Küppers Elektromechanik GmbH

Certified according to DIN EN ISO 9001

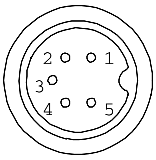
Datasheet and Operating Instructions

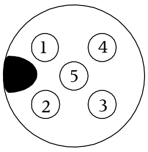
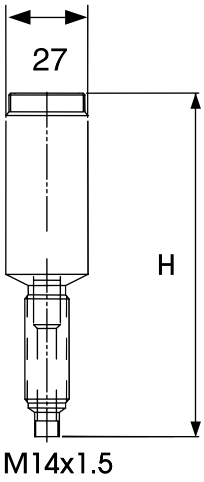
VTE*/P-Ex

Carrier-Frequency Pulse Amplifier

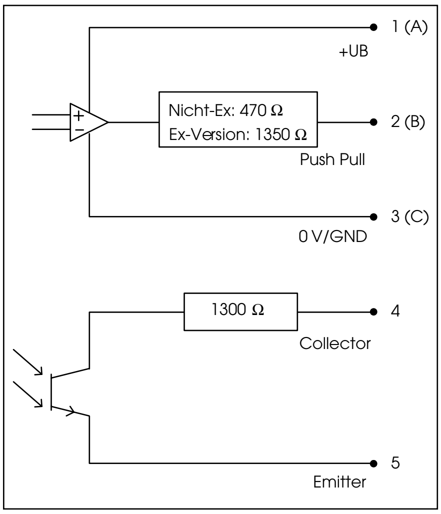
Index

Technical Data

<table>
<tr><td>Supply voltage U_B</td><td colspan="2">+8.5 up to 29 V DC, controlled</td></tr>
<tr><td>Quiescent current</td><td colspan="2">< 5 mA</td></tr>
<tr><td>Frequency range</td><td colspan="2">2 up to 4,000 Hz</td></tr>
<tr><td>Ambient temperature</td><td colspan="2">-40 up to +50 °C</td></tr>
<tr><td>Max. medium temperature</td><td colspan="2">+120 °C with a distance of at least 25 mm between flow meter and amplifier housing
+150 °C with a distance of at least 65 mm between flow meter and amplifier housing</td></tr>
<tr><td>Electrical connection</td><td>
<table>
<tr><td>5-pin amphenol plug</td><td>3-pin cable</td><td>5-pin cable</td></tr>
<tr><td>1 = +UB</td><td>white</td><td>grey</td></tr>
<tr><td>2 = signal push pull</td><td>green</td><td>green</td></tr>
<tr><td>3 = 0 V</td><td>brown</td><td>brown</td></tr>
<tr><td>4 = OC signal (collector)</td><td></td><td>white</td></tr>
<tr><td>5 = OC signal (emitter)</td><td></td><td>yellow</td></tr>
</table>
5-pin plug S713
1 =+UB
2 = n.c.
3 = 0 V
4 = signal push pull
5 = n.c.</td><td>


</td></tr>
<tr><td>Housing</td><td colspan="2">stainless steel as per DIN 1.4104</td></tr>
<tr><td>Ingress protection</td><td colspan="2">IP 65</td></tr>
<tr><td>Dimensions</td><td>H = 110 mm (VT*K/P und VT*R/P),
149 mm (VT*L/P und VT*S/P)
Ø = 27 mm
thread: M 14 x 1.5</td><td>
</td></tr>
<tr><td>Ex protection 100a</td><td colspan="2">Ex II 2 G EEx ia IIC T4</td></tr>
</table>

Output (short-circuit proof):



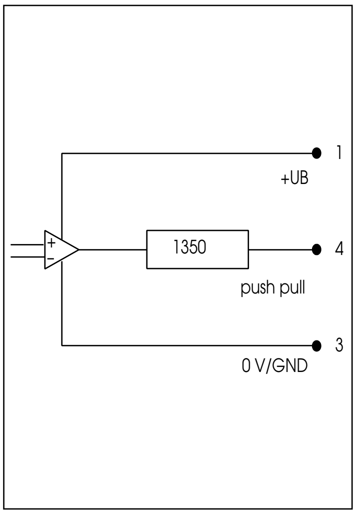
- push pull (see output curve below)

- voltage level NPN/open collector passive

$U_{high} > U_B - (I_{out}\text{ (mA) x }1300\ \Omega)$

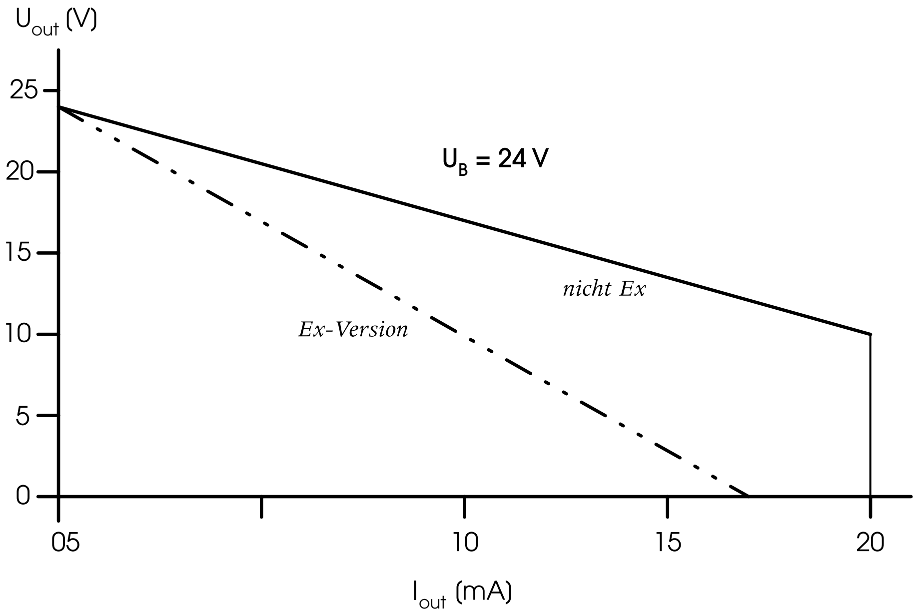
$U_{low} < 0.6\text{ V} + (I_{out}\text{ (mA) x }1300\ \Omega)$

$U_{max} = 30\text{ V}$



Version VTE*/P-Ex-12

Characteristic output curve:



Electrical Data

VT**/P-Ex-00 bis 09

Supply circuit (pin 1 and 3)

Voltage	Ui=DC 30V
Current	Ii = 120 mA
Power	Pi = 750 mW
Effective internal capacitance	Ci = negligible
Effective internal inductance	Li = negligible

Signal current ciruit push/pull (pin 2 and 3)

Voltage	Ui = DC 30 V
Current	Ii = 120 mA
Power	Pi = 750 mW
Internal resistance	Ri = 1350 Ω ±5%
Effective internal capacitance	Ci = negligible
Effective internal inductance	Li = negligible

Signal copen collector (pin 4 and 5)

Voltage	Ui = DC 30 V
Current	Ii = 120 mA
Power	Pi = 750 mW
Internal resistance	Ri = 1200 Ω ±5%
Effective internal capacitance	Ci = negligible
Effective internal inductance	Li = negligible

VT**/P-Ex-12

Supply circuit (pin 1 and 3)

Voltage	Ui=DC 30 V
Current	Ii = 120 mA
Power	Pi = 750 mW
Effective internal capacitance	Ci = negligible
Effective internal inductance	Li = negligible

Signal current ciruit push/pull (pin 4 and 3)

Voltage	Ui = DC 30 V
Current	Ii = 120 mA
Power	Pi = 750 mW
Internal resistance	Ri = 1350 Ω, ±5 %
Effective internal capacitance	Ci = negligible
Effective internal inductance	Li = negligible

Ordering Information

VTE* / P - Ex - xx

07 = round shape with UNF thread and 3-pin ITT plug
09 = compact version with 3-pin ITT plug
12 = 5-pin plug type S713 (M12)

Ex protection

EU= short with UNF thread
EK= short for ZHM 02–ZHM 04 and HM series
EL = long for ZHM 02–ZHM 07 and HM series
ER= short for ZHM 01 and SRZ series
ES = long for ZHM 01 and SRZ series
SR = centre pickup short
SS = centre pickup long

E1 = compact version for ZHM 01 with 5-pin plug type S713
E2 = compact version for ZHM 02–03 with 5-pin plug type S713
EC = compact version for ZHM in cartridge design
with 5-pin plug type S713

Notes on Installation

The following has to be adhered to:

a) Installation instructions for electrical devices
Installation instructions for associated intrinsically-safe devices
The »Special conditions for safe use« as per EC-Type Examination Certificate

b) The amplifier has to be installed in a way that the max. ambient temperature does under no circumstances exceed +50°C (consider self heating).

c) With cables care should be taken, that the max inductivity and capacity of the respective voltage or gas group are not exceeded.

d) Exceeding or falling below the regular measuring range will cause invalid frequency output signals.

e) Shielded cables are to be used as connecting lines.

f) Generally, supplied units have to be connected by an expert according to EMC stipulations.

g) Disconnect power supply before soldering the electrical connector.

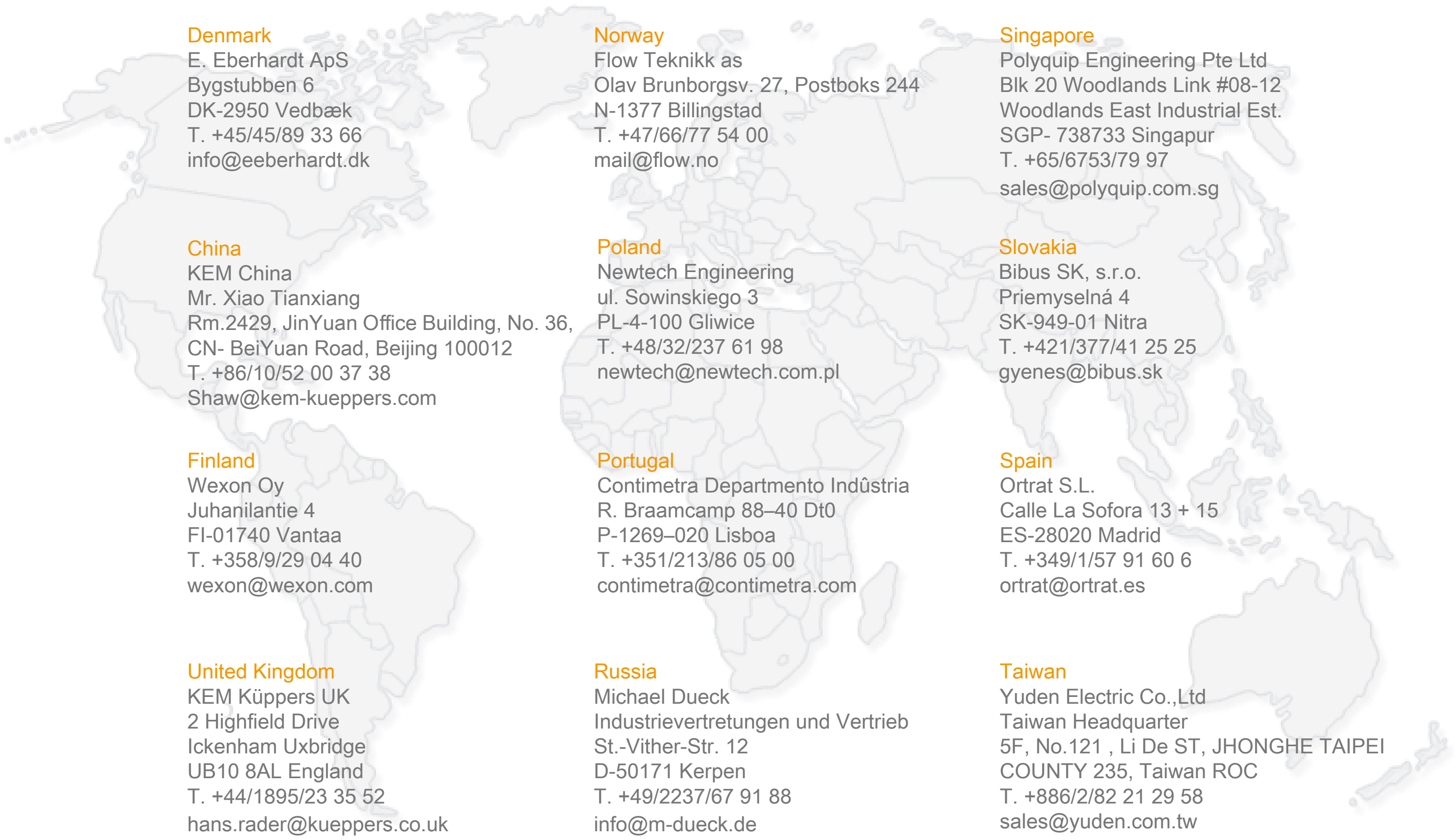
Küppers Elektromechanik GmbH

Contact worldwide

KEM-Headquarter
Liebigstraße 2
D-85757 Karlsfeld
T. +49 8131 5 93 91 - 0
F: +49 8131 9 26 04
info@kem-kueppers.com

KEM-Office West
Im Langen Hahn 44
D-58515 Lüdenscheid
T. +49 2351 9 78 80
F: +49 2351 9 78 83 1
kem-west@kem-kueppers.com

KEM-Office South
Dahlienweg 35
D-73765 Neuhausen
T. +49 7158 98 56 82
F: +49 7158 98 56 83
kem-sued@kem-kueppers.com



Denmark
E. Eberhardt ApS
Bygstubben 6
DK-2950 Vedbæk
T. +45/45/89 33 66
info@eeberhardt.dk

Norway
Flow Teknikk as
Olav Brunborgsv. 27, Postboks 244
N-1377 Billingstad
T. +47/66/77 54 00
mail@flow.no

Singapore
Polyquip Engineering Pte Ltd
Blk 20 Woodlands Link #08-12
Woodlands East Industrial Est.
SGP- 738733 Singapur
T. +65/6753/79 97
sales@polyquip.com.sg

China
KEM China
Mr. Xiao Tianxiang
Rm.2429, JinYuan Office Building, No. 36,
CN- BeiYuan Road, Beijing 100012
T. +86/10/52 00 37 38
Shaw@kem-kueppers.com

Poland
Newtech Engineering
ul. Sowinskiego 3
PL-4-100 Gliwice
T. +48/32/237 61 98
newtech@newtech.com.pl

Slovakia
Bibus SK, s.r.o.
Priemyselná 4
SK-949-01 Nitra
T. +421/377/41 25 25
gyenes@bibus.sk

Finland
Wexon Oy
Juhanilantie 4
FI-01740 Vantaa
T. +358/9/29 04 40
wexon@wexon.com

Portugal
Contimetra Departmento Indûstria
R. Braamcamp 88–40 Dt0
P-1269–020 Lisboa
T. +351/213/86 05 00
contimetra@contimetra.com

Spain
Ortrat S.L.
Calle La Sofora 13 + 15
ES-28020 Madrid
T. +349/1/57 91 60 6
ortrat@ortrat.es

United Kingdom
KEM Küppers UK
2 Highfield Drive
Ickenham Uxbridge
UB10 8AL England
T. +44/1895/23 35 52
hans.rader@kueppers.co.uk

Russia
Michael Dueck
Industrievertretungen und Vertrieb
St.-Vither-Str. 12
D-50171 Kerpen
T. +49/2237/67 91 88
info@m-dueck.de

Taiwan
Yuden Electric Co.,Ltd
Taiwan Headquarter
5F, No.121 , Li De ST, JHONGHE TAIPEI
COUNTY 235, Taiwan ROC
T. +886/2/82 21 29 58
sales@yuden.com.tw

Hong Kong Area
Asia Technology and Instrument Ltd.
Unit 5, 9/F., Free Trade Centre
49 Tsun Yip Street, Kwun Tong
HK-Kowloon
T. +85/227/16 55 56
ati@ati.com.hk

Schweden
Pentronic AB
SE-590 93 Gunnebobruk
T. +46/490/25 85 00
info@pentronic.se

United States of America
AW-LAKE Company
Electronics for Instrumentation
8809 Industrial Dr.
Franksville, WI 53126, USA
T. +1/262/88 49 80 0
sales@aw-lake.com

Italy
Ingg. Vigo e Cova SAS
Piazzale Segrino 6/a
I-20159 Milano
T. +39/02/668 82 02
vigo.cova@vigocova.com

www.kem-kueppers.com

info@kem-kueppers.com