

1 Datasheet W-TEC 15K STI/BU-90°R 6x1,5 DA4



source

destination

xxxxx (see order no:) stands for the length in cm.


2 Application

Cable for the connection of asynchronous motors and 3-phase consumer's with 2 Signalpins

3 General component properties

3.1 Cataloguing

| DESIGNATION | VALUE | UNIT |
|-------------------------------------|-------------|------|
| product designation of manufacturer | W-TEC 15 | |
| MANUFACTURER ARTICLE NUMBER | 1146378 | |
| Product utilization of the cable | PERFORMANCE | |
| eCl@ss 9.0 | 27-06-04-90 | |
| country of origin | DE | |

| | | | | | | |
|----------------|------------------------|-------|---|---------------------------------|------------------|------|
| 27.10.2023-RSP | Adaptation Eclass | 8.0 |  | UL- Identification | Order no. | |
| 23.08.2023-RSP | CSA.CCN ** | 7.0 | | W-TEC 15K-GCS-RCS-61616-XX-TX | 1146378-xxxxx | |
| 03.08.2023-RSP | New: IEC 61076-2-116 | 6.0 | | Designation | Datasheet | |
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3.2 Electrical properties

| DESIGNATION | VALUE | UNIT |
|--|------------------------------------|-----------|
| Rated value of current | 13 | A |
| Rated current auxiliary wires | 10 | A |
| rated voltage | 600 | V AC |
| Rated voltage auxiliary wires | 250 | V AC / DC |
| rated impulse voltage | 6 | kV |
| shield | No | |
| Design of ground wire | according to VDE 0627 | |
| Overvoltage category according to DIN EN 60664-1 | 3 | |
| Plugging under voltage according to DIN EN 61984 | No | |
| degree of contamination | 3 | |
| earthed conductor present | yes (PE) leading on pin side 1,2mm | |
| neutral conductor | No | |
| Degree of protection by encapsulation according to IEC 60529 | No | |
| Application standards | DIN EN 61984 / IEC 61076-2-116 | |

If the plug connection is disconnected for an indefinite period of time from a exposed to industrial atmospheres, the contact chamber is equipped with a cover cap to protect against pollution.

*To determine max. load currents, deratings for used connection conductor cross-sections as well as reduction factors for conductors, cables and lines in the electrical equipment of machines according to DIN EN 60204-1 must be taken into account.

3.3 Weights

| DESIGNATION | VALUE | UNIT |
|------------------|-------|------|
| Connection 1 | 138 | g/m |
| Connector Source | 20 | g |
| Connector Target | 30 | g |


3.4 Approval

| DESIGNATION | VALUE | UNIT |
|-----------------|-------------------------------|------|
| UL.CCN ** | PVVA.E486020 | |
| CSA.CCN ** | PVVA7.E486020 | |
| CCC | No | |
| GOST-R | No | |
| CE Nomenclature | W-TEC 15K-GCS-RCS-61616-XX-TX | |

3.4.1 Approvals Supplements

** Suitable For Use On a Circuit Capable Of Delivering Not More Than 5,000 rms Symmetrical Amperes, 600V Maximum.

When Protected by Time Delay (See Table Below) Class Fuses:

| | | | | | | |
|----------------|------------------------|-------|---|---------------------------------|------------------|------|
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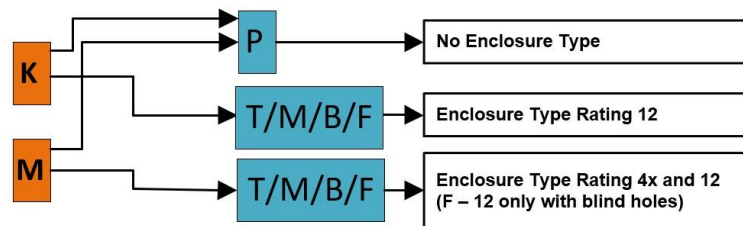
| Cat. No(s). | Time Delay (TD) /Non-time delay (NTD) | Fuse Class | Fuse Current Rating (A) | SCCR (kA) | Voltage V AC |
|----------------|---------------------------------------|------------|-------------------------|-----------|--------------|
| All rated 13 A | TD | RK5 | 25 | 5 | 600 |
| | TD | J | 60 | 50 | 600 |
| | TD | CC | 30 | 50 | 600 |
| All rated 16 A | TD | RK5 | 35 | 5 | 600 |
| | TD | J | 60 | 50 | 600 |
| | TD | CC | 30 | 50 | 600 |

Suitable For Use On A Circuit Capable Of Delivering Not More Than 50kA rms Symmetrical Amperes, 480 Vac Maximum, When Protcted By A Circuit Breaker Rated Not More Than 16A, Having An Interrupting Rating Not Less Than 50kA rms Symmetrical Amperes, 480Vac Maximum.

Circuit Breakers:

| Cat. No(s). | Model/Type | Manufacturer / UL File | Current Rating (A) | SCCR (kA) | Voltage V AC |
|-------------|------------|------------------------|--------------------|-----------|--------------|
| All | Any | Any / Any | 16 | 50 | 480Y/277 Vac |


X - T E C 1 5 - - - X X X ...



X - T E C 1 5 - X X X - - - ...

3.5 Thermal properties

| DESIGNATION | VALUE | UNIT |
|---|-------|------|
| min. permissible cable outside temperature, when moving | -20 | °C |
| max. permissible cable outside temperature, when moving | 60 | °C |
| min. permissible cable outside temperature, fixed laid | -20 | °C |
| max. permissible cable outside temperature, fixed laid | 70 | °C |

| | | | | | |
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3.6 UL Ratings

| DESIGNATION | VALUE | UNIT |
|---|-------|------|
| Reference to UL standard | 2237 | |
| cross section of the wire (AWG) | 16 | AWG |
| Auxiliary wires Wire gauge | 16 | AWG |
| Encl. Type (UL 50/CSA C22.2 NO.94.1-15) | 12 | |
| Flame resist. of the plug head (UL 94) | HB | |
| AWM Style of cable | 21223 | |

3.7 Other features

| DESIGNATION | VALUE | UNIT |
|--|------------------------------------|------|
| RoHS compliant | 2011/65/EU under exception III 6c | |
| REACH SVHC substances | Lead (CAS 7439-92-1, EC 231-100-4) | |
| halogen-free | Yes | |
| Oil-resistant in accordance EN 60811-2-1 | Yes | |
| flame-resistant | Yes | |

The material of the housing-encapsulation is plastic and has a good resistance to chemicals and oil. If aggressive media are used, the material resistance must be checked in relation to the application. Further details on request.

| | | | | | | |
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4 General structure

4.1 Allocation plan




4.2 Cable

4.2.1 Cable construction

| DESIGNATION | VALUE | UNIT |
|--|----------------------------------|-----------------|
| Structure Line | 6 x 1,5mm ² | |
| Number of wires | 4 | |
| conductor cross-section | 1,5 | mm ² |
| max. main core diameter incl. insulation D | 2,4 | mm |
| Auxiliary wires Number | 2 | |
| Auxiliary wires Wire gauge | 1,5 | mm ² |
| max. auxiliary core diameter incl. insulation D | 2,4 | mm |
| outer shield | No | |
| internal shield | No | |
| color of the outer sheath | black similar to RAL 9005 | |
| material of the sheath | PUR | |
| coat colour main wires | black/green-yellow | |
| coat colour auxiliary wires | black | |
| Identification of main wires | consecutive number imprint (1-3) | |
| Identification of auxiliary wires | consecutive number imprint (4-5) | |
| Core insulation material | TPM | |
| outside diameter | 9,0 ±0,3 | mm |
| insulation resistance | >= 100 | MΩm/km |

4.2.2 Mechanical properties

| DESIGNATION | VALUE | UNIT |
|------------------------------------|----------|-------|
| installation type | flexible | |
| dynamic value | DA4 | |
| Minimum bending radius moves | 10 | xD mm |
| Minimum bending radius fixed | 5 | xD mm |
| Max. permissible torsion stress | ± 180 | °/m |

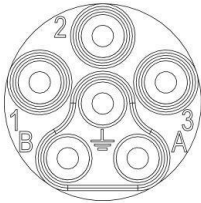
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5 Construction Source

5.1 Pole diagram Source



5.2 Construction Source

| DESIGNATION | VALUE | UNIT |
|--|----------------------------------|---------------|
| Size of construction | X-TEC 15 | |
| locking type | Quick release fastener | |
| Type of plug-in contact, head 1 | free plug-in pin | |
| Number of poles | 6 | |
| Arrangement of the cable lead-in, head 1 | straight | |
| Material Seals | NBR | |
| production type | overmoulded | |
| Housing material | Technomelt | |
| Material Insulating body | PA 6.6 | |
| Design of the electrical connection (head 1) | Crimp connection | |
| Material Contacts | Copper alloy, hard silver plated | |
| contact resistance | <3 | mOhm |
| Mechanical life Contacts | 500 | mating cycles |
| degree of protection | IP66/67 | |

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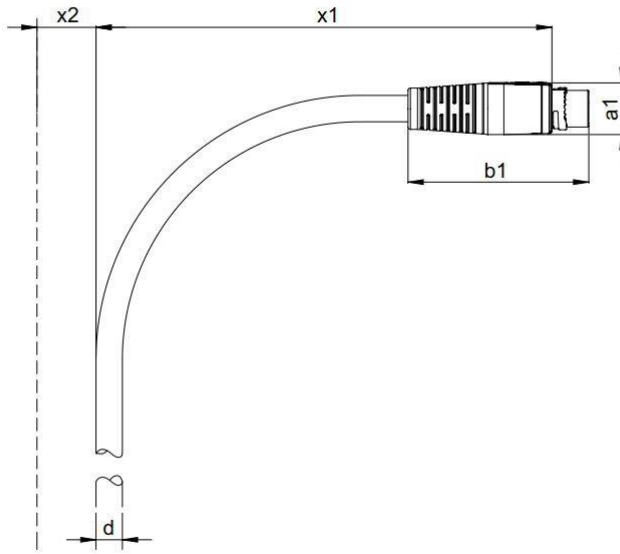
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5.3 Space requirement source

| DESIGNATION | VALUE | UNIT |
|--|-------|------|
| (a1) max. plug diameter | 22 | mm |
| (b1) Plug length | 76 | mm |
| (x1) in mated condition | 152,1 | mm |
| (x2) additional distance to interfering contour plugged in | 18 | mm |

5.4 Schematic diagram Source



| | | | | | | |
|----------------|------------------------|-------|---|---------------------------------|------------------|------|
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6 Construction Destination

6.1 Pole diagram Target



6.2 Construction Destination

| DESIGNATION | VALUE | UNIT |
|--|----------------------------------|---------------|
| Size of construction | X-TEC 15 | |
| locking type | Quick release fastener | |
| Type of plug-in contact (head 2) | free plug-in socket | |
| Number of poles | 6 | |
| arrangement of the cable lead-in (head 2) | angled 90° R | |
| Material Seals | NBR | |
| production type | overmoulded | |
| Housing material | Technomelt | |
| Material Insulating body | PA 6.6 | |
| Design of the electrical connection (head 2) | Crimp connection | |
| Material Contacts | Copper alloy, hard silver plated | |
| contact resistance | <3 | mOhm |
| Mechanical life Contacts | 500 | mating cycles |
| degree of protection | IP66/67 | |

| | | | | | | |
|----------------|------------------------|-------|---|---------------------------------|------------------|------|
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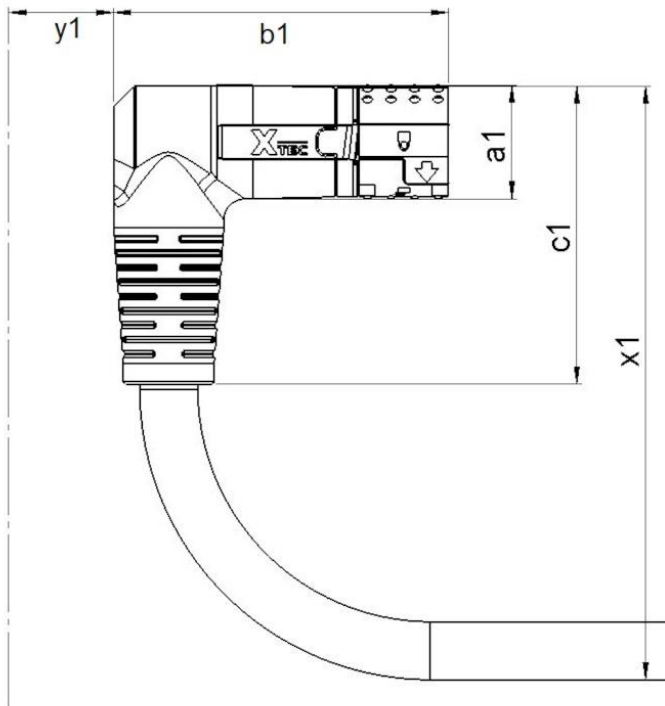
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6.3 Space requirement target

| DESIGNATION | VALUE | UNIT |
|--|-------|------|
| (a1) max. plug diameter | 22 | mm |
| (b1) Plug length | 64 | mm |
| (c1) Plug width | 57 | mm |
| (x1) in mated condition | 150 | mm |
| (y1) additional distance to interfering contour plugged in | 18 | mm |

6.4 Schematic diagram Target

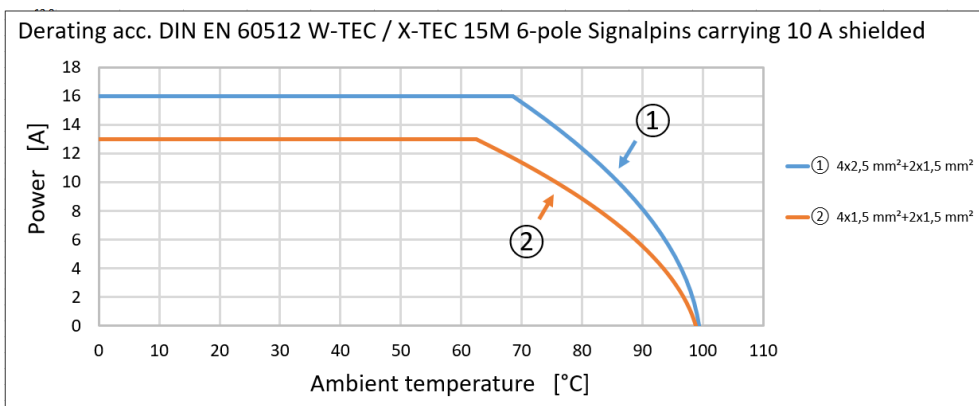
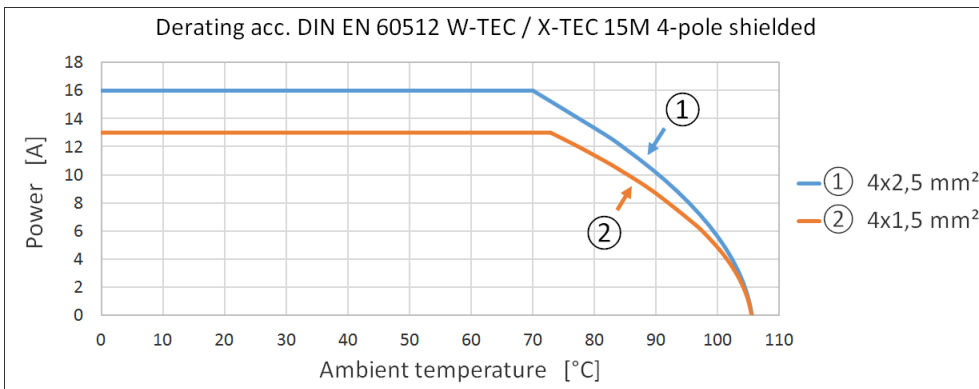
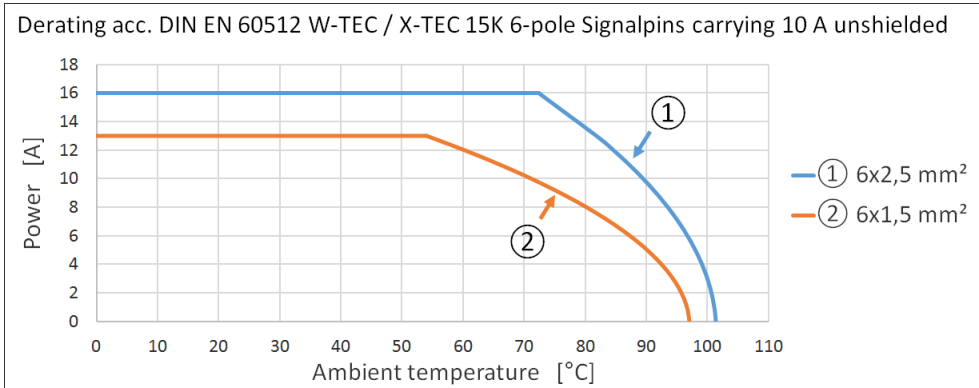



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7 Derating



| | | | | | | |
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8 Appendix Nomenclature

W - T E C 1 5 K - G C S - G C S - 6 1 4 1 4 - X X - T X -

Family designation

- W-TEC
 - Cable Assemblies
 - Cable Fittings

Connector Size

- 15
- 12

Connector type

- K – plastic connector
- M – metal connector

Male/Female contactor type

- G – straight
- F – angled left
- R – Angled right
- X – No male/female connector

Male/Female contact type

- C – crimp
- X – No male/female connector
- T – No Male/female connector, additional terminal/ferrule crimped to wire ends, resistance welded wire ends, single wire lengths may be varying (Female Panel mounted)

Male/Female contact plating

- S – Silver
- X – No male/female connector

Cable Screen

- S – shielded cable
- X – cable not shielded

Cable Type

- T – TPU
- P – PVC (applicable for cable not shielded variants only)

Cable gland size

- XX – no cable gland

Signal contact terminal cross-section

- 14 – AWG 14
- 16 – AWG 16
- XX – no signal contacts

Power contact terminal cross-section

- 14 – AWG 14
- 16 – AWG 16

Number of poles

- 4 – 4 poles
- 6 – 6 poles

1 1 1 9 8 8 7 - 0 0 1 0 0

internal description, where xxxxxx can be 7 digit alphanumeric


internal description, where xxxxxx can be 7 digit alphanumeric

- Ferrules with insulating collar
- Uninsulated ferrules
- Terminal Connectors,
- Uninsulated Terminal Connectors,
- dust caps

and additional features which may be

- welded/compacted stranded wire ends
- additional stripping of wire
- additional stripping of cord isolation
- length difference between power, ground and signal wires

five digit number describing cable length in cm

| | | | | | | |
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