

Tap Position Interface Type REG-S 'B1'

Function

The tap position interface REG-F decodes the position of a tap changer transformer to BCD code. An external DC voltage (user part) supplies the moving side of a dry contact row. REG-S gets the information from this switch and the built-in diode matrix decodes the closed contact out of n to BCD (see code table). At one time only one contact should be closed. Outputs of REG-F will be wired to BCD inputs of REGSys. A capacitor on each input enhances the noise suppression.

- ⊕ up to 33 dry contacts of a switch were decoded to BCD
- ⊕ up to 100m cable length between switch and REG-S
- ⊕ wide range of external DC voltage

Technical Characteristics

Mechanical Construction

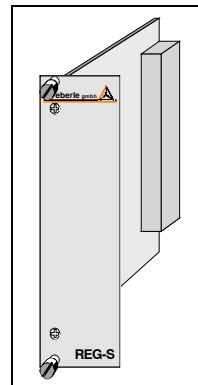
case plug-in module 7T 3U 19"rack
 size of pc board 100 x 160mm
 front Alu, painted grey RAL 7035
 module mounting see DIN 41494 part 5
 edge connector 1 pce, 'F1': DIN 41612 F 48poles
 protection IP00
 weight module ≤ 0,2 kg

Input

input voltage U_1
 dry contact closed / open
 feature 'E4' 12 .. 150 V AC,DC / < 5 V
 feature 'E3' 50 .. 250 V AC,DC / < 10V
 differential mode voltage < 2 V AC

Output voltage U_2 to REGSys LV-inputs or HV-inputs
 BCD 1, ..BCD 10, BCD 20 or sign (-)

feature 'E4' 10 ...60 V DC to LV-inputs
 or 50..150 V DC to HV-inputs
 feature 'E3' 50 ..250 V DC to HV-inputs
 (to LV-inputs with input resistance R_e 6..15kOhm;
 to HV-inputs with input resist. R_e 82..150kOhm)
 output current ON / OFF ≤ 30 mA / < 0,01 mA



Code table

| inputs: 1 of n (only one switch closed) | outputs: BCD - code | | | |
|--|------------------------|----|---|-------|
| | 20 | 10 | 8 | 4 2 1 |
| contact 1 | 0 | 0 | 0 | 0 0 1 |
| contact 2 | 0 | 0 | 0 | 0 1 0 |
| . | . | . | . | . |
| contact 10 | 0 | 1 | 0 | 0 0 0 |
| contact 11 | 0 | 1 | 0 | 0 0 1 |
| . | . | . | . | . |
| contact 29 | 1 | 0 | 1 | 0 0 1 |
| contact 30 | 1 | 1 | 0 | 0 0 0 |
| contact 31 | 1 | 1 | 0 | 0 0 1 |

Function

diode reverse voltage 600 V DC
 capacitor on inputs >0,047uF/ 250V DC
 capacitor on outputs feat.'E4/E3' >2,2u/ 0,22uF 250V DC
 Insulation / creepage 250 V AC / 1,3mm
 inputs are **not** isolated from outputs and not touchable
 common reference is GND
Temperature operation 0 ... +65°C;
 storage, transportation -25 ... +85°C

Contact Position

| connector 'F1' "F" 48pol. | z | b | d |
|------------------------------|---------------|---------------|----------------|
| 2 | tap 1 | tap 2 | tap 3 |
| 4 | tap 4 | tap 5 | tap 6 |
| 6 | tap 7 | tap 8 | tap 9 |
| 8 | tap 10 | tap 11 | tap 12 |
| 10 | tap 13 | tap 14 | tap 15 |
| 12 | tap 16 | tap 17 | tap 18 |
| 14 | tap 19 | tap 20 or -0 | tap 21 or -1 |
| 16 | tap 22 or -2 | tap 23 or -3 | tap 24 or -4 |
| 18 | tap 25 or -5 | tap 26 or -6 | tap 27 or -7 |
| 20 | tap 28 or -8 | tap 29 or -9 | tap 30 or -10 |
| 22 | tap 31 or -11 | tap 32 or -12 | tap 33 or -13 |
| 24 | | | |
| 26 | GND | | GND |
| 28 | BCD 1 | | BCD 2 |
| 30 | BCD 4 | | BCD 8 |
| 32 | BCD 10 | | BCD20or sgn(-) |

Order Information: REG-S 'E4 B1' or REG-S 'E3 B1'

Application REG-S 'E4'

