KEMA Labs

EU-TYPE EXAMINATION CERTIFICATE

Holley Technology Ltd.
No.181 Wuchang Avenue, Yuhang District
310023 HANGZHOU
China

Type	DDSY283SR
Object	Electronic single-phase two-wire energy meter. Direct connected

The object has been assessed and meets the requirements of

EU Directive 2014/32/EU
Module B

The energy meter(s) meet(s) the essential requirements of Annex V of EU Directive 2014/32/EU, on the harmonization of the laws of Member States relating to the making available on the market of measuring instruments (recast).

This Certification is based on the report(s) listed in the report list in this Certificate.

This Certificate is valid until: July 10, 2034.

This Certificate comprises 8 pages in total.

Issued by KEMA B.V.
Klingelbeekseweg 195,
Arnhem, The Netherlands
Notified Body 2290

Alessandro Bertani
Director,
Services & Smart Technologies

Arnhem, July 10, 2024

REVISION OVERVIEW

The edition with the highest revision number always replaces the earlier issued editions.

Rev. No.	Date of issue	Reason
0 (V1)	24 May 2019	First issue
1	July 10, 2024	Report 1236-24 added

REPORT LIST

This Certificate is issued based on the following reports.

Report number	Revision	Firmware version
1234-19	V2	HMSP1626001G3P0000998B0190313112
1636-24	0	HMS16X26001G3P000096200231228301
1637-24	0	

1   TECHNICAL DATA

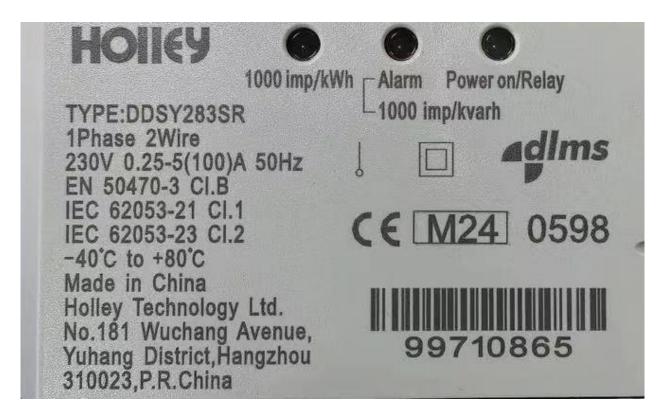| Manufacturer	Holley Technology Ltd., No.181 Wuchang Avenue, Yuhang District, 310023 HANGZHOU, China	
Production location	Holley Technology Ltd., No.181 Wuchang Avenue, Yuhang District, 310023 HANGZHOU, China	
Type	DDSY283SR	
Connection	Direct	
Type of circuit	1P2W two-element	1P2W
Accuracy class Wh	1/B	
Accuracy class varh	2	
Meter constant	1000 imp/kWh 1000 imp/kvarh	
V range	220 – 240 V	230 V
I range I_{min}-I_n(I_{max})	0,25-5(100) A	
Frequency	50 Hz	
Temperature range	-40 .. 80 °C	
Use	Indoor	
IP rating	IP54	
Protection Class	II	
Impulse voltage	6 kV	
Internal clock	Crystal controlled	
Environmental class	M1, M2, E1 and E2, CISPR32 class B	
LR Firmware ID	HMSP1626001G3P0000998B0190313112	HMS16X26001G3P000096200231228301
LR Firmware CRC	-	0x01928E45
Register	LCD	
Registry method(s):	Bi-directional method with separate registers: received- and delivered energy is added in separate registers.	

2 PHOTOGRAPHS AND SEALING

3 EXAMPLES OF NAME PLATES

Holley

1000 imp/kWh — Alarm   Power on/Relay
              └ 1000 imp/kvarh

TYPE:DDSY283SR
1Phase 2Wire
230V 0.25-5(100)A 50Hz
EN 50470-3 Cl.B
IEC 62053-21 Cl.1
IEC 62053-23 Cl.2
−40°C to +80°C
Made in China
Holley Technology Ltd.
No.181 Wuchang Avenue,
Yuhang District,Hangzhou
310023,P.R.China

CE M24 0598

dlms

99710865

4   CALCULATION OF THE COMPOSITE ERROR / MPE

During the type approval test the intrinsic errors for temperature, voltage and frequency variation are determined per load point. The composite error is determined with the following formula:

$$\varepsilon_m = \sqrt{\varepsilon^2(I,cos\varphi) + \delta^2(T,I,cos\varphi) + +\delta^2(U,I,cos\varphi) + \delta^2(f,I,cos\varphi)}$$

Where
$\varepsilon^2(I,cos\varphi)$ = Intrinsic error of the meter at a certain load
$\delta^2(T,I,cos\varphi)$ = Additional error due to the variation of the temperature at the same load
$\delta^2(U,I,cos\varphi)$ = Additional error due to the variation of the voltage at the same load
$\delta^2(f,I,cos\varphi)$ = Additional error due to the variation of the frequency at the same load

Results are in the table below:

I in % of I_{ref}	cos φ	Composite error %								
		-40 ºC	-25 ºC	-10 ºC	5 ºC	30 ºC	40 ºC	55 ºC	70 ºC	80 ºC
5	1	0,21%	0,18%	0,17%	0,20%	0,13%	0,13%	0,14%	0,21%	0,21%
10	1	0,17%	0,14%	0,12%	0,12%	0,11%	0,12%	0,16%	0,22%	0,19%
10	0,5 ind.	0,14%	0,12%	0,12%	0,09%	0,11%	0,10%	0,14%	0,17%	0,16%
10	0,8 cap.	0,21%	0,18%	0,16%	0,14%	0,12%	0,12%	0,16%	0,22%	0,19%
I_{max}	1	0,11%	0,10%	0,10%	0,10%	0,09%	0,11%	0,13%	0,18%	0,18%
I_{max}	0,5 ind.	0,08%	0,08%	0,08%	0,08%	0,08%	0,08%	0,11%	0,14%	0,13%
I_{max}	0,8 cap.	0,11%	0,11%	0,11%	0,11%	0,11%	0,12%	0,14%	0,18%	0,20%

5   OPTIONS AND VARIANTS

Overview of variants with details

Type designation	Details of the meter
DDSY283SR	• Communication options: optical port RS485 Remote communication port • Supply control switch

END OF DOCUMENT

The laboratories of KEMA Labs are:

- CESI S.p.A., Milan, Italy, accredited by ACCREDIA in accordance with ISO/IEC 17025:2017 under no. 0030L.
- FGH Engineering & Test GmbH, Mannheim, Germany, accredited by DAkkS in accordance with DIN EN ISO/IEC 17025:2018 under no. D-PL-12110-01-00.
- IPH Institut "Prüffeld für elektrische Hochleistungstechnik" GmbH, Berlin, Germany accredited by DAkkS in accordance with DIN EN ISO/IEC 17025:2018 under nos. D-PL-12107-01-00 and D-K-12107-01-00.
- KEMA B.V., Arnhem, The Netherlands, accredited by RvA in accordance with EN ISO/IEC 17025:2017 under nos. L020, L218 and K006 and with EN ISO/IEC 17065:2012 under no. C685.
- KEMA Labs, Zkušebnictví, a.s., Prague, the Czech Republic, testing laboratory no. 1035 accredited by CAI in accordance with ČSN EN ISO/IEC 17025:2018.
- KEMA-Powertest, LLC, Chalfont, United States, accredited by A2LA in accordance with ISO/IEC 17025:2017 under no. 0553.01.

Tests are carried out under the scope of accreditation, unless otherwise indicated in the chapter 'Tests carried out'.