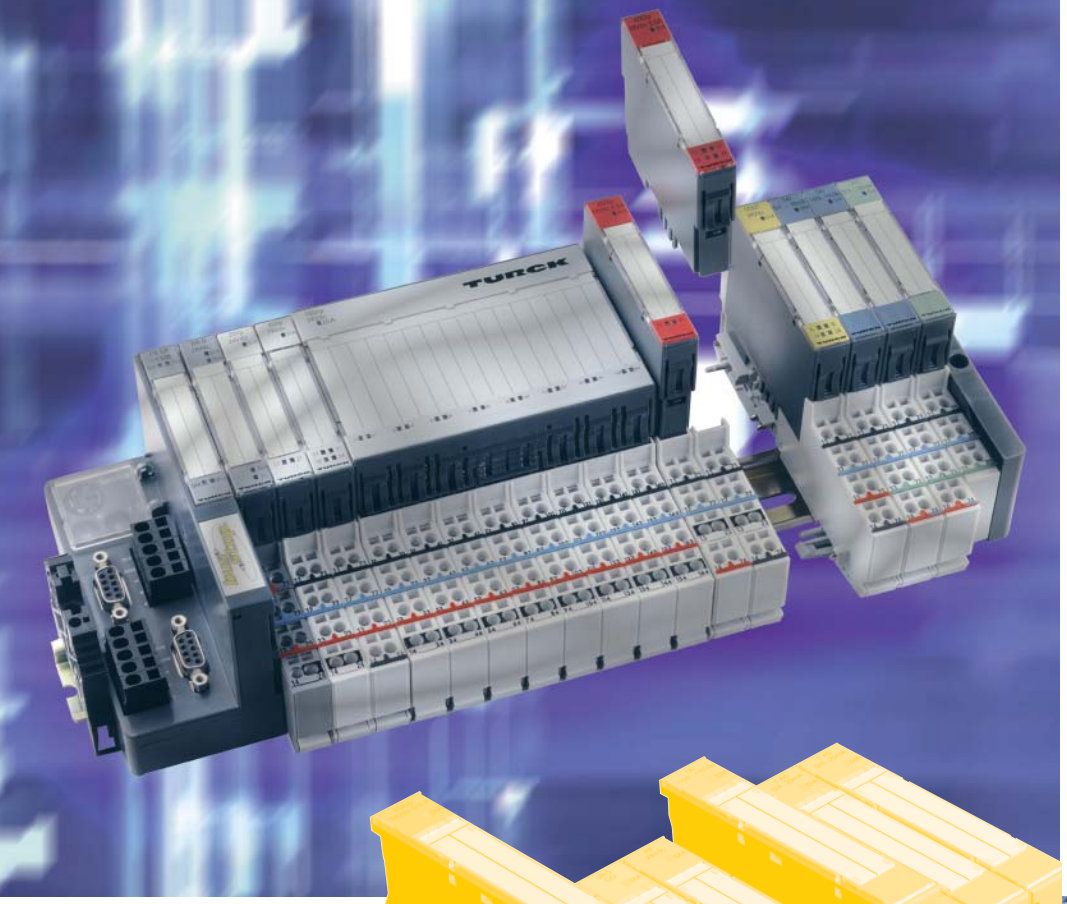
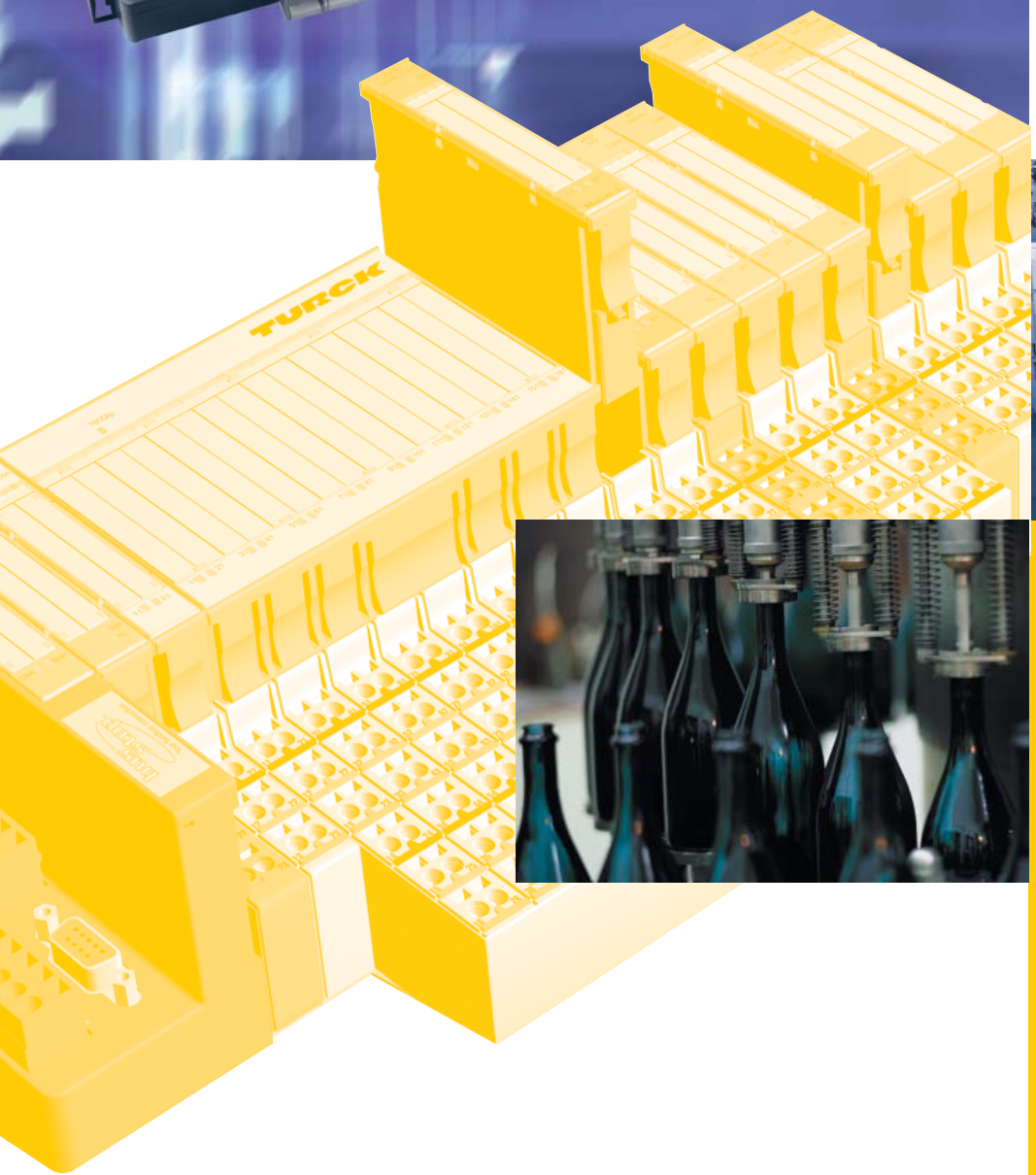
TURCK

Industrielle
Automation

BL20 –

ZERTIFIKATE FÜR ZONE 2/ DIVISION 2





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Ausgabe 10/2014

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Änderungen vorbehalten.

1 Zu diesem Handbuch

1.1 Dokumentationskonzept

Dieses Handbuch enthält alle Zone 2/ Division 2- Zulassungen für die Produktfamilie BL20.

1.2 Symbolerläuterung

Warnhinweise

Handlungsbezogene Warnhinweise stehen vor potenziell gefährlichen Arbeitsschritten und werden durch grafische Symbole gekennzeichnet. Jeder Warnhinweis wird durch ein Warnsymbol und ein Signalwort eingeleitet, das die Schwere der Gefahr ausdrückt. Die Hinweise müssen unbedingt eingehalten werden:

GEFAHR!

GEFAHR kennzeichnet eine unmittelbar gefährliche Situation mit hohem Risiko, die zu Tod oder schwerer Verletzung führt, wenn sie nicht vermieden wird.

WARNUNG!

WARNUNG kennzeichnet eine möglicherweise gefährliche Situation mit mittlerem Risiko, die zu Tod oder schwerer Verletzung führen kann, wenn sie nicht vermieden wird.

VORSICHT!

VORSICHT kennzeichnet eine möglicherweise gefährliche Situation mit geringem Risiko, die zu mittlerer oder leichter Verletzung führen kann, wenn sie nicht vermieden wird.

ACHTUNG!

ACHTUNG kennzeichnet eine Situation, die möglicherweise zu Sachschäden führt, wenn sie nicht vermieden wird.

1.2.1 Weitere Hinweise

HINWEIS

Unter HINWEIS finden Sie Tipps, Empfehlungen und wichtige Informationen. Die Hinweise erleichtern die Arbeit, enthalten Infos zu speziellen Handlungsschritten und helfen, Mehrarbeit durch falsches Vorgehen zu vermeiden.

TECHNISCHEN GRUNDLAGEN

Die TECHNISCHEN GRUNDLAGEN bieten technischen Informationen, die Grundlagen und Hintergrundwissen vermitteln. Diese Informationen führen beispielsweise zum besseren Verständnis der Gerätefunktionen. Der erfahrende Anwender kann diese Informationen übergehen.

➤ **HANDLUNGSAUFFORDERUNG**

Dieses Symbol kennzeichnet einzelne Handlungsschritte, die der Anwender durchzuführen hat.

➥ **HANDLUNGSRESULTAT**

Dieses Symbol kennzeichnet relevante Ergebnisse der Handlungsschritte

1.3 Allgemeine Hinweise

Diesen Abschnitt sollten Sie auf jeden Fall lesen, da die Sicherheit im Umgang mit elektrischen Geräten nicht dem Zufall überlassen werden darf.

1.3.1 Bestimmungsgemäßer Gebrauch

Die in diesem Handbuch beschriebenen Geräte dürfen nur für die in diesem Handbuch und in der jeweiligen technischen Beschreibung vorgesehenen Einsatzfälle und nur in Verbindung mit zertifizierten Fremdgeräten und -komponenten verwendet werden.

Der einwandfreie und sichere Betrieb der Geräte setzt sachgemäßen Transport, sachgerechte Lagerung, Aufstellung und Montage sowie sorgfältige Bedienung und Wartung voraus.

1.3.2 Hinweise zur Projektierung/Installation des Produktes

Die für den jeweiligen Einsatzfall geltenden Sicherheits- und Unfallverhütungsvorschriften sind unbedingt zu beachten.

2 Zertifizierte BL20-Komponenten

2.1 BL20-Gateways/ programmierbare Gateways

GEFAHR!

Einsatz nicht zugelassener Komponenten

Explosionsgefahr durch zu hohe Ströme/Spannungen

➤ Setzen Sie nur die im Folgenden aufgeführten BL20-Komponenten in Zone 2/ Division 2 ein!

2.1.1 Gateways (GWs)

- BL20-GWBR-PBDP
- BL20-GWBR-DNET
- BL20-GWBR-CANOPEN
- BL20-GW-DPV1
- BL20-GW-EN
- BL20-GW-EN-IP
- BL20-E-GW-CO
- BL20-E-GW-DN
- BL20-E-GW-DP
- BL20-E-GW-EN
- BL20-E-GW-EN-IP
- BL20-GW-EN-PN

2.1.2 Programmierbare Gateways (PGs)

- BL20-PG-EN-IP
- BL20-PG-EN
- BL20-PG-EN-DN-JA

2.2 Digitale I/O-Module

GEFAHR!

Einsatz nicht zugelassener Komponenten

Explosionsgefahr durch zu hohe Ströme/Spannungen

➤ Setzen Sie nur die im Folgenden aufgeführten BL20-Komponenten in Zone 2/ Division 2 ein!

2.2.1 Digitale Eingabemodule

- BL20-2DI-24VDC-P
- BL20-2DI-24VDC-N
- BL20-4DI-24VDC-P
- BL20-4DI-24VDC-N
- BL20-4DI-NAMUR
- BL20-16DI-24VDC-P
- BL20-32DI-24VDC-P
- BL20-E-8DI-24VDC-P
- BL20-E-16DI-24VDC-P

2.2.2 Digitale Ausgabemodule

- BL20-2DO-24VDC-0,5A-P
- BL20-2DO-24VDC-0,5A-N
- BL20-2DO-24VDC-2A-P
- BL20-4DO-24VDC-0,5A-P
- BL20-16DO-24VDC-0,5A-P
- BL20-32DO-24VDC-0,5A-P
- BL20-E-8DO-24VDC-0,5A-P
- BL20-E-16DO-24VDC-0,5A-P
- BL20-2DO-R-NC
- BL20-2DO-R-NO
- BL20-2DO-R-CO

2.3 Analoge I/O-Module

GEFAHR!

Einsatz nicht zugelassener Komponenten

Explosionsgefahr durch zu hohe Ströme/Spannungen

➤ Setzen Sie nur die im Folgenden aufgeführten BL20-Komponenten in Zone 2/ Division 2 ein!

2.4 Analoge Eingabemodule

- BL20-2AI-I(0/4...20MA)
- BL20-2AI-U(-10/0...+10VDC)
- BL20-2AI-PT/NI-2/3
- BL20-2AI-THERMO-PI
- BL20-4AI-U/I
- BL20-2AIH-I
- BL20-E-8AI-U/I-4PT/NI

2.4.1 Analoge Ausgabemodule

- BL20-2AO-I(0/4...20MA)
- BL20-2AO-U(-10/0...+10VDC)
- BL20-2AOH-I
- BL20-E-4AO-U/I

2.5 Technologiemodule

GEFAHR!

Einsatz nicht zugelassener Komponenten

Explosionsgefahr durch zu hohe Ströme/Spannungen

➤ Setzen Sie nur die im Folgenden aufgeführten BL20-Komponenten in Zone 2/ Division 2 ein!

2.6 Serielle Schnittstellen

- BL20-1RS232
- BL20-1RS485/422

2.6.1 Counter/Encoder

- BL20-1CNT-24VDC
- BL20-1SSI

2.6.2 RFID

- BL20-2RFID-A
- BL20-2RFID-C
- BL20-2RFID-S

2.7 Versorgungsmodule

GEFAHR!

Einsatz nicht zugelassener Komponenten

Explosionsgefahr durch zu hohe Ströme/Spannungen

➤ Setzen Sie nur die im Folgenden aufgeführten BL20-Komponenten in Zone 2/ Division 2 ein!

- BL20-BR-24VDC-Dss
- BL20-PF-24VDC-D

3 BL20-Zulassungen für Zone 2/ Division 2

3.1 Zertifikate für Europa

3.1.1 Baumusterprüfbescheinigung, Januar 2008

1 Baumusterprüfbescheinigung

2 **Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen – Richtlinie 94/9/EG**

3 Baumusterprüfbescheinigungsnummer: **FM07ATEX0040X**

4 Gerät: (Baumusterbezeichnung und Name) **BL20 Modulares I/O Bus Klemmen System**

5 Hersteller: **Hans Turck GmbH & Co KG**

6 Anschrift: **Witzlebenstrasse 7**
DE 45472 Mülheim an der Ruhr
GERMANY

7 Die Bauart dieses Gerätes sowie die verschiedenen zulässigen Ausführungen sind in der Anlage zu dieser Baumusterprüfbescheinigung festgelegt.

8 FM Approvals Ltd. bescheinigt, dass das Gerät die grundlegenden Sicherheits- und Gesundheitsanforderungen für die Konzeption und den Bau von Geräten und Schutzsystemen zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen gemäß Anhang II der Richtlinie erfüllt.
Die Ergebnisse der Prüfung sind im vertraulichen Prüfbericht Nr. 3030839EC vom 21 Januar, 2008 festgehalten.

9 Die grundlegenden Sicherheits- und Gesundheitsanforderungen, mit Ausnahme der in Punkt 15 der Anlage zu dieser Bescheinigung genannten, werden erfüllt durch Übereinstimmung mit: EN 60079-0:2006 und EN 60079-15:2005

10 Falls das Zeichen „X" hinter der Bescheinigungsnummer steht, wird in der Anlage zu dieser Bescheinigung auf besondere Bedingungen für die sichere Anwendung des Gerätes hingewiesen.

11 Diese Baumusterprüfbescheinigung bezieht sich nur auf die Konzeption und Prüfung des festgelegten Gerätes gemäß Richtlinie 94/9/EG. Weitere Anforderungen dieser Richtlinie gelten für die Herstellung und das Inverkehrbringen dieses Gerätes. Diese Anforderungen werden nicht durch diese Bescheinigung abgedeckt.

12 Die Kennzeichnung des Gerätes muss die folgenden Angaben enthalten:

II 3 G Ex nA II T4	**Ta = 0°C to +55°C**
II 3 G Ex nA nC II T4	**Ta = 0°C to +55°C (Nur Relaismodule)**

Andrew Was
Generaldirektor, FM Approvals Ltd.

Ausstellungsdatum: 21 Januar 2008

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zur Baumusterprüfbescheinigung FM07ATEX0040X

13 **Beschreibung des Gerätes:**

Das BL20 I/O Bus Klemmen System ist modular und kommuniziert über Gateways mit Bus Systemen wie PROFIBUS, DeviceNetT und CanOpen. Verschiedene digitale und analoge I/O Module stehen für Verbindungen zu nicht näher spezifizierten Feldgeräten zur Verfügung. Zusätzlich zu den analogen und digitalen Modulen gibt es einige spezielle Module, wie Zähler oder RS232 Interface und Relaisausgänge. Die Module stecken in Basiseinheiten, die der Montage und der elektrischen Versorgung und Busanbindung zu den Versorgungsmodulen und Gateways dienen. Der Bus hat eine obere Versorgungsgrenze, die durch zusätzlich dazwischen liegende Versorgungsmodule erweitert werden kann. Anwenderseitige Verbindungen erfolgen nur zu den Gateways und zu den Signalanschlüssen der einzelnen Module.

BL20 Modulares I/O Bus Klemmen System

Module	Beschreibung
BL20-2DI-24VDC-P	2 channel digital input modules – pnp
BL20-2DI-24VDC-N	2 channel digital input modules - npn
BL20-4DI-24VDC-P	4 channel digital input modules - pnp
BL20-4DI-24VDC-N	4 channel digital input modules - npn
BL20-4DI-NAMUR	4 channel digital input modules – NAMUR input
BL20-32DI-24VDC-P	32 channel digital input modules -pnp
BL20-2AI-I(0/4...20MA)	2 channel analogue input module – current
BL20-2AI-U(-10/0...+10VDC)	2 channel analogue input module – voltage
BL20-2AI-PT/NI-2/3	2 channel analogue input module – platinum and nickel resistance elements
BL20-2AI-THERMO-PI	2 channel analogue input module – thermoelements
BL20-4AI-U/I	4 channel analogue input module – current or voltage
BL20-2DO-24VDC-0,5A-P	2 channel digital output – 0.5A - pnp
BL20-2DO-24VDC-0,5A-N	2 channel digital output – 0.5A - npn
BL20-2DO-24VDC-2A-P	2 channel digital output – 2.0A - pnp
BL20-4DO-24VDC-0,5A-P	4 channel digital output – 0.5A - pnp
BL20-16DO-24VDC-0,5A-P	16 channel digital output – 0.5A - pnp
BL20-32DO-24VDC-0,5A-P	32 channel digital output – 0.5A - pnp
BL20-2AO-I(0/4...20MA)	2 channel analogue output module – current
BL20-2AO-U(-10/0...+10VDC)	2 channel analogue output module – voltage
BL20-1CNT-24VDC	Counter
BL20-1RS232	RS232 interface
BL20-1RS485/422	RS485/422 interface
BL20-1SSI	SSI interface
BL20-BR-24VDC-D	Power Supply Module with internal 5V DC Bus
BL20-PF-24VDC-D	Power Feed Module Field Supply 24V
BL20-E-8DI-24VDC-P	8 channel digital input module – pnp – Economy
BL20-E-16DI-24VDC-P	16 channel digital input module – pnp – Economy
BL20-E-8DO-24VDC-0,5A-P	8 channel digital output module – 0.5A – pnp – Economy
BL20-E-16DO-24VDC-0,5A-P	16 channel digital output module – 0.5A – pnp – Economy
BL20-GWBR-PBDP	Gateway for Profibus-DP with internal 5V DC Bus

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Module	Beschreibung
BL20-GW-DPV1	Gateway for Profibus-DPV1
BL20-GW-EN	Gateway for Modbus TCP
BL20-GW-EN-IP	Gateway for Ethernet IP
BL20-PG-EN-IP	Programmable Gateway for Ethernet IP
BL20-PG-EN	Programmable Gateway for Modbus TCP
BL20-GWBR-DNET	Gateway for DeviceNet with internal 5V DC Bus
BL20-GWBR-CANOPEN	Gateway for CANopen with internal 5V DC Bus
BL20-2RFID-A	2 Channel RFID module asynchronous
BL20-2RFID-C	2 Channel RFID module cyclic
BL20-2DO-R-NC	2 channel digital output – relay – normally closed
BL20-2DO-R-NO	2 channel digital output – relay – normally open
BL20-2DO-R-CO	2 channel digital output – relay – change over

14 **Besondere Bedingungen für die sichere Anwendung:**

1. *Zone 2 Installationen: Das BL20 - modulare I/O Bus- Klemmen- System soll in einem mit Werkzeug zu öffnenden Gehäuse montiert werden, dass den Anforderung der EN 60079-0 und EN 60079-15 entspricht und bei dem ein oder mehrere Zone 2 Verdrahtungsmethoden gemäß EN 60079-14 möglich sind. Bei Installationen im Freien oder an feuchten Orten, soll das Gehäuse mindestens IP54 Schutz bieten. Bei Installationen an Orten, die einen geeigneten Schutz gegen das Eindringen von Fremdkörpern oder Flüssigkeiten bieten, muss das Gehäuse mindestens IP4X Schutz erfüllen.*
2. *Die BL20 I/O Module werden auf einer EN 50 022 NS35 Tragschiene montiert, wobei jede Gruppe rechts mit einer Abschlussplatte (Typ BL20-ABPL, Ident-Nr. 6827123) und rechts und links mit Endwinkeln (Typ BL20-WEW-35/2-SW, Ident-Nr. 6827124) komplettiert wird.*
3. *Die Eingangsspannung der 2-kanaligen digitalen BL20 Relaismodule darf 30VAC oder DC nicht überschreiten (max. Kontaktspannung).*

15 **Grundlegende Sicherheits- und Gesundheitsanforderungen:**

Die nicht durch die in dieser Bescheinigung aufgelisteten Normen abgedeckten grundlegenden Sicherheits- und Gesundheitsanforderungen wurden im unter Punkt 8 genannten vertraulichen Bericht erfasst und bewertet.

16 **Prüf- und Bewertungsverfahren und Bedingungen:**

Diese Baumusterprüfbescheinigung ist das Ergebnis einer Prüfung eines entsprechend den Bestimmungen der geltenden Norm(en) eingereichten Produktmusters, sowie einer Auswertung weiterer Unterlagen. Dies bedeutet nicht, dass eine Bewertung der gesamten Produktion vorgenommen wurde.

Auch wenn diese Bescheinigung zur Unterstützung des Antrages eines Herstellers auf Erteilung des CE-Kennzeichens verwendet werden kann, übernimmt FM Approvals Ltd. keine Verantwortung dafür, dass dieses Gerät die Anforderungen aller geltenden Richtlinien für alle Anwendungen erfüllt.

Diese Bescheinigung wurde entsprechend dem FM Approvals Ltd. ATEX-Zertifizierungsverfahren ausgestellt.

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17 **Genehmigte Zeichnungen**

Zeichnung Nr.:	Rev.	Titel / Beschreibung
EZ 2725-0046-0711-04 / 07299300	30.06.2006	BL20-32DI-24VDC-P Layout
GZ 2725-0046-0710-01 / 12396800	D	BL20-32DI-24VDC-P Placement
ZS 2725-0046-0710-01 / 12396800	C	BL20-32DI-24VDC-P Schematic
EZ 2725-0068-0711-03 / 07257902	A	BL20-4DI-NAMUR Layout
GZ 2725-0068-0710-01 / 12349700	B	BL20-4DI-NAMUR Placement
ZS 2725-0068-0710-01 / 12349700	A	BL20-4DI-NAMUR Schematic
EZ 2725-0015-0711-03 / 07296400	06.06.2006	BL20-2DI-24VDC-P Layout
12393900	17.08.06	BL20-4DI-24VDC-P Placement
ZS 2725-0015-0710-01 / 12393900	C	BL20-2DI-24VDC-P Schematic
EZ 2725-0034-0711-03 / 07297300	22.06.2006	BL20-2DI-24VDC-N Layout
GZ 2725-0034-0710-01 / 12394800	c	BL20-2DI-24VDC-N Placement
ZS 2725-0034-0710-01 / 12394800	c	BL20-2DI-24VDC-N Schematic
EZ 2725-0038-0711-04 / 07297600	30.08.2006	XN-2AI-PT/NI-2/3 Layout
GZ 2725-0038-0710-01 / 12395100	c	XN-2AI-PT/NI-2/3 Placement
ZS 2725-0038-0710-01 / 12395100	D	XN-2AI-PT/NI-2/3 Schematic
EZ 2725-0039-0711-04 / 07297700	04.09.2006	XN-2AI-THERMO-PI Layout
GZ 2725-0039-0710-01 / 12395200	F	XN-2AI-THERMO-PI Placement
ZS 2725-0039-0710-01 / 12395200	D	XN-2AI-THERMO-PI Schematic
EZ 2725-0069-0711-03 / 07299800	06.07.2006	BL20-4AI-U/I Layout
GZ 2725-0069-0710-01 / 12397300	B	BL20-4AI-U/I Placement
ZS 2725-0069-0710-01 / 12397300	c	BL20-4AI-U/I Schematic
EZ 2725-0048-0711-04 / 07298200	07.06.2006	BL20-2AI-I(0/4...20mA) Layout
GZ 2725-0048-0710-01 / 12395700	D	BL20-2AI-I(0/4...20mA) Placement
ZS 2725-0048-0710-01 / 12395700	H	BL20-2AI-I(0/4...20mA) Schematic
EZ 2725-0047-0711-04 / 07298100	06.06.2006	BL20-4DO-24VDC-0.5A-P Layout
GZ 2725-0047-0710-01 / 12395600	C	BL20-4DO-24VDC-0.5A-P Placement
ZS 2725-0047-0710-01 / 12395600	D	BL20-4DO-24VDC-0.5A-P Schematic
EZ 2725-0017-0711-03 / 07296500	07.06.2006	BL20-2DO-24VDC-0.5A-P Layout
GZ 2725-0017-0710-01 / 12394000	A	BL20-2DO-24VDC-0.5A-P Placement
ZS 2725-0017-0710-01 / 12394000	B	BL20-2DO-24VDC-0.5A-P Schematic
EZ 2725-0036-0711-03 / 07297400	23.06.2006	BL20-2DO-24VDC-05A-N Layout
GZ 2725-0036-0710-01 / 12394900	D	BL20-2DO-24VDC-05A-N Placement
ZS 2725-0036-0710-01 / 12394900	E	BL20-2DO-24VDC-05A-N Schematic
EZ 2725-0018-0711-03 / 07296600	07.06.2006	BL20-2DO-24VDC-2A-P Layout
GZ 2725-0018-0710-01 / 12394100	A	BL20-2DO-24VDC-2A-P Placement
ZS 2725-0018-0710-01 / 12394100	B	BL20-2DO-24VDC-2A-P Schematic
EZ 2725-0063-0711-04 / 07299700	06.06.2006	BL20-32DO-24VDC-0.5A-P Layout

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Zeichnung Nr.:	Rev.	Titel / Beschreibung
GZ 2725-0063-0710-01 / 12397200	D	BL20-32DO-24VDC-0.5A-P Placement
ZS 2725-0063-0710-01 / 12397200	E	BL20-32DO-24VDC-0.5A-P Schematic
EZ 2725-0025-0711-02 / 07297100	07.06.2006	BL20-2AO-U(-10/0...+10VDC) Layout
GZ 2725-0025-0710-01 / 12394600	A	BL20-2AO-U(-10/0...+10VDC) Placement
ZS 2725-0025-0710-01 / 12394600	B	BL20-2AO-U(-10/0...+10VDC) Schematic
EZ 2725-0050-0711-04 / 07298300	A	BL20-2AO-I(0/4...20mA) Layout
GZ 2725-0050-0710-01 / 12395800	D	BL20-2AO-I(0/4...20mA) Placement
ZS 2725-0050-0710-01 / 12395800	D	BL20-2AO-I(0/4...20mA) Schematic
EZ 2725-0043-0711-04 / 07297900	30.06.2006	BL20-1CNT-24VDC Layout
GZ 2725-0043-0710-01 / 12395400	G	BL20-1CNT-24VDC Placement
ZS 2725-0043-0710-01 / 12395400	G	BL20-1CNT-24VDC Schematic
EZ 2725-0058-0711-03 / 07299500	03.07.2006	BL20-1RS232 Layout
AWA 2725-0058-0710-01/07600020	24.08.04	XN-RS232 Modification
GZ 2725-0058-0710-01 / 12397000	B	BL20-1RS232 Placement
ZS 2725-0058-0710-01 / 12397000	C	BL20-1RS232 Schematic
EZ 2725-0026-0711-02 / 07297200	06.06.2006	BL20-BR-24VDC-D Layout
GZ 2725-0026-0710-01 / 12394700	A	BL20-BR-24VDC-D Placement
ZS 2725-0026-0710-01 / 12394700	B	BL20-BR-24VDC-D Schematic
EZ 2725-0073-0711-04 / 07299900	06.06.2006	BL20-E-8DI-24VDC-P Layout
EZ 2725-0075-0711-04 / 07300100	07.06.2006	BL20-E-16DI-24VDC-P Layout
GZ 2725-0073-0710-01 / 12397400	C	BL20-E-8DI-24VDC-P Placement
GZ 2725-0075-0710-01 / 12397600	C	BL20-E-16DI-24VDC-P Placement
ZS 2725-0073-0710-01 / 12397400	C	BL20-E-8DI-24VDC-P Schematic
ZS 2725-0075-0710-01 / 12397600	C	BL20-E-16DI-24VDC-P Schematic
EZ 2725-0074-0711-05 / 07300000	06.06.2006	BL20-E-8DO-24VDC-0.5A-P Layout
EZ 2725-0076-0711-03 / 07300200	07.06.2006	BL20-E-16DO-24VDC-0.5A-P Layout
GZ 2725-0074-0710-01 / 12397500	c	BL20-E-8DO-24VDC-0.5A-P Placement
GZ 2725-0076-0710-01 / 12397700	B	BL20-E-16DO-24VDC-0.5A-P Placement
ZS 2725-0074-0710-01 / 12397500	c	BL20-E-8DO-24VDC-0.5A-P Schematic
ZS 2725-0076-0710-01 / 12397700	B	BL20-E-16DO-24VDC-0.5A-P Schematic
EZ 2725-0061-0711-06 / 07300500	A	BL20-GWBR-CANopen Layout
EZ 2725-0061-0721-02 / 07300900	A	BL20-GWBR-CANopen CPU Layout
GZ 2725-0061-0710-01 / 12398000	E	BL20-GWBR-CANopen Placement
GZ 2725-0061-0720-01 / 12398400	B	BL20-GWBR-CANopen CPU Placement
ZS 2725-0061-0710-01 / 12398000	B	BL20-GWBR-CANopen Schematic
ZS 2725-0061-0720-01 / 12398400	B	BL20-GWBR-CANopen CPU Schematic
EZ 2725-0081-0711-02 / 07286801	A	BL20-GW-DPV1(BASIS) Layout
EZ 2725-0081-0721-02 / 07286901	A	BL20-GW-DPV1(CPU) Layout
GZ 2725-0081-0710-01 / 12383800	22.11.2005	BL20-GW-DPV1 Placement

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Anlage

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zur Baumusterprüfbescheinigung FM07ATEX0040X

Zeichnung Nr.:	Rev.	Titel / Beschreibung
GZ 2725-0081-0720-01 / 12383900	18.11.2005	BL20-GW-DPV1 Placement
ZS 2725-0081-0710-01 / 12383800	22.11.2005	BL20-GW-DPV1 Schematic
ZS 2725-0081-0720-01 / 12383900	18.11.2005	BL20-GW-DPV1 Schematic
EZ 2725-0082-0721-01 / 07289500	A	BL20-GW-EN Layout
EZ 2725-0082-0711-01 / 07289600	A	BL20-GW-EN Layout
GZ 2725-0082-0720-01 / 12386300	20.12.2005	BL20-GW-EN Placement
GZ 2725-0082-0710-01 / 12386400	23.12.2005	BL20-GW-EN Placement
ZS 2725-0082-0720-01 / 12386300	20.12.2005	BL20-GW-EN Schematic
ZS 2725-0082-0710-01 / 12386400	23.12.2005	BL20-GW-EN Schematic
EZ 2725-0077-0711-01 / 07279300	A	BL20-2RFID-A Layout
GZ 2725-0077-0710-01 / 12374300	02.11.2005	BL20-2RFID Placement
ZS 2725-0077-0710-01 / 12374300	01.06.2006	BL20-2RFID Schematic
EZ 2725-0019-0711-03 / 07296700	22.06.2006	BL20-2DO-R-NC Layout
EZ 2725-0020-0711-04 / 07296800	06.06.2006	BL20-2DO-R-NO Layout
EZ 2725-0021-0711-04 / 07299200	07.06.2006	BL20-2DO-R-CO Layout
GZ 2725-0019-0710-01 / 12394200	B	BL20-2DO-R-NC Placement
GZ 2725-0020-0710-01 / 12394300	C	BL20-2DO-R-NO Placement
GZ 2725-0021-0710-01 / 12396700	B	BL20-2DO-R-CO Placement
ZS 2725-0019-0710-01 / 12394200	C	BL20-2DO-R-NC Schematic
ZS 2725-0020-0710-01 / 12394300	C	BL20-2DO-R-NO Schematic
ZS 2725-0021-0710-01 / 12396700	C	BL20-2DO-R-CO Schematic
337897	02	Gateway Lower part
338856	01	Gateway Upper part
430095	5	Gateway Locking Assy
430050	4	Gateway Cover
329434	04	Locking Foot
441532	02	Moulding Set
341525	03	Moulding Cover
229430	07	Electronic Moulding
329431	07	Moulding Cover
330094	3	Base Module
331333	3	Base Module
tmex 0049	02.01.2008	Approval Label
2256460000	-	End Bracket
338003	2	End Plate
BL20 installation instructions ATEX IEC	1	BL20 – MODULAR I/O BUS- TERMINAL SYSTEM - IN ZONE 2

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Ergänzung zur Baumusterprüfbescheinigung, Teil 1

Anhang 1 zur
Baumusterprüfbescheinigung Nr. FM07ATEX0040
gemäß Klausel 6 von Anhang III zur Richtlinie 94/9/EG

4 Gerät oder Schutzsysteme: (Baumusterbezeichnung und Name) **BL20 Modular I/O Bus Terminal System**

5 Name des Antragstellers: **Hans Turck GmbH & Co KG**

6 Adresse des Antragstellers: **Witzlebenstrasse 7**
DE 45472 Mülheim an der Ruhr
GERMANY

Die Ergebnisse der Prüfung sind im vertraulichen Prüfbericht festgehalten.

3030839rev100115 vom 19. Oktober 2010

Beschreibung der Ergänzungen und Änderungen:

13 **Beschreibung des Gerätes oder Schutzsystem:**

Änderungen an der Dokumentation und den Leiterplatten der BL20 Modul Serie.

17 **Genehmigte Zeichnungen:**

Drawing No:	Previous Revision	Drawing No:	New Revision	Title / Description
ZS 2525-0039-0710-01 / 12395200	D	ZS 2525-0039-0710-01 / 12395200	E	XN-2AI-THERMO-PI Schematic
GZ 2725-0069-0710-01 / 12397300	B	GZ 2725-0069-0710-01 / 12397300	D	BL20-4AI-U/I Placement
ZS 2725-0063-0710-01 / 12397200	E	ZS 2725-0063-0710-01 / 12397200	F	BL20-32DO-24VDC-0.5A-P Schematic
EZ 2725-0050-0711-04 / 07298300	A	EZ 2725-0050-0711-05- / 07298301	000	XN-/BL20-2AO-I(0/4...20mA) Layout 2983/1
GZ 2725-0050-0710-01 / 12395800	D	GZ 2725-0050-0710-01-E / DOK-07298301-BP	000	XN-/BL20-2AO-I(0/4...20mA) Placement

Andrew Was
Generaldirektor, FM Approvals Ltd.

Ausstellungsdatum: 25. Oktober 2010

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Anhang 1 zur
Baumusterprüfbescheinigung Nr. FM07ATEX0040
gemäß Klausel 6 von Anhang III zur Richtlinie 94/9/EG

FM Approvals

17 Genehmigten Zeichnungen (Fortsetzung):

Zeichnungs Nr.:	Vorherige Revision	Zeichnungs Nr.:	Neue Revision	Titel / Beschreibung
ZS 2725-0050-0710-01 / 12395800	D	ZS 2725-0050-0710-01-E / DOK-07298301-SP	000	XN-/BL20-2AO-I(0/4...20mA) Schematic
EZ 2725-0043-0711-04 / 07297900	30.06.2006	EZ 2725-0043-0711-05 / 07297900	02.11.2006	BL20-1CNT-24VDC Layout 2979/0
EZ 2725-0026-0711-02 / 07297200	06.06.2006	EZ 2725-0026-0711-04- - / DOK 07297202-LP	000	BL20-BR-24VDC-D Layout 2972/2
GZ 2725-0026-0710-01 / 12394700	A	GS 2725-0026-0710-01-C / DOK-07297202-BP	000	BL20-BR-24VDC-D Placement
ZS 2725-0026-0710-01 / 12394700	B	ZS 2725-0026-0710-01-E / DOK-07297202-SP	001	BL20-BR-24VDC-D Schematic
EZ 2725-0073-0711-04 / 07299900	06.06.2006	EZ 2725-0073-0711-06-- / DOK-07299902-LP	000	BL20-E-8DI-24VDC-P Layout 2999/2
GZ 2725-0073-0710-01 / 12397400	C	GZ 2725-0073-0710-01-E- / DOK-07299902-BP	000	BL20-E-8DI-24VDC-P Placement
ZS 2725-0073-0710-01 / 12397400	C	ZS 2725-0073-0710-01-E- / DOK-07299902-SP	000	BL20-E-8DI-24VDC-P Schematic
EZ 2725-0075-0711-04 / 07300100	07.06.2006	EZ 2725-0075-0711-05-- / DOK-07300102-LP	000	BL20-E-16DI-24VDC-P Layout 3001/2
GZ 2725-0075-0710-01 / 12397600	C	GZ 2725-0075-0710-01-D / DOK-07300102-BP	000	BL20-E-16DI-24VDC-P Placement
ZS 2725-0075-0710-01 / 12397600	C	ZS 2725-0075-0710-01-D / DOK-07300102-SP	000	BL20-E-16DI-24VDC-P Schematic
EZ 2725-0074-0711-05 / 07300000	06.06.2006	EZ 2725-0074-0711-07-- / DOK-07300002-LP	000	BL20-E-8DO-24VDC-0.5-P Layout 3000/2
GZ 2725-0074-0710-01 / 12397500	C	GZ 2725-0074-0710-01-E / DOK-07300002-BP	000	BL20-E-8DO-24VDC-0.5-P Placement
ZS 2725-0074-0710-01 / 12397500	C	ZS 2725-0074-0710-01-E / DOK-07300002-SP	000	BL20-E-8DO-24VDC-0.5-P Schematic
EZ 2725-0076-0711-03 / 07300200	07.06.2006	EZ 2725-0076-0711-05-- /DOK-07300202-LP	000	BL20-E-16DO-24VDC-0.5-P Layout 3002/2

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Anhang 1 zur
Baumusterprüfbescheinigung Nr. FM07ATEX0040
gemäß Klausel 6 von Anhang III zur Richtlinie 94/9/EG

Zeichnungs Nr.:	Vorherige Revision	Zeichnungs Nr.:	Neue Revision	Titel / Beschreibung
GZ 2725-0076-0710-01 / 12397700	B	GZ 2725-0076-0710-01-D /DOK-07300302-BP	000	BL20-E-16DO-24VDC-0.5-P Placement
ZS 2725-0076-0710-01 / 12397700	B	ZS 2725-0076-0710-01-D / DOK-07300202-SP	000	BL20-E-16DO-24VDC-0.5-P Schematic
EZ 2725-0061-0711-06 / 07300500	A	EZ 2725-0061-0711-07-B / DOK-07300501-LP	002	GWBR-CANOPEN (Basis) Layout 3005/1: See note 1
GZ 2725-0061-0710-01 / 12398000	E	GZ-2725-0061-0710-01-F / DOK-07300501-BP	000	GWBR-CANOPEN (Basis) Placement
ZS 2725-0061-0710-01 / 12398000	B	ZS-2725-0061-0710-0101-C / DOK-07300501-SP	000	GWBR-CANOPEN (Basis) Schematic
EZ 2725-0081-0711-02 / 07286801	A	EZ-2725-0081-0711-03-- / DOK-07286802-LP	000	BL20-GW-DPV1 (BASIS) Layout 2868/2: See note 1
GZ 2725-0081-0710-01 / 12383800	22.11.2005	GZ-2725-0081-0710-01-B / DOK-07286802-BP	000	BL20-GW-DPV1 (BASIS) Placement
ZS 2725-0081-0710-01 / 12383800	22.11.2005	ZS-2725-0081-0710-01-B / DOK-07286802-SP	000	BL20-GW-DPV1 (BASIS) Schematic
EZ 2725-0081-0721-02 / 07286901	A	EZ 2725-0081-0721-02-C / DOK-07286901-LP	004	BL20-GW-DPV1(CPU) Layout 2869/1
EZ-2725-0082-0711-01 / 07289600	A	EZ-2725-0082-0711-01-B / DOK-07289600-LP	B	BL20-GW-EN Basis Layout 2896/0: See note 1
EZ 2725-0082-0721-01 / 07289500	A	EZ 2725-0082-0721-03-A / DOK-07289502-LP	001	BL20-GW-EN CPU Layout 2895/2
GZ 2725-0082-0720-01 / 12386300	20.12.2005	GZ 2725-0082-0720-01-B / DOK-07289502-BP	000	BL20-GW-EN CPU Placement
ZS 2725-0082-0720-01 / 12386300	20.12.2005	ZS 2725-0082-0720-01-B / DOK-07289502-SP	000	BL20-GW-EN CPU Schematic

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Ergänzung zur Baumusterprüfbescheinigung, Teil 2

Anhang 2 zur
Baumusterprüfbescheinigung Nr. FM07ATEX0040
gemäß Klausel 6 von Anhang III zur Richtlinie 94/9/EG

4	Gerät oder Schutzsysteme: (Baumusterbezeichnung und Name)	**BL20 Modular I/O Bus Terminal System**
5	Name des Antragstellers:	**Hans Turck GmbH & Co KG**
6	Adresse des Antragstellers:	**Witzlebenstrasse 7 DE 45472 Mülheim an der Ruhr GERMANY**

Die Ergebnisse der Prüfung sind im vertraulichen Prüfbericht festgehalten.

Anhang 2 zu Nr. 3030839EC vom 29. November 2010

Beschreibung der Ergänzungen und Änderungen:

13 Beschreibung des Gerätes oder Schutzsystem:

Ergänzung von 13 neuen BL20 Modulen und Gateways

Module	Beschreibung
BL20-16DI-24VDC-P	16 channel digital inputs module - pnp
BL20-2AIH-I	2 channel analogue inputs module – 0/4...20mA
BL20-2AOH-I	2 channel analogue outputs module – 0/4...20mA
BL20-E-8AI-U/I-4PT/NI	8 channel analogue inputs U/I resp. 4 PT/NI inputs module - Economy
BL20-E-4AO-U/I	4 channel analogue outputs module - Economy
BL20-2RFID-S	2 channel RFID module
BL20-E-GW-CO	Gateway for CANopen – Economy
BL20-E-GW-DN	Gateway for DeviceNet - Economy
BL20-E-GW-DP	Gateway for PROFIBUS-DP - Economy
BL20-E-GW-EN	Gateway for MODBUS TCP incl. supply - Economy
BL20-E-GW-EN-IP	Gateway for EtherNet/IP incl. supply - Economy
BL20-GW-EN-PN	Gateway for PROFINET IO incl. supply
BL20-PG-EN-DN-JA	Gateway for MODBUS TCP and DeviceNet incl. supply

Ron Webb
Stellvertretender, FM Approvals Ltd.

Ausstellungsdatum: 6. Dezember 2010

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Anhang 2 zur
Baumusterprüfbescheinigung Nr. FM07ATEX0040
gemäß Klausel 6 von Anhang III zur Richtlinie 94/9/EG

17 Genehmigte Zeichnungen:

Die folgenden Zeichnungen wurden hinzugefügt

Zeichnungs Nr.	Revision	Titel / Beschreibung
EZ 2725-0044-0711-02 / 07298000	08.08.2006	BL20-16DI-24VDC-P Layout
GZ 2725-0044-0710-01 / 12395500	E	BL20-16DI-24VDC-P Placement
ZS 2725-0044-0710-01 / 12395500	E	BL20-16DI-24VDC-P Schematic
EZ 2725-0106-0711-03- - / DOK-07009202-LP	03.04.2009	BL20-2AIH-I and BL20-2AOH-I Layout
GZ 2725-0106-0710-01-B / DOK-07009202-BP	03.04.2009	BL20-2AIH-I and BL20-2AOH-I Placement
ZS 2725-0106-0710-01-C / DOC-07009202-SP	001	BL20-2AIH-I and BL20-2AOH-I Schematic
EZ 2725-0092-0711-04- - / DOK-07007903-LP	07.05.2009	XNE-8AI-U/I/4PT-NI Layout
GZ 2725-0092-0710-01-C / DOK-07007903-BP	07.05.2009	XNE-8AI-U/I/4PT-NI Placement
ZS 2725-0092-0710-01-C / DOK-07007903-SP	06.05.2009	XNE-8AI-U/I/4PT-NI Schematic
EZ 2725-0093-0711-04- - / DOK-07014403-LP	001	XNE-4AO-U/I Layout
GZ 2725-0093-0710-01-B / DOK-07014402-BP	17.03.2009	XNE-4AO-U/I Placement
ZS 2725-0093-0710-01-B / DOC-07014402-SP	17.03.2009	XNE-4AO-U/I Schematic
EZ 2725-0084-0711-04-D / DOK-07311303-LP	001	BL20-E-GW-CO Layout
GZ 2725-0084-0711-01-B / DOK-07311303-BP	06.12.2007	BL20-E-GWBR-CANOPEN Placement
ZS 2725-0084-0710-01-C / DOK-07311303-SP	06.12.2007	BL20-E-GWBR-CANOPEN Schematic
EZ 2725-0102-0711-02-B / DOK-07331201-LP	002	BL20-E-GW-DN Layout
GZ 2725-0102-0710-01-A / DOK-07331201-BP	08.04.2008	BL20-E-GW-DN Placement
ZS 2725-0102-0710-01-A / DOK-07331201-SP	08.04.2008	BL20-E-GW-DN Schematic
EZ 2725-0085-0711-04-B / DOK-07310603-LP	002	BL20-E-GW-DP Layout
GZ 2725-0085-0710-01-B / DOK-07310603-BP	10.12.2007	BL20-GWBR-PBDP Placement
ZS 2725-0084-0710-01-C / ZS 07310603-SP	10.12.2007	BL20-GWBR-PBDP Schematic
EZ 2725-0103-0711-04-A / DOK 07337703-LP	001	BL20-E-GW-EN Layout
GZ 2725-0103-0710-01-D / DOK 07337703-BP	001	BL20-E-GW-EN Placement
ZS 2725-0103-0710-01-C / DOK 07337703-SP	27.01.2009	BL20-E-GW-EN Schematic

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3.1.2 Baumusterprüfbescheinigung, März 2014

1 # TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 94/9/EC**

3 **Type Examination Certificate No:** **FM07ATEX0040X**

4 **Equipment or protective system: (Type Reference and Name)** **BL20 Modular I/O Bus Terminal System**

5 **Name of Applicant:** **Hans Turck GmbH & Co KG**

6 **Address of Applicant:** **Witzlebenstrasse 7**
DE 45472 Mulheim an der Ruhr
GERMANY

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8 FM Approvals Ltd. certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number:

3030839EC dated 21st January 2008

9 Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN 60079-0:2012 and EN 60079-15:2010

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

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

II 3 G Ex nA IIC T4 Gc Ta= 0°C to +55°C

II 3 G Ex nA nC IIC T4 Gc Ta= 0°C to +55°C (Relay Modules only)

Mick Gower
cn=Mick Gower, o=FM Approvals, ou, email=mick.gower@fmapprovals.com, c=GB
2014.03.07 12:21:27 Z

Mick Gower
Certification Manager, FM Approvals Ltd.

Issue date: 07th March 2014

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

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F ATEX 029 (Oct/12) Page 1 of 4

SCHEDULE

to Type Examination Certificate No. FM07ATEX0040X

Description of Equipment or Protective System:

13

The BL20 I/0 Bus Terminal System is a modular system and offers gateways for communication with bus systems such as PROFIBUS, DeviceNet™ and CanOpen. There are a number of I/0 modules, both digital and analogue, for connection to unspecified field devices. In addition to the analogue and digital modules there are a number of modules for specific applications such as a counter or RS232 interfaces and for relay outputs. The modules plug into bases which are used to mount the modules and which also carry the electrical power and signals via the bus to the Power Feed Modules and Gateway Modules. The bus has an upper operational limit, but this can be increased by use of an intermediate power feed module. User connections are only made to the Gateway modules and to the signal terminals on the individual modules.

BL20 Modular I/O Bus Terminal System

Module Description	***Module Description***
BL20-2DI-24VDC-P	2 channel digital input modules - pnp
BL20-2DI-24VDC-N	2 channel digital input modules - npn
BL20-4DI-24VDC-P	4 channel digital input modules - pnp
BL20-4DI-24VDC-N	4 channel digital input modules - npn
BL20-4DI-NAMUR	4 channel digital input modules - NAMUR input
BL20-32DI-24VDC-P	32 channel digital input modules -pnp
BL20-2AI-I(0/4...20MA)	2 channel analogue input module - current
BL20-2AI-U(-10/0...+10VDC)	2 channel analogue input module - voltage
BL20-2AI-PT/NI-2/3	2 channel analogue input module - platinum and nickel resistance elements
BL20-2AI-THERMO-PI	2 channel analogue input module - thermoelements
BL20-4AI-U/I	4 channel analogue input module - current or voltage
BL20-2DO-24VDC-0,5A-P	2 channel digital output - 0.5A - pnp
BL20-2DO-24VDC-0,5A-N	2 channel digital output – 0.5A - npn
BL20-2DO-24VDC-2A-P	2 channel digital output - 2.0A - pnp
BL20-4DO-24VDC-0,5A-P	4 channel digital output - 0.5A - pnp
BL20-16DO-24VDC-0,5A-P	16 channel digital output - 0.5A - pnp
BL20-32DO-24VDC-0,5A-P	32 channel digital output - 0.5A - pnp
BL20-2AO-I (0/4...20MA)	2 channel analogue output module - current
BL20-2AO-U(-10/0...+10VDC)	2 channel analogue output module - voltage
BL20-1CNT-24VDC	Counter
BL20-1RS232	RS232 interface
BL20-1RS485/422	RS485/422 interface
BL20-1SSI	SSI intertace
BL20-BR-24VDC-D	Power Supply Module with internal 5V DC Bus
BL20-PF-24VDC-D	Power Feed Module Field Supply 24V
BL20-E-8DI-24VDC-P	8 channel digital input module - pnp - Economy
BL20-E-16DI-24VDC-P	16 channel digital input module - pnp - Economy
BL20-E-8DO-24VDC-0,5A-P	8 channel digital output module - 0.5A - pnp - Economy
BL20-E-16DO-24VDC-0,5A-P	16 channel diqital output module - 0.5A - pnp - Economy
BL20-GWBR-PBDP	Gateway for Profibus-DP with internal 5V DC Bus
BL20-GW-DPV1	Gatewav for Profibus-DPV1
BL20-GW-EN	Gatewav for Modbus TCP
BL20-GW-EN-IP	Gateway for Ethernet IP
BL20-PG-EN-IP	Programmable Gateway for Ethernet IP
BL20-PG-EN	Programmable Gatewav for Modbus TCP
BL20-GWBR-DNET	Gatewav for DeviceNet with internal 5V DC Bus
BL20-GWBR-CANOPEN	Gatewav for CANopen with internal 5V DC Bus

THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE

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Module	Descriotion
BL20-2RFID-A	2 Channel RFID module asynchronous
BL20-2RFID-C	2 Channel RFID module cyclic
BL20-2DO-R-NC	2 channel digital output - relay - normally closed
BL20-2DO-R-NO	2 channel digital output - relay - normally open
BL20-2DO-R-CO	2 channel digital output - relay - change over
BL20-16DI-24VDC-P	16 channel digital inputs module - pnp
BL20-2AIH-I	2 channel analogue inputs module - 0/4...20mA
BL20-2AOH-I	2 channel analogue outputs module - 0/4...20mA
BL20-E-8AI-U/I-4PT/NI	8 channel analogue inputs U/I resp. 4 PT/NI inputs module - Economy
BL20-E-4AO-U/I	4 channel analogue outputs module - Economy
BL20-2RFID-S	2 channel RFID module
BL20-E-GW-CO	Gateway for CANopen - Economy
BL20-E-GW-DN	Gateway for DeviceNet - Economy
BL20-E-GW-DP	Gateway for PROFIBUS-DP - Economy
BL20-E-GW-EN	Gateway for MPDBUS TCP incl. supply - Economy
BL20-E-GW-EN-IP	Gateway for Ethernet/IP incl. supply - Economy
BL20-E-GW-EN-PN	Gateway for PROFINET IO incl. supply
BL20-PG-EN-DN-JA	Gateway for MODBUS TCP and DeviceNet incl. supply.

14 **Special Conditions for Safe Use:**

1. In Zone 2 installations, the BL20 - Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure which meets the requirements of EN 60079-0 and EN 60079-15 and is capable of accepting one or more of the Zone 2 wiring methods specified in EN 60079-14. Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in locations providing adequate protection against the entry of solid foreign objects or water capable of impairing safety, the enclosure shall, at a minimum, meet the requirements of IP4X.
2. The BL20 I/O Modules shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident-no. 6827123) and sandwiched between two end brackets (Type BL20-WEW-35/2-SW, Ident-no. 6827124).
3. The input voltage for the BL20 2-channel digital relay modules shall be limited to 30 Vac or dc (max. contact voltage).

15 **Essential Health and Safety Requirements:**

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

16 **Test and Assessment Procedure and Conditions:**

This Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Ltd's ATEX Certification Scheme.

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SCHEDULE

to Type Examination Certificate No. FM07ATEX0040X

17 **Schedule Drawings**

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by FM Approvals Ltd.

18 **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
21st January 2008	Original Issue.
25th October 2010	Supplement 1: Report Reference: 3030839rev100115 dated 19th October 2010. Description of the Change: Modification to documentation and printed circuit boards of BL20 Series modules.
06th December 2010	Supplement 2: Report Reference: Supplement 2 to 3030839EC dated 29th November 2010. Description of the Change: Addition of 13 new BL20 Series Modules and Gateways.
07th March 2014	Supplement 3: Report Reference: 3050164 dated 27th February 2014. Description of the Change: Minor electrical changes not affecting compliance and update of certification Standards to most recent editions.

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Blueprint Report

Hans Turck GmbH & Co KG (106275)

Class No 3611

Original Project I.D. 3030839

Certificate I.D. FM07ATEX0040X

Drawing No.	Revision Level	Drawing Title	Last Report	Electronic Drawing
2256460000	-	End Bracket	3030839	Yes (pdf)
229430	7	Electronic Moulding	3030839	Yes (pdf)
329431	7	Moulding Cover	3030839	Yes (pdf)
329434	04	Locking Foot	3030839	Yes (pdf)
330094	3	Base Module	3030839	Yes (pdf)
331333	3	Base Module	3030839	Yes (pdf)
337897	02	Gateway Lower part	3030839	Yes (pdf)
338003	2	Blanking Plate	3030839	Yes (pdf)
338856	01	Gateway Upper part	3030839	Yes (pdf)
341525	3	Moulding Cover	3030839	Yes (pdf)
430050	4	Gateway Cover	3030839	Yes (pdf)
430095	5	Gateway Locking Assy	3030839	Yes (pdf)
441532	2	Moulding Set	3030839	Yes (pdf)
AWA 2725-0058-0710-01/07600020	24.08	BL20-1RS232 Modification	3030839	Yes (pdf)
BL20 Installation instructions	2	BL20 Installation instructions	3050164	Yes (pdf)
DOK-07007905-BP	000	XNE-8AI-U/I/4PT-NI placement	3050164	Yes (pdf)
DOK-07007905-LP	000	XNE-8AI-U/I/4PT-NI layout	3050164	Yes (pdf)
DOK-07007905-SP	000	XNE-8AI-U/I/4PT-NI schematic	3050164	Yes (pdf)
DOK-07009203-BP	000	2AIH-I placement	3050164	Yes (pdf)
DOK-07009203-LP	000	2AIH-I layout	3050164	Yes (pdf)
DOK-07009203-SP	000	2AIH-I schematic	3050164	Yes (pdf)
DOK-07014406-BP	001	XNE-4AO-U/I placement	3050164	Yes (pdf)
DOK-07014406-LP	001	XNE-4AO-U/I layout	3050164	Yes (pdf)
DOK-07014406-SP	001	XNE-4AO-U/I schematic	3050164	Yes (pdf)
DOK-07257903-BP	001	BL20-4DI-NAMUR placement	3050164	Yes (pdf)
DOK-07257903-LP	000	BL20-4DI-NAMUR layout	3050164	Yes (pdf)
DOK-07257903-SP	000	BL20-4DI-NAMUR schematic	3050164	Yes (pdf)
DOK-07279301-BP	000	BL20-2RFID placement	3050164	Yes (pdf)
DOK-07279301-LP	000	BL20-2RFID layout	3050164	Yes (pdf)
DOK-07279301-SP	000	BL20-2RFID schematic	3050164	Yes (pdf)
DOK-07286802-BP	001	BL20-GW-DPV1 placement	3050164	Yes (pdf)
DOK-07286802-LP	000	BL20-GW-DPV1 layout	3050164	Yes (pdf)
DOK-07286802-SP	000	BL20-GW-DPV1 schematic	3050164	Yes (pdf)
DOK-07289503-BP	000	BL20-GW-EN placement	3050164	Yes (pdf)
DOK-07289503-LP	001	BL20-GW-EN layout	3050164	Yes (pdf)
DOK-07289503-SP	000	BL20-GW-EN schematic	3050164	Yes (pdf)
DOK-07289602-BP	000	BL20-GW-EN-Basis placement	3050164	Yes (pdf)
DOK-07289602-LP	000	BL20-GW-EN-Basis layout	3050164	Yes (pdf)
DOK-07289602-SP	000	BL20-GW-EN-Basis schematic	3050164	Yes (pdf)
DOK-07296401-BP	001	2DI(4DI)-24VDC-P placement	3050164	Yes (pdf)
DOK-07296401-LP	001	2DI(4DI)-24VDC-P layout	3050164	Yes (pdf)
DOK-07296401-SP	001	2DI(4DI)-24VDC-P schematic	3050164	Yes (pdf)
DOK-07296501-BP	000	2DO-24VDC-0.5A-P placement	3050164	Yes (pdf)
DOK-07296501-LP	000	2DO-24VDC-0.5A-P layout	3050164	Yes (pdf)
DOK-07296501-SP	000	2DO-24VDC-0.5A-P schematic	3050164	Yes (pdf)
DOK-07296601-BP	000	2DO-24VDC-2A-P placement	3050164	Yes (pdf)
DOK-07296601-LP	000	2DO-24VDC-2A-P layout	3050164	Yes (pdf)
DOK-07296601-SP	000	2DO-24VDC-2A-P schematic	3050164	Yes (pdf)
DOK-07296701-BP	000	2DO-R-NC placement	3050164	Yes (pdf)
DOK-07296701-LP	000	2DO-R-NC layout	3050164	Yes (pdf)
DOK-07296701-SP	000	2DO-R-NC schematic	3050164	Yes (pdf)
DOK-07296802-BP	000	2DO-R-NO placement	3050164	Yes (pdf)
DOK-07296802-LP	000	2DO-R-NO layout	3050164	Yes (pdf)
DOK-07296802-SP	000	2DO-R-NO schematic	3050164	Yes (pdf)
DOK-07297101-BP	001	2AO-U(-10/0…+10VDC) placement	3050164	Yes (pdf)
DOK-07297101-LP	001	2AO-U(-10/0…+10VDC) layout	3050164	Yes (pdf)
DOK-07297101-SP	001	2AO-U(-10/0…+10VDC) schematic	3050164	Yes (pdf)
DOK-07297203-BP	000	BR-24VDC-D placement	3050164	Yes (pdf)
DOK-07297203-LP	000	BR-24VDC-D layout	3050164	Yes (pdf)
DOK-07297203-SP	000	BR-24VDC-D schematic	3050164	Yes (pdf)
DOK-07297301-BP	000	2/4DI-24VDC-N placement	3050164	Yes (pdf)

DOK-07297301-LP	000	2/4DI-24VDC-N layout	3050164	Yes (pdf)
DOK-07297301-SP	000	2/4DI-24VDC-N schematic	3050164	Yes (pdf)
DOK-07297401-BP	000	2DO-24VDC-0.5A-N placement	3050164	Yes (pdf)
DOK-07297401-LP	000	2DO-24VDC-0.5A-N layout	3050164	Yes (pdf)
DOK-07297401-SP	000	2DO-24VDC-0.5A-N schematic	3050164	Yes (pdf)
DOK-07297601-BP	000	2AI-PT/NI-2/3 placement	3050164	Yes (pdf)
DOK-07297601-LP	000	2AI-PT/NI-2/3 layout	3050164	Yes (pdf)
DOK-07297601-SP	001	2AI-PT/NI-2/3 schematic	3050164	Yes (pdf)
DOK-07297703-BP	000	2AI-THERMO-PI placement	3050164	Yes (pdf)
DOK-07297703-LP	000	2AI-THERMO-PI layout	3050164	Yes (pdf)
DOK-07297703-SP	001	2AI-THERMO-PI schematic	3050164	Yes (pdf)
DOK-07298101-BP	001	4DO-24VDC-0.5A-P placement	3050164	Yes (pdf)
DOK-07298101-LP	001	4DO-24VDC-0.5A-P layout	3050164	Yes (pdf)
DOK-07298101-SP	001	4DO-24VDC-0.5A-P schematic	3050164	Yes (pdf)
DOK-07298201-BP	000	2AI-I (0-4…20MA) placement	3050164	Yes (pdf)
DOK-07298201-LP	000	2AI-I (0-4…20MA) layout	3050164	Yes (pdf)
DOK-07298201-SP	001	2AI-I (0-4…20MA) schematic	3050164	Yes (pdf)
DOK-07298302-BP	000	2AO I 4..20MA placement	3050164	Yes (pdf)
DOK-07298302-LP	000	2AO I 4..20MA layout	3050164	Yes (pdf)
DOK-07298302-SP	000	2AO I 4..20MA	3050164	Yes (pdf)
DOK-07299201-BP	000	2DO-R-CO placement	3050164	Yes (pdf)
DOK-07299201-LP	000	2DO-R-CO layout	3050164	Yes (pdf)
DOK-07299201-SP	000	2DO-R-CO schematic	3050164	Yes (pdf)
DOK-07299301-BP	001	32DI-24VDC-P placement	3050164	Yes (pdf)
DOK-07299301-LP	000	32DI-24VDC-P layout	3050164	Yes (pdf)
DOK-07299301-SP	001	32DI-24VDC-P schematic	3050164	Yes (pdf)
DOK-07299502-BP	000	BL20-1RS232 placement	3050164	Yes (pdf)
DOK-07299502-LP	000	BL20-1RS232 layout	3050164	Yes (pdf)
DOK-07299502-SP	000	BL20-1RS232 schematic	3050164	Yes (pdf)
DOK-07299701-BP	000	32VDO-24VDC-0.5A-P placement	3050164	Yes (pdf)
DOK-07299701-LP	000	32VDO-24VDC-0.5A-P layout	3050164	Yes (pdf)
DOK-07299701-SP	000	32VDO-24VDC-0.5A-P schematic	3050164	Yes (pdf)
DOK-07299802-BP	000	4AI-U-I placement	3050164	Yes (pdf)
DOK-07299802-LP	000	4AI-U-I layout	3050164	Yes (pdf)
DOK-07299802-SP	000	4AI-U-I schematic	3050164	Yes (pdf)
DOK-07299903-BP	000	8DI-24VDC-P placement	3050164	Yes (pdf)
DOK-07299903-LP	000	8DI-24VDC-P layout	3050164	Yes (pdf)
DOK-07299903-SP	000	8DI-24VDC-P schematic	3050164	Yes (pdf)
DOK-07300003-BP	000	8DO-24VDC-0.5A-P placement	3050164	Yes (pdf)
DOK-07300003-LP	000	8DO-24VDC-0.5A-P layout	3050164	Yes (pdf)
DOK-07300003-SP	000	8DO-24VDC-0.5A-P schematic	3050164	Yes (pdf)
DOK-07300104-BP	000	16DI-24VDC-P placement	3050164	Yes (pdf)
DOK-07300104-LP	000	16DI-24VDC-P layout	3050164	Yes (pdf)
DOK-07300104-SP	000	16DI-24VDC-P schematic	3050164	Yes (pdf)
DOK-07300204-BP	000	16DO-24VDC-0.5A-P placement	3050164	Yes (pdf)
DOK-07300204-LP	000	16DO-24VDC-0.5A-P layout	3050164	Yes (pdf)
DOK-07300204-SP	000	16DO-24VDC-0.5A-P schematic	3050164	Yes (pdf)
DOK-07300501-LP	003	GWBR-CANOPEN layout	3050164	Yes (pdf)
DOK-07300901-BP	000	GWBR-CANOPEN placement	3050164	Yes (pdf)
DOK-07300901-LP	000	GWBR-CANOPEN layout	3050164	Yes (pdf)
DOK-07300901-SP	000	GWBR-CANOPEN schematic	3050164	Yes (pdf)
DOK-07310604-BP	001	XNE-GWBR-PBDP placement	3050164	Yes (pdf)
DOK-07310604-LP	001	XNE-GWBR-PBDF layout	3050164	Yes (pdf)
DOK-07310604-SP	001	XNE-GWBR-PBDF schematic	3050164	Yes (pdf)
DOK-07311303-BP	000	BL20-E-GWBR-CANOPEN placement	3050164	Yes (pdf)
DOK-07311303-LP	002	BL20-E-GW-CO layout	3050164	Yes (pdf)
DOK-07311303-SP	000	BL20-E-GWBR-CANOPEN schematic	3050164	Yes (pdf)
DOK-07337706-BP	000	BL20-E-GW-EN placement	3050164	Yes (pdf)
DOK-07337706-LP	000	BL20-E-GW-EN layout	3050164	Yes (pdf)
DOK-07337706-SP	000	BL20-E-GW-EN schematic	3050164	Yes (pdf)
EZ 2725-0043-0711-04 / 07297900	30.06	BL20-1CNT-24VDC Layout	3030839	Yes (pdf)
GZ 2725-0043-0710-01 / 12395400	G	BL20-1CNT-24VDC Placement	3030839	Yes (pdf)
GZ 2725-0061071001FDOK07300501BP	000	GZ 2725-0061-0710-01-FDOK-07300501-BPrev000.pdf	3050164	Yes (pdf)
GZ 2725-0081-0720-01 / 12383900	18.11.2005	BL20-GW-DPV1 Placement	3030839	Yes (pdf)
ZS2725006107100101CDOK07300501SP	000	ZS 2725-0061-0710-0101-CDOK-07300501-SP.pdf	3050164	Yes (pdf)
d300717	05/07	BL20 –I/O-MODULES HARDWARE AND ENGINEERING	3030839	Yes (pdf)
tmex 0049	C	Approval Label	3050164	Yes (pdf)

3.1.3 ATEX IEC Rev.1.doc

BL20 installation instructions ATEX IEC Rev.1.doc

BL20 – MODULAR I/O BUS- TERMINAL SYSTEM - IN ZONE 2

Installation instructions to use approved BL20 devices of category 3 in zone 2 according to directive 94/9/EG respective the standards IEC/ EN 60079-15:2006.

Ex-Marking

Label Material 7815 of 3M. Label Material 7815 CSA accepted (File 99316). See the CSA listings for details.

Manufacturer and address country	TURCK D-45466 Mülheim an der Ruhr Made in Germany
Type	Type label, other side of module
Type of protection	Ex nA nC II T4 respective Ex nA II T4
Approval number	FM 07 ATEX 0040 X IECEx FME 07.0004 X
Ex symbol and ATEX identifier	 II 3 G
Allowed ambient temperature	0°C ... +55°C
CE symbol with PTB No. as supervising notified body of manufacturing control	CE 0102
Serial no. production year (it's a code no.)	Type label, other side of module

Instructions for safe use in zone 2

BL20 devices of category 3 have to be installed in a suitable housing according IEC/ EN 60079-15 in such way, that a degree of protection of at least IP 54 according EN 60529 is reached.

Using switches e.g. at front side of the gateway as well as the connecting and disconnecting of any circuits is only permitted if no explosion hazardous atmosphere exists.

BL20 devices are to keep under normal operation conditions. The limits of the data sheets have to be observed.

The UL connector of the gateway supplies all field devices up to 30V d.c. and 10A d.c.. To supply more modules additional Power feeding modules BL20-PF-24VDC-D resp. Bus refreshing modules BL20-BR-24VDC-D may be necessary.

The Usys connector of the gateway feeds an internal supply circuit of the gateway and that provides "5V" module bus supply up to 1.5A d.c for gateway and modules. To supply more modules additional Bus refreshing modules BL20-BR-24VDC-D may be necessary. The rated current consumption of the module bus shows a table in BL20 catalogue.

Terminal blocks shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident-no. 6827123) and sandwiched between two end brackets (Type BL20-WEW-35/2-SW, Ident-no. 6827124).

The mounting rails used for BL20 should be mounted onto a galvanized mounting plate with a minimum thickness of 2 mm. This allows a reference potential for protective earth (PE) and functional earth that has to be created. Please allow for a maximum distance of 150 mm between mounting holes, when mounting non pre-drilled mounting rails.

If flexible wire should be used for wiring it is necessary that the endings must have wire end ferrules.

The devices are maintenance-free. A dry cleaning is acceptable. Repairs have to be done by manufacturer.

3.1.4 ATEX IEC Rev.2.doc

BL20 installation instructions ATEX IEC Rev.2

BL20 – MODULAR I/O BUS- TERMINAL SYSTEM - IN ZONE 2

Installation instructions to use approved BL20 devices of category 3 in zone 2 according to directive 94/9/EG respective the standards IEC / EN 60079-0:2012 and IEC / EN 60079-15:20010.

Ex-Marking

Label Material 7815 of 3M. Label Material 7815 CSA accepted (File 99316). See the CSA listings for details.

Manufacturer and address country	TURCK D-45466 Mülheim an der Ruhr Made in Germany
Type	Type label, other side of module
Type of protection	Ex nA IIC T4 Gc Ex nA nC IIC T4 Gc (Relay Modules only)
Approval number	FM 07 ATEX 0040 X IECEx FME 07.0004 X
Ex symbol and ATEX identifier	 II 3 G
Allowed ambient temperature	0°C ... +55°C
CE	CE
Serial no. production year (it's a code no.)	Type label, other side of module

Instructions for safe use in zone 2

BL20 devices of category 3 have to be installed in a suitable housing according IEC/ EN 60079-15 in such way, that a degree of protection of at least IP 54 according EN 60529 is reached.

Using switches e.g. at front side of the gateway as well as the connecting and disconnecting of any circuits is only permitted if no explosion hazardous atmosphere exists.

BL20 devices are to keep under normal operation conditions. The limits of the data sheets have to be observed.

The UL connector of the gateway supplies all field devices up to 30V d.c. and 10A d.c.. To supply more modules additional Power feeding modules BL20-PF-24VDC-D resp. Bus refreshing modules BL20-BR-24VDC-D may be necessary.

The Usys connector of the gateway feeds an internal supply circuit of the gateway and that provides "5V" module bus supply up to 1.5A d.c for gateway and modules. To supply more modules additional Bus refreshing modules BL20-BR-24VDC-D may be necessary. The rated current consumption of the module bus shows a table in BL20 catalogue.

Terminal blocks shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident-no. 6827123) and sandwiched between two end brackets (Type BL20-WEW-35/2-SW, Ident-no. 6827124).

The mounting rails used for BL20 should be mounted onto a galvanized mounting plate with a minimum thickness of 2 mm. This allows a reference potential for protective earth (PE) and functional earth that has to be created. Please allow for a maximum distance of 150 mm between mounting holes, when mounting non pre-drilled mounting rails.

If flexible wire should be used for wiring it is necessary that the endings must have wire end ferrules.

Please observe at screw connection technology the max. torque of 0,4Nm to 0,6Nm to tighten the terminal screws.

The devices are maintenance-free. A dry cleaning is acceptable. Repairs have to be done by manufacturer.

Rev.2/20140124

1

BL20 installation instructions ATEX IEC Rev.2

BL20 – MODULAR I/O BUS- KLEMMEN SYSTEM - IN ZONE 2

Betriebsanleitung für den Gebrauch zugelassener BL20 Geräte der Kategorie 3 in der Zone 2 entsprechend der Richtlinie 94/9/EG bzw. der Normen IEC / EN 60079-0:2012 und IEC / EN 60079-15:20010.

Ex-Kennzeichnung

Typenschildmaterial von 3M 7815 CSA anerkannt (Datei 99316). Details siehe CSA Liste.

Hersteller und Adresse Land	TURCK D-45466 Mülheim an der Ruhr Made in Germany
Typ	Typenschild, siehe andere Modulseite
Zündschutzart	Ex nA IIC T4 Gc Ex nA nC IIC T4 Gc (nur Module mit Relaisausgang)
Zulassungsnummer	FM 07 ATEX 0040 X IECEx FME 07.0004 X
Ex Symbol und ATEX Bezeichner	 II 3 G
Zulässige Umgebungstemperatur	0°C ... +55°C
CE	CE
Serien-Nr. Produktionsjahr (als Kodenummer)	Typenschild, siehe andere Modulseite

Anweisungen für den sicheren Gebrauch in der Zone 2

BL20 Geräte der Kategorie 3 müssen in einem passenden Gehäuse gemäß IEC/ EN 60079-15 eingebaut werden. Dabei ist mindestens die Schutzart IP 54 nach EN 60529 einzuhalten.

Das Bedienen der Schalter z.B. an der Frontseite des Gateways, sowie der Verbinden und Trennen von irgendeinem Stromkreis ist nur zulässig, wenn keine explosionsgefährliche Atmosphäre vorhanden ist.

BL20 Geräte müssen innerhalb normaler Bedingungen betrieben werden. Die Grenzen der Datenblätter sind zu beachten.

Über den UL Anschluss des Gateways werden alle Feldgeräte bis zu 30V DC und 10A DC versorgt. Um mehr Module zu versorgen sind zusätzliche Power-Feeding-Module BL20-PF-24VDC-D bzw. Bus-Refreshing-Module BL20-BR-24VDC-D erforderlich.

Der Usys Anschluss des Gateways versorgt die interne Elektronik des Gateways und liefert die „5V“ Modulbus Versorgung bis 1,5A für Gateway und die angefügten Module. Um mehr Module zu versorgen sind zusätzliche Power-Feeding-Module BL20-PF-24VDC-D erforderlich. Die Nennstromaufnahmen der Module stehen in einer Tabelle im BL20 Katalog.

Endwinkel müssen auf den Tragschienen EN 50022 NS35 geschraubt werden. Jede Gruppe wird rechts mit einer Abschlussplatte (Typ BL20-ABPL, Ident-Nr. 6827123) versehen und ist festgesetzt zwischen zwei Endwinkel (Typ BL20-WEW-35/2-SW, Ident-Nr. 6827124).

Die für BL20 verwendete Tragschiene sollte auf einem leitenden Montageblech mit einer Dicke von mindestens 2 mm montiert werden. Damit ist ein Bezugspotenzial für Schutz- und Funktionserde herstellbar. Bei nicht vorgebohrten Tragschienen achten Sie bitte auf einen Lochabstand von max. 150 mm.

Wenn zur Verdrahtung fein drahtige Adern verarbeitet werden, dann ist es erforderlich die abisolierten Leitungsenden mit Aderendhülsen zu verpressen.

Bei Schraubanschlusstechnik ist beim Andrehen der Klemmschrauben auf das max. zulässige Drehmoment von 0,4Nm bis 0,6Nm zu achten.

Die Geräte sind wartungsfrei. Eine trockene Reinigung ist zulässig. Reparaturen dürfen nur vom Hersteller durchgeführt werden.

Rev.2/20140124

3.1.5 Konformitätserklärung/Declaration of Conformity

Konformitätserklärung Nr. 3245 M
Declaration of Conformity

TURCK Industrielle Automation

Diese Konformitätserklärung entspricht der Europäischen Norm EN 45014 "Allgemeine Kriterien für Konformitätserklärungen von Anbietern". Die Grundlage der Kriterien sind internationale Dokumente, insbesondere ISO/IEC Leitfaden 22, 1982: "Information on manufacturer's declaration of conformity with standards or other technical specifications".

This "Declaration of Conformity" complies with the European Standard EN 45014 "General criteria for a supplier's declaration of conformity". These criteria are based on the relevant international documentation, particularly the ISO/IEC Guide 22, 1982: "Information on the manufacturer's declaration of conformity with standards or other technical specifications".

Wir/ We HANS TURCK GMBH & CO KG
WITZLEBENSTR. 7, D - 45472 MÜLHEIM A.D. RUHR

erklären in alleiniger Verantwortung, dass die Produkte
declare under our sole responsibility that the products

BL20 modulares I/O Bus- Klemmen- System
Gelistete Module siehe Baumusterprüfbescheinigung FM 07 ATEX 0040 X
Listed modules see Type Examination Certificate FM 07 ATEX 0040 X

auf die sich die Erklärung bezieht, mit den folgenden Normen übereinstimmen
to which this declaration relates are in conformity with the following standards

EN 61326-1:2006

und wo anwendbar
and where applicable

EN 60079-0:2006 EN 60079-15:2005

Gemäß den Bestimmungen der Richtlinie (falls zutreffend)
Following the provisions of Directive (if applicable)

EMV - Richtlinie	/ EMC Directive	2004 / 108 / EG	15. Dez. 2004
Richtlinie ATEX	/ Directive ATEX	94 / 9 / EG	23. März 1994

Weitere Normen
additional standards

Aussteller der EG-Baumusterbescheinigung:
FM Approvals Ltd. 1 Windsor Dials
Windsor, Berkshire, UK. SL4 1 RS
Baumusterprüfbescheinigung FM 07 ATEX 0040 X

Kennzeichnung: Ex II 3 G

Mülheim, den 23.01.08 i.V. (i.V. W. Stoll)

Ort und Datum der Austellung / Place and date of issue

Name und Unterschrift des Befugten / Name and signature of authorized person

7_3f12a.doc Stand: 001 vom 01.08.06

Konformitätserklärung Nr. 4163M
Declaration of Conformity

Diese Konformitätserklärung entspricht der Europäischen Norm EN ISO/IEC 17050-1:2010 "Allgemeine Kriterien für Konformitätserklärungen von Anbietern".

This "Declaration of Conformity" complies with the European Standard EN ISO/IEC 17050-1:2010 "General criteria for a supplier's declaration of conformity".

Wir/ We HANS TURCK GMBH & CO KG
WITZLEBENSTR. 7, D – 45472 MÜLHEIM A.D. RUHR

erklären in alleiniger Verantwortung, dass die Produkte
declare under our sole responsibility that the products

BL20 modulares I/O Bus- Klemmen- System
Gelistete Module siehe Baumusterprüfbescheinigung FM 07 ATEX 0040 X
Listed modules see Type Examination Certificate FM 07 ATEX 0040 X

auf die sich die Erklärung bezieht, mit den folgenden Normen übereinstimmen
to which this declaration relates are in conformity with the following standards

EN 61131-2:2007 (Abschnitte 8, 9, 10)

bei ATEX Richtlinie
in case of ATEX Directive

EN 60079-0:2012 EN 60079-15:2010

Gemäß den Bestimmungen der Richtlinie (falls zutreffend)
Following the provisions of Directive (if applicable)

EMV – Richtlinie	/ EMC Directive	2004 / 108 / EG	15. Dez.2004
Richtlinie ATEX 100a	/ Directive ATEX 100a	94 / 9 / EG	23. März 1994

Weitere Normen, Bemerkungen
additional standards, remarks

Aussteller der ATEX-Baumusterbescheinigung:
FM Approvals Ltd. 1 Windsor Dials
Windsor, Berkshire, UK. SL4 1 RS
Baumusterprüfbescheinigung FM 07 ATEX 0040 X

Kennzeichnung: Ex II 3 G

Mülheim, den 04.07.2014

(i.V. Dr.-Ing. A. Nest, CE-Beauftragter)

Ort und Datum der Austellung / Place and date of issue

Name und Unterschrift des Befugten / Name and signature of authorized person

FM 7.3-12 02.04.12

4 Zertifikate IECEx

4.1 IECEx Certificate of Conformity

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx FME 07.0004X issue No.:2	Certificate history: Issue No. 2 (2010-11-19) Issue No. 1 (2010-8-20) Issue No. 0 (2008-1-21)
Status:	**Current**	
Date of Issue:	**2010-11-19** Page 1 of 6	
Applicant:	**Hans Turck GmbH & Co KG** Witzlebenstrasse 7 DE 45472 Mülheim an der Ruhr **Germany**	
Electrical Apparatus: *Optional accessory:*	**BL20 Modular I/O Bus Terminal System**	
Type of Protection:	**Type of protection 'n' electrical appartus**	
Marking:	**Ex nA II T4** **Ex nA nC II T4 (Relay Modules)**	
Approved for issue on behalf of the IECEx Certification Body:	Andrew Was	
Position:	Certification Manager	
Signature: *(for printed version)*		
Date:	19TH NOVEMBER 2010.	

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

FM Approvals Ltd
1 Windsor Dials
SL4 1RS Windsor
United Kingdom

IECEx Certificate of Conformity

Certificate No.: IECEx FME 07.0004X

Date of Issue: **2010-11-19** Issue No.: **2**

Manufacturer: **Werner Turck GmbH & Co KG**
Goethestrasse 7
DE 58553 Halver
Germany

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition: 4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-15 : 2005-03 Edition: 3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

GB/FME/ExTR07.0002/00
GB/FME/ExTR07.0002/01
GB/FME/ExTR07.0002/02

Quality Assessment Report:

DE/PTB/QAR06.0012/00

IECEx Certificate of Conformity

Certificate No.: IECEx FME 07.0004X

Date of Issue: **2010-11-19** Issue No.: **2**

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

The BL20 I/O Bus-Terminal System is a modular system and offers gateways for communication with bus system such as PROFIBUS, DeviceNet™ and CanOpen. There are a number of I/O modules for both digital and analogue for connection to unspecified field devices. In addition to the analog and digital modules there are a number of modules for specific applications such as a counter or RS232 interfaces and for relay outputs. The modules plug in to bases which are used to mount the modules and which also carry the electrical power and signals via the bus to the Power Feed Modules and Gateway Modules. The bus has a maximum operational limit, but this can be increased by use of an intermediate power feed module. User connections are only made to the Gateway modules and to the signal terminals on the individual modules.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. In Zone 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure which meets the requirements of IEC 60079-0 and IEC 60079-15 and is capable of accepting one or more of the Zone 2 wiring methods specified in IEC 60079-14. Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in locations providing adequate protection against the entry of solid foreign objects or water capable of impairing safety, the enclosure shall, at a minimum, meet the requirements of IP4X.
2 The BL20 I/O Modules shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident-no. 6827123) and sandwiched between two end brackets (Type BL20-WEW-35/2-SW, Ident-no. 6827124).
3. The input voltage for the BL20 2-channel digital relay module shall be limited to 30 Vac or dc (max. contact voltage).

IECEx Certificate of Conformity

Certificate No.: IECEx FME 07.0004X

Date of Issue: 2010-11-19 Issue No.: 2

EQUIPMENT(continued):

Module	Description
BL20-2DI-24VDC-P	2 channel digital input modules – pnp
BL20-2DI-24VDC-N	2 channel digital input modules - npn
BL20-4DI-24VDC-P	4 channel digital input modules - pnp
BL20-4DI-24VDC-N	4 channel digital input modules - npn
BL20-4DI-NAMUR	4 channel digital input modules – NAMUR input
BL20-32DI-24VDC-P	32 channel digital input modules -pnp
BL20-2AI-I(0/4...20MA)	2 channel analogue input module – current
BL20-2AI-U(-10/0...+10VDC)	2 channel analogue input module – voltage
BL20-2AI-PT/NI-2/3	2 channel analogue input module – platinum and nickel resistance elements
BL20-2AI-THERMO-PI	2 channel analogue input module – thermoelements
BL20-4AI-U/I	4 channel analogue input module – current or voltage
BL20-2DO-24VDC-0,5A-P	2 channel digital output – 0.5A - pnp
BL20-2DO-24VDC-0,5A-N	2 channel digital output – 0.5A - npn
BL20-2DO-24VDC-2A-P	2 channel digital output – 2.0A - pnp
BL20-4DO-24VDC-0,5A-P	4 channel digital output – 0.5A - pnp
BL20-16DO-24VDC-0,5A-P	16 channel digital output – 0.5A - pnp
BL20-32DO-24VDC-0,5A-P	32 channel digital output – 0.5A - pnp
BL20-2AO-I(0/4...20MA)	2 channel analogue output module – current
BL20-2AO-U(-10/0...+10VDC)	2 channel analogue output module – voltage
BL20-1CNT-24VDC	Counter
BL20-1RS232	RS232 interface
BL20-1RS485/422	RS485/422 interface
BL20-1SSI	SSI interface
BL20-BR-24VDC-D	Power Supply Module with internal 5V DC Bus
BL20-PF-24VDC-D	Power Feed Module Field Supply 24V
BL20-E-8DI-24VDC-P	8 channel digital input module – pnp – Economy

IECEx Certificate of Conformity

Certificate No.: IECEx FME 07.0004X

Date of Issue: **2010-11-19** Issue No.: **2**

Page 5 of 6

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Addition of Module types

Module	Description
BL20-16DI-24VDC-P	16 channel digital inputs module - pnp
BL20-2AIH-I	2 channel analogue inputs module – 0/4...20mA
BL20-2AOH-I	2 channel analogue outputs module – 0/4...20mA
BL20-E-8AI-U/I-4PT/NI	8 channel analogue inputs U/I resp. 4 PT/NI inputs module - Economy
BL20-E-4AO-U/I	4 channel analogue outputs module - Economy
BL20-2RFID-S	2 channel RFID module
BL20-E-GW-CO	Gateway for CANopen – Economy
BL20-E-GW-DN	Gateway for DeviceNet - Economy
BL20-E-GW-DP	Gateway for PROFIBUS-DP - Economy
BL20-E-GW-EN	Gateway for MODBUS TCP incl. supply - Economy
BL20-E-GW-EN-IP	Gateway for EtherNet/IP incl. supply - Economy
BL20-GW-EN-PN	Gateway for PROFINET IO incl. supply
BL20-PG-EN-DN-JA	Gateway for MODBUS TCP and DeviceNet incl. supply

IECEx Certificate of Conformity

Certificate No.: IECEx FME 07.0004X

Date of Issue: **2010-11-19** Issue No.: **2**

Additional information:

Module	Description
BL20-E-16DI-24VDC-P	16 channel digital input module – pnp – Economy
BL20-E-8DO-24VDC-0,5A-P	8 channel digital output module – 0.5A – pnp – Economy
BL20-E-16DO-24VDC-0,5A-P	16 channel digital output module – 0.5A – pnp – Economy
BL20-GWBR-PBDP	Gateway for Profibus-DP with internal 5V DC Bus
BL20-GW-DPV1	Gateway for Profibus-DPV1
BL20-GW-EN	Gateway for Modbus TCP
BL20-GW-EN-IP	Gateway for Ethernet IP
BL20-PG-EN-IP	Programmable Gateway for Ethernet IP
BL20-PG-EN	Programmable Gateway for Modbus TCP
BL20-GWBR-DNET	Gateway for DeviceNet with internal 5V DC Bus
BL20-GWBR-CANOPEN	Gateway for CANopen with internal 5V DC Bus
BL20-2RFID-A	2 Channel RFID module asynchronous
BL20-2RFID-C	2 Channel RFID module cyclic
BL20-2DO-R-NC	2 channel digital output – relay – normally closed
BL20-2DO-R-NO	2 channel digital output – relay – normally open
BL20-2DO-R-CO	2 channel digital output – relay – change over

IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx FME 07.0004X	Issue No: 3	Certificate history:
			Issue No. 3 (2014-04-04)
Status:	**Current**	Page 1 of 6	Issue No. 2 (2010-11-19)
			Issue No. 1 (2010-08-20)
Date of Issue:	**2014-04-04**		Issue No. 0 (2008-01-21)

Applicant: **Hans Turck GmbH & Co KG**
Witzlebenstrasse 7
DE 45472 Mülheim an der Ruhr
Germany

Electrical Apparatus: **BL20 Modular I/O Bus Terminal System**
Optional accessory:

Type of Protection: **Type of protection 'n' electrical appartus**

Marking:
Ex nA II T4 Ta = 0 ° C to +55 ° C
Ex nA nC II T4 Ta = 0 ° C to +55 ° C (Relay Modules)

Approved for issue on behalf of the IECEx Certification Body: Mick Gower

Position: Certification Manager

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

FM Approvals Ltd
1 Windsor Dials
SL4 1RS Windsor
United Kingdom

FM Approvals
Member of the FM Global Group

IECEx Certificate of Conformity

Certificate No:	IECEx FME 07.0004X	Issue No: 3
Date of Issue:	**2014-04-04**	Page 2 of 6
Manufacturer:	**Werner Turck GmbH & Co KG** Goethestrasse 7 DE 58553 Halver **Germany**	
Additional Manufacturing location(s):		

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2004 Edition:4.0	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
IEC 60079-15 : 2005-03 Edition:3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

GB/FME/ExTR07.0002/00 GB/FME/ExTR07.0002/01 GB/FME/ExTR07.0002/02
GB/FME/ExTR07.0002/03

Quality Assessment Report:

DE/PTB/QAR06.0012/00

IECEx Certificate of Conformity

Certificate No:	IECEx FME 07.0004X	Issue No: 3
Date of Issue:	**2014-04-04**	Page 3 of 6

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The BL20 I/O Bus-Terminal System is a modular system and offers gateways for communication with bus system such as PROFIBUS, DeviceNet™ and CanOpen. There are a number of I/O modules for both digital and analogue for connection to unspecified field devices. In addition to the analog and digital modules there are a number of modules for specific applications such as a counter or RS232 interfaces and for relay outputs. The modules plug in to bases which are used to mount the modules and which also carry the electrical power and signals via the bus to the Power Feed Modules and Gateway Modules. The bus has a maximum operational limit, but this can be increased by use of an intermediate power feed module. User connections are only made to the Gateway modules and to the signal terminals on the individual modules.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. In Zone 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure which meets the requirements of IEC 60079-0 and IEC 60079-15 and is capable of accepting one or more of the Zone 2 wiring methods specified in IEC 60079-14. Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in locations providing adequate protection against the entry of solid foreign objects or water capable of impairing safety, the enclosure shall, at a minimum, meet the requirements of IP4X.

2 The BL20 I/O Modules shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident-no. 6827123) and sandwiched between two end brackets (Type BL20-WEW-35/2-SW, Ident-no. 6827124).

3. The input voltage for the BL20 2-channel digital relay module shall be limited to 30 Vac or dc (max. contact voltage).

IECEx Certificate of Conformity

Certificate No:	IECEx FME 07.0004X	Issue No: 3
Date of Issue:	2014-04-04	Page 4 of 6

EQUIPMENT (continued):

Module	Description
BL20-2DI-24VDC-P	2 channel digital input modules – pnp
BL20-2DI-24VDC-N	2 channel digital input modules - npn
BL20-4DI-24VDC-P	4 channel digital input modules - pnp
BL20-4DI-24VDC-N	4 channel digital input modules - npn
BL20-4DI-NAMUR	4 channel digital input modules – NAMUR input
BL20-32DI-24VDC-P	32 channel digital input modules -pnp
BL20-2AI-I(0/4...20MA)	2 channel analogue input module – current
BL20-2AI-U(-10/0...+10VDC)	2 channel analogue input module – voltage
BL20-2AI-PT/NI-2/3	2 channel analogue input module – platinum and nickel resistance elements
BL20-2AI-THERMO-PI	2 channel analogue input module – thermoelements
BL20-4AI-U/I	4 channel analogue input module – current or voltage
BL20-2DO-24VDC-0,5A-P	2 channel digital output – 0.5A - pnp
BL20-2DO-24VDC-0,5A-N	2 channel digital output – 0.5A - npn
BL20-2DO-24VDC-2A-P	2 channel digital output – 2.0A - pnp
BL20-4DO-24VDC-0,5A-P	4 channel digital output – 0.5A - pnp
BL20-16DO-24VDC-0,5A-P	16 channel digital output – 0.5A - pnp
BL20-32DO-24VDC-0,5A-P	32 channel digital output – 0.5A - pnp
BL20-2AO-I(0/4...20MA)	2 channel analogue output module – current
BL20-2AO-U(-10/0...+10VDC)	2 channel analogue output module – voltage
BL20-1CNT-24VDC	Counter
BL20-1RS232	RS232 interface
BL20-1RS485/422	RS485/422 interface
BL20-1SSI	SSI interface
BL20-BR-24VDC-D	Power Supply Module with internal 5V DC Bus
BL20-PF-24VDC-D	Power Feed Module Field Supply 24V
BL20-E-8DI-24VDC-P	8 channel digital input module – pnp – Economy

IECEx Certificate of Conformity

Certificate No:	IECEx FME 07.0004X	Issue No: 3
Date of Issue:	**2014-04-04**	Page 5 of 6

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Revised drawings to reflect minor design changes not affecting compliance.

IECEx Certificate of Conformity

Certificate No: IECEx FME 07.0004X Issue No: 3

Date of Issue: 2014-04-04 Page 6 of 6

Additional information:

Module	Description
BL20-E-16DI-24VDC-P	16 channel digital input module – pnp – Economy
BL20-E-8DO-24VDC-0,5A-P	8 channel digital output module – 0.5A – pnp – Economy
BL20-E-16DO-24VDC-0,5A-P	16 channel digital output module – 0.5A – pnp – Economy
BL20-GWBR-PBDP	Gateway for Profibus-DP with internal 5V DC Bus
BL20-GW-DPV1	Gateway for Profibus-DPV1
BL20-GW-EN	Gateway for Modbus TCP
BL20-GW-EN-IP	Gateway for Ethernet IP
BL20-PG-EN-IP	Programmable Gateway for Ethernet IP
BL20-PG-EN	Programmable Gateway for Modbus TCP
BL20-GWBR-DNET	Gateway for DeviceNet with internal 5V DC Bus
BL20-GWBR-CANOPEN	Gateway for CANopen with internal 5V DC Bus
BL20-2RFID-A	2 Channel RFID module asynchronous
BL20-2RFID-C	2 Channel RFID module cyclic
BL20-2DO-R-NC	2 channel digital output – relay – normally closed
BL20-2DO-R-NO	2 channel digital output – relay – normally open
BL20-2DO-R-CO	2 channel digital output – relay – change over

4.2 ATEX IEC Rev.1.doc

BL20 installation instructions ATEX IEC Rev.1.doc

BL20 – MODULAR I/O BUS- TERMINAL SYSTEM - IN ZONE 2

Installation instructions to use approved BL20 devices of category 3 in zone 2 according to directive 94/9/EG respective the standards IEC/ EN 60079-15:2006.

Ex-Marking

Label Material 7815 of 3M. Label Material 7815 CSA accepted (File 99316). See the CSA listings for details.

Manufacturer and address country	TURCK D-45466 Mülheim an der Ruhr Made in Germany
Type	Type label, other side of module
Type of protection	Ex nA nC II T4 respective Ex nA II T4
Approval number	FM 07 ATEX 0040 X IECEx FME 07.0004 X
Ex symbol and ATEX identifier	 II 3 G
Allowed ambient temperature	0°C ... +55°C
CE symbol with PTB No. as supervising notified body of manufacturing control	CE 0102
Serial no. production year (it's a code no.)	Type label, other side of module

Instructions for safe use in zone 2

BL20 devices of category 3 have to be installed in a suitable housing according IEC/ EN 60079-15 in such way, that a degree of protection of at least IP 54 according EN 60529 is reached.

Using switches e.g. at front side of the gateway as well as the connecting and disconnecting of any circuits is only permitted if no explosion hazardous atmosphere exists.

BL20 devices are to keep under normal operation conditions. The limits of the data sheets have to be observed.

The UL connector of the gateway supplies all field devices up to 30V d.c. and 10A d.c.. To supply more modules additional Power feeding modules BL20-PF-24VDC-D resp. Bus refreshing modules BL20-BR-24VDC-D may be necessary.

The Usys connector of the gateway feeds an internal supply circuit of the gateway and that provides "5V" module bus supply up to 1.5A d.c for gateway and modules. To supply more modules additional Bus refreshing modules BL20-BR-24VDC-D may be necessary. The rated current consumption of the module bus shows a table in BL20 catalogue.

Terminal blocks shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident-no. 6827123) and sandwiched between two end brackets (Type BL20-WEW-35/2-SW, Ident-no. 6827124).

The mounting rails used for BL20 should be mounted onto a galvanized mounting plate with a minimum thickness of 2 mm. This allows a reference potential for protective earth (PE) and functional earth that has to be created. Please allow for a maximum distance of 150 mm between mounting holes, when mounting non pre-drilled mounting rails.

If flexible wire should be used for wiring it is necessary that the endings must have wire end ferrules.

The devices are maintenance-free. A dry cleaning is acceptable. Repairs have to be done by manufacturer.

4.3 ATEX IEC Rev.2.doc

BL20 installation instructions ATEX IEC Rev.2

BL20 – MODULAR I/O BUS- TERMINAL SYSTEM - IN ZONE 2

Installation instructions to use approved BL20 devices of category 3 in zone 2 according to directive 94/9/EG respective the standards IEC / EN 60079-0:2012 and IEC / EN 60079-15:20010.

Ex-Marking

Label Material 7815 of 3M. Label Material 7815 CSA accepted (File 99316). See the CSA listings for details.

Manufacturer and address country	TURCK D-45466 Mülheim an der Ruhr Made in Germany
Type	Type label, other side of module
Type of protection	Ex nA IIC T4 Gc Ex nA nC IIC T4 Gc (Relay Modules only)
Approval number	FM 07 ATEX 0040 X IECEx FME 07.0004 X
Ex symbol and ATEX identifier	Ex II 3 G
Allowed ambient temperature	0°C ... +55°C
CE	CE
Serial no. production year (it's a code no.)	Type label, other side of module

Instructions for safe use in zone 2

BL20 devices of category 3 have to be installed in a suitable housing according IEC/ EN 60079-15 in such way, that a degree of protection of at least IP 54 according EN 60529 is reached.

Using switches e.g. at front side of the gateway as well as the connecting and disconnecting of any circuits is only permitted if no explosion hazardous atmosphere exists.

BL20 devices are to keep under normal operation conditions. The limits of the data sheets have to be observed.

The UL connector of the gateway supplies all field devices up to 30V d.c. and 10A d.c.. To supply more modules additional Power feeding modules BL20-PF-24VDC-D resp. Bus refreshing modules BL20-BR-24VDC-D may be necessary.

The Usys connector of the gateway feeds an internal supply circuit of the gateway and that provides "5V" module bus supply up to 1.5A d.c for gateway and modules. To supply more modules additional Bus refreshing modules BL20-BR-24VDC-D may be necessary. The rated current consumption of the module bus shows a table in BL20 catalogue.

Terminal blocks shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident-no. 6827123) and sandwiched between two end brackets (Type BL20-WEW-35/2-SW, Ident-no. 6827124).

The mounting rails used for BL20 should be mounted onto a galvanized mounting plate with a minimum thickness of 2 mm. This allows a reference potential for protective earth (PE) and functional earth that has to be created. Please allow for a maximum distance of 150 mm between mounting holes, when mounting non pre-drilled mounting rails.

If flexible wire should be used for wiring it is necessary that the endings must have wire end ferrules.

Please observe at screw connection technology the max. torque of 0,4Nm to 0,6Nm to tighten the terminal screws.

The devices are maintenance-free. A dry cleaning is acceptable. Repairs have to be done by manufacturer.

Rev.2/20140124

BL20 installation instructions ATEX IEC Rev.2

BL20 – MODULAR I/O BUS- KLEMMEN SYSTEM - IN ZONE 2

Betriebsanleitung für den Gebrauch zugelassener BL20 Geräte der Kategorie 3 in der Zone 2 entsprechend der Richtlinie 94/9/EG bzw. der Normen IEC / EN 60079-0:2012 und IEC / EN 60079-15:20010.

Ex-Kennzeichnung

Typenschildmaterial von 3M 7815 CSA anerkannt (Datei 99316). Details siehe CSA Liste.

Hersteller und Adresse Land	TURCK D-45466 Mülheim an der Ruhr Made in Germany
Typ	Typenschild, siehe andere Modulseite
Zündschutzart	Ex nA IIC T4 Gc Ex nA nC IIC T4 Gc (nur Module mit Relaisausgang)
Zulassungsnummer	FM 07 ATEX 0040 X IECEx FME 07.0004 X
Ex Symbol und ATEX Bezeichner	 II 3 G
Zulässige Umgebungstemperatur	0°C ... +55°C
CE	CE
Serien-Nr. Produktionsjahr (als Kodenummer)	Typenschild, siehe andere Modulseite

Anweisungen für den sicheren Gebrauch in der Zone 2

BL20 Geräte der Kategorie 3 müssen in einem passenden Gehäuse gemäß IEC/ EN 60079-15 eingebaut werden. Dabei ist mindestens die Schutzart IP 54 nach EN 60529 einzuhalten.

Das Bedienen der Schalter z.B. an der Frontseite des Gateways, sowie der Verbinden und Trennen von irgendeinem Stromkreis ist nur zulässig, wenn keine explosionsgefährliche Atmosphäre vorhanden ist.

BL20 Geräte müssen innerhalb normaler Bedingungen betrieben werden. Die Grenzen der Datenblätter sind zu beachten.

Über den UL Anschluss des Gateways werden alle Feldgeräte bis zu 30V DC und 10A DC versorgt. Um mehr Module zu versorgen sind zusätzliche Power-Feeding-Module BL20-PF-24VDC-D bzw. Bus-Refreshing-Module BL20-BR-24VDC-D erforderlich.

Der Usys Anschluss des Gateways versorgt die interne Elektronik des Gateways und liefert die „5V“ Modulbus Versorgung bis 1,5A für Gateway und die angefügten Module. Um mehr Module zu versorgen sind zusätzliche Power-Feeding-Module BL20-PF-24VDC-D erforderlich. Die Nennstromaufnahmen der Module stehen in einer Tabelle im BL20 Katalog.

Endwinkel müssen auf den Tragschienen EN 50022 NS35 geschraubt werden. Jede Gruppe wird rechts mit einer Abschlussplatte (Typ BL20-ABPL, Ident-Nr. 6827123) versehen und ist festgesetzt zwischen zwei Endwinkel (Typ BL20-WEW-35/2-SW, Ident-Nr. 6827124).

Die für BL20 verwendete Tragschiene sollte auf einem leitenden Montageblech mit einer Dicke von mindestens 2 mm montiert werden. Damit ist ein Bezugspotenzial für Schutz- und Funktionserde herstellbar. Bei nicht vorgebohrten Tragschienen achten Sie bitte auf einen Lochabstand von max. 150 mm.

Wenn zur Verdrahtung fein drahtige Adern verarbeitet werden, dann ist es erforderlich die abisolierten Leitungsenden mit Aderendhülsen zu verpressen.

Bei Schraubanschlusstechnik ist beim Andrehen der Klemmschrauben auf das max. zulässige Drehmoment von 0,4Nm bis 0,6Nm zu achten.

Die Geräte sind wartungsfrei. Eine trockene Reinigung ist zulässig. Reparaturen dürfen nur vom Hersteller durchgeführt werden.

Rev.2/20140124

5 Zertifikate für die USA

5.1 Certificate Of Compliance

FM Approvals
1151 Boston Providence Turnpike
P.O. Box 9102 Norwood, MA 02062 USA
T: **781 762 4300** F: 781-762-9375 www.fmapprovals.com

CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

BL20 Modular I/O Bus Terminal System
NI / I / 2 / ABCD / T4 Ta = 0°C to +55°C
I / 2 / AEx nA IIC T4 Ta = 0°C to +55°C

Module	Description
BL20-2DI-24VDC-P	2 channel digital input modules – pnp
BL20-2DI-24VDC-N	2 channel digital input modules - npn
BL20-4DI-24VDC-P	4 channel digital input modules - pnp
BL20-4DI-24VDC-N	4 channel digital input modules - npn
BL20-4DI-NAMUR	4 channel digital input modules – NAMUR input
BL20-32DI-24VDC-P	32 channel digital input modules -pnp
BL20-2AI-I(0/4...20MA)	2 channel analogue input module – current
BL20-2AI-U(-10/0...+10VDC)	2 channel analogue input module – voltage
BL20-2AI-PT/NI-2/3	2 channel analogue input module – platinum and nickel resistance elements
BL20-2AI-THERMO-PI	2 channel analogue input module – thermoelements
BL20-4AI-U/I	4 channel analogue input module – current or voltage
BL20-2DO-24VDC-0,5A-P	2 channel digital output – 0.5A - pnp
BL20-2DO-24VDC-0,5A-N	2 channel digital output – 0.5A - npn
BL20-2DO-24VDC-2A-P	2 channel digital output – 2.0A - pnp
BL20-4DO-24VDC-0,5A-P	4 channel digital output – 0.5A - pnp
BL20-16DO-24VDC-0,5A-P	16 channel digital output – 0.5A - pnp
BL20-32DO-24VDC-0,5A-P	32 channel digital output – 0.5A - pnp
BL20-2AO-I(0/4...20MA)	2 channel analogue output module – current
BL20-2AO-U(-10/0...+10VDC)	2 channel analogue output module – voltage

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Module	Description
BL20-1CNT-24VDC	Counter
BL20-1RS232	RS232 interface
BL20-1RS485/422	RS485/422 interface
BL20-1SSI	SSI interface
BL20-BR-24VDC-D	Power Supply Module with internal 5V DC Bus
BL20-PF-24VDC-D	Power Feed Module Field Supply 24V
BL20-E-8DI-24VDC-P	8 channel digital input module – pnp – Economy
BL20-E-16DI-24VDC-P	16 channel digital input module – pnp – Economy
BL20-E-8DO-24VDC-0,5A-P	8 channel digital output module – 0.5A – pnp – Economy
BL20-E-16DO-24VDC-0,5A-P	16 channel digital output module – 0.5A – pnp – Economy
BL20-GWBR-PBDP	Gateway for Profibus-DP with internal 5V DC Bus
BL20-GW-DPV1	Gateway for Profibus-DPV1
BL20-GW-EN	Gateway for Modbus TCP
BL20-GW-EN-IP	Gateway for Ethernet IP
BL20-PG-EN-IP	Programmable Gateway for Ethernet IP
BL20-PG-EN	Programmable Gateway for Modbus TCP
BL20-GWBR-DNET	Gateway for DeviceNet with internal 5V DC Bus
BL20-GWBR-CANOPEN	Gateway for CANopen with internal 5V DC Bus
BL20-2RFID-A	2 Channel RFID module asynchronous
BL20-2RFID-C	2 Channel RFID module cyclic
BL20-16DI-24VDC-P	16 channel digital inputs module - pnp
BL20-2AIH-I	2 channel analogue inputs module – 0/4…20mA
BL20-2AOH-I	2 channel analogue outputs module – 0/4…20mA
BL20-E-8AI-U/I-4PT/NI	8 channel analogue inputs U/I resp. 4 PT/NI inputs module - Economy
BL20-E-4AO-U/I	4 channel analogue outputs module - Economy
BL20-2RFID-S	2 channel RFID module
BL20-E-GW-CO	Gateway for CANopen – Economy
BL20-E-GW-DN	Gateway for DeviceNet - Economy
BL20-E-GW-DP	Gateway for PROFIBUS-DP - Economy
BL20-E-GW-EN	Gateway for MODBUS TCP incl. supply - Economy
BL20-E-GW-EN-IP	Gateway for EtherNet/IP incl. supply - Economy
BL20-GW-EN-PN	Gateway for PROFINET IO incl. supply
BL20-PG-EN-DN-JA	Gateway for MODBUS TCP and DeviceNet incl. supply

Special Conditions of Use

1. In Class I, Division 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure installed in accordance with the enclosure, mounting, spacing, and segregation requirements of the ultimate application which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code ANSI/NFPA 70 Article 500.

2. In Class I, Zone 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure which meets the requirements of ISA 60079-0 and ISA 60079-15 and is capable of accepting one or more of the Class I, Zone 2 wiring methods specified in the National Electrical Code ANSI/NFPA 70 Article 505. Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in locations providing adequate protection against the entry of solid foreign objects or water capable of impairing safety, the enclosure shall, at a minimum, meet the requirements of IP4X.

3. The BL20 I/O Modules shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident-no. 6827123) and sandwiched between two end brackets (Type

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BL20-WEW-35/2-SW, Ident-no. 6827124).

BL20 Modular I/O Bus Terminal System
NI / I / 2 / ABCD / T4 Ta = 0°C to +55°C
I / 2 / AEx nA nC IIC T4 Ta = 0°C to +55°C

Module	Description
BL20-2DO-R-NC	2 channel digital output – relay – normally closed
BL20-2DO-R-NO	2 channel digital output – relay – normally open
BL20-2DO-R-CO	2 channel digital output – relay – change over

Special Conditions of Use
1. In Class I, Division 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure installed in accordance with the enclosure, mounting, spacing, and segregation requirements of the ultimate application which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code ANSI/NFPA 70 Article 500.
2. In Class I, Zone 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure which meets the requirements of ISA 60079-0 and ISA 60079-15 and is capable of accepting one or more of the Class I, Zone 2 wiring methods specified in the National Electrical Code ANSI/NFPA 70 Article 505. Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in locations providing adequate protection against the entry of solid foreign objects or water capable of impairing safety, the enclosure shall, at a minimum, meet the requirements of IP4X
3. The BL20 I/O Modules shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident-no. 6827123) and sandwiched between two end brackets (Type BL20-WEW-35/2-SW, Ident-no. 6827124).
4. The input voltage for the BL20 2-channel digital relay modules shall be limited to 30 Vac or dc. (max. contact voltage).

Equipment Ratings:

Nonincendive for Class I, Division 2, Groups A, B, C and D; Nonsparking Ex nA for Class I, Zone 2, Group IIC and Nonsparking and sealed, AEx nA nC for Class I, Zone 2, Group IIC; Hazardous (Classified) Locations Temperature Class T4 at an ambient of 0°C to +55°C.

FM Approved for:

Hans Turck GmbH & Co KG
Mülheim an der Ruhr, Germany

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This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	1998
Class 3611	2004
Class 3810	2005
ANSI/ISA 60079-15	2003

Original Project ID: 3030839 Approval Granted: November 26, 2007

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
080116	February 22, 2008		
3037599	November 29, 2010		

FM Approvals LLC

J. E. Marquedant
Group Manager, Electrical

29 November 2010
Date

6/07

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Page 4 of 4

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CERTIFICATE OF COMPLIANCE

HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT

This certificate is issued for the following equipment:

BL20 Modular I/O Bus Terminal System
NI / I / 2 / ABCD / T4 Ta = 0°C to +55°C
I / 2 / AEx nA IIC T4 Ta = 0°C to +55°C

Module	Description
BL20-2DI-24VDC-P	2 channel digital input modules – pnp
BL20-2DI-24VDC-N	2 channel digital input modules - npn
BL20-4DI-24VDC-P	4 channel digital input modules - pnp
BL20-4DI-24VDC-N	4 channel digital input modules - npn
BL20-4DI-NAMUR	4 channel digital input modules – NAMUR input
BL20-32DI-24VDC-P	32 channel digital input modules -pnp
BL20-2AI-I(0/4...20MA)	2 channel analogue input module – current
BL20-2AI-U(-10/0...+10VDC)	2 channel analogue input module – voltage
BL20-2AI-PT/NI-2/3	2 channel analogue input module – platinum and nickel resistance elements
BL20-2AI-THERMO-PI	2 channel analogue input module – thermoelements
BL20-4AI-U/I	4 channel analogue input module – current or voltage
BL20-2DO-24VDC-0,5A-P	2 channel digital output – 0.5A - pnp
BL20-2DO-24VDC-0,5A-N	2 channel digital output – 0.5A - npn
BL20-2DO-24VDC-2A-P	2 channel digital output – 2.0A - pnp
BL20-4DO-24VDC-0,5A-P	4 channel digital output – 0.5A - pnp
BL20-16DO-24VDC-0,5A-P	16 channel digital output – 0.5A - pnp
BL20-32DO-24VDC-0,5A-P	32 channel digital output – 0.5A - pnp
BL20-2AO-I(0/4...20MA)	2 channel analogue output module – current
BL20-2AO-U(-10/0...+10VDC)	2 channel analogue output module – voltage

To verify the availability of the Approved product, please refer to www.approvalguide.com
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Module	Description
BL20-1CNT-24VDC	Counter
BL20-1RS232	RS232 interface
BL20-1RS485/422	RS485/422 interface
BL20-1SSI	SSI interface
BL20-BR-24VDC-D	Power Supply Module with internal 5V DC Bus
BL20-PF-24VDC-D	Power Feed Module Field Supply 24V
BL20-E-8DI-24VDC-P	8 channel digital input module – pnp – Economy
BL20-E-16DI-24VDC-P	16 channel digital input module – pnp – Economy
BL20-E-8DO-24VDC-0,5A-P	8 channel digital output module – 0.5A – pnp – Economy
BL20-E-16DO-24VDC-0,5A-P	16 channel digital output module – 0.5A – pnp – Economy
BL20-GWBR-PBDP	Gateway for Profibus-DP with internal 5V DC Bus
BL20-GW-DPV1	Gateway for Profibus-DPV1
BL20-GW-EN	Gateway for Modbus TCP
BL20-GW-EN-IP	Gateway for Ethernet IP
BL20-PG-EN-IP	Programmable Gateway for Ethernet IP
BL20-PG-EN	Programmable Gateway for Modbus TCP
BL20-GWBR-DNET	Gateway for DeviceNet with internal 5V DC Bus
BL20-GWBR-CANOPEN	Gateway for CANopen with internal 5V DC Bus
BL20-2RFID-A	2 Channel RFID module asynchronous
BL20-2RFID-C	2 Channel RFID module cyclic
BL20-16DI-24VDC-P	16 channel digital inputs module - pnp
BL20-2AIH-I	2 channel analogue inputs module – 0/4…20mA
BL20-2AOH-I	2 channel analogue outputs module – 0/4…20mA
BL20-E-8AI-U/I-4PT/NI	8 channel analogue inputs U/I resp. 4 PT/NI inputs module - Economy
BL20-E-4AO-U/I	4 channel analogue outputs module - Economy
BL20-2RFID-S	2 channel RFID module
BL20-E-GW-CO	Gateway for CANopen – Economy
BL20-E-GW-DN	Gateway for DeviceNet - Economy
BL20-E-GW-DP	Gateway for PROFIBUS-DP - Economy
BL20-E-GW-EN	Gateway for MODBUS TCP incl. supply - Economy
BL20-E-GW-EN-IP	Gateway for EtherNet/IP incl. supply - Economy
BL20-GW-EN-PN	Gateway for PROFINET IO incl. supply
BL20-PG-EN-DN-JA	Gateway for MODBUS TCP and DeviceNet incl. supply

Special Conditions of Use
1. In Class I, Division 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure installed in accordance with the enclosure, mounting, spacing, and segregation requirements of the ultimate application which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code ANSI/NFPA 70 Article 500.
2. In Class I, Zone 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure which meets the requirements of ISA 60079-0 and ISA 60079-15 and is capable of accepting one or more of the Class I, Zone 2 wiring methods specified in the National Electrical Code ANSI/NFPA 70 Article 505. Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in locations providing adequate protection against the entry of solid foreign objects or water capable of impairing safety, the enclosure shall, at a minimum, meet the requirements of IP4X.
3. The BL20 I/O Modules shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident-no. 6827123) and sandwiched between two end brackets (Type

BL20-WEW-35/2-SW, Ident-no. 6827124).

BL20 Modular I/O Bus Terminal System
NI / I / 2 / ABCD / T4 Ta = 0°C to +55°C
I / 2 / AEx nA nC IIC T4 Ta = 0°C to +55°C

Module	Description
BL20-2DO-R-NC	2 channel digital output – relay – normally closed
BL20-2DO-R-NO	2 channel digital output – relay – normally open
BL20-2DO-R-CO	2 channel digital output – relay – change over

Special Conditions of Use
1. In Class I, Division 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure installed in accordance with the enclosure, mounting, spacing, and segregation requirements of the ultimate application which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code ANSI/NFPA 70 Article 500.
2. In Class I, Zone 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure which meets the requirements of ISA 60079-0 and ISA 60079-15 and is capable of accepting one or more of the Class I, Zone 2 wiring methods specified in the National Electrical Code ANSI/NFPA 70 Article 505. Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in locations providing adequate protection against the entry of solid foreign objects or water capable of impairing safety, the enclosure shall, at a minimum, meet the requirements of IP4X
3. The BL20 I/O Modules shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident-no. 6827123) and sandwiched between two end brackets (Type BL20-WEW-35/2-SW, Ident-no. 6827124).
4. The input voltage for the BL20 2-channel digital relay modules shall be limited to 30 Vac or dc. (max. contact voltage).

Equipment Ratings:

Nonincendive for Class I, Division 2, Groups A, B, C and D; Nonsparking Ex nA for Class I, Zone 2, Group IIC and Nonsparking and sealed, AEx nA nC for Class I, Zone 2, Group IIC; Hazardous (Classified) Locations Temperature Class T4 at an ambient of 0°C to +55°C.

FM Approved for:

Hans Turck GmbH & Co KG
Mülheim an der Ruhr, Germany

To verify the availability of the Approved product, please refer to www.approvalguide.com
3030839
Page 3 of 4

This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

Class 3600	2011
Class 3611	2004
Class 3810	2005
ANSI/ISA 60079-0	2013
ANSI/ISA 60079-15	2012

Original Project ID: 3030839 Approval Granted: November 26, 2007

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
080116	February 22, 2008		
3037599	November 29, 2010		
3050164	February 27, 2014		

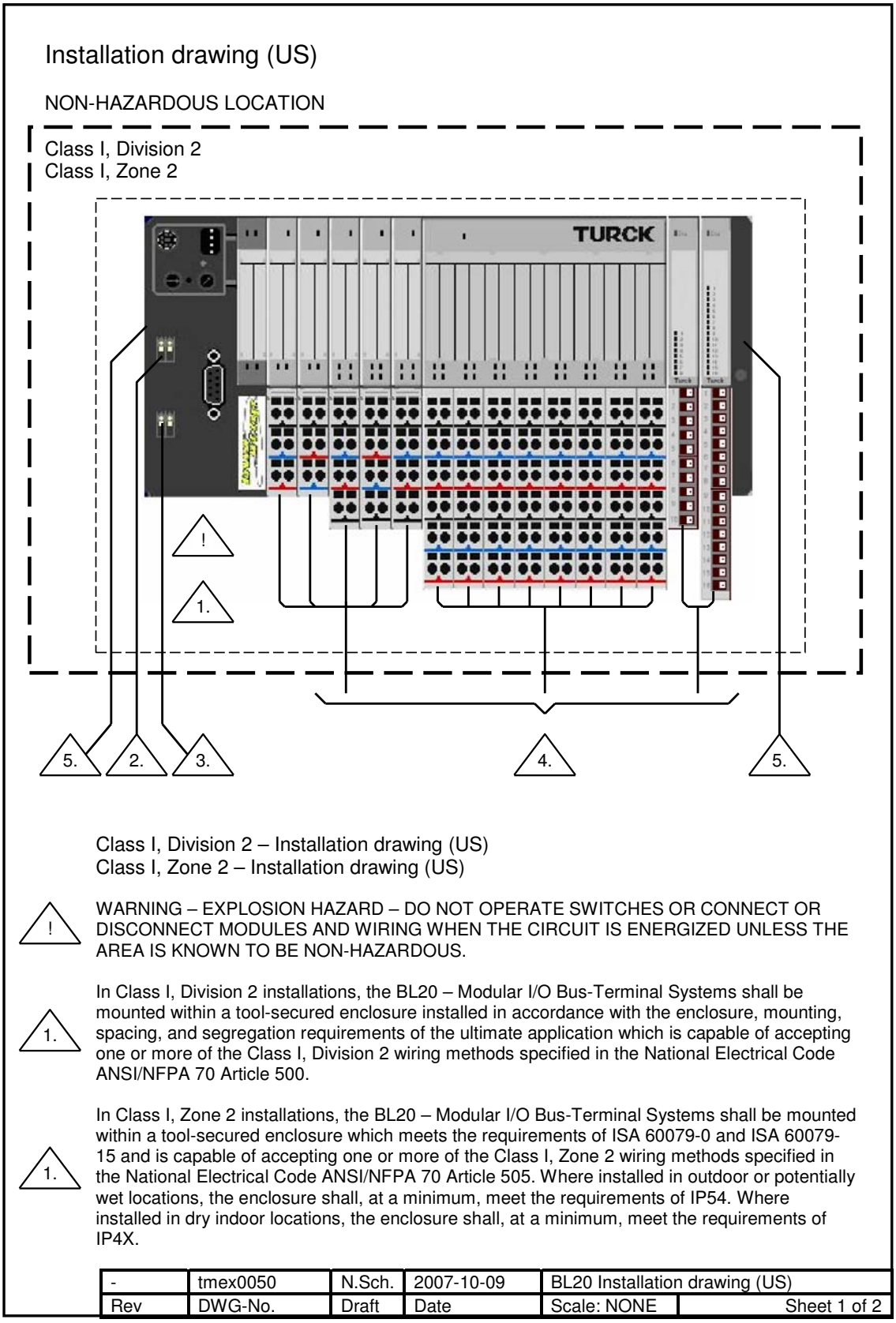
FM Approvals LLC

J. E. Marquedant
Group Manager, Electrical

27 February 2014
Date

To verify the availability of the Approved product, please refer to www.approvalguide.com

5.1.1 Installationsanweisungen



Class I, Division 2 – Installation drawing (US)
Class I, Zone 2 – Installation drawing (US)

! WARNING – EXPLOSION HAZARD – DO NOT OPERATE SWITCHES OR CONNECT OR DISCONNECT MODULES AND WIRING WHEN THE CIRCUIT IS ENERGIZED UNLESS THE AREA IS KNOWN TO BE NON-HAZARDOUS.

1. In Class I, Division 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure installed in accordance with the enclosure, mounting, spacing, and segregation requirements of the ultimate application which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the National Electrical Code ANSI/NFPA 70 Article 500.

1. In Class I, Zone 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure which meets the requirements of ISA 60079-0 and ISA 60079-15 and is capable of accepting one or more of the Class I, Zone 2 wiring methods specified in the National Electrical Code ANSI/NFPA 70 Article 505. Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in dry indoor locations, the enclosure shall, at a minimum, meet the requirements of IP4X.

-	tmex0050	N.Sch.	2007-10-09	BL20 Installation drawing (US)	
Rev	DWG-No.	Draft	Date	Scale: NONE	Sheet 1 of 2

2. The UL connector supplies all field devices up to 30V d.c. and 10A d.c.. To supply more modules additional Power feeding modules BL20-PF-24VDC-D resp. Bus refreshing modules BL20-BR-24VDC-D may be necessary.

3. The Usys connector feeds an internal supply circuit of the gateway and that provides “5V” module bus supply up to 1.5A d.c for gateway and modules. To supply more modules additional Bus refreshing modules BL20-BR-24VDC-D may be necessary. The rated current consumption of the module bus shows a table in BL20 catalogue.

2. 4. Primary power and secondary wiring external to the enclosure shall be in accordance with Class I, Division 2 or Class I, Zone 2 wiring practices per the National Electrical Code ANSI/NFPA 70, Article 500 or Article 505 as appropriate.

5. Terminal blocks shall be installed on an EN 50022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident-no. 6827123) and sandwiched between two end brackets (Type BL20-WEW-35/2-SW, Ident-no. 6827124).

-	tmex0050	N.Sch.	2007-10-09	BL20 Installation drawing (US)	
Rev	DWG-No.	Draft	Date	Scale: NONE	Sheet 2 of 2

6 Zertifikate für Kanada

6.1 Certificate Of Compliance

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P.O. Box 9102 Norwood, MA 02062 USA
T: **781 762 4300** F: 781-762-9375 www.fmapprovals.com

CERTIFICATE OF COMPLIANCE

HAZARDOUS LOCATION ELECTRICAL EQUIPMENT
PER CANADIAN REQUIREMENTS

This certificate is issued for the following equipment:

BL20 Modular I/O Bus Terminal System
NI / I / 2 / ABCD / T4 Ta = 0°C to +55°C
I / 2 / Ex nA IIC T4 Ta = 0°C to +55°C

Module	Description
BL20-2DI-24VDC-P	2 channel digital input modules – pnp
BL20-2DI-24VDC-N	2 channel digital input modules - npn
BL20-4DI-24VDC-P	4 channel digital input modules - pnp
BL20-4DI-24VDC-N	4 channel digital input modules - npn
BL20-4DI-NAMUR	4 channel digital input modules – NAMUR input
BL20-32DI-24VDC-P	32 channel digital input modules -pnp
BL20-2AI-I(0/4...20MA)	2 channel analogue input module – current
BL20-2AI-U(-10/0...+10VDC)	2 channel analogue input module – voltage
BL20-2AI-PT/NI-2/3	2 channel analogue input module – platinum and nickel resistance elements
BL20-2AI-THERMO-PI	2 channel analogue input module – thermoelements
BL20-4AI-U/I	4 channel analogue input module – current or voltage
BL20-2DO-24VDC-0,5A-P	2 channel digital output – 0.5A - pnp
BL20-2DO-24VDC-0,5A-N	2 channel digital output – 0.5A - npn
BL20-2DO-24VDC-2A-P	2 channel digital output – 2.0A - pnp
BL20-4DO-24VDC-0,5A-P	4 channel digital output – 0.5A - pnp
BL20-16DO-24VDC-0,5A-P	16 channel digital output – 0.5A - pnp
BL20-32DO-24VDC-0,5A-P	32 channel digital output – 0.5A - pnp
BL20-2AO-I(0/4...20MA)	2 channel analogue output module – current
BL20-2AO-U(-10/0...+10VDC)	2 channel analogue output module – voltage

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Module	Description
BL20-1CNT-24VDC	Counter
BL20-1RS232	RS232 interface
BL20-1RS485/422	RS485/422 interface
BL20-1SSI	SSI interface
BL20-BR-24VDC-D	Power Supply Module with internal 5V DC Bus
BL20-PF-24VDC-D	Power Feed Module Field Supply 24V
BL20-E-8DI-24VDC-P	8 channel digital input module – pnp – Economy
BL20-E-16DI-24VDC-P	16 channel digital input module – pnp – Economy
BL20-E-8DO-24VDC-0,5A-P	8 channel digital output module – 0.5A – pnp – Economy
BL20-E-16DO-24VDC-0,5A-P	16 channel digital output module – 0.5A – pnp – Economy
BL20-GWBR-PBDP	Gateway for Profibus-DP with internal 5V DC Bus
BL20-GW-DPV1	Gateway for Profibus-DPV1
BL20-GW-EN	Gateway for Modbus TCP
BL20-GW-EN-IP	Gateway for Ethernet IP
BL20-PG-EN-IP	Programmable Gateway for Ethernet IP
BL20-PG-EN	Programmable Gateway for Modbus TCP
BL20-GWBR-DNET	Gateway for DeviceNet with internal 5V DC Bus
BL20-GWBR-CANOPEN	Gateway for CANopen with internal 5V DC Bus
BL20-2RFID-A	2 Channel RFID module asynchronous
BL20-2RFID-C	2 Channel RFID module cyclic
BL20-16DI-24VDC-P	16 channel digital inputs module - pnp
BL20-2AIH-I	2 channel analogue inputs module – 0/4...20mA
BL20-2AOH-I	2 channel analogue outputs module – 0/4...20mA
BL20-E-8AI-U/I-4PT/NI	8 channel analogue inputs U/I resp. 4 PT/NI inputs module - Economy
BL20-E-4AO-U/I	4 channel analogue outputs module - Economy
BL20-2RFID-S	2 channel RFID module
BL20-E-GW-CO	Gateway for CANopen – Economy
BL20-E-GW-DN	Gateway for DeviceNet - Economy
BL20-E-GW-DP	Gateway for PROFIBUS-DP - Economy
BL20-E-GW-EN	Gateway for MODBUS TCP incl. supply - Economy
BL20-E-GW-EN-IP	Gateway for EtherNet/IP incl. supply - Economy
BL20-GW-EN-PN	Gateway for PROFINET IO incl. supply
BL20-PG-EN-DN-JA	Gateway for MODBUS TCP and DeviceNet incl. supply

1. In Class I, Division 2 installations, the BL20 Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure installed in accordance with the enclosure, mounting, spacing, and segregation requirements of the ultimate application which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the Canadian Electrical Code CSA C22.1.

2. In Class I, Zone 2 installations, the BL20 Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure which meet the requirements of CSA E60079-0 and CSA E60079-15 and is capable of accepting one or more of the Class I, Zone 2 wiring methods specified in the Canadian Electrical Code CSA C22.1. Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in locations providing adequate protection against the entry of solid foreign objects or water capable of impairing safety, the enclosure shall, at a minimum, meet the requirements of IP4X.

3. The BL20 I/O Modules shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (03100138) and sandwiched between two end brackets (03100137).

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BL20 Modular I/O Bus Terminal System
NI / I / 2 / ABCD / T4 Ta = 0°C to +55°C
I / 2 / Ex nA nC IIC T4 Ta = 0°C to +55°C

Module	Description
BL20-2DO-R-NC	2 channel digital output – relay – normally closed
BL20-2DO-R-NO	2 channel digital output – relay – normally open
BL20-2DO-R-CO	2 channel digital output – relay – change over

Special Conditions of Use
1. In Class I, Division 2 installations, the BL20 Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure installed in accordance with the enclosure, mounting, spacing, and segregation requirements of the ultimate application which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the Canadian Electrical Code CSA C22.1.
2. In Class I, Zone 2 installations, the BL20 Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure which meet the requirements of CSA E60079-0 and CSA E60079-15 and is capable of accepting one or more of the Class I, Zone 2 wiring methods specified in the Canadian Electrical Code CSA C22.1. Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in locations providing adequate protection against the entry of solid foreign objects or water capable of impairing safety, the enclosure shall, at a minimum, meet the requirements of IP4X.
3. The BL20 I/O Modules shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (03100138) and sandwiched between two end brackets (03100137).
4. The input voltage for the BL20 2-channel digital relay modules shall be limited to 30 Vac or dc. (max. contact voltage).

Equipment Ratings:

Nonincendive for Class I, Division 2, Groups A, B, C and D; Nonsparking Ex nA for Class I, Zone 2, Group IIC and Nonsparking and sealed, Ex nA nC for Class I, Zone 2, Group IIC; Hazardous Locations Temperature Class T4 at an ambient of 0°C to +55°C.

FM Approved for:

Hans Turck GmbH & Co KG
Mülheim an der Ruhr, Germany

6/07

3030839
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This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

CSA/C22.2 No 213	1992
CSA/C22.2 No 1010.1	2006
CAN/CSA-E60079-15:02	2002

Original Project ID: 3030839C Approval Granted: November 26, 2007

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
080116	February 22, 2008		
3037599	November 29, 2010		

FM Approvals LLC

J.E. Marquedant

J/E. Marquedant
Group Manager, Electrical

29 November 2010
Date

6/07

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CERTIFICATE OF COMPLIANCE

HAZARDOUS LOCATION ELECTRICAL EQUIPMENT PER CANADIAN REQUIREMENTS

This certificate is issued for the following equipment:

BL20 Modular I/O Bus Terminal System
NI / I / 2 / ABCD / T4 Ta = 0°C to +55°C
I / 2 / Ex nA IIC T4 Ta = 0°C to +55°C

Module	Description
BL20-2DI-24VDC-P	2 channel digital input modules – pnp
BL20-2DI-24VDC-N	2 channel digital input modules - npn
BL20-4DI-24VDC-P	4 channel digital input modules - pnp
BL20-4DI-24VDC-N	4 channel digital input modules - npn
BL20-4DI-NAMUR	4 channel digital input modules – NAMUR input
BL20-32DI-24VDC-P	32 channel digital input modules -pnp
BL20-2AI-I(0/4...20MA)	2 channel analogue input module – current
BL20-2AI-U(-10/0...+10VDC)	2 channel analogue input module – voltage
BL20-2AI-PT/NI-2/3	2 channel analogue input module – platinum and nickel resistance elements
BL20-2AI-THERMO-PI	2 channel analogue input module – thermoelements
BL20-4AI-U/I	4 channel analogue input module – current or voltage
BL20-2DO-24VDC-0,5A-P	2 channel digital output – 0.5A - pnp
BL20-2DO-24VDC-0,5A-N	2 channel digital output – 0.5A - npn
BL20-2DO-24VDC-2A-P	2 channel digital output – 2.0A - pnp
BL20-4DO-24VDC-0,5A-P	4 channel digital output – 0.5A - pnp
BL20-16DO-24VDC-0,5A-P	16 channel digital output – 0.5A - pnp
BL20-32DO-24VDC-0,5A-P	32 channel digital output – 0.5A - pnp
BL20-2AO-I(0/4...20MA)	2 channel analogue output module – current
BL20-2AO-U(-10/0...+10VDC)	2 channel analogue output module – voltage

To verify the availability of the Approved product, please refer to www.approvalguide.com
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Module	Description
BL20-1CNT-24VDC	Counter
BL20-1RS232	RS232 interface
BL20-1RS485/422	RS485/422 interface
BL20-1SSI	SSI interface
BL20-BR-24VDC-D	Power Supply Module with internal 5V DC Bus
BL20-PF-24VDC-D	Power Feed Module Field Supply 24V
BL20-E-8DI-24VDC-P	8 channel digital input module – pnp – Economy
BL20-E-16DI-24VDC-P	16 channel digital input module – pnp – Economy
BL20-E-8DO-24VDC-0,5A-P	8 channel digital output module – 0.5A – pnp – Economy
BL20-E-16DO-24VDC-0,5A-P	16 channel digital output module – 0.5A – pnp – Economy
BL20-GWBR-PBDP	Gateway for Profibus-DP with internal 5V DC Bus
BL20-GW-DPV1	Gateway for Profibus-DPV1
BL20-GW-EN	Gateway for Modbus TCP
BL20-GW-EN-IP	Gateway for Ethernet IP
BL20-PG-EN-IP	Programmable Gateway for Ethernet IP
BL20-PG-EN	Programmable Gateway for Modbus TCP
BL20-GWBR-DNET	Gateway for DeviceNet with internal 5V DC Bus
BL20-GWBR-CANOPEN	Gateway for CANopen with internal 5V DC Bus
BL20-2RFID-A	2 Channel RFID module asynchronous
BL20-2RFID-C	2 Channel RFID module cyclic
BL20-16DI-24VDC-P	16 channel digital inputs module - pnp
BL20-2AIH-I	2 channel analogue inputs module – 0/4…20mA
BL20-2AOH-I	2 channel analogue outputs module – 0/4…20mA
BL20-E-8AI-U/I-4PT/NI	8 channel analogue inputs U/I resp. 4 PT/NI inputs module - Economy
BL20-E-4AO-U/I	4 channel analogue outputs module - Economy
BL20-2RFID-S	2 channel RFID module
BL20-E-GW-CO	Gateway for CANopen – Economy
BL20-E-GW-DN	Gateway for DeviceNet - Economy
BL20-E-GW-DP	Gateway for PROFIBUS-DP - Economy
BL20-E-GW-EN	Gateway for MODBUS TCP incl. supply - Economy
BL20-E-GW-EN-IP	Gateway for EtherNet/IP incl. supply - Economy
BL20-GW-EN-PN	Gateway for PROFINET IO incl. supply
BL20-PG-EN-DN-JA	Gateway for MODBUS TCP and DeviceNet incl. supply

1. In Class I, Division 2 installations, the BL20 Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure installed in accordance with the enclosure, mounting, spacing, and segregation requirements of the ultimate application which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the Canadian Electrical Code CSA C22.1.

2. In Class I, Zone 2 installations, the BL20 Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure which meet the requirements of CSA E60079-0 and CSA E60079-15 and is capable of accepting one or more of the Class I, Zone 2 wiring methods specified in the Canadian Electrical Code CSA C22.1. Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in locations providing adequate protection against the entry of solid foreign objects or water capable of impairing safety, the enclosure shall, at a minimum, meet the requirements of IP4X.

3. The BL20 I/O Modules shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident. no. 6827123) and sandwiched between two end brackets (Type BL20-WEW-35/2-SW, Ident. No. 6827124).

To verify the availability of the Approved product, please refer to www.approvalguide.com

BL20 Modular I/O Bus Terminal System
NI / I / 2 / ABCD / T4 Ta = 0°C to +55°C
I / 2 / Ex nA nC IIC T4 Ta = 0°C to +55°C

Module	Description
BL20-2DO-R-NC	2 channel digital output – relay – normally closed
BL20-2DO-R-NO	2 channel digital output – relay – normally open
BL20-2DO-R-CO	2 channel digital output – relay – change over

Special Conditions of Use
1. In Class I, Division 2 installations, the BL20 Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure installed in accordance with the enclosure, mounting, spacing, and segregation requirements of the ultimate application which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the Canadian Electrical Code CSA C22.1.
2. In Class I, Zone 2 installations, the BL20 Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure which meet the requirements of CSA E60079-0 and CSA E60079-15 and is capable of accepting one or more of the Class I, Zone 2 wiring methods specified in the Canadian Electrical Code CSA C22.1. Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in locations providing adequate protection against the entry of solid foreign objects or water capable of impairing safety, the enclosure shall, at a minimum, meet the requirements of IP4X.
3. The BL20 I/O Modules shall be installed on an EN 50 022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident. no. 6827123) and sandwiched between two end brackets (Type BL20-WEW-35/2-SW, Ident. No. 6827124).
4. The input voltage for the BL20 2-channel digital relay modules shall be limited to 30 Vac or dc. (max. contact voltage).

Equipment Ratings:

Nonincendive for Class I, Division 2, Groups A, B, C and D; Nonsparking Ex nA for Class I, Zone 2, Group IIC and Nonsparking and sealed, Ex nA nC for Class I, Zone 2, Group IIC; Hazardous Locations Temperature Class T4 at an ambient of 0°C to +55°C.

FM Approved for:

Hans Turck GmbH & Co KG
Mülheim an der Ruhr, Germany

To verify the availability of the Approved product, please refer to www.approvalguide.com

This certifies that the equipment described has been found to comply with the following Approval Standards and other documents:

CSA/C22.2 No 213	1992 (reaffirmed 2013)
CSA/C22.2 No 1010.1	2006
CAN/CSA 60079-0	2011
CAN/CSA 60079-15	2012

Original Project ID: 3030839C Approval Granted: November 26, 2007

Subsequent Revision Reports / Date Approval Amended

Report Number	Date	Report Number	Date
080116	February 22, 2008		
3037599	November 29, 2010		
3050164	February 27, 2014		

FM Approvals LLC

J.E. Marquedant
Group Manager, Electrical

27 February 2014
Date

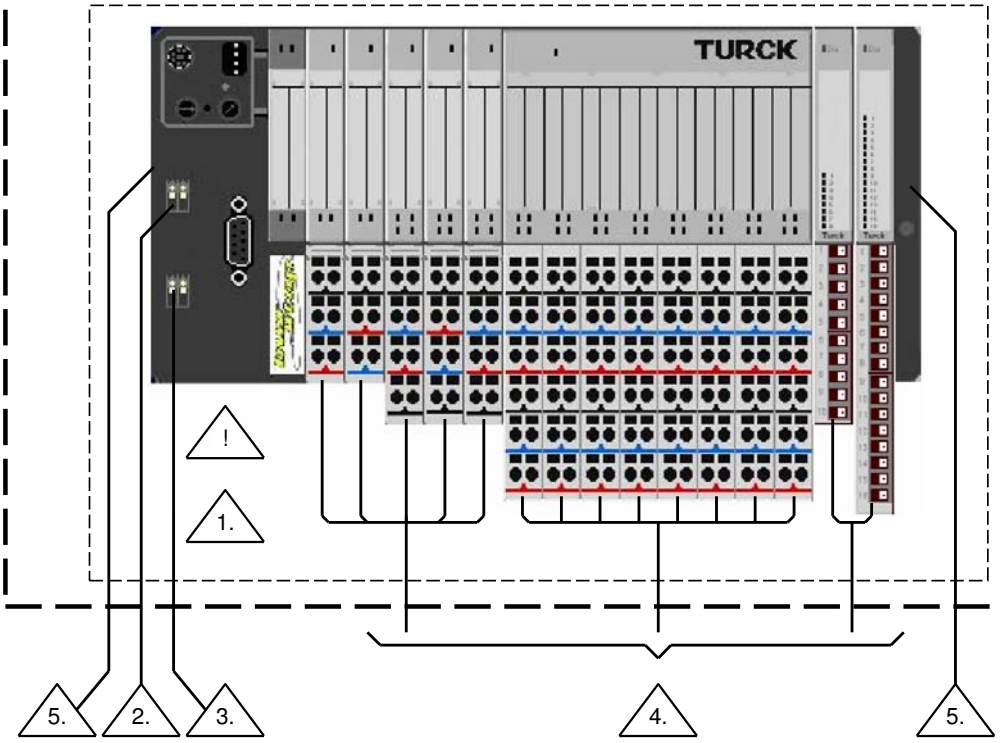
To verify the availability of the Approved product, please refer to www.approvalguide.com

6.1.1 Installationsanweisungen

Installation drawing (Canada)
Principe de montage (Canada)

NON-HAZARDOUS LOCATION – EMPLACEMENT NON DANGEREUX

Class I, Division 2 - Classe I, division 2
Class I, Zone 2 - Classe I, zone 2



Class I, Division 2 – Installation drawing (Canada)
Classe I, division 2 – principe de montage (Canada)

Class I, Zone 2 – Installation drawing (Canada)
Classe I, zone 2 – principe de montage (Canada)

! WARNING – EXPLOSION HAZARD – DO NOT OPERATE SWITCHES OR CONNECT OR DISCONNECT MODULES AND WIRING WHEN THE CIRCUIT IS ENERGIZED UNLESS THE AREA IS KNOWN TO BE NON-HAZARDOUS.
ATTENTION – DANGER D'EXPLOSION – NE PAS FAIRE FONCTIONNER LES INTERRUPTEURS OU CONNECTER OU DECONNECTER LES MODULES ET LE CABLAGE SI LE CIRCUIT EST SOUS TENSION SAUF SI LA ZONE EST DECLAREE NON DANGEREUSE

-	tmex0051	N.Sch.	2007-10-09	BL20 Installation drawing (Canada)	
Rev	DWG-No.	Draft	Date	Scale: NONE	Sheet 1 of 2

1. In Class I, Division 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure installed in accordance with the enclosure, mounting, spacing, and segregation requirements of the ultimate application which is capable of accepting one or more of the Class I, Division 2 wiring methods specified in the Canadian Electrical Code CSA C22.1.
Dans la classe I, installations de la division 2, les systèmes de bornes de bus E/S modulaires BL20 sont à monter dans une armoire sécurisée installée conformément aux exigences d'armoire, de montage, d'espacement et de ségrégation de l'application respective qui doit être capable d'accepter une ou plusieurs méthodes de câblage de la classe I, division 2 comme spécifie le CSA C22.1 du "Canadian Electrical Code" (Norme de sécurité relative aux installations électriques au Canada).

1. In Class I, Zone 2 installations, the BL20 – Modular I/O Bus-Terminal Systems shall be mounted within a tool-secured enclosure which meets the requirements of ISA 60079-0 and ISA 60079-15 and is capable of accepting one or more of the Class I, Zone 2 wiring methods specified in the Canadian Electrical Code CSA C22.1. Where installed in outdoor or potentially wet locations, the enclosure shall, at a minimum, meet the requirements of IP54. Where installed in dry indoor locations, the enclosure shall, at a minimum, meet the requirements of IP4X.
Dans la classe I, installations de la zone 2, les systèmes de bornes de bus E/S modulaires BL20 sont à monter dans une armoire sécurisée remplissant les exigences des normes ISA 60079-0 et ISA 60079-15 et doit être capable d'accepter une ou plusieurs méthodes de câblage de la classe I, zone 2 comme spécifié dans le CSA C22.1 du "Canadian Electrical Code" (norme de sécurité relative aux installations électriques au Canada). En cas d'installation à l'extérieur ou dans des localisations potentiellement humides, l'armoire doit posséder au moins l'indice de protection IP54. En cas d'installation à l'intérieur, l'armoire doit au moins répondre aux exigences de l'indice de protection IP4X.

2. The UL connector supplies all field devices up to 30V d.c. and 10A d.c.. To supply more modules additional Power feeding modules BL20-PF-24VDC-D resp. Bus refreshing modules BL20-BR-24VDC-D may be necessary.
Le connecteur UL alimente tous les appareils de terrain jusqu'à 30 VDC et 10 A DC. Pour alimenter plus de modules, l'utilisation de modules d'alimentation additionnels BL20-PF-24VDC-D et resp. modules de rafraîchissement de bus BL20-BR-24VDC-D peut s'imposer.

3. The Usys connector feeds an internal supply circuit of the gateway and that provides "5V" module bus supply up to 1.5A d.c for gateway and modules. To supply more modules additional Bus refreshing modules BL20-BR-24VDC-D may be necessary. The rated current consumption of the module bus shows a table in BL20 catalogue.
Le connecteur Usys alimente un circuit d'alimentation interne de la passerelle et permet d'augmenter l'alimentation « 5V » du module de bus jusqu'à 1,5 A DC pour la passerelle et les modules. Pour alimenter plus de modules, l'utilisation du module rafraîchissement de bus BL20-BR-24VDC-D peut s'imposer. La consommation de courant nominale du module de bus figure au tableau du catalogue BL20.

2. 4. Primary power and secondary wiring external to the enclosure shall be in accordance with Class I, Division 2 or Class I, Zone 2 wiring practices per the Canadian Electrical Code CSA C22.1.
En premier lieu l'alimentation et en deuxième lieu le câblage externe à l'armoire doivent être conformes aux prescriptions de câblage de la classe I, division 2 ou de la classe I, zone 2 suivant le « Canadian Electrical Code CSA C22.1 (norme de sécurité relative aux installations électriques au Canada).

5. Terminal blocks shall be installed on an EN 50022 NS35 rail with each group completed by an end plate (Type BL20-ABPL, Ident-no. 6827123) and sandwiched between two end brackets (Type BL20-WEW-35/2-SW, Ident-no. 6827124).
Les borniers doivent être installés sur un rail EN 50022 NS35 dont chaque groupe est complété par une plaquette d'obturation (Type BL20-ABPL, No. d'identité 687123) et bloqué par deux équerres (Type BL20-WEW-35/2-SW, No. d'identité 6827124).

-	tmex0051	N.Sch.	2007-10-09	BL20 Installation drawing (Canada)	
Rev	DWG-No.	Draft	Date	Scale: NONE	Sheet 2 of 2

TURCK

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