

BEZBEDNOŠNA TEHNOLOGIJA
ZA ZAŠTITU ŽIVOTNE SREDINE

SAFETY AND
ENVIRONMENTAL
TECHNOLOGY

E.L.B.
FÜLLSTANDSGERÄTE

04-01-04E

Elektrode - višestruke - za elektronske delove E-2...5 puta

Ove provodljive elektrode mogu da se koriste za kontrolu minimuma-maksimuma, signalizaciju limita, kontrolne pumpe, zaštitu od prepunjavanja i rada na suvo. Glava spojnice je pripremljena za ugradnju u elektronske delove (ET-4xx, vidite sledeću stranu). Uz ove evaluacione elektronske delove (24 V DC napajanje voltaže i 4 izlazna kanala) moguće je realizovati do 4 limitna signala ili dva limitna signala i jednu kontrolu maksimuma-minimuma.

Tehnicki podaci

Priključak	Integrirana glava spojnice
Sistem zaštite	EN 60529 IP 65
Navoj veze	G 1¼"
Materijal veze zavrtnja	PPH
Materijal elektrodnog štapa	Nerđajuci celik (1.4571) (V4A), Hastelloy B, Hastelloy C, Titan, Tantal
Materijal zaštite	Poliamid, PTFE
Dužina zaštitnog sloja	Puna=cela šipka (10mm na kraju šipke golo) Deo= oko 250mm od vrha
Precnik štapa	4mm, 6mm
Dužina štapa	Max. 6m
Operativna temperatura, operativni pritisak	85 °C, za detalje pogledajte krivu pritiska/ temperature (4-0-1e)
Razmak	Pocevši od dužine >1000mm 1 razmak na 1000mm

Kljuc tipa

Osnovne oznake E = Polipropilen (zavrtnji + glava)	Broj elektroda 2...5 = 2...5 elektroda na G 1¼"
Veza G125 = G 1¼"	Materijal šipke VA = Nerđajuci celik (1.4571) HB = Hastelloy B HC = Hastelloy C TI = Titanijum TA = Tantal HB/TA = Vrh od tantala 100 mm osnovni stap Hastelloy B
Precnik šipki 4 = 4 mm 6 = 6 mm	Zaštitni sloj materijala PA = Poliamid TI = delimicno izolovan PTFE VI = potpuno izolovan PTFE
Evaluaciona elektronika ET = spremna za elektronske delove	Duzina ___ u mm

Electrodes -multiple- prepared for electronics part E-2...5 times

These conductive electrodes can be used for minimum/maximum controls, limit signalling, pump control, dry-running and overflow protection. The connection head is prepared to build in an electronics part (ET-4xx, see next page). With this evaluation electronics (24 V DC supply voltage and 4 output channels) it's possible to realize up to 4 limit signals or 2 limit signals and one minimum/maximum control.

Technical Data

Connector	integrated connected head
System of protection	EN 60529 IP 65
Connecting thread	G 1¼"
Material screw connection	PPH
Material electrode rods	Stainless steel (1.4571), Hastelloy B, Hastelloy C, Titanium, Tantalum
Material coating	Polyamide, PTFE
Coating length	full = entire rod (10 mm at rod end bare) part = about 250 mm from top
Rod diameter	4 mm, 6 mm
Rod length	max. 6 m
Operating temperature / operating pressure	85 °C, for details see the pressure-temperature curve (04-00-01E).
Spacer	starting from length > 1000 mm 1 spacer per 1000 mm

Type Key

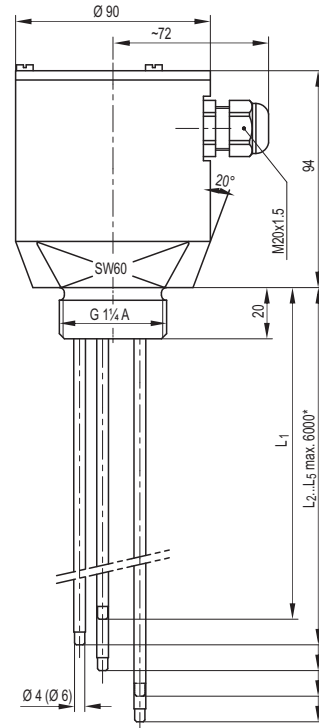
Basic designation E = Polypropylene (screwing + head)	Number of electrodes 2...5 = 2...5 electrodes at G 1¼"
Connection size G125 = G 1¼"	Rod material VA = High-grade steel (1.4571) HB = Hastelloy B HC = Hastelloy C TI = Titanium TA = Tantalum HB/TA = Tantalum tip 100 mm basic rod Hastelloy B
Rod diameter 4 = 4 mm 6 = 6 mm	Coating PA = Polyamide TI = partly insulated PTFE VI = fully insulated PTFE
Evaluation electronics ET = prepared for electronics part	Rod length ___ in mm



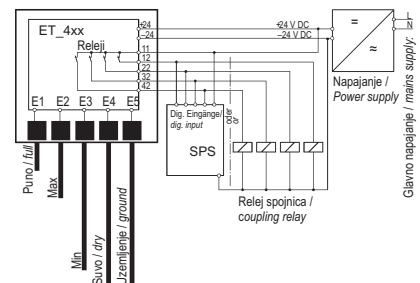
E-2...5 puta
za elektronske
delove
E-2...5 times
prepared for
electronics part

Dimenzioni crtez Dimensional Drawing

E-2...5puta / E-2...5times



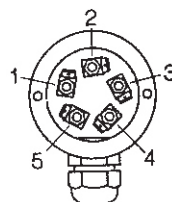
*Veće dužine na zahtev / Longer lengths available on request
dimenzije u mm / Dimensioning in mm



Glavno napajanje / mains supply

Specifikacija priključaka Pin Assignment

**E-5puta/
E-5 times**



Elektronski delovi u kutiji spojnice

Elektrodni relej od platine u glavi spojnice višestrukih elektroda (E-2...5 puta) može da transmituje 4 nezavisna ulazna signala u 4 signala za uključivanje (NO).

Pored 4 merne tacke moguće je realizovati zadatke merenja kao što je alarm za ispunjavanje, rad na suvo i dve pozicije kontrolnih pumpi.

- izlazni relej radi u zatvorenom kolu
- standardna podešavanja za često korišćene provodljive tečnosti: nije potrebno poravnanje
- četiri mera obima (3 kΩ, 10 kΩ, 30 kΩ i 100 kΩ) na DIP-prekidacu po izboru
- odlaganje pri uključivanju (on/off) 0.5 ili 2 s na DIP-prekidacu po izboru
- dve pozicije kontrole na DIP-prekidacu sa sledecim funkcijama po izboru:
 - Na sponi 12 (E1) alarm za ispunjenje
 - Na sponi 22 (E2) prazno
 - Na sponi 32 (E3) punjenje
 - Na sponi 42 (E4) rad na suvo

Tehnicki podaci

CE oznaka	Prema regulativama za niske voltaže (72/23/EWG), uputstvima EMV (89/336/EWG)
Operativna temperatura	20... + 85°C
Temperatura skladišta	-30... + 85°C
Procenjena voltaža	24 V DC ±15%
Utrošnja struje	Max. 2W (spone A1, A2)
Voltaža uključivanja	Max. 250 V AC, 150 V DC Min. 5 V DC (releji sa kombinacijom zlatnih kontakata)
Struja uključivanja	max. 3AAC, 3ADC min. 1 mA
Kapacitet uključivanja	Max. 750 VA, 150W
Osetljivost	3k... 100kΩ u četiri koraka (3 kΩ, 10 kΩ, 30 kΩ i 100 kΩ) po izboru

Kljuc tipa

Osnovne oznake	
410 = evaluaciona elektronika za E-2-puta (1 izlazni relej)	
420 = evaluaciona elektronika za E-3-puta (2 izlazna releja)	
430 = evaluaciona elektronika za E-4-puta (3 izlazna releja)	
440 = evaluaciona elektronika za E-5-puta (4 izlazna releja)	



Electronics Part in the Connector Box

The electrode relay (platine) in the connection head of the multiple electrode (E-2...5 times) can transmit 4 independent input signals into 4 switching signals (NO).

With 4 measurement points it's possible to realize measurement tasks like filling alarm, dry-running and two-position control of pumps.

- relay output in closed circuit working
- standard adjustment for frequently used conductive liquids: no alignment necessary
- four measurement ranges (3 kΩ, 10 kΩ, 30 kΩ and 100 kΩ) on DIP-switch selectable
- switching delay (on/off) 0,5 or 2 sec on DIP-switch selectable
- two-position control on DIP-switch with following functionality selectable:
 - at clamp 12 (E1) filling alarm
 - at clamp 22 (E2) empty
 - at clamp 32 (E3) filling
 - at clamp 42 (E4) dry-running

Technical Data

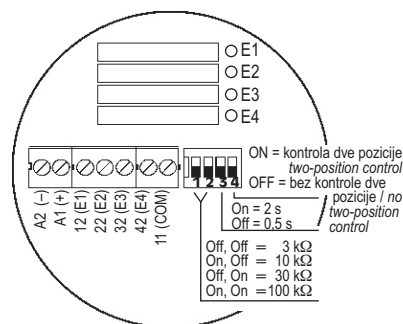
CE marking	according to low-voltage guideline (73/23/EWG), EMV guideline (89/336/EWG)
Operating temperature	-20...+85°C
Storage temperature	-30...+85°C
Rated voltage	24 V DC ±15%
Power consumption	max. 2 W (clamps A1, A2)
Switching voltage	max. 250 V AC, 150 V DC min. 5 V DC (relay with combination gold contacts)
Switching current	max. 3 AAC, 3 ADC min. 1 mA
Switching capacity	max. 750 VA, 150 W
Sensitivity	3k ... 100 kΩ in four steps (3 kΩ, 10 kΩ, 30 kΩ, 100 kΩ) selectable

Type Key

Basic designation	
410 = evaluation electronics for E-2-times (1 output relay)	
420 = evaluation electronics for E-3-times (2 output relays)	
430 = evaluation electronics for E-4-times (3 output relays)	
440 = evaluation electronics for E-5-times (4 output relays)	



Primer veza Connection Examples



prekidac 1 Switch 1	prekidac 2 Switch 2	merni opseg Measuring range
OFF	OFF	bis/up to 3 kΩ
ON	OFF	bis/up to 10 kΩ
OFF	ON	bis/up to 30 kΩ
ON	ON	bis/up to 100 kΩ

prekidac 3 Switch 3	odlaganje Delay
OFF	ca./approx. 0,5 sec
ON	ca./approx. 2 sec

prekidac 4 Switch 4	funkcija Function
OFF	kontrola dve pozicije two-position control
ON	kontrola dve pozicije two-position control

Moguće izmene bez prethodne najave.

Subject to change without prior notice, errors excepted.