

## M12 transf. 1000BASE-T x ANG w/ PoE+



Image is for illustration purposes only. Please refer to product description.

|                    |   |
|--------------------|---|
| Part number        | 21 03 381 4822  |
| Specification      | M12 transf. 1000BASE-T x ANG w/ PoE+  |
| HARTING eCatalogue | <a href="https://b2b.harting.com/21033814822">https://b2b.harting.com/21033814822</a> |

### Identification

|                |   |
|----------------|---|
| Category       | Connectors  |
| Series         | Circular connectors M12   |
| Identification | Magnetics   |
| Element        | PCB adapter   |
| Specification  | with integrated transformer<br>Angled<br>Power over Ethernet (PoE+) |

### Version

|                    |                                    |
|--------------------|------------------------------------|
| Termination method | Reflow soldering termination (SMT) |
| Gender             | Female                             |
| Shielding          | Shielded                           |
| Number of contacts | 8                                  |
| Coding             | X-coding                           |
| Details            | Order housings separately          |
| Pack contents      | 30 pieces in a tray                |

### Technical characteristics

|                       |                |
|-----------------------|----------------|
| Rated current         | 0.8 A          |
| Rated voltage         | 57 V           |
| Rated impulse voltage | 1.5 kV         |
| Pollution degree      | 3              |
| Data rate             | 1 Gbit/s       |
| Insulation resistance | $>10^8 \Omega$ |



Pushing Performance  
 Since 1945

## Technical characteristics

|  |  |
|--|--|
| Contact resistance                     | ≤10 mΩ   |
| Limiting temperature                   | -40 ... +85 °C (during reflow soldering max. +245) |
| Insertion force                        | 30 N   |
| Withdrawal force                       | 30 N   |
| Mating cycles                          | ≥100   |
| Degree of protection acc. to IEC 60529 | IP65 / IP67 mated condition                        |
| Isolation group                        | IIIa (175 ≤ CTI < 400)                             |
| Process Sensitivity Level (PSL)        | R7 acc. to ECA/IPC/JEDEC J-STD-075                 |

## Material properties

|   |  |
|---|--|
| Material (insert)                         | Liquid crystal polymer (LCP)                           |
| Colour (insert)                           | Black  |
| Material (contacts)                       | Brass  |
| Surface (contacts)                        | Au over Ni Mating side                                 |
| Material flammability class acc. to UL 94 | V-0  |
| RoHS                                      | compliant with exemption                               |
| RoHS exemptions                           | 6(c): Copper alloy containing up to 4 % lead by weight |
| ELV status                                | compliant with exemption                               |
| China RoHS                                | 50   |
| REACH Annex XVII substances               | Not contained  |
| REACH ANNEX XIV substances                | Not contained  |
| REACH SVHC substances                     | Yes  |
| REACH SVHC substances                     | Lead   |
| ECHA SCIP number                          | 0d7d3693-d625-47ab-934a-d241bf72c86e                   |
| California Proposition 65 substances      | Yes  |
| California Proposition 65 substances      | Lead<br>Nickel<br>Naphthalene                          |
| Fire protection on railway vehicles       | EN 45545-2 (2020-08)                                   |
| Requirement set with Hazard Levels        | R26  |

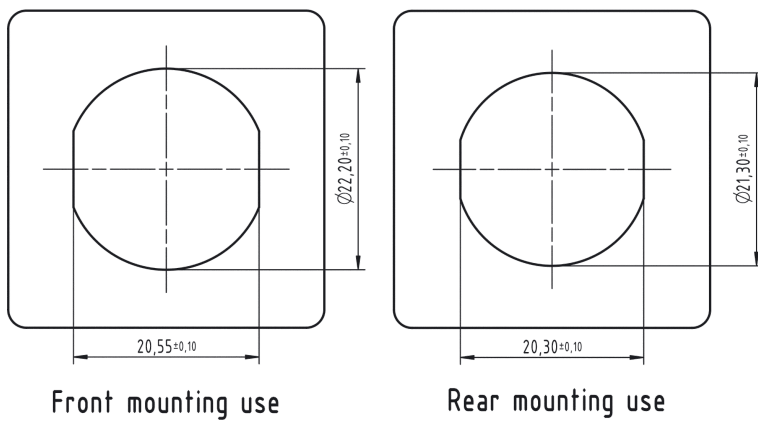
## Specifications and approvals

|                |                 |
|----------------|-----------------|
| Specifications | IEC 61076-2-109 |
|----------------|-----------------|

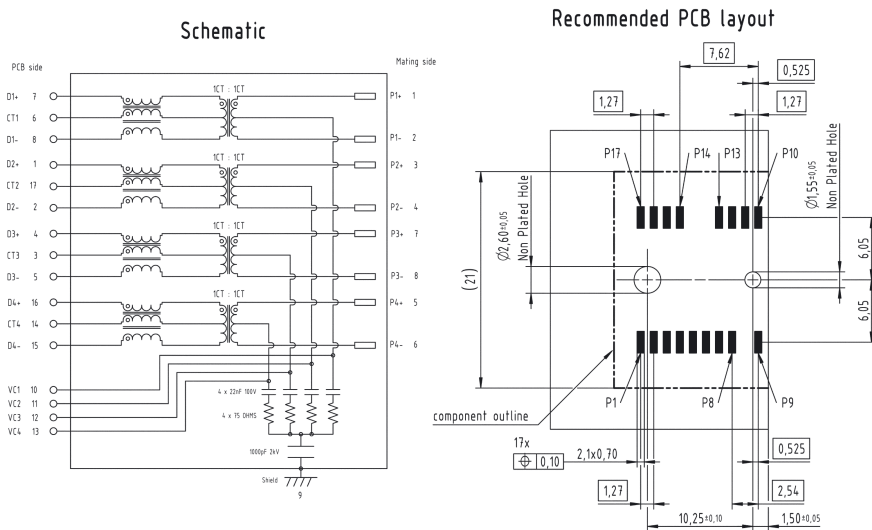
### Commercial data

|                                |  |
|--------------------------------|--|
| Packaging size                 | 30                                       |
| Net weight                     | 15.03 g                                  |
| Country of origin              | China                                    |
| European customs tariff number | 85366990                                 |
| GTIN                           | 5713140228955                            |
| eCl@ss                         | 27460201 PCB connector (board connector) |

### Panel cut out



### General information



Electrical Characteristics @+25°C unless otherwise noted  
 Meets IEEE802.3 specification  
 RoHS compliant

| Parameter                          | Specification/ Limit Values                      |
|------------------------------------|--|
| Operating Temperature              | -40°C - +85°C                                    |
| Turn Ratio (±/ - 2%)               | 1CT : 1CT  |
| Current Capacity Pins 1-8/ VC1-VC4 | 750mA DC   |
| OCL                                | min 350µH @ 100KHz , 100mV with 8mA bias current |
| Isolation (Input- Output)          | 2.25kV VDC , for 60sec. min<br>f ≤ 100MHz        |
| Insertion Loss                     | 13 db  |
| Return Loss                        | 9 db   |
| Crosstalk                          | 30 db  |
| CMRR                               | 30 db  |
| CDMR                               | 30 db  |

NOTE: 1. f is the frequency in MHz  
 2. The Product has been tested for DC isolation. HARTING assumes no liability or obligation for AC isolation testing.

### Tape layout & packaging

