

## STRING CURRENT MONITORING

### 160 / 320

The INGECON® SUN StringControl is a device for measuring each PV generator string current and detecting defective string currents through INGECON® SUN Manager software, INGECON® SUN SCADA and/or other monitoring systems. String currents can be monitored through the RS485, Ethernet Modbus/TCP and GSM/GPRS communication interfaces.

#### Flexibility

Available in models ranging from 16 to 32 inputs and equipped with PV connectors type 4 (standard) or cable glands inlet connections,

#### MAIN FEATURES

- Built to minimize system costs by providing the maximum flexibility.
- Available with RS485, Ethernet or GSM/GPRS communication (optional).
- Available in 16 and 32 input configurations.
- Rated for 1,000 Vdc maximum voltage.
- Simplifies input and output wiring.
- String polarity verifier function.
- Self-powering from DC strings.
- Capability to connect up to 2 strings per input (StringControl 320 models).
- Capability to connect up to 2 DC output cables per polarity.
- IP65 protection rating.
- Maximum protection to corrosion and pollution thanks to the isolating polyester enclosure reinforced with fiberglass.

the INGECON® SUN StringControl provide the maximum flexibility and expandability in system design. The compact and rugged IP65 enclosure is designed for installation in outdoor environments, such as roof-mounted systems and large-scale solar farms.

#### Maximum protection

The INGECON® SUN StringControl intelligent combiner boxes can be equipped with touch-safe DC fuse holders, DC fuses, lightning induced DC surge arresters and load disconnect switch.

#### PROTECTIONS

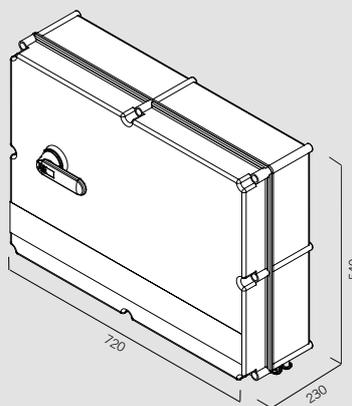
- Up to 16 pairs of DC fuses.
- Lightning induced DC surge arresters, type 2 (optional).
- Lightning induced DC surge arresters, type 1 (optional).
- Manual DC isolating switch (optional).
- DC isolating switch with remote tripping (optional).



	StringControl 160	StringControl 320
<b>Input</b>		
Max number of connectable input strings	16	32 <sup>(1)</sup>
Maximum number of measurable channels	16	16
Maximum current per string	10 A	20 A
Number of protection fuses	2 x 16	2 x 16
Type of fuses	gPV fuses, 10 x 38 mm, 30 kA	gPV fuses, 10 x 38 mm, 30 kA
Available fuses	10 A, 12 A, 15 A, 16 A (15 A standard)	20 A, 25 A, 30 A (30 A standard)
Maximum DC voltage	1,000 V	1,000 V
Inlet connections	PV connectors type 4 (standard) or M12 cable glands (3.5 to 7 mm) with direct connection on fuse holders (on request)	PV connectors type 4 (standard) or M12 cable glands (3.5 to 7 mm) with direct connection on fuse holders (on request)
<b>Output</b>		
Maximum total current <sup>(2)</sup>	160 A	320 A
Outlet connections	M50 cable glands (cable diameter: 27 to 35 mm) with direct connection on copper plates	M50 cable glands (cable diameter: 27 to 35 mm) with direct connection on copper plates
DC switch disconnect rating	250 A (standard) <sup>(3)</sup>	450 A (standard) <sup>(4)</sup>
<b>Communication</b>		
Communication interface	RS485, Ethernet, GSM/GPRS	RS485, Ethernet, GSM/GPRS
Inlet connection	M16 cable glands (cable diameter: 4.5 to 10 mm)	M16 cable glands (cable diameter: 4.5 to 10 mm)
<b>Grounding</b>		
Grounding connection	M16 cable gland (cable diameter: 4.5 to 10 mm)	M16 cable gland (cable diameter: 4.5 to 10 mm)
<b>General Information</b>		
Enclosure type	Outdoor use, insulating cabinet (polyester reinforced with fiberglass)	Outdoor use, insulating cabinet (polyester reinforced with fiberglass)
Protection rating	IP65	IP65
Impact strength	IK10	IK10
Operating temperature range	-20 °C to +55 °C	-20 °C to +55 °C
Relative humidity (non-condensing)	0 to 95%	0 to 95%
Maximum altitude <sup>(5)</sup>	3,000 m a.s.l.	3,000 m a.s.l.
DC switch handle	External (front) access, lockable in open position	External (front) access, lockable in open position
Weight	15 kg	15 kg
Marking	CE	
EMC and security standards	EN 61000-6-4, EN 61000-6-2, EN 50178	
LV Switchgear standards	IEC 61439-1, IEC 61439-2	
Electric shock protection	Class II equipment	

**Notes:** <sup>(1)</sup> Type 4 Y connectors for parallel connection of two string cables to the same input channel not included in the supply. <sup>(2)</sup> DC current up to 50°C ambient temperature. <sup>(3)</sup> 250 A disconnect rating for DC isolating switch with remote tripping (optional). <sup>(4)</sup> 450 A disconnect rating for DC isolating switch with remote tripping (optional). <sup>(5)</sup> Over 1,000 m temperature for rated current is reduced at the rate of 4.5 °C for each 1,000 m.

**Size** (mm)



StringControl 160 / 320

\* Illustrative image. It might not correspond with the basic configuration.