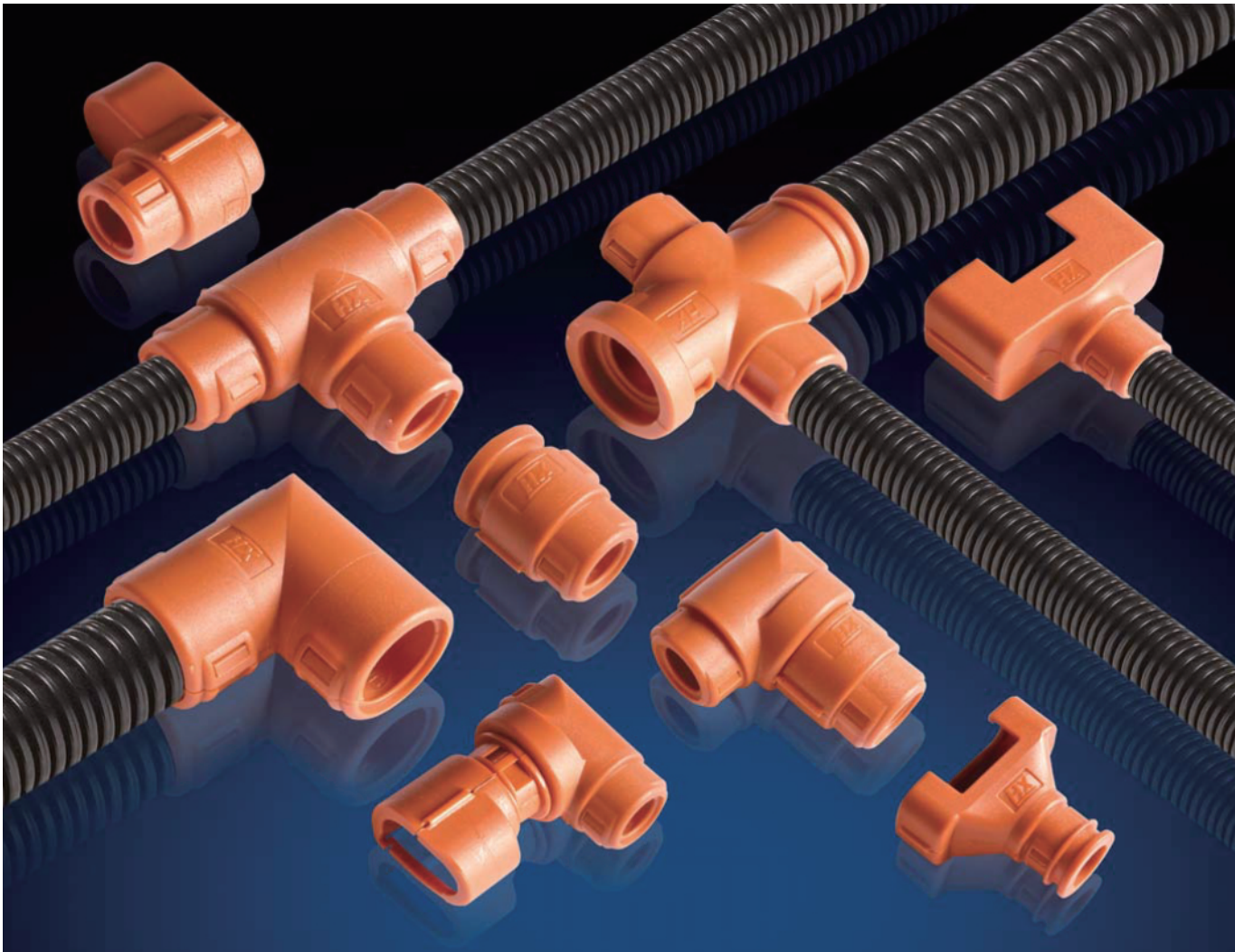


Power and productivity  
for a better world™



# Harnessflex 車用電線保護管系統

Product Overview



**Harnessflex**  
SPECIALIST CONDUIT SYSTEMS

總代理：



**凌特國際股份有限公司**  
**Lintronix Co., Ltd.**

<http://www.lintronix.com.tw>



- 新北市24257新莊區中正路651-6號4樓  
電話：02-29081666 傳真：02-29081678
- 台中市40854南屯區東興路一段500號  
電話：04-24712125 傳真：04-24712124
- 高雄市三民區博愛一路287號4樓A06室  
電話：07-3229509 傳真：07-3229956

## 關於凌特

凌特國際股份有限公司創立於1987年，總公司位於新北市新莊區，另外在台中市南屯區設立分公司與物流倉儲，高雄設立業務據點，就近服務客戶。經營活動主要以進口銷售歐洲國家工業零組件，為機械業、模具業、軌道業等相關機電設備業提供專業服務，協助顧客提升產品品質，彰顯顧客企業價值。

三十多年來，凌特國際堅守企業責任，持續開發優良的產品，培育優秀的經營人才和改善經營管理制度。除了提供顧客滿意的服務品質、與讓工作夥伴發揮潛力的舞台，同時不定期舉辦公益活動回饋社會，善盡地球一份子的責任，為「創造具有國際競爭力的滿意客戶」和「穩健成長、持續擴充、永續發展的企業」奠定堅實的基礎。

## 英國Harnessflex公司介紹

Harnessflex成立於1984年，目前為ABB集團旗下車用電線保護管系統製造商，主要產品包括電線保護管、保護管接頭與連接器介面，豐富的產品組合與便利的組裝設計、提供線束設計廠商、線束加工廠更靈活的产品配置選擇。

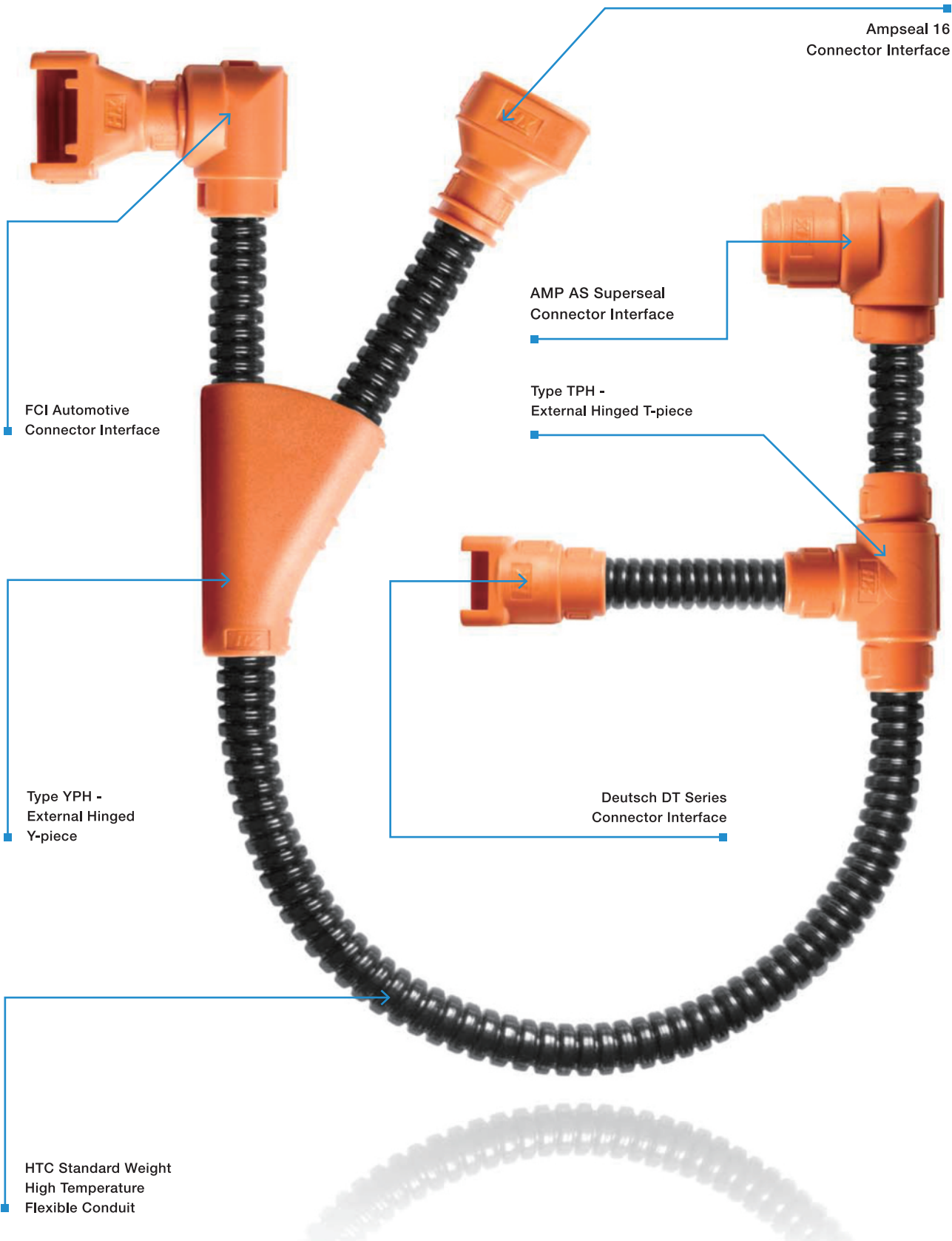
Harnessflex的電線保護管系統提供線束完整保護。使電線電纜不受扭轉、敲撞擊、液體噴濺、鹽份腐蝕、UV照射等外部侵擾受損，每樣產品均承受30,000小時的耐久測試，確保品質無虞。全系列產品通過CE、RoHS認證與ELV EU2000/53/EC。

應用範圍：

1. 電動車、電動巴士
2. 農用機械
3. 建築機械
4. 重型機具
5. 貨卡車與特殊車輛
6. 軍用車輛
7. 引擎配線
8. 線材加工廠



# Harnessflex車用電線保護管系統



# 剖開式延長接頭

1. 適用於有溝槽或無溝槽電線保護管
2. 可以作為電線保護管增、減徑使用
3. 強化保護管的抗拉力，有效保護線材
4. 剖開式設計，安裝簡便，節省配線工時
5. 另有EV、重型車輛、電池模組引擎周邊耐高溫系列



External Hinged Joiner



## Approvals

**CE Mark** to the Low Voltage Directive

**RoHS Compliant** to 2011/65/EU

Conforms with **End of Life Vehicle directive (ELV)** EU2000/53/EC

| Part No. | Conduit Size (NC) |    | Conduit Size (NW) |     | Nominal Dimensions |      |      |      |
|----------|-------------------|----|-------------------|-----|--------------------|------|------|------|
|          | A                 | B  | A                 | B   | C                  | D    | E    | F    |
| JPS1208  | 12                | 08 | 10                | 7.5 | 38mm               | 16mm | 10mm | 10mm |
| JPS1212  | 12                | 12 | 10                | 10  | 36mm               | 16mm | 10mm | 10mm |
| JPS1612  | 16                | 12 | 13                | 10  | 36mm               | 21mm | 10mm | 10mm |
| JPS1616  | 16                | 16 | 13                | 13  | 36mm               | 21mm | 10mm | 10mm |
| JPS2008  | 20                | 08 | 17                | 7.5 | 38mm               | 26mm | 12mm | 10mm |
| JPS2012  | 20                | 12 | 17                | 10  | 38mm               | 26mm | 12mm | 10mm |
| JPS2016  | 20                | 16 | 17                | 13  | 38mm               | 26mm | 12mm | 10mm |
| JPS2020  | 20                | 20 | 17                | 17  | 38mm               | 26mm | 12mm | 12mm |
| JPS2520  | 25                | 20 | 22                | 17  | 39mm               | 33mm | 12mm | 12mm |
| JPS2525  | 25                | 25 | 22                | 22  | 39mm               | 33mm | 13mm | 13mm |
| JPS2820  | 28                | 20 | 23                | 17  | 39mm               | 33mm | 13mm | 13mm |
| JPS2825  | 28                | 25 | 23                | 22  | 39mm               | 33mm | 13mm | 13mm |
| JPS2828  | 28                | 28 | 23                | 23  | 39mm               | 33mm | 13mm | 13mm |

## IP Rating

## Appropriate Conduit

## Fire Performance

## Temperature Range

**For use with:** All conduits in the Harnessflex range

Self Extinguishing

-40°C to +120°C

IP40

Yes

Low Smoke Toxicity

IP67

N/A

Halogen Free

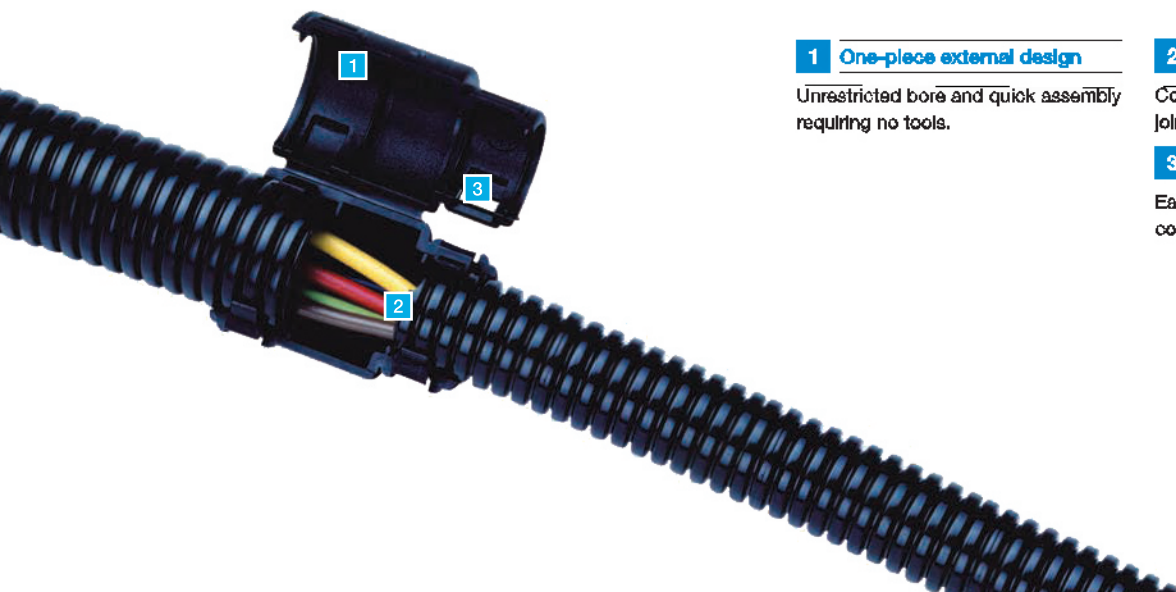
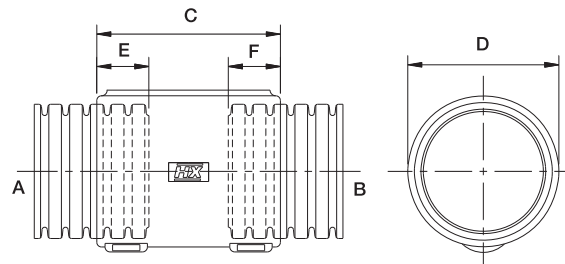
IP68

N/A

## UV Resistance

Very High

## Dimensions



## 1 One-piece external design

Unrestricted bore and quick assembly requiring no tools.

## 2 High pull-off strength

Conduit corrugations sit tightly into joiner junctions.

## 3 Conduit size labels

Each junction indicates nominal conduit size to aid installation.

# 剖開式90°彎形接頭



External Hinged Elbow

1. 適用於有溝槽或無溝槽電線保護管
2. 適用於車內分線，也可以作為電線保護管增、減徑使用
3. 強化保護管的抗拉力，有效保護線材
4. 剖開式設計，安裝簡便，節省配線工時
5. 另有EV、重型車輛、電池模組引擎周邊耐高溫系列

| Part No.  | Conduit Size (NC) |    | Conduit Size (NW) |     | Nominal Dimensions |      |      |      |      |
|-----------|-------------------|----|-------------------|-----|--------------------|------|------|------|------|
|           | A                 | B  | A                 | B   | C                  | D    | E    | F    | G    |
| EPS08S08* | 08                | 08 | 7.5               | 7.5 | 38mm               | 29mm | 20mm | 10mm | 10mm |
| EPS12S12* | 12                | 12 | 10                | 10  | 38mm               | 29mm | 20mm | 10mm | 10mm |
| EPS1608   | 16                | 08 | 10                | 7.5 | 34mm               | 34mm | 21mm | 10mm | 10mm |
| EPS1612   | 16                | 12 | 13                | 10  | 34mm               | 34mm | 21mm | 10mm | 10mm |
| EPS1616   | 16                | 16 | 13                | 13  | 34mm               | 34mm | 21mm | 10mm | 10mm |
| EPS2008   | 20                | 08 | 17                | 7.5 | 41mm               | 39mm | 26mm | 12mm | 10mm |
| EPS2012   | 20                | 12 | 17                | 10  | 41mm               | 41mm | 26mm | 10mm | 10mm |
| EPS2016   | 20                | 16 | 17                | 13  | 41mm               | 41mm | 26mm | 12mm | 10mm |
| EPS2020   | 20                | 20 | 17                | 17  | 41mm               | 41mm | 26mm | 12mm | 12mm |
| EPS2520   | 25                | 20 | 22                | 17  | 48mm               | 48mm | 33mm | 13mm | 12mm |
| EPS2525   | 25                | 25 | 22                | 22  | 48mm               | 48mm | 33mm | 13mm | 13mm |
| EPS2812   | 28                | 12 | 23                | 10  | 48mm               | 48mm | 33mm | 13mm | 10mm |
| EPS2816   | 28                | 16 | 23                | 13  | 48mm               | 48mm | 33mm | 13mm | 10mm |
| EPS2820   | 28                | 20 | 23                | 17  | 48mm               | 48mm | 33mm | 13mm | 12mm |
| EPS2825   | 28                | 25 | 23                | 22  | 48mm               | 48mm | 33mm | 13mm | 13mm |
| EPS2828   | 28                | 28 | 23                | 23  | 48mm               | 48mm | 33mm | 13mm | 13mm |
| EPS3232** | 32                | 32 | 29                | 29  | 60mm               | 60mm | 38mm | 12mm | 12mm |
| EPS4040** | 40                | 40 | 36                | 36  | 67mm               | 67mm | 47mm | 15mm | 15mm |

\* NOTE: Swivel fitting \*\* NOTE: Split fitting not hinged



## Approvals

**CE Mark** to the Low Voltage Directive  
**RoHS Compliant** to 2011/65/EU  
 Conforms with **End of Life Vehicle directive (ELV) EU200/53/EC**

## IP Rating

| IP Rating                                                  | Appropriate Conduit |
|------------------------------------------------------------|---------------------|
| <b>For use with:</b> All conduits in the Harnessflex range |                     |
| IP40                                                       | Yes                 |
| IP67                                                       | N/A                 |
| IP68                                                       | N/A                 |

## Fire Performance

Self Extinguishing  
 Low Smoke Toxicity  
 Halogen Free

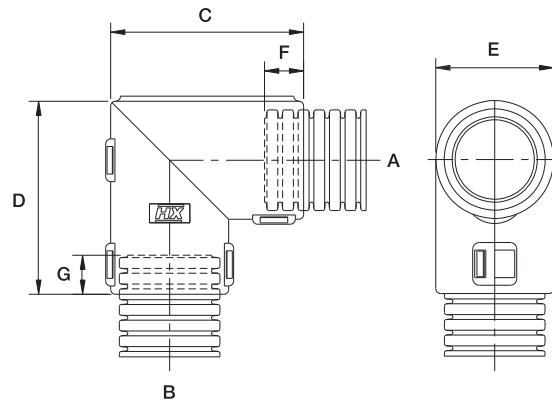
## Temperature Range

-40°C to +120°C

## UV Resistance

Very High

## Dimensions



### 1 One-piece external design

Unrestricted bore and quick assembly requiring no tools.

### 2 High pull-off strength

Conduit corrugations sit tightly into joiner junctions.

### 3 Conduit size labels

Each junction indicates nominal conduit size to aid installation.



# 剖開式Y型接頭

- 1. 適用於有溝槽或無溝槽電線保護管
- 2. 三通設計，適用於車內分線，也可以作為電線保護管增、減徑使用
- 3. 強化保護管的抗拉力，有效保護線材
- 4. 剖開式設計，安裝簡便，節省配線工時
- 5. 另有EV、重型車輛、電池模組引擎周邊耐高溫系列



External Hinged Y-piece

| Part No.  | Conduit Size (NC) |    |    | Conduit Size (NW) |     |     | Nominal Dimensions |      |      |      |      |
|-----------|-------------------|----|----|-------------------|-----|-----|--------------------|------|------|------|------|
|           | A                 | B  | C  | A                 | B   | C   | D                  | E    | F    | G    | H    |
| YPS080808 | 08                | 08 | 08 | 7.5               | 7.5 | 7.5 | 55mm               | 37mm | 10mm | 10mm | 10mm |
| YPS080812 | 08                | 08 | 12 | 7.5               | 7.5 | 10  | 55mm               | 37mm | 10mm | 10mm | 10mm |
| YPS081208 | 08                | 12 | 08 | 7.5               | 10  | 7.5 | 55mm               | 37mm | 10mm | 10mm | 10mm |
| YPS101010 | 10                | 10 | 10 | 8.5               | 8.5 | 8.5 | 55mm               | 37mm | 10mm | 10mm | 10mm |
| YPS120808 | 12                | 08 | 08 | 10                | 7.5 | 7.5 | 55mm               | 37mm | 10mm | 10mm | 10mm |
| YPS120810 | 12                | 08 | 10 | 10                | 7.5 | 8.5 | 55mm               | 37mm | 10mm | 10mm | 10mm |
| YPS120812 | 12                | 08 | 12 | 10                | 7.5 | 10  | 55mm               | 37mm | 10mm | 10mm | 10mm |
| YPS121010 | 12                | 10 | 10 | 10                | 8.5 | 8.5 | 55mm               | 37mm | 10mm | 10mm | 10mm |
| YPS121208 | 12                | 12 | 08 | 10                | 10  | 7.5 | 55mm               | 37mm | 10mm | 10mm | 10mm |
| YPS121210 | 12                | 12 | 10 | 10                | 10  | 8.5 | 55mm               | 37mm | 10mm | 10mm | 10mm |
| YPS121212 | 12                | 12 | 12 | 10                | 10  | 10  | 55mm               | 37mm | 10mm | 10mm | 10mm |
| YPS160812 | 16                | 08 | 12 | 13                | 7.5 | 10  | 55mm               | 37mm | 10mm | 10mm | 10mm |
| YPS161010 | 16                | 10 | 10 | 13                | 8.5 | 8.5 | 55mm               | 40mm | 10mm | 10mm | 10mm |
| YPS161208 | 16                | 12 | 08 | 13                | 10  | 7.5 | 55mm               | 40mm | 10mm | 10mm | 10mm |
| YPS161210 | 16                | 12 | 10 | 13                | 10  | 8.5 | 55mm               | 40mm | 10mm | 10mm | 10mm |
| YPS161212 | 16                | 12 | 12 | 13                | 10  | 10  | 55mm               | 40mm | 10mm | 10mm | 10mm |
| YPS161608 | 16                | 16 | 08 | 13                | 13  | 7.5 | 55mm               | 40mm | 10mm | 10mm | 10mm |
| YPS161610 | 16                | 16 | 10 | 13                | 13  | 8.5 | 55mm               | 40mm | 10mm | 10mm | 10mm |
| YPS161612 | 16                | 16 | 12 | 13                | 13  | 10  | 55mm               | 40mm | 10mm | 10mm | 10mm |
| YPS200808 | 20                | 08 | 08 | 17                | 7.5 | 7.5 | 43mm               | 37mm | 12mm | 10mm | 10mm |
| YPS201208 | 20                | 12 | 08 | 17                | 10  | 7.5 | 43mm               | 37mm | 12mm | 10mm | 10mm |
| YPS201210 | 20                | 12 | 10 | 17                | 10  | 8.5 | 43mm               | 37mm | 12mm | 10mm | 10mm |
| YPS201212 | 20                | 12 | 12 | 17                | 10  | 10  | 43mm               | 37mm | 12mm | 10mm | 10mm |
| YPS201608 | 20                | 16 | 08 | 17                | 13  | 7.5 | 43mm               | 37mm | 12mm | 10mm | 10mm |
| YPS201612 | 20                | 16 | 12 | 17                | 13  | 10  | 48mm               | 40mm | 12mm | 10mm | 10mm |
| YPS201616 | 20                | 16 | 16 | 17                | 13  | 13  | 48mm               | 40mm | 12mm | 10mm | 10mm |
| YPS202008 | 20                | 20 | 08 | 17                | 17  | 7.5 | 56mm               | 45mm | 12mm | 10mm | 10mm |
| YPS202010 | 20                | 20 | 10 | 17                | 17  | 8.5 | 58mm               | 45mm | 12mm | 12mm | 10mm |
| YPS202012 | 20                | 20 | 12 | 17                | 17  | 10  | 58mm               | 45mm | 12mm | 12mm | 10mm |
| YPS202016 | 20                | 20 | 16 | 17                | 17  | 13  | 64mm               | 48mm | 12mm | 12mm | 10mm |



## 1 One-piece external design

Unrestricted bore and quick assembly requiring no tools.

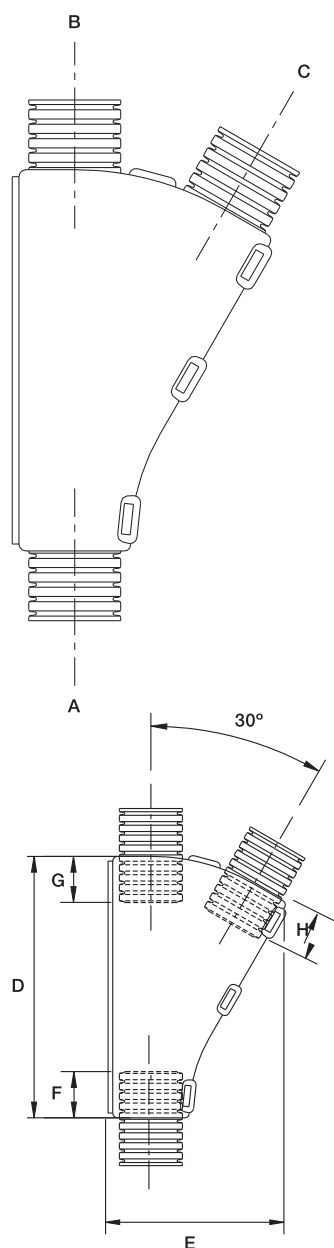
## 2 High pull-off strength

Conduit corrugations sit tightly into joiner junctions.

## 3 Conduit size labels

Each junction indicates nominal conduit size to aid installation.

## Dimensions



## Approvals

**CE Mark** to the Low Voltage Directive

**RoHS Compliant** to 2011/65/EU

Conforms with **End of Life Vehicle directive (ELV) EU200/53/EC**

| Part No.   | Conduit Size (NC) |    |    | Conduit Size (NW) |    |     | Nominal Dimensions |       |      |      |      |
|------------|-------------------|----|----|-------------------|----|-----|--------------------|-------|------|------|------|
|            | A                 | B  | C  | A                 | B  | C   | D                  | E     | F    | G    | H    |
| YPS252012  | 25                | 20 | 12 | 22                | 17 | 10  | 54mm               | 49mm  | 13mm | 12mm | 10mm |
| YPS252016  | 25                | 20 | 16 | 22                | 17 | 13  | 54mm               | 49mm  | 10mm | 12mm | 10mm |
| YPS252020  | 25                | 20 | 20 | 22                | 17 | 17  | 54mm               | 49mm  | 10mm | 12mm | 12mm |
| YPS252508  | 25                | 25 | 08 | 22                | 22 | 7.5 | 67mm               | 56mm  | 10mm | 12mm | 10mm |
| YPS252510  | 25                | 25 | 10 | 22                | 22 | 8.5 | 67mm               | 56mm  | 10mm | 13mm | 10mm |
| YPS252512  | 25                | 25 | 12 | 22                | 22 | 10  | 67mm               | 56mm  | 10mm | 13mm | 10mm |
| YPS252516  | 25                | 25 | 16 | 22                | 22 | 13  | 67mm               | 56mm  | 10mm | 13mm | 10mm |
| YPS252520  | 25                | 25 | 20 | 22                | 22 | 17  | 77mm               | 60mm  | 10mm | 13mm | 12mm |
| YPS252525  | 25                | 25 | 25 | 22                | 22 | 22  | 91mm               | 67mm  | 10mm | 13mm | 13mm |
| YPS282012  | 28                | 20 | 12 | 23                | 17 | 10  | 54mm               | 49mm  | 10mm | 13mm | 10mm |
| YPS282016  | 28                | 20 | 16 | 23                | 17 | 13  | 54mm               | 49mm  | 10mm | 12mm | 10mm |
| YPS282020  | 28                | 20 | 20 | 23                | 17 | 17  | 54mm               | 49mm  | 10mm | 12mm | 12mm |
| YPS282512  | 28                | 25 | 12 | 23                | 22 | 10  | 67mm               | 56mm  | 10mm | 12mm | 10mm |
| YPS282520  | 28                | 25 | 20 | 23                | 22 | 17  | 77mm               | 60mm  | 10mm | 13mm | 12mm |
| YPS282525  | 28                | 25 | 25 | 23                | 22 | 22  | 91mm               | 67mm  | 10mm | 13mm | 13mm |
| YPS282808  | 28                | 28 | 08 | 23                | 23 | 7.5 | 67mm               | 56mm  | 10mm | 13mm | 10mm |
| YPS282812  | 28                | 28 | 12 | 23                | 23 | 10  | 67mm               | 56mm  | 10mm | 13mm | 10mm |
| YPS282816  | 28                | 28 | 16 | 23                | 23 | 13  | 67mm               | 56mm  | 10mm | 13mm | 10mm |
| YPS282820  | 28                | 28 | 20 | 23                | 23 | 17  | 77mm               | 60mm  | 10mm | 13mm | 12mm |
| YPS282825  | 28                | 28 | 25 | 23                | 23 | 22  | 91mm               | 67mm  | 12mm | 13mm | 13mm |
| YPS282828  | 28                | 28 | 28 | 23                | 23 | 23  | 91mm               | 67mm  | 12mm | 13mm | 13mm |
| YPS322516  | 32                | 25 | 16 | 29                | 22 | 13  | 100mm              | 75mm  | 12mm | 13mm | 10mm |
| YPS322520  | 32                | 25 | 20 | 29                | 22 | 17  | 100mm              | 76mm  | 12mm | 13mm | 12mm |
| YPS322525  | 32                | 25 | 25 | 29                | 22 | 22  | 100mm              | 79mm  | 12mm | 13mm | 13mm |
| YPS322532  | 32                | 25 | 32 | 29                | 22 | 29  | 100mm              | 82mm  | 12mm | 13mm | 13mm |
| YPS323216  | 32                | 32 | 16 | 29                | 29 | 13  | 100mm              | 75mm  | 12mm | 13mm | 10mm |
| YPS323220  | 32                | 32 | 20 | 29                | 29 | 17  | 100mm              | 76mm  | 12mm | 13mm | 12mm |
| YPS323225  | 32                | 32 | 25 | 29                | 29 | 22  | 100mm              | 79mm  | 12mm | 13mm | 13mm |
| YPS323232  | 32                | 32 | 32 | 29                | 29 | 29  | 100mm              | 82mm  | 13mm | 13mm | 13mm |
| YPS403212* | 40                | 32 | 12 | 36                | 29 | 10  | 133mm              | 91mm  | 15mm | 12mm | 10mm |
| YPS403216* | 40                | 32 | 16 | 36                | 29 | 13  | 133mm              | 92mm  | 15mm | 12mm | 10mm |
| YPS403225* | 40                | 32 | 25 | 36                | 29 | 22  | 133mm              | 92mm  | 15mm | 12mm | 12mm |
| YPS403228* | 40                | 32 | 28 | 36                | 29 | 23  | 133mm              | 92mm  | 15mm | 12mm | 12mm |
| YPS404012* | 40                | 40 | 12 | 36                | 36 | 10  | 135mm              | 93mm  | 15mm | 15mm | 10mm |
| YPS404016* | 40                | 40 | 16 | 36                | 36 | 13  | 135mm              | 93mm  | 15mm | 15mm | 10mm |
| YPS404025* | 40                | 40 | 25 | 36                | 36 | 22  | 135mm              | 93mm  | 15mm | 15mm | 12mm |
| YPS404028* | 40                | 40 | 28 | 36                | 36 | 23  | 135mm              | 93mm  | 15mm | 15mm | 12mm |
| YPS404032* | 40                | 40 | 32 | 36                | 36 | 29  | 135mm              | 96mm  | 15mm | 15mm | 12mm |
| YPS404040* | 40                | 40 | 40 | 36                | 36 | 36  | 135mm              | 100mm | 15mm | 15mm | 15mm |

\*Size 40 YPS fittings are not hinged. They are a two part fitting

| IP Rating                                                  | Appropriate Conduit | Fire Performance   | Temperature Range    |
|------------------------------------------------------------|---------------------|--------------------|----------------------|
| <b>For use with:</b> All conduits in the Harnessflex range |                     | Self Extinguishing | -40°C to +120°C      |
| IP40                                                       | Yes                 | Low Smoke Toxicity |                      |
| IP67                                                       | N/A                 | Halogen Free       | <b>UV Resistance</b> |
| IP68                                                       | N/A                 |                    | Very High            |

# 剖開式T型接頭

1. 適用於有溝槽或無溝槽電線保護管
2. 三通設計，適用於車內分線，也可以作為電線保護管增、減徑使用
3. 強化保護管的抗拉力，有效保護線材
4. 剖開式設計，安裝簡便，節省配線工時
5. 另有EV、重型車輛、電池模組引擎周邊耐高溫系列



External Hinged T-piece

| Part No.  | Conduit Size (NC) |    |    | Conduit Size (NW) |     |     | Nominal Dimensions |        |      |      |      |      |
|-----------|-------------------|----|----|-------------------|-----|-----|--------------------|--------|------|------|------|------|
|           | A                 | B  | C  | A                 | B   | C   | D                  | E      | F    | G    | H    | I    |
| TPS080808 | 08                | 08 | 08 | 7.5               | 7.5 | 7.5 | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS081208 | 08                | 12 | 08 | 7.5               | 10  | 7.5 | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS081612 | 08                | 16 | 12 | 7.5               | 13  | 10  | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS100808 | 10                | 08 | 08 | 8.5               | 7.5 | 7.5 | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS100810 | 10                | 08 | 10 | 8.5               | 7.5 | 8.5 | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS101010 | 10                | 10 | 10 | 8.5               | 8.5 | 8.5 | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS101012 | 10                | 10 | 12 | 8.5               | 8.5 | 13  | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS120808 | 12                | 08 | 08 | 10                | 7.5 | 7.5 | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS120812 | 12                | 08 | 12 | 10                | 7.5 | 10  | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS121010 | 12                | 10 | 10 | 10                | 8.5 | 8.5 | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS121012 | 12                | 10 | 12 | 10                | 8.5 | 10  | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS121208 | 12                | 12 | 08 | 10                | 10  | 7.5 | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS121210 | 12                | 12 | 10 | 10                | 10  | 7.5 | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS121212 | 12                | 12 | 12 | 10                | 10  | 10  | 45.2mm             | 31.1mm | 17mm | 10mm | 10mm | 10mm |
| TPS121612 | 12                | 16 | 12 | 10                | 13  | 10  | 45.2mm             | 31.1mm | 21mm | 10mm | 10mm | 10mm |
| TPS160808 | 16                | 08 | 08 | 13                | 7.5 | 7.5 | 49.1mm             | 34.8mm | 21mm | 10mm | 10mm | 10mm |
| TPS160812 | 16                | 08 | 12 | 13                | 7.5 | 10  | 49.1mm             | 34.8mm | 21mm | 10mm | 10mm | 10mm |
| TPS160816 | 16                | 08 | 16 | 13                | 7.5 | 13  | 49.1mm             | 34.8mm | 21mm | 10mm | 10mm | 10mm |
| TPS161012 | 16                | 10 | 12 | 13                | 8.5 | 10  | 49.1mm             | 34.8mm | 21mm | 10mm | 10mm | 10mm |
| TPS161016 | 16                | 10 | 16 | 13                | 8.5 | 13  | 49.1mm             | 34.8mm | 21mm | 10mm | 10mm | 10mm |
| TPS161212 | 16                | 12 | 12 | 13                | 10  | 10  | 49.1mm             | 34.8mm | 21mm | 10mm | 10mm | 10mm |
| TPS161216 | 16                | 12 | 16 | 13                | 10  | 13  | 49.1mm             | 34.8mm | 21mm | 10mm | 10mm | 10mm |
| TPS161608 | 16                | 16 | 08 | 13                | 13  | 7.5 | 49.1mm             | 34.8mm | 21mm | 10mm | 10mm | 10mm |
| TPS161612 | 16                | 16 | 12 | 13                | 13  | 10  | 49.1mm             | 34.8mm | 21mm | 10mm | 10mm | 10mm |
| TPS161616 | 16                | 16 | 16 | 13                | 13  | 13  | 49.1mm             | 34.8mm | 21mm | 10mm | 10mm | 10mm |
| TPS162012 | 16                | 20 | 12 | 13                | 17  | 10  | 49.1mm             | 34.8mm | 21mm | 10mm | 10mm | 10mm |
| TPS162016 | 16                | 20 | 16 | 13                | 17  | 13  | 49.1mm             | 34.8mm | 21mm | 10mm | 10mm | 10mm |
| TPS200816 | 20                | 08 | 16 | 17                | 7.5 | 13  | 56.5mm             | 41.0mm | 26mm | 12mm | 10mm | 10mm |
| TPS200820 | 20                | 08 | 20 | 17                | 7.5 | 17  | 56.5mm             | 41.0mm | 26mm | 12mm | 10mm | 12mm |



## 1 One-piece external design

Unrestricted bore and quick assembly requiring no tools.

## 2 High pull-off strength

Conduit corrugations sit tightly into joiner junctions.

## 3 Conduit size labels

Each junction indicates nominal conduit size to aid installation.

## 4 Integral retaining clips

Retains conduit in position during assembly.

| Part No.  | Conduit Size (NC) |    |    | Conduit Size (NW) |     |    | Nominal Dimensions |        |      |      |      |      |
|-----------|-------------------|----|----|-------------------|-----|----|--------------------|--------|------|------|------|------|
|           | A                 | B  | C  | A                 | B   | C  | D                  | E      | F    | G    | H    | I    |
| TPS201016 | 20                | 10 | 16 | 17                | 8.5 | 13 | 56.5mm             | 41.0mm | 26mm | 12mm | 10mm | 10mm |
| TPS201020 | 20                | 10 | 20 | 17                | 8.5 | 17 | 56.5mm             | 41.0mm | 26mm | 12mm | 10mm | 12mm |
| TPS201216 | 20                | 12 | 16 | 17                | 10  | 13 | 56.5mm             | 41.0mm | 26mm | 12mm | 10mm | 10mm |
| TPS201220 | 20                | 12 | 20 | 17                | 10  | 17 | 56.5mm             | 41.0mm | 26mm | 12mm | 10mm | 12mm |
| TPS201612 | 20                | 16 | 12 | 17                | 13  | 10 | 56.5mm             | 41.0mm | 26mm | 12mm | 10mm | 10mm |
| TPS201616 | 20                | 16 | 16 | 17                | 13  | 13 | 56.5mm             | 41.0mm | 26mm | 12mm | 10mm | 10mm |
| TPS201620 | 20                | 16 | 20 | 17                | 13  | 17 | 56.5mm             | 41.0mm | 26mm | 12mm | 10mm | 12mm |
| TPS202012 | 20                | 20 | 12 | 17                | 17  | 10 | 56.5mm             | 41.0mm | 26mm | 12mm | 12mm | 10mm |
| TPS202016 | 20                | 20 | 16 | 17                | 17  | 13 | 56.5mm             | 41.0mm | 26mm | 12mm | 12mm | 10mm |
| TPS202020 | 20                | 20 | 20 | 17                | 17  | 17 | 56.5mm             | 41.0mm | 26mm | 12mm | 12mm | 12mm |
| TPS202516 | 20                | 25 | 16 | 17                | 22  | 13 | 64.5mm             | 48.5mm | 33mm | 12mm | 13mm | 10mm |
| TPS250820 | 25                | 08 | 20 | 22                | 7.5 | 17 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 12mm |
| TPS250825 | 25                | 08 | 25 | 22                | 7.5 | 22 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 13mm |
| TPS251025 | 25                | 10 | 25 | 22                | 8.5 | 22 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 13mm |
| TPS251220 | 25                | 12 | 20 | 22                | 10  | 17 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 12mm |
| TPS251225 | 25                | 12 | 25 | 22                | 10  | 22 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 13mm |
| TPS251620 | 25                | 16 | 20 | 22                | 13  | 17 | 64.5mm             | 48.5mm | 33mm | 13mm | 12mm | 12mm |
| TPS251625 | 25                | 16 | 25 | 22                | 13  | 22 | 64.5mm             | 48.5mm | 33mm | 13mm | 12mm | 13mm |
| TPS252020 | 25                | 20 | 20 | 22                | 17  | 17 | 64.5mm             | 48.5mm | 33mm | 13mm | 13mm | 12mm |
| TPS252025 | 25                | 20 | 25 | 22                | 17  | 22 | 64.5mm             | 48.5mm | 33mm | 13mm | 13mm | 13mm |
| TPS252520 | 25                | 25 | 20 | 22                | 22  | 17 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 12mm |
| TPS252525 | 25                | 25 | 25 | 22                | 22  | 22 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 13mm |
| TPS280820 | 28                | 08 | 20 | 23                | 7.5 | 17 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 12mm |
| TPS280828 | 28                | 08 | 28 | 23                | 7.5 | 23 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 13mm |
| TPS281020 | 28                | 10 | 20 | 23                | 8.5 | 17 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 12mm |
| TPS281028 | 28                | 10 | 28 | 23                | 8.5 | 23 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 13mm |
| TPS281220 | 28                | 12 | 20 | 23                | 10  | 17 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 13mm |
| TPS281225 | 28                | 12 | 25 | 23                | 10  | 22 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 12mm |

NOTE: Part numbers are continued on page 3/10



#### Approvals

**CE Mark** to the Low Voltage Directive

**RoHS Compliant** to 2011/65/EU

Conforms with **End of Life Vehicle directive (ELV) EU200/53/EC**

#### IP Rating

**For use with:** All conduits in the Harnessflex range

IP40 Yes

IP67 N/A

IP68 N/A

#### Appropriate Conduit

#### Fire Performance

Self Extinguishing

Low Smoke Toxicity

Halogen Free

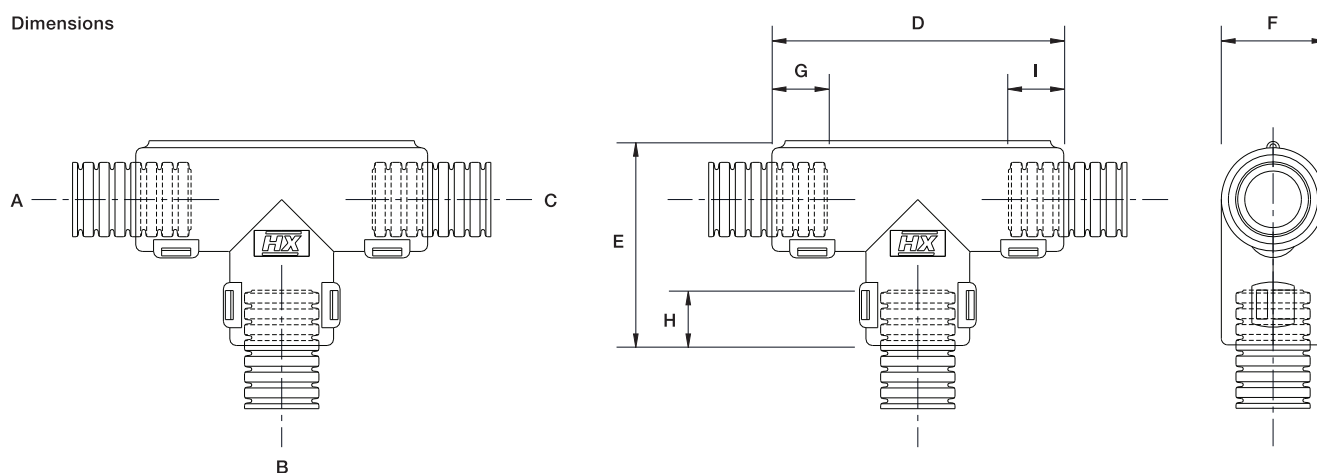
#### Temperature Range

-40°C to +120°C

#### UV Resistance

Very High

#### Dimensions



# 剖開式T型接頭

| Part No.   | Conduit Size (NC) |    |    | Conduit Size (NW) |     |    | Nominal Dimensions |        |      |      |      |      |
|------------|-------------------|----|----|-------------------|-----|----|--------------------|--------|------|------|------|------|
|            | A                 | B  | C  | A                 | B   | C  | D                  | E      | F    | G    | H    | I    |
| TPS281228  | 28                | 12 | 28 | 23                | 10  | 23 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 13mm |
| TPS281620  | 28                | 16 | 20 | 23                | 13  | 17 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 12mm |
| TPS281625  | 28                | 16 | 25 | 23                | 13  | 22 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 13mm |
| TPS281628  | 28                | 16 | 28 | 23                | 13  | 23 | 64.5mm             | 48.5mm | 33mm | 13mm | 10mm | 13mm |
| TPS282020  | 28                | 20 | 20 | 23                | 17  | 17 | 64.5mm             | 48.5mm | 33mm | 13mm | 12mm | 12mm |
| TPS282025  | 28                | 20 | 25 | 23                | 17  | 22 | 64.5mm             | 48.5mm | 33mm | 13mm | 12mm | 13mm |
| TPS282028  | 28                | 20 | 28 | 23                | 17  | 23 | 64.5mm             | 48.5mm | 33mm | 13mm | 12mm | 13mm |
| TPS282525  | 28                | 25 | 25 | 23                | 22  | 22 | 64.5mm             | 48.5mm | 33mm | 13mm | 13mm | 13mm |
| TPS282528  | 28                | 25 | 28 | 23                | 22  | 23 | 64.5mm             | 48.5mm | 33mm | 13mm | 13mm | 13mm |
| TPS282828  | 28                | 28 | 28 | 23                | 23  | 23 | 64.5mm             | 48.5mm | 33mm | 13mm | 13mm | 13mm |
| TPS300830  | 30                | 08 | 30 | 26                | 7.5 | 26 | 72.0mm             | 55.3mm | 39mm | 12mm | 10mm | 12mm |
| TPS301230  | 30                | 12 | 30 | 26                | 10  | 26 | 72.0mm             | 55.3mm | 39mm | 12mm | 10mm | 12mm |
| TPS301625  | 30                | 16 | 25 | 26                | 13  | 22 | 72.0mm             | 55.3mm | 39mm | 12mm | 10mm | 12mm |
| TPS301630  | 30                | 16 | 30 | 26                | 13  | 26 | 72.0mm             | 55.3mm | 39mm | 12mm | 10mm | 12mm |
| TPS302020  | 30                | 20 | 20 | 26                | 17  | 17 | 72.0mm             | 55.3mm | 39mm | 12mm | 12mm | 12mm |
| TPS302025  | 30                | 20 | 25 | 26                | 17  | 22 | 72.0mm             | 55.3mm | 39mm | 12mm | 12mm | 12mm |
| TPS302030  | 30                | 20 | 30 | 26                | 17  | 26 | 72.0mm             | 55.3mm | 39mm | 12mm | 12mm | 12mm |
| TPS302525  | 30                | 25 | 25 | 26                | 22  | 22 | 72.0mm             | 55.3mm | 39mm | 12mm | 12mm | 12mm |
| TPS303025  | 30                | 30 | 25 | 26                | 26  | 22 | 72.0mm             | 55.3mm | 39mm | 12mm | 12mm | 12mm |
| TPS303030  | 30                | 30 | 30 | 26                | 26  | 26 | 72.0mm             | 55.3mm | 39mm | 12mm | 12mm | 12mm |
| TPS321625  | 32                | 16 | 25 | 29                | 13  | 22 | 72.0mm             | 55.3mm | 39mm | 13mm | 10mm | 13mm |
| TPS321632  | 32                | 16 | 32 | 29                | 13  | 29 | 72.0mm             | 55.3mm | 39mm | 13mm | 10mm | 13mm |
| TPS322532  | 32                | 25 | 32 | 29                | 22  | 29 | 72.0mm             | 55.3mm | 39mm | 13mm | 10mm | 13mm |
| TPS322025  | 32                | 20 | 25 | 29                | 17  | 22 | 72.0mm             | 55.3mm | 39mm | 13mm | 12mm | 13mm |
| TPS322028  | 32                | 20 | 28 | 29                | 17  | 23 | 72.0mm             | 55.3mm | 39mm | 13mm | 12mm | 13mm |
| TPS322032  | 32                | 20 | 32 | 29                | 17  | 29 | 72.0mm             | 55.3mm | 39mm | 13mm | 12mm | 13mm |
| TPS322525  | 32                | 25 | 25 | 29                | 22  | 22 | 72.0mm             | 55.3mm | 39mm | 13mm | 13mm | 13mm |
| TPS322532  | 32                | 25 | 32 | 29                | 22  | 29 | 72.0mm             | 55.3mm | 39mm | 13mm | 13mm | 13mm |
| TPS323225  | 32                | 32 | 25 | 29                | 29  | 22 | 72.0mm             | 55.3mm | 39mm | 13mm | 13mm | 13mm |
| TPS323232  | 32                | 32 | 32 | 29                | 29  | 29 | 72.0mm             | 55.3mm | 39mm | 13mm | 13mm | 13mm |
| TPS401232* | 40                | 12 | 32 | 36                | 10  | 29 | 85.0mm             | 65.0mm | 47mm | 15mm | 10mm | 12mm |
| TPS401240* | 40                | 12 | 40 | 36                | 10  | 36 | 87.0mm             | 65.0mm | 47mm | 15mm | 10mm | 15mm |
| TPS401632* | 40                | 16 | 32 | 36                | 13  | 29 | 85.0mm             | 65.0mm | 47mm | 15mm | 10mm | 12mm |
| TPS401640* | 40                | 16 | 40 | 36                | 13  | 36 | 87.0mm             | 65.0mm | 47mm | 15mm | 10mm | 15mm |
| TPS402040* | 40                | 20 | 40 | 36                | 17  | 36 | 87.0mm             | 65.0mm | 47mm | 15mm | 12mm | 15mm |
| TPS402540* | 40                | 25 | 40 | 36                | 22  | 36 | 87.0mm             | 65.0mm | 47mm | 15mm | 12mm | 15mm |
| TPS402840* | 40                | 28 | 40 | 36                | 23  | 36 | 87.0mm             | 65.0mm | 47mm | 15mm | 12mm | 15mm |
| TPS404016* | 40                | 40 | 16 | 36                | 36  | 13 | 85.0mm             | 70.0mm | 47mm | 15mm | 15mm | 12mm |
| TPS404032* | 40                | 40 | 32 | 36                | 36  | 29 | 85.0mm             | 70.0mm | 47mm | 15mm | 15mm | 12mm |
| TPS404040* | 40                | 40 | 40 | 36                | 36  | 36 | 87.0mm             | 70.0mm | 47mm | 15mm | 15mm | 15mm |

\*Size 40 TPS fittings are not hinged. They are a two part fitting



## Approvals

**CE Mark** to the Low Voltage Directive

**RoHS Compliant** to 2011/65/EU

Conforms with **End of Life Vehicle directive (ELV) EU2000/53/EC**

## IP Rating

**For use with:** All conduits in the Harnessflex range

IP40

Yes

IP67

N/A

IP68

N/A

## Appropriate Conduit

## Fire Performance

Self Extinguishing

Low Smoke Toxicity

Halogen Free

## Temperature Range

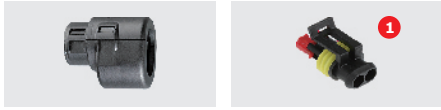
-40°C to +120°C

## UV Resistance

Very High



# 連接器介面 產品料號對照表



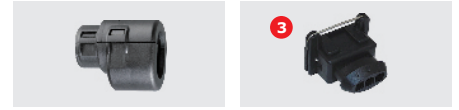
TE AMP Superseal

| Part no. | Tempguard Part no. | Interface | Connector |
|----------|--------------------|-----------|-----------|
| CI08-AS1 | CIH08-AS1          | 1 way     | 282079-2* |
| CI08-AS2 | CIH08-AS2          | 2 way     | 282080-1* |
| CI08-AS3 | CIH08-AS3          | 3 way     | 282087-1* |
| CI08-AS4 | CIH08-AS4          | 4 way     | 282088-1* |
| CI10-AS2 | CIH10-AS2          | 2 way     | 282080-1* |
| CI10-AS3 | CIH10-AS3          | 3 way     | 282087-1* |
| CI10-AS4 | CIH10-AS4          | 4 way     | 282088-1* |
| CI12-AS1 | CIH12-AS1          | 1 way     | 282079-2* |
| CI12-AS2 | CIH12-AS2          | 2 way     | 282080-1* |
| CI12-AS3 | CIH12-AS3          | 3 way     | 282087-1* |
| CI12-AS4 | CIH12-AS4          | 4 way     | 282088-1* |



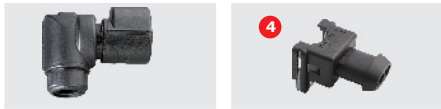
TE AMP Superseal 90°

| Part no.    | Tempguard Part no. | Interface | Connector |
|-------------|--------------------|-----------|-----------|
| CI08-90-AS1 | CIH08-90-AS1       | 1 way     | 282079-2* |
| CI08-90-AS2 | CIH08-90-AS2       | 2 way     | 282080-1* |
| CI08-90-AS3 | CIH08-90-AS3       | 3 way     | 282087-1* |
| CI08-90-AS4 | CIH08-90-AS4       | 4 way     | 282088-1* |
| CI10-90-AS2 | CIH10-90-AS2       | 2 way     | 282080-1* |
| CI10-90-AS3 | CIH10-90-AS3       | 3 way     | 282087-1* |
| CI10-90-AS4 | CIH10-90-AS4       | 4 way     | 282088-1* |
| CI12-90-AS2 | CIH12-90-AS2       | 2 way     | 282080-1* |
| CI12-90-AS3 | CIH12-90-AS3       | 3 way     | 282087-1* |
| CI12-90-AS4 | CIH12-90-AS4       | 4 way     | 282088-1* |



TE AMP Junior & Mini Timer

| Part no. | Tempguard Part no. | Interface | Connector   |
|----------|--------------------|-----------|-------------|
| CI08-AM2 | CIH08-AM2          | 2 way     | 347887-3*   |
| CI08-AM3 | CIH08-AM3          | 3 way     | 1-827578-1* |
| CI08-AM4 | CIH08-AM4          | 4 way     | 281804-1*   |
| CI10-AM2 | CIH10-AM2          | 2 way     | 347887-3*   |
| CI10-AM3 | -                  | 3 way     | 1-827578-1* |
| CI10-AM4 | -                  | 4 way     | 281804-1*   |
| CI12-AM2 | CIH12-AM2          | 2 way     | 374887-3*   |
| CI12-AM3 | CIH12-AM3          | 3 way     | 1-827578-1* |
| CI12-AM4 | CIH12-AM4          | 4 way     | 281804-1*   |



TE AMP Junior & Mini Timer 90°

| Part no.    | Tempguard Part no. | Interface | Connector   |
|-------------|--------------------|-----------|-------------|
| CI08-90-AM2 | CIH08-90-AM2       | 2 way     | 347887-3*   |
| CI08-90-AM3 | CIH08-90-AM3       | 3 way     | 1-827578-1* |
| CI08-90-AM4 | CIH08-90-AM4       | 4 way     | 281804-1*   |
| CI10-90-AM2 | CIH10-90-AM2       | 2 way     | 347887-3*   |
| CI10-90-AM3 | -                  | 3 way     | 1-827578-1* |
| CI10-90-AM4 | -                  | 4 way     | 281804-1*   |
| CI12-90-AM2 | -                  | 2 way     | 374887-3*   |
| CI12-90-AM3 | CIH12-90-AM3       | 3 way     | 1-827578-1* |
| CI12-90-AM4 | CIH12-90-AM4       | 4 way     | 281804-1*   |



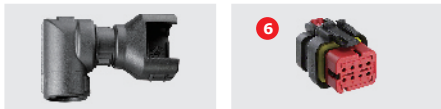
TE AMPSEAL 16

| Part no.    | Tempguard Part no. | Interface | Connector |
|-------------|--------------------|-----------|-----------|
| CI08-AT2PL  | CIH08-AT2PL        | 2 way     | 776427-1* |
| CI08-AT3PL  | CIH08-AT3PL        | 3 way     | 776523-1* |
| CI08-AT4PL  | CIH08-AT4PL        | 4 way     | 776487-1* |
| CI12-AT4PL  | CIH12-AT4PL        | 4 way     | 776487-1* |
| CI12-AT6PL  | CIH12-AT6PL        | 6 way     | 776433-1* |
| CI12-AT8PL  | CIH12-AT8PL        | 8 way     | 776532-1* |
| CI12-AT12PL | CIH12-AT12PL       | 12 way    | 776494-1* |
| CI16-AT8PL  | CIH16-AT8PL        | 8 way     | 776523-1* |
| CI16-AT12PL | CIH16-AT12PL       | 12 way    | 776494-1* |



TE/Deutsch-DT Series

| Part no.  | Tempguard Part no. | Interface | Connector      |
|-----------|--------------------|-----------|----------------|
| CI08-DT2  | CIH08-DT2          | 2 way     | DT06-2S-E005   |
| CI08-DT3  | CIH08-DT3          | 3 way     | DT06-3S-E005   |
| CI08-DT4  | CIH08-DT4          | 4 way     | DT06-4S-E005   |
| CI08-DT6  | CIH08-DT6          | 6 way     | DT06-6S-E005   |
| CI12-DT2  | CIH12-DT2          | 2 way     | DT06-2S-E005   |
| CI12-DT3  | CIH12-DT3          | 3 way     | DT06-3S-E005   |
| CI12-DT4  | CIH12-DT4          | 4 way     | DT06-4S-E005   |
| CI12-DT6  | CIH12-DT6          | 6 way     | DT06-6S-E005   |
| CI12-DT8  | CIH12-DT8          | 8 way     | DT06-8S-E005   |
| CI16-DT12 | CIH16-DT12         | 12 way    | DT06-12SA-E005 |



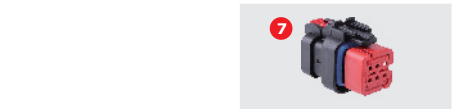
TE AMPSEAL 16 90°

| Part no.      | Tempguard Part no. | Interface | Connector |
|---------------|--------------------|-----------|-----------|
| CI08-90-AT2PL | CIH08-90-AT2PL     | 2 way     | 776427-1* |
| CI08-90-AT3PL | CIH08-90-AT3PL     | 3 way     | 776523-1* |
| CI08-90-AT4PL | CIH08-90-AT4PL     | 4 way     | 776487-1* |
| CI12-90-AT2PL | CIH12-90-AT2PL     | 2 way     | 776427-1* |
| CI12-90-AT3PL | CIH12-90-AT3PL     | 3 way     | 776523-1* |
| CI12-90-AT4PL | CIH12-90-AT4PL     | 4 way     | 776487-1* |



TE AMPSEAL 16 90°

| Part no.      | Tempguard Part no. | Interface | Connector |
|---------------|--------------------|-----------|-----------|
| CI08-90-AT2LP | CIH08-90-AT2LP     | 2 way     | 776427-1* |
| CI08-90-AT2LR | CIH08-90-AT2LR     | 2 way     | 776427-1* |
| CI08-90-AT3LP | CIH08-90-AT3LP     | 3 way     | 776523-1* |
| CI08-90-AT3LR | CIH08-90-AT3LR     | 3 way     | 776523-1* |
| CI08-90-AT4LP | CIH08-90-AT4LP     | 4 way     | 776487-1* |
| CI08-90-AT4LR | CIH08-90-AT4LR     | 4 way     | 776487-1* |
| CI08-90-AT6LP | CIH08-90-AT6LP     | 6 way     | 776433-1* |
| CI08-90-AT6LR | CIH08-90-AT6LR     | 6 way     | 776433-1* |



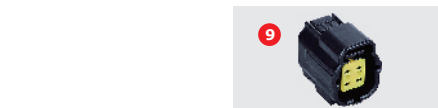
TE AMPSEAL 16 90°

| Part no.      | Tempguard Part no. | Interface | Connector |
|---------------|--------------------|-----------|-----------|
| CI12-90-AT2LP | CIH12-90-AT2LP     | 2 way     | 776427-1* |
| CI12-90-AT2LR | -                  | 2 way     | 776427-1* |
| CI12-90-AT3LP | CIH12-90-AT3LP     | 3 way     | 776523-1* |
| CI12-90-AT3LR | CIH12-90-AT3LR     | 3 way     | 776523-1* |
| CI12-90-AT4LP | -                  | 4 way     | 776487-1* |
| CI12-90-AT4LR | -                  | 4 way     | 776487-1* |
| CI12-90-AT6LP | CI12-90-AT6LP      | 6 way     | 776433-1* |
| CI12-90-AT6LR | -                  | 6 way     | 776433-1* |
| CI16-90-AT4LP | -                  | 4 way     | 776487-1* |
| CI16-90-AT4LR | -                  | 4 way     | 776487-1* |
| CI16-90-AT6LP | -                  | 6 way     | 776433-1* |
| CI16-90-AT6LR | -                  | 6 way     | 776433-1* |



TE Econoseal 90°

| Part no.     | Tempguard Part no. | Interface | Connector |
|--------------|--------------------|-----------|-----------|
| CI08-90-ES2P | -                  | 2 way     | 174352-2  |
| CI10-90-ES2P | -                  | 2 way     | 174352-2  |
| CI12-90-ES2P | -                  | 2 way     | 174352-2  |
| CI08-90-ES3P | -                  | 3 way     | 2822390-1 |
| CI10-90-ES3P | -                  | 3 way     | 2822390-1 |
| CI12-90-ES3P | -                  | 3 way     | 2822390-1 |
| CI10-90-ES4P | -                  | 4 way     | 174259-2  |
| CI12-90-ES4P | -                  | 4 way     | 174259-2  |
| CI16-90-ES4P | -                  | 4 way     | 174259-2  |



TE Econoseal 90°

| Part no.     | Tempguard Part no. | Interface | Connector |
|--------------|--------------------|-----------|-----------|
| CI08-90-ES2R | -                  | 2 way     | 174354-2  |
| CI10-90-ES2R | -                  | 2 way     | 174354-2  |
| CI12-90-ES2R | -                  | 2 way     | 174354-2  |
| CI08-90-ES3R | -                  | 3 way     | 2822390-1 |
| CI10-90-ES3R | -                  | 3 way     | 2822390-1 |
| CI12-90-ES3R | -                  | 3 way     | 2822390-1 |
| CI10-90-ES4R | -                  | 4 way     | 174259-2  |
| CI12-90-ES4R | -                  | 4 way     | 174259-2  |
| CI16-90-ES4R | -                  | 4 way     | 174259-2  |



TE Econoseal

| Part no.  | Tempguard Part no. | Interface | Connector |
|-----------|--------------------|-----------|-----------|
| CI08-ES2P | -                  | 2 way     | 174354-2  |
| CI08-ES3P | -                  | 3 way     | 2822390-1 |
| CI08-ES4P | -                  | 4 way     | 174257-2  |
| CI10-ES2R | -                  | 2 way     | 174354-2  |
| CI08-ES3R | -                  | 3 way     | 174257-2  |
| CI10-ES4R | -                  | 4 way     | 174259-2  |

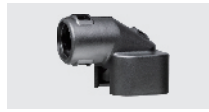
## CONNECTOR KEY:

- |                                  |                       |                             |                                |                      |
|----------------------------------|-----------------------|-----------------------------|--------------------------------|----------------------|
| 1 TE AMP Superseal               | 5 TE AMPSEAL 16       | 10 TE/Deutsch-DT Series     | 14 FCI Automotive Apex 2.8     | 18 Aptive Series 90° |
| 2 TE AMP Superseal 90°           | 6 7 TE AMPSEAL 16 90° | 11 TE/Deutsch-DT Series 90° | 15 FCI Automotive Apex 2.8 90° | 18 Kostal            |
| 3 TE AMP Junior & Mini Timer     | 8 TE Econoseal        | 12 TE/Deutsch-DRC50 Series  | 15 Bosch Compact               | 19 Kostal Kostal 90° |
| 4 TE AMP Junior & Mini Timer 90° | 9 TE Econoseal 90°    | 13 Heavy Duty Series        | 16 Bosch Compact 90°           | 20 Kostal SLK Series |
|                                  |                       |                             | 17 Aptive Series               | 21 Sumitomo          |



TE/Deutsch-DT Series 90°

| Part no.     | Tempguard Part no. | Interface | Connector      |
|--------------|--------------------|-----------|----------------|
| CI08-90-DT2  | CIH08-90-DT2       | 2 way     | DT06-2S-E005   |
| CI08-90-DT3  | CIH08-90-DT3       | 3 way     | DT06-3S-E005   |
| CI08-90-DT4  | CIH08-90-DT4       | 4 way     | DT06-4S-E005   |
| CI08-90-DT6  | CIH08-90-DT6       | 6 way     | DT06-6S-E005   |
| CI12-90-DT2  | CIH12-90-DT2       | 2 way     | DT06-2S-E005   |
| CI12-90-DT3  | CIH12-90-DT3       | 3 way     | DT06-3S-E005   |
| CI12-90-DT4  | CIH12-90-DT4       | 4 way     | DT06-4S-E005   |
| CI12-90-DT6  | CIH12-90-DT6       | 6 way     | DT06-6S-E005   |
| CI12-90-DT8  | CIH12-90-DT8       | 8 way     | DT06-8S-E005   |
| CI12-90-DT12 | CIH12-90-DT12      | 12 way    | DT06-12SA-E005 |
| CI16-90-DT8  | CIH16-90-DT8       | 8 way     | DT06-8SA-E005  |
| CI16-90-DT12 | CIH16-90-DT12      | 12 way    | DT06-12SA-E005 |



TE/Deutsch-DTP04 Series 90°

| Part no.      | Tempguard Part no. | Interface | Connector     |
|---------------|--------------------|-----------|---------------|
| CI12-90-DTP04 | -                  | -         | DTP06-4S-CE02 |
| 16-90-DTP04   | -                  | -         | DTP06-4S-E004 |

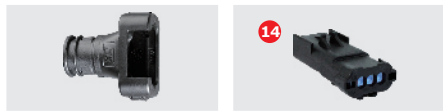


TE/Deutsch-DRC50 Series

| Part no.       | Tempguard Part no. | Interface | Connector   |
|----------------|--------------------|-----------|-------------|
| CI122812-DRC50 | -                  | -         | DRC26-50S0* |
| CI201220-DRC50 | -                  | -         | DRC26-50S0* |
| CI202820-DRC50 | -                  | -         | DRC26-50S0* |
| CI251225-DRC50 | -                  | -         | DRC26-50S0* |
| CI252825-DRC50 | -                  | -         | DRC26-50S0* |

Heavy Duty Series

| Part no.         | Tempguard Part no. | Interface | Connector |
|------------------|--------------------|-----------|-----------|
| CI08-HDSCS-B     | -                  | -         | HDRCS-B   |
| CI12-HDSCS-B     | -                  | -         | HDRCS-B   |
| CI20-HDSCS-E     | -                  | -         | HDRCS-E   |
| CI20-F90-HDSCS-E | -                  | -         | HDRCS-E   |



FCI Automotive Apex 2.8

| Part no.   | Tempguard Part no. | Interface | Connector   |
|------------|--------------------|-----------|-------------|
| CI08-FCI02 | CIH08-FCI02        | 2 way     | 54200210    |
| CI08-FCI03 | CIH08-FCI03        | 3 way     | 54200312    |
| CI08-FCI04 | CIH08-FCI04        | 4 way     | 54200413    |
| CI12-FCI02 | CIH12-FCI02        | 2 way     | 54200210    |
| CI12-FCI03 | CIH12-FCI03        | 3 way     | 54200312    |
| CI12-FCI04 | CIH12-FCI04        | 4 way     | 54200413    |
| CI12-FCI14 | CIH12-FCI14        | 14 way    | 54201415    |
| CI16-FCI14 | CIH16-FCI14        | 14 way    | 54201415    |
| 16-FCI14   | H16-FCI14          | 14 way    | 54201415    |
| CI16-FCI06 | CIH16-FCI06        | 6 way     | 54200612    |
| CI17-FCI10 | CIH17-FCI10        | 10 way    | 54201016    |
| CI25-FCI50 | -                  | 50 way    | DTB 5000 MH |



FCI Automotive Apex 2.8 90°

| Part no.      | Tempguard Part no. | Interface | Connector |
|---------------|--------------------|-----------|-----------|
| CI08-90-FCS02 | CIH08-90-FSC02     | 2 way     | 54200210  |
| CI08-90-FSI02 | CIH08-90-FSI02     | 2 way     | 54200210  |
| CI08-90-FSI03 | CIH08-90-FSI03     | 3 way     | 54200312  |
| CI08-90-FSI04 | CIH08-90-FSI04     | 4 way     | 54200413  |
| CI12-90-FCI02 | CIH12-90-FCI02     | 2 way     | 54200210  |
| CI12-90-FCI03 | CIH12-90-FCI03     | 3 way     | 54200312  |
| CI12-90-FCI04 | CIH12-90-FCI04     | 4 way     | 54201413  |
| CI08-90-FSI04 | CIH08-90-FSI04     | 14 way    | 54201415  |
| CI12-90-FCI14 | CIH12-90-FCI14     | 14 way    | 54201415  |
| CI16-90-FCI14 | CIH16-90-FCI14     | 14 way    | 54201415  |
| CI20-90-FCI14 | CIH20-90-FCI14     | 14 way    | 54201415  |



Aptiv Series 90°

| Part no.      | Tempguard Part no. | Interface | Connector          |
|---------------|--------------------|-----------|--------------------|
| CI08-90-DE001 | -                  | 2 way     | 13532244           |
| CI08-90-MP2   | -                  | 2 way     | 12162194           |
| CI08-90-MP3   | -                  | 3 way     | 12129615/12110293* |
| CI08-90-MMP2  | -                  | 2 way     | 12162852           |
| CI12-90-MP2   | -                  | 2 way     | 12162194           |
| CI12-90-MP3   | -                  | 3 way     | 12129615/12110293* |
| CI12-90-MMP2  | -                  | 2 way     | 12162852           |
| CI08-90-WP2   | -                  | 2 way     | 12052613/12065863* |
| CI12-90-WP2   | -                  | 2 way     | 1205613/120565863* |
| CI08-90-PTD2  | -                  | 2 way     | 15397337/15397327  |
| CI12-90-PTD2  | -                  | 2 way     | 15397337/15397327  |
| CI08-90-GT153 | -                  | 3 way     | 15336121           |
| CI12-90-GT153 | -                  | 3 way     | 15336121           |
| CI12-90-GT284 | -                  | 3 way     | 15326631           |
| CI16-90-GT284 | -                  | 3 way     | 15326631           |

\*Both connectors need to be fitted with TPA 1205 2845.



Bosch Compact

| Part no.  | Tempguard Part no. | Interface | Connector      |
|-----------|--------------------|-----------|----------------|
| CI08-BC2  | CIH08-BC2          | 2 way     | 1 928 403 137* |
| CI08-BC3  | CIH08-BC3          | 3 way     | 1 928 403 110* |
| CI08-BC4  | CIH08-BC4          | 4 way     | 1 928 403 112* |
| CI12-BC2  | CIH12-BC2          | 2 way     | 1 928 403 137* |
| CI12-BC3  | CIH12-BC3          | 3 way     | 1 928 403 110* |
| CI12-BC4  | CIH12-BC4          | 4 way     | 1 928 403 112* |
| CI28-BC40 | CIH28-BC40         | 40 way    | 1 928 404 777* |



Bosch Compact 90°

| Part no.    | Tempguard Part no. | Interface | Connector      |
|-------------|--------------------|-----------|----------------|
| CI08-90-BC2 | CIH08-90-BC2       | 2 way     | 1 928 403 137* |
| CI08-90-BC3 | CIH08-90-BC3       | 3 way     | 1 928 403 110* |
| CI08-90-BC4 | CIH08-90-BC4       | 4 way     | 1 928 403 112* |
| CI12-90-BC2 | CIH12-90-BC2       | 2 way     | 1 928 403 137* |
| CI12-90-BC3 | CIH12-90-BC3       | 3 way     | 1 928 403 110* |
| CI12-90-BC4 | CIH12-90-BC4       | 4 way     | 1 928 403 112* |



Aptiv Series

| Part no.   | Tempguard Part no. | Interface | Connector         |
|------------|--------------------|-----------|-------------------|
| CI08-DE001 | -                  | 3 way     | 13532244          |
| CI08-MP2   | -                  | 2 way     | 12162194          |
| CI08-MP3   | -                  | 3 way     | 15300003          |
| CI08-MMP2  | -                  | 2 way     | 12162852          |
| CI08-WP2   | -                  | 2 way     | 12015792          |
| CI08-TPD2  | -                  | 2 way     | 15397337/15397327 |
| CI08-GT153 | -                  | 3 way     | 15336121          |
| 16-GT284   | -                  | 4 way     | 135214559         |



Kostal

| Part no.     | Tempguard Part no. | Interface | Connector |
|--------------|--------------------|-----------|-----------|
| CI16-LK20    | -                  | 20 way    | 9430010   |
| PG21-LK20    | -                  | 20 way    | 9430010   |
| CI08-SLK28-2 | -                  | 28 way    | 9441391   |
| CI08-SLK28-3 | -                  | 28 way    | 9441391   |

Kostal 90°

| Part no.     | Tempguard Part no. | Interface | Connector |
|--------------|--------------------|-----------|-----------|
| CI08-90-K2C  | -                  | 2 way     | 9432291   |
| CI08-90-K3C  | -                  | 3 way     | 9302231   |
| CI12-90-K2C  | -                  | 2 way     | 9442291   |
| CI12-90-K3C  | -                  | 3 way     | 9302231   |
| CI12-90-K10C | -                  | 10 way    | 9331031   |



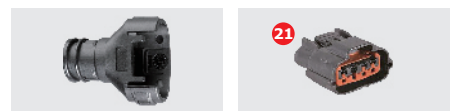
Kostal SLK Series 90°

| Part no.        | Tempguard Part no. | Interface | Connector |
|-----------------|--------------------|-----------|-----------|
| CI08-90-SLK28-2 | -                  | 28 way    | 9441391   |
| CI08-90-SLK28-3 | -                  | 28 way    | 9441391   |
| CI08-90-SLK28-4 | -                  | 28 way    | 9441391   |



Millflex ABS

| Part no. | Tempguard Part no. | Interface | Connector |
|----------|--------------------|-----------|-----------|
| CI08-MF2 | -                  | 2 way     | -         |
| CI10-MF2 | -                  | 2 way     | -         |
| CI12-MF2 | -                  | 2 way     | -         |



Sumitomo

| Part no.      | Tempguard Part no. | Interface | Connector   |
|---------------|--------------------|-----------|-------------|
| CI08-SU4      | -                  | 4 way     | 6098-0144*  |
| CI08-90-SU4   | -                  | 4 way     | 6098-0144*  |
| CI08-X2SU4    | -                  | 4 way     | 6195-0030** |
| CI08-90-X2SU4 | -                  | 4 way     | 6195-0030** |
| CI12-SU10     | -                  | 10 way    | 6189-1134   |

\*Original connector.

\*\*New version of connector.



DIN 72585

| Part no.   | Tempguard Part no. | Interface | Connector  |
|------------|--------------------|-----------|------------|
| CI08-72585 | -                  | 4 way     | 1-967325-1 |



# 車用電線保護管



## Conduits

| Conduit Type           | NC              | NCV             | CTPA        | HNC             | CPC             | PP            | DSPP                   | PKC                   | HTC                   |
|------------------------|-----------------|-----------------|-------------|-----------------|-----------------|---------------|------------------------|-----------------------|-----------------------|
| Conduit material       | Polyamide 6     | FR Polyamide 6  | Polyamide 6 | Polyamide 12    | FR Co-Polyester | Polypropylene | Modified Polypropylene | Polyether-etherketone | Modified Co-Polyester |
| Conduit weight         | Standard weight | Standard weight | Lightweight | Standard weight | Medium weight   | Medium weight | Medium weight          | Standard weight       | Medium weight         |
| Slit version available | •               | –               | •           | –               | –               | •             | Slit only              | –                     | –                     |

## Characteristics

| Temperature Range     |        |        |        |        |        |        |        |        |        |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Long term static min. | -40°C  | -40°C  | -40°C  | -45°C  | -50°C  | -20°C  | -20°C  | -60°C  | -45°C  |
| Long term static max. | +120°C | +120°C | +120°C | +105°C | +135°C | +90°C  | +90°C  | +260°C | +175°C |
| Maximum temperature   | +150°C | +150°C | +150°C | +120°C | +175°C | +105°C | +105°C | +300°C | 190°C  |
| UV Resistance         | ■■■■■  | ■■■■■  | ■■■■■  | ■■■■■  | ■■■■■  | ■■■□   | ■■■■■  | ■■■■■  | ■■■■■  |
| Flexibility           | ■■■■□  | ■■■■□  | ■■■■□  | ■■■■■  | ■■■■■  | ■■■■□  | ■■■■□  | ■■■■□  | ■■■■■  |
| Fatigue life          | ■■■■□  | ■■■■□  | ■■■■□  | ■■■■■  | ■■■■■  | ■■■■□  | ■■■■□  | ■■■■■  | ■■■■■  |
| Ext. wear resistance  | ■■■■■  | ■■■■■  | ■■■■■  | ■■■■□  | ■■■■□  | ■■■■□  | ■■■■□  | ■■■■■  | ■■■■□  |
| Self extinguishing    | •      | •      | •      | •      | •      | –      | •      | •      | •      |
| Halogen free          | •      | •      | •      | •      | •      | •      | •      | •      | •      |
| Low smoke toxicity    | •      | •      | •      | •      | •      | –      | –      | •      | •      |

## Approvals

|                   |   |   |   |   |   |   |   |   |   |
|-------------------|---|---|---|---|---|---|---|---|---|
| CE                | • | • | • | • | • | • | • | • | • |
| UL94 V0           | – | • | – | – | – | – | – | • | – |
| UL94 V2           | – | – | – | – | • | – | • | – | – |
| UL94 HB           | • | – | • | • | – | • | – | – | • |
| RoHS Compliant    | • | • | • | • | • | • | • | • | • |
| ADR Approved      | • | – | – | – | – | – | – | – | – |
| (ELV) EU200/53/EC | • | • | • | • | • | • | • | • | • |

## Chemical resistance\*

|                               |   |   |   |   |    |    |    |   |   |
|-------------------------------|---|---|---|---|----|----|----|---|---|
| IRM 903 (ASTM Oil No.2)       | S | S | S | S | S  | S  | S  | S | S |
| Diesel Oil                    | S | S | S | S | S  | S  | S  | S | S |
| Ethylene Glycol (Anti-freeze) | S | S | S | S | S  | S  | S  | S | S |
| Lubricating Oil               | S | S | S | S | S  | S  | S  | S | S |
| Methyl Alcohol                | L | L | L | S | S  | S  | S  | S | S |
| Parafin Oil                   | S | S | S | S | S  | S  | S  | S | S |
| Petrol                        | S | S | S | S | S  | S  | S  | S | S |
| Sodium Chloride               | S | S | S | S | S  | S  | S  | S | S |
| Sodium Hydroxide (10%)        | S | S | S | S | S  | S  | S  | S | S |
| Transformer Oil               | S | S | S | S | S  | S  | S  | S | S |
| Urea                          | S | S | S | S | NT | NT | NT | S | S |
| Vegetable Oil                 | S | S | S | S | S  | S  | S  | S | S |
| Sea (Water)                   | S | S | S | S | S  | S  | S  | S | S |

Key: S = Suitable / L = Limited Suitability / U = Unsustainable / NT = Not Tested / Maximum Performance = ■■■■■ \*All chemicals tested for resistance at 23°C

