

WÜRTH ELEKTRONIK MORE THAN YOU EXPECT

# PERFORMANCE. RELIABILITY. SERVICE.

## Optocouplers by Würth Elektronik



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### Optocouplers by Würth Elektronik

With the new optocouplers, Würth Elektronik presents one of the latest additions to its optoelectronic product portfolio. The innovative design features a coplanar structure and high-grade silicon for total internal reflection. This ensures the isolation gap stay fixed during the production process and provide perfect isolation and protection for your application. The total internal reflection provide stable CTR over the whole temperature range and high CTR even at low current operation.

Provided in all industry standard packages. Available with all binnings ex stock. Samples free of charge: [www.we-online.com/optocoupler](http://www.we-online.com/optocoupler)

### Highlights

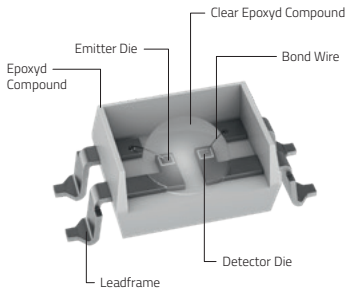
- Innovative coplanar design
- High grade silicon encapsulation
- Copper leadframe for high reliability
- Stable CTR over whole temperature range
- High CTR in low current operation



#OptocouplersbyWE

# OPTOCOUPLER

## GENERAL INFORMATION



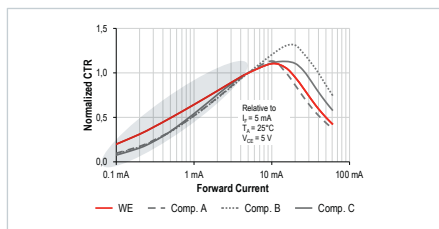
### Optocouplers - What's that?

- Transfers analog/ digital signals between two isolated circuits by using light transmission
- Optoelectronic package with infrared LED & detector
- The optical transmission takes place with an infrared light beam

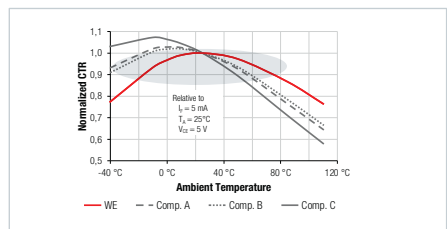
### Why Optocouplers?

- Separation of low power control circuits from high power circuits (galvanic isolation)
- Optocouplers protect your application against overvoltages
- Safety Isolation: for circuits and persons from dangerous electrical installations

## PERFORMANCE

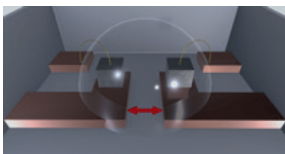


High CTR in low current operation

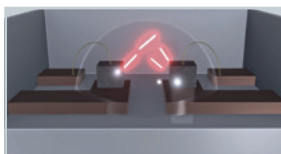


Stable CTR over whole temperature range

## RELIABILITY & QUALITY



Fixed isolation gap for perfect isolation and protection



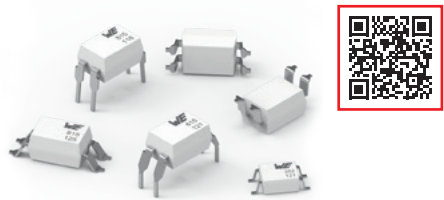
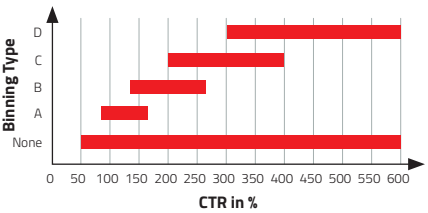
High quality silicon and polymer materials ensure stable CTR



Copper Leadframe for high reliability and solderability

# SERVICE

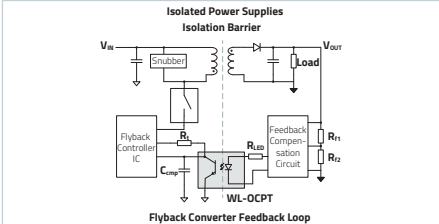
Learn more about  
optocouplers and how to  
increase their lifetime:  
[www.we-online.com/ano006](http://www.we-online.com/ano006)



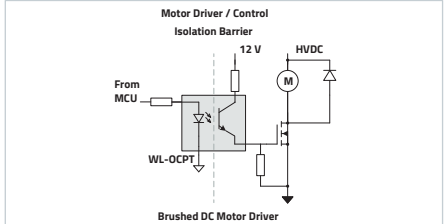
Different CTR binnings  
possibilities available

Every package available  
with all binnings ex stock

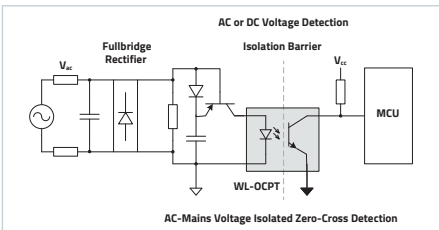
# APPLICATION EXAMPLES



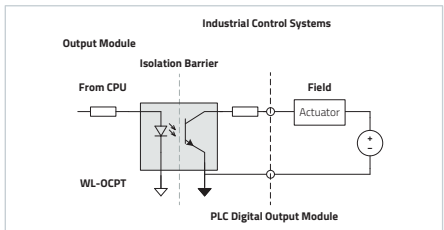
Providing robust galvanic isolation of  
feedback control loop in SMPS



Breaking ground loops and providing safety  
isolation in high-voltage motor drivers

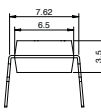
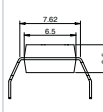
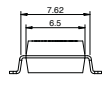
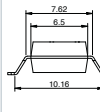
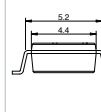
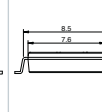


Safety isolation in phase-controlled AC motor,  
safety relays/switches, etc.

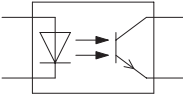
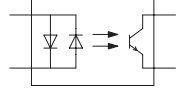


Ensuring noise immunity and safety  
in industrial environments

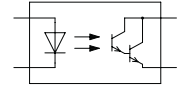
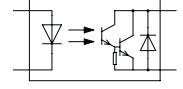
# OPTOCOUPLER PRODUCT OVERVIEW

| DIP4<br>816 / 817 / 814 / 815 |                                                                                   |                                                                                   |                                                                                   |                                                                                   | SOP4<br>354 / 356 /<br>357 / 355 / 352                                            |                                                                                   | LSOP4<br>10x                                                                      |     |
|-------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----|
| THT                           | Standard                                                                          | M-Type                                                                            | S-Type                                                                            | SL-Type                                                                           | SLM-Type                                                                          |                                                                                   |                                                                                   | SMT |
|                               |  |  |  |  |  |  |  |     |
|                               |  |  |  |  |  |  |  |     |
| DC / AC                       |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   | DC                                                                                |     |

## WL-OCPT OPTOCOUPLER PHOTOTRANSISTOR

| Input | Schematic                                                                         | Series | Order Code | Package | $V_{ISO} (V_{RMS})$ | $V_{CE \text{ max.}} (V)$ | $CTR_{min.} (\%)$ | $CTR_{max.} (\%)$ |
|-------|-----------------------------------------------------------------------------------|--------|------------|---------|---------------------|---------------------------|-------------------|-------------------|
| DC    |  | 816    | 140816xx   | DIP4    | 5000                | 80                        | 50                | 600               |
|       |                                                                                   | 817    | 140817xx   | DIP4    | 5000                | 35                        |                   |                   |
|       |                                                                                   | 356    | 140356xx   | SOP4    | 3750                | 80                        |                   |                   |
|       |                                                                                   | 357    | 140357xx   | SOP4    | 3750                | 35                        |                   |                   |
|       |                                                                                   | 10x    | 14010xx    | LSOP4   | 5000                | 80                        |                   |                   |
| AC    |  | 814    | 140814xx   | DIP4    | 5000                | 80                        | 20                | 300               |
|       |                                                                                   | 354    | 140354xx   | SOP4    | 3750                | 80                        |                   |                   |

## WL-OCDA OPTOCOUPLER DARLINGTON

| Input | Schematic                                                                           | Series | Order Code | Package | $V_{ISO} (V_{RMS})$ | $V_{CE \text{ max.}} (V)$ | $CTR_{min.} (\%)$ | $CTR_{max.} (\%)$ |
|-------|-------------------------------------------------------------------------------------|--------|------------|---------|---------------------|---------------------------|-------------------|-------------------|
| DC    |  | 815    | 141815xx   | DIP4    | 5000                | 40                        | 600               | 7500              |
|       |                                                                                     | 355    | 141355xx   | SOP4    | 3750                | 40                        |                   |                   |
| DC    |  | 352    | 141352xx   | SOP4    | 3750                | 350                       | 1000              | 15000             |



All technical details:  
[www.we-online.com/redexpert-wl-ocpt](http://www.we-online.com/redexpert-wl-ocpt)

