



# SGS

EU Type Examination Certificate Number: **0120/SGS0250**

## Tyco Electronics UK Ltd

Freebournes Road  
Witham  
Essex  
CM83AH  
UK

Instrument Identification:  
**DRS-100-3P**

Instrument Traceable Number  
**0120/SGS0250**

Polyphase, Active Import/ Export (kWh), Indoor, Electricity Meter

has been assessed and certified as meeting the requirements of

# EU Directive 2014/32/EU

**Measuring Instruments Annex II Module B**

It is certified that the manufacturer's technical design and specimen for the above instrument has been examined and, based on the evidence submitted, it is considered that the instrument conforms to the requirements of Annex V of EU Directive 2014/32/EU

This certificate must be used in conjunction with a certificate covering the product verification as required in Annex II, Module D or Annex II Module F

This certificate is valid until 5<sup>th</sup> January 2025  
Issue 1

Certification is based on report number(s) SHES130800321501 dated 26<sup>th</sup> December 2014

EMA198278/1  
EMA198278/2  
EMA226287/1

Authorised Signature

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EU Type Examination Cert



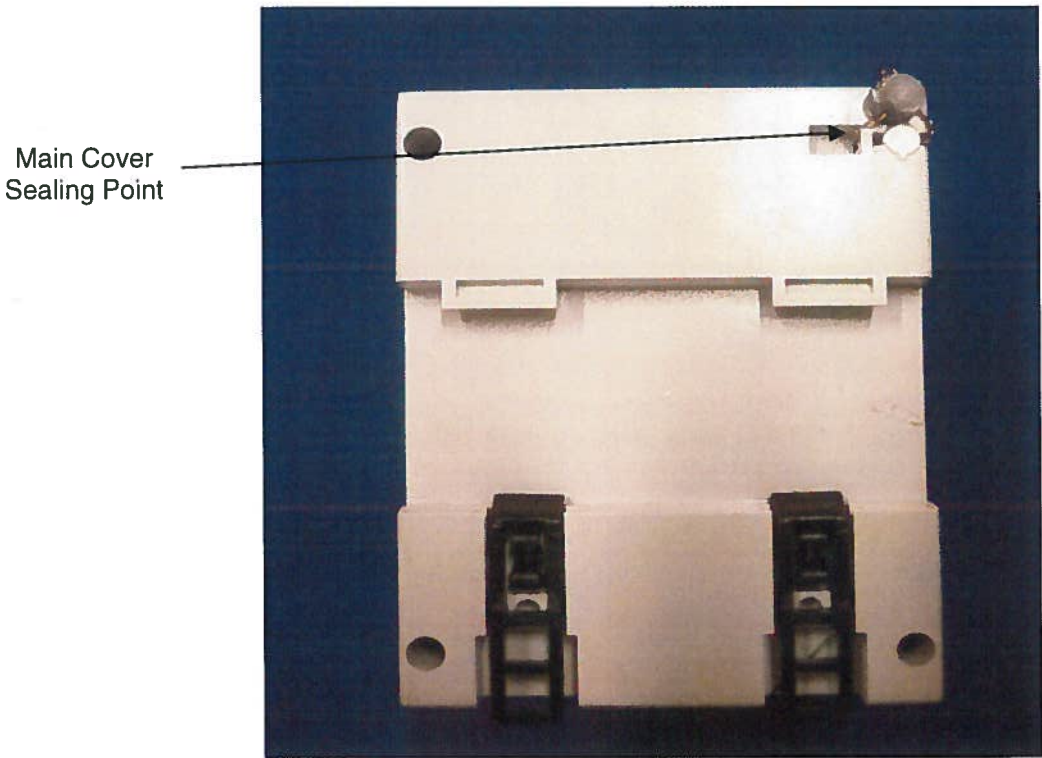
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	Issue Number: 1	19 <sup>th</sup> January 2017


## 1. Technical Data

<b>Manufacturer</b>	Tyco Electronic UK Ltd
<b>Meter Types Version 1 and Version 2</b>	DRS-100-3P -MT DRS-100-3P -MODBUS DRS-100-3P -Mbus DRS-100-3P -Pulse
<b>Voltage Rating (<math>U_n</math>)</b>	3x230/400V
<b>Current Rating (<math>I_{min} - I_{ref} (I_{max})</math>)</b>	0.5-10(100)A
<b>Frequency (<math>F_n</math>)</b>	50Hz
<b>Active Accuracy Class (kWh)</b>	A or B (kWh)
<b>Type of circuit</b>	3p4w, 3p3w, 1p2w
<b>Temperature Range</b>	-25°C to +55°C
<b>Software Version No.</b>	V1.3
<b>Identification Location</b>	Nameplate
<b>Bill Of Materials Version 2 No.'s</b>	SDM630-MT V1.4 SDM630-MODBUS V1.4 SDM630-MBUS V1.4 SDM630-Pulse V1.4
<b>IP Rating</b>	IP51
<b>Insulation Protective Class</b>	Class II
<b>LED Pulse Constant</b>	400imp/ kWh
<b>Impulse Voltage Rating</b>	6kV
<b>AC Voltage Rating</b>	4kV
<b>Main Cover Sealing Type</b>	1 x Wire & Crimp
<b>Integrity of meter</b>	Inaccessible without breaking seals
<b>Intended Location of the Meter</b>	Indoor
<b>Type of Register</b>	LCD
<b>Location of Distributors Name and Address</b>	On accompanying documentation

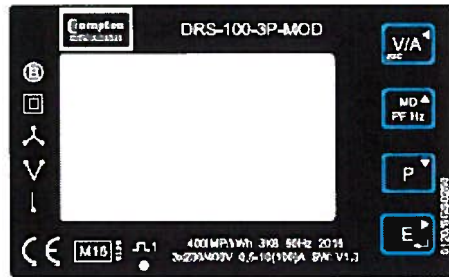
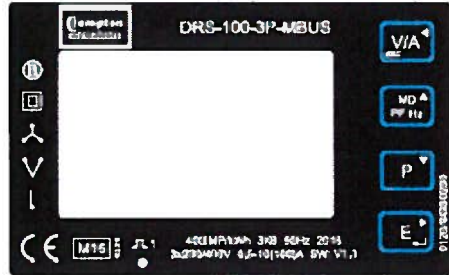
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**2. Photograph of Meter and Sealing Plan**



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**Name Plates**

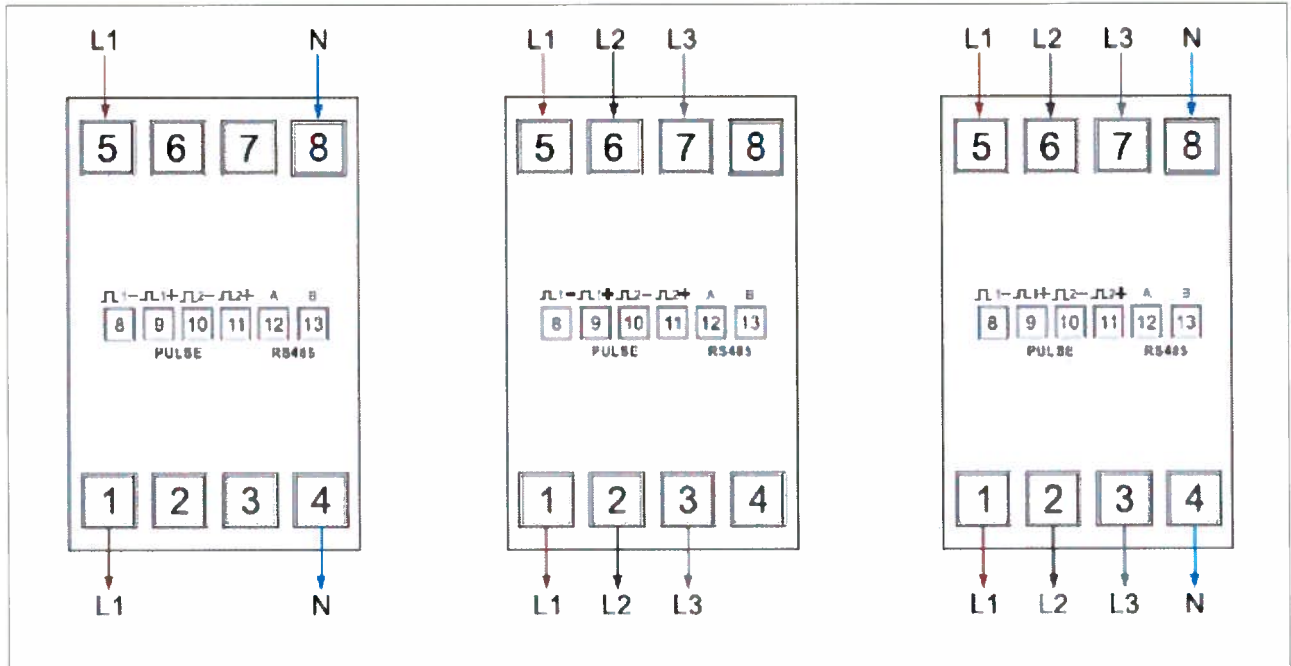



**Wiring Diagrams**

**Single phase two wire**

**Three phase three wire**


**Three Phase four wire**



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### 3. Influence factors for temperature, frequency and voltage

		Influence Factors for Temperature. Frequency & Voltage					
Current	PF Cos	-25	-10	5	30	40	55
l <sub>min</sub>	1.0	0.46	0.34	0.14	0.18	0.29	0.52
l <sub>tr</sub>	1.0	0.57	0.39	0.19	0.11	0.24	0.46
10l <sub>tr</sub>	1.0	0.64	0.45	0.25	0.06	0.20	0.42
l <sub>max</sub>	1.0	0.75	0.60	0.44	0.26	0.23	0.30
l <sub>tr</sub>	0.5ind	0.56	0.40	0.20	0.14	0.24	0.49
10l <sub>tr</sub>	0.5ind	0.60	0.43	0.23	0.11	0.23	0.45
l <sub>max</sub>	0.5ind	0.62	0.47	0.30	0.05	0.10	0.28
l <sub>tr</sub>	0.8cap	0.65	0.46	0.27	0.11	0.21	0.43
10l <sub>tr</sub>	0.8cap	0.62	0.44	0.24	0.12	0.24	0.46
l <sub>max</sub>	0.8cap	0.69	0.55	0.37	0.16	0.14	0.28
L1							
l <sub>tr</sub>	1.0	0.84	0.60	0.32	0.08	0.20	0.48
10l <sub>tr</sub>	1.0	0.97	0.71	0.46	0.10	0.13	0.36
l <sub>max</sub>	1.0	0.93	0.70	0.48	0.16	0.06	0.25
l <sub>tr</sub>	0.5ind	0.60	0.32	0.09	0.25	0.42	0.66
10l <sub>tr</sub>	0.5ind	0.79	0.56	0.29	0.12	0.27	0.53
l <sub>max</sub>	0.5ind	0.84	0.63	0.40	0.10	0.11	0.33
L2							
l <sub>tr</sub>	1.0	0.40	0.26	0.09	0.08	0.16	0.37
10l <sub>tr</sub>	1.0	0.42	0.31	0.19	0.08	0.17	0.36
l <sub>max</sub>	1.0	0.44	0.36	0.25	0.08	0.08	0.23
l <sub>tr</sub>	0.5ind	0.20	0.09	0.24	0.27	0.35	0.53
10l <sub>tr</sub>	0.5ind	0.43	0.30	0.17	0.10	0.20	0.40
l <sub>max</sub>	0.5ind	0.46	0.35	0.25	0.09	0.06	0.20
L3							
l <sub>tr</sub>	1.0	0.55	0.37	0.15	0.14	0.30	0.51
10l <sub>tr</sub>	1.0	0.51	0.33	0.11	0.20	0.33	0.56
l <sub>max</sub>	1.0	0.55	0.39	0.21	0.10	0.21	0.52
l <sub>tr</sub>	0.5ind	0.41	0.24	0.06	0.32	0.46	0.66
10l <sub>tr</sub>	0.5ind	0.41	0.22	0.04	0.31	0.46	0.67
l <sub>max</sub>	0.5ind	0.43	0.30	0.34	0.17	0.30	0.53

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During the type approval examination the influence factors for temperature, frequency and voltage are determined per load point. The table above represents the sum of the square values per load, determined via the following formula:-


$$\delta e (T, U, f) = \sqrt{(\delta e^2 (T, I, \cos\phi) + \delta e^2 (U, I, \cos\phi) + \delta e^2 (f, I, \cos\phi))}$$

where

$\delta e(T, I, \cos\phi) =$  Additional error due to variation of the temperature at the same load

$\delta e(U, I, \cos\phi) =$  Additional error due to variation of the voltage at the same load

$\delta e(f, I, \cos\phi) =$  Additional error due to variation of the frequency at the same load

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#### 4. Annex of Variants

Product Variant Identification Details of both Version 1 and Version 2:

Type Designation	Description of meter
DRS-100-3P -MT:	Three phase, multi-function, multi-tariff, 2 pulse outputs and 1 RS485 Modbus communication port
DRS-100-3P -Modbus:	Three phase, multi-function, 2 pulse outputs and 1 RS485 communication port
DRS-100-3P -Mbus:	Three phase, multi-function, 2 pulse outputs and 1 Mbus communication port
DRS-100-3P -Pulse:	Three phase, multi-function, 2 pulse outputs

Modifications to the meter(s) described according to approval No.**0120/ SGS0250** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).



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**5. Document Revision History**

Issue	Date	Comments
1	19/01/17	Initial Issue