

## Motor protection – 7SK82

Housing: 1/3 x 19", Flush mounting

### Base function with hardware standard variant <sup>1)</sup>

T1: 1/3, 11 BI, 9 BO (8S, 1 Life contact), 4CT

T2: 1/3, 23 BI, 16 BO (15S, 1 Life contact), 4CT

T4: 1/3, 11 BI, 9 BO (8S, 1 Life contact), 4CT, 4VT

T5: 1/3, 23 BI, 16 BO (15S, 1 Life contact), 4CT, 4VT

### Application templates/ Function points <sup>2)</sup>

4\*1 (0 function points)

4\*1, 4\*V (40 function points)

### Warranty extension

Price per extra year of warranty

### Communication

Integrated Ethernet interface RJ45 for DIGSI

Integrated Ethernet interface RJ45 for DIGSI, IEC 61850 incl. GOOSE

SIPROTEC 5 Plug-In Modules

### Display

Large display

### Extra function points

Price per function point

1) Abbreviations:

Housing width in 19" fragments, with small display, with 16 LEDs

BI: Binary inputs

BO: Binary outputs

S: Standard relays, F: Fast relays

HS: High-speed relays, P: Power relays.

2) Available function scope acc. to catalog or function points calculator in the order configurator.

# SIPROTEC 5 - Arc Protection

Product description	Order No.
<b>Arc Protection</b>	(Short Product Code)
Arc Protection Plugin Module (ARC-CD-3FO)	<b>P1Z1966</b>
Point Sensor 3 m	<b>P1X19</b>
Point Sensor 4 m	<b>P1X28</b>
Point Sensor 5 m	<b>P1X37</b>
Point Sensor 10 m	<b>P1X46</b>
Point Sensor 15 m	<b>P1X55</b>
Point Sensor 20 m	<b>P1X64</b>
Point Sensor 35 m	<b>P1X82</b>

# SIPROTEC 5 - Interfaces

Product description	Order No. <sup>1)</sup>
<b><u>Plug-in modules for System Interface</u></b>	(Short Product Code)
<b>USART-AB-1EL: 1 x electric</b> 1 x electrical RS485, applicable for serial protocols, e.g. IEC60870-5-103, DNP3, RTD-unit and 20 mA unit	<b>P1Z79</b>
<b>USART-AC-2EL: 2 x electric</b> 2 x electrical RS485, applicable for serial protocols, e.g. IEC60870-5-103, DNP3, RTD-unit and 20 mA unit	<b>P1Z437</b>
<b>USART-AD-1FO: 1 x opt. 1.5 km</b> 1 x optic serial, 820 nm, ST-connector, 1.5 km over 62,5/125 µm multimode - fiber applicable for IEC 60870-5-103 (extended), DNP 3 serial and Protection interface (Sync. HDLC, IEEE C37.94)	<b>P1Z62</b>
<b>USART-AE-2FO: 2 x opt. 1.5 km</b> 2 x optic serial, 820 nm, ST-connector, 1.5 km over 62,5/125 µm multimode - fiber applicable for IEC 60870-5-103 (extended), DNP 3 serial and Protection interface (Sync. HDLC, IEEE C37.94)	<b>P1Z48</b>
<b>ETH-BA-2EL: 2 x electrical Ethernet interfaces</b> RJ45 plug, 100 Mbit/s integrated switch (for RSTP, PRP, HSR), applicable for IEC 61850, DNP3 TCP, IEC 60870-5-104 and IEEE C37.118 (Syncho-phasor)	<b>P1Z55</b>
<b>ETH-BB-2FO: 2 x optical Ethernet interfaces</b> LC-Duplex connector, 100 Mbit/s, integrated switch (for RSTP, PRP, HSR), applicable for IEC 61850, DNP3 TCP, IEC 60870-5-104 and IEEE C37.118 (Syncho-phasor)	<b>P1Z390</b>
<b><u>Plug-in module for various applications</u></b>	
<b>ANAI-CA-4EL: 4x 20 mA</b> ANAI-CA-4EL: 4 Analog inputs 20 mA, screw terminals	<b>P1Z1137</b>

1) The below-mentioned Ordering No. is applicable for a warranty period of 5 years. For extended warranty, please select the appropriate Ordering No. (Short product code) by using the online configurator.

**Plug-in modules for Protection Interface**Ordering No. <sup>5)</sup>  
(Short Product Code)

<b>USART-AF-1LDFO: 1 x opt. 24 km (single-mode) / 4 km (multimode)</b> 1 x optic serial, 1300 nm, LC duplex connector, 24 km over 9/125 µm singlemode – fiber, 4 km over 62,5/125 µm multimode - fiber applicable for Protection interface	<b>P1Z758</b>
<b>USART-AW-2LDFO: 2x opt. 24 km (single-mode) / 4 km (multimode)</b> 2 x optic serial, 1300 nm, LC duplex connector, 24 km over 9/125 µm singlemode – fiber, 4 km over 62,5/125 µm multimode - fiber applicable for Protection interface	<b>P1Z772</b>
<b>USART-AG-1LDFO: 1 x opt. 60 km</b> 1 x optic serial, 1300 nm, LC duplex connector, 60 km over 9/125 µm singlemode – fiber applicable for Protection interface	<b>P1Z468</b>
<b>USART-AU-2LDFO: 2 x opt. 60 km</b> 2 x optic serial, 1300 nm, LC duplex connector, 60 km over 9/125 µm singlemode – fiber applicable for Protection interface	<b>P1Z239</b>
<b>USART-AK-1LDFO: 1x opt. 100 km</b> 1 x optic serial, 1550 nm, LC duplex connector, 100 km over 9/125 µm singlemode – fiber applicable for Protection interface	<b>P1Z888</b>
<b>USART-AV-2LDFO: 2 x opt. 100 km</b> 2 x optic serial, 1550 nm, LC duplex connector, 100 km over 9/125 µm singlemode – fiber applicable for Protection interface	<b>P1Z741</b>
<b>USART-AH-1LDFO: 1x opt.,bidir.</b> 1 x optic serial, bidirectional via 1 common fiber, 1300 nm/1550 nm (Tx/Rx), LC simplex connector, 40 km over 9/125 µm singlemode – fiber <sup>1)</sup> applicable for Protection interface	<b>P1Z765</b>
<b>USART-AJ-1LDFO: 1x opt.,bidir.</b> 1 x optic serial, bidirectional via 1 common fiber, 1550 nm/1300 nm (Tx/Rx), LC simplex connector 40 km over 9/125 µm singlemode – fiber <sup>2)</sup> applicable for Protection interface	<b>P1Z1007</b>
<b>USART-AX-2LDFO: 2x opt.,bidir.</b> 2 x optic serial, bidirectional via 1 common fiber, 1300 nm/1550 nm (Tx/Rx), 2 x LC simplex connector, 40 km over 9/125 µm singlemode – fiber <sup>3)</sup> applicable for Protection interface	<b>P1Z802</b>
<b>USART-AY-2LDFO: 2x opt.,bidir.</b> 2 x optic serial, bidirectional via 1 common fiber, 1550 nm/1300 nm (Tx/Rx), 2x LC simplex connector, 40 km over 9/125 µm singlemode – fiber <sup>4)</sup> applicable for Protection interface	<b>P1Z789</b>

**Warranty extension**

price per extra year of warranty (applicable for each plug-in module)

- 1) USART-AH-1LDFO only in conjunction with USART-AJ-1LDFO or USART-AY-2LDFO at the remote end.
- 2) USART-AJ-1LDFO only in conjunction with USART-AH-1LDFO or USART-AX-2LDFO at the remote end.
- 3) USART-AX-2LDFO only in conjunction with USART-AJ-1LDFO or USART-AY-2LDFO at the remote end.
- 4) USART-AY-2LDFO only in conjunction with USART-AH-1LDFO or USART-AX-2LDFO at the remote end.
- 5) The below-mentioned Ordering No. is applicable for a warranty period of 5 years. For extended warranty, please select the appropriate Ordering No. (Short product code) by using the online configurator.