

SUBJECT: Product rationalization of old H8 µP based power generation controls

This announcement is used to inform Woodward Customers, Channel Partners, Sales/ Marketing and Operations of the product rationalization and support plan for the PG – Power Generation product lines that used old H8 micro-processor.

This rationalization affects the following product lines

1. Genset Controllers: AMG-2, GCP-31/32
2. Multi Function Relays: MFR-11/12/13/15, MFR-2/3, MPU-2, LS-4, Syncon Panel
3. Synchronizer: SPM-D11
4. Communication Units: GW4
5. Transducers: UMT1
6. Protection Relay: ESDR4

These are important product lines to Woodward. However due to acute obsolescence of important components, Woodward is forced to cease production of these devices in the near future. Woodward has produced and supported these product lines for several years and will continue to offer new sales in the short run, and support for them in the medium run. Please refer to the below support schedule.

Woodward offers the following “Last Time Buy” scenario:

- Orders for the Last Time Buy (LTB) can be placed until **23rd January 2015**. Woodward will accept orders until this date.
- Woodward will ship items ordered on or before the LTB date **until 22nd April 2015**. After this date Woodward will stop the production of discontinued items that are listed on next pages.
- Due to tremendous increase in production cost for maintaining availability of discontinued items, Woodward will conduct price increase in two steps.
 - o 25% on 1st Dec 2014
 - o Another 50% on 24th Jan 2015

Please contact your Account Manager for pricing and support on the replacement item(s).

After LTB, Woodward will commit to the following support plan:

24th Jan 2015 – 23rd Dec 2016

- Repairs
- Limited spares based upon the available inventory

24th Dec 2016 – 23rd Nov 2018

- Limited repairs based on components availability

Further parts obsolescence from electronic manufacturers can present a challenge to post-life support plans. Woodward strives to hold inventory, or look for alternative parts when components are obsolete. However, there are times when components can simply not be obtained and where sufficient last-time buys cannot be made. In these cases, Woodward cannot always guarantee that we can maintain the rationalization support plan.

Replacement Tools

| Sl. No. | Document Number | Document Description | Remarks |
|---------|-----------------|---|---|
| 1. | 37556 | What is new? | For GCP-30/AMG-2/MFR-2/3 customers using easYgen-3000 series controller |
| 2. | 37554 | Terminal Allocation Plan | GCP-30/MFR 2/3 >>> easYgen-3000 |
| 3. | 37555 | Part Number Mapping | GCP-30/MFR 2/3 >>> easYgen-3000 |
| 4. | - | Retrofit Adapter | For AMG-2, GCP-30; Currently under development |
| 5. | 37528 | Technical Manual: easYgen-3400/3500 P1/P2 | For easYgen-3400/3500 P1 and P2 genset controls |
| 6. | 37532 | Technical Manual: easYgen-3100/3200 P1/P2 | For easYgen-3100/3200 P1 and P2 genset controllers |
| 7. | 37535 | Technical Manual: easYgen-2000 Series | For easYgen-2200/2300/2500 genset controllers |
| 8. | 37538 | Technical Manual: MFR 300 Series | For MFR 300 multifunction relays |
| 9. | 37527 | Technical Manual: LS-511/521 | For circuit breaker control LS-5 |
| 10. | 37541 | Technical Manual: easYprotec-1000 Series | For multifunction relay easYprotec-1000 |
| 11. | 37537 | Technical Manual: easYgen-2500 Rental | For rental version of easYgen-2500 |

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|-----|----------------|---|--|
| 12. | 37536 | Technical Manual: easYgen-3500 Rental | For rental version of easYgen-3500 |
| 13. | 37561 | Technical Manual: Remanence Voltage Converter | Describing "Electronic Pickup Unit" for asynchronous generators |
| 14. | 37442 | Technical Manual: Load Share Gateway | For LSG that works with easYgen, MFR2/3, GCP20/30, and EGCP-2 |
| 15. | 37540 | Technical Manual: LS-521 | For LS-521 option K12 |
| 16. | DE37549 | Technical Manual: easYgen-3500-P2 | For easYgen-3500-P2 option K36 |
| 17. | DSESEPRO-1302 | Data Sheet: ESEPRO | Profibus/CAN gateway product datasheet from ProconX |
| 18. | DOK-HB-MCDGV4E | Technical Manual: MCDGV4 | For MCDGV4 Generator Differential Protection |
| 19. | DOK-HB-MRA4E | Technical Manual: MRA4 | For MRA4 Directional Feeder Protection |
| 20. | DOK-HB-MRDT4E | Technical Manual: MRDT4 | For MRDT4 Transformer Differential Protection |
| 21. | DOK-HB-MRI4E | Technical Manual: MRI4 | For MRI4 Feeder Protection |
| 22. | DOK-HB-MRU4E | Technical Manual: MRU4 | For MRU4 Voltage Protection |
| 23. | DOK-TD-MRI3E | Technical Manual: MRI3 | For MRI3 - Digital multifunctional relay for over-current protection |
| 24. | DOK-TD-MRI1INE | Technical Manual: MRI1 | For MRI1-IN - Sensitive directional time over-current relay |
| 25. | DOK-TD-MRN3E | Technical Manual: MRN3 | For MRN3 - Mains decoupling relay |
| 26. | DOK-TD-XUF2-E | Technical Manual: XUF2 | For XUF2 - AC voltage and frequency relay |

Above documents are available on Woodward web (www.woodward.com). Please remember to download the latest document.

Discontinued Items:

Genset Controllers: AMG-2, GCP-31/32

| Item Number | Item Description | Comments |
|-------------|--------------------------------|---|
| 5418-1726 | AMG2S45B/N2PB-A2QSC04SFT7VSW01 | Software item |
| 5418-1915 | GCP-3245B/A2K10QSFT701ZE H8/53 | Software item |
| 5418-2781 | GCP-3245B/XPQ+K23 H8/536 CPU1/ | Software item |
| 8440-1273 | AMG2S45B/N1PB-FGW01IN20QSFT4YM | Similar item 8440-2030: EASYGEN-3500-5/P1-K32 |
| 8440-1514 | GCP-3145B/A2K10QSFT701ZE | Similar item 8440-2030: EASYGEN-3500-5/P1-K32 or 8440-2105 or 8440-2106 |

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| 8440-1516 | AMG2S45B/A2EEA1 | No direct easYgen replacement due to ring operation |
| 8440-1556 | GCP-3111B/XPQ | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1558 | GCP-3115B/XPQ | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1559 | GCP-3145B/XPQ | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1560 | GCP-3115B/XPQ+SC10 | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1561 | GCP-3145B/XPQ+SC10 | Similar item 8440-1936: EASYGEN-3500-5/P |
| 8440-1562 | GCP-3115B/XPQ+SB03 | No direct easYgen replacement due to CAT CCM support |
| 8440-1563 | GCP-3145B/XPQ+SB03 | No direct easYgen replacement due to CAT CCM support |
| 8440-1572 | GCP-3211B/XPQ | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1573 | GCP-3241B/XPQ | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1574 | GCP-3215B/XPQ | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1575 | GCP-3245B/XPQ | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1576 | GCP-3215B/XPQ+SC10 | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1577 | GCP-3245B/XPQ+SC10 | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1578 | GCP-3215B/XPQ+SB03 | No direct easYgen replacement due to CAT CCM support |
| 8440-1579 | GCP-3245B/XPQ+SB03 | No direct easYgen replacement due to CAT CCM support |
| 8440-1609 | GCP-3115B/BPQ | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1610 | GCP-3145B/BPQ | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1612 | GCP-3241B/BPQ | Similar item 8440-1937: EASYGEN-3500-1/P2 |

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| 8440-1614 | GCP-3245B/BPQ | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1664 | GCP-3241B/XPQ+SC10 | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1678 | AMG2S45B/N1PB+D08QSC10SFT710ZS | No direct easYgen replacement due to ring operation |
| 8440-1683 | GCP-3241B/XPQ+SC10 | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1688 | GCP-3211B/XPQ+SC10 | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1716 | GCP-3141B/XPQ+SC10 | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1764 | GCP-3145B/RPQ+SC09 | Similar item 8440-2030: EASYGEN-3500-5/P1-K32 |
| 8440-1806 | GCP-3111B/XPQ+SC10 | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1832 | GCP-3145B/XPQ+D10D11SC10 | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1854 | AMG2S45B/N2PB+A2K01M03QSFT717Z | Similar item 8440-2093: EASYGEN-3500-5/P2-K36 + EPU-100 (8445-1045) |
| LR20711 | AMG2S45B/A2EVC1 | No direct easYgen replacement due to ring operation |
| LR21086 | AMG2S45B/N2PB-SEC400 | No direct easYgen replacement due to SEC connection |

Multi Function Relays: MFR-11/12/13/15, MFR-2/3, MPU-2, LS-4, Syncon Panel

| Item Number | Item Description | Comments |
|-------------|------------------|---|
| 5448-883 | MFR1205B/CP | Similar item MRI1 or MRI3 |
| 5448-884 | MFR1110B/MP | Similar item 8441-1160: easYprotec-1410-1 or 8441-1161: easYprotec-1410-7 |
| 5448-885 | MFR1110B/G59 | Similar item 8441-1160: easYprotec-1410-1 or 8441-1161: easYprotec-1410-7 |

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| 5448-886 | MFR1315B/GP | Similar item MRG3 |
| 5448-898 | MFR1315B/GPX | Similar item MCDGV4 |
| 8440-1006 | LS445B | No direct replacement, easYgen-3500 + LS-5 can be used instead |
| 8440-1016 | MFR1515B/SYN-I | Similar item 8440-1936: EASYGEN-3500-5/P2 + LSG (8444-1074 & 8444-1075) |
| 8440-1031 | LS415B | No direct replacement, easYgen-3500 + LS-5 can be used instead |
| 8440-1105 | MFR2S45B/PSV+SB | Similar item 8440-1936: EASYGEN-3500-5/P2 & 8445-1046: ESEPRO |
| 8440-1123 | MPU2-S-45B/L | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1172 | MPU2-S-11B/L | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1173 | MPU2-S-15B/L | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1174 | MPU2-S-41B/L | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1276 | SYNCON PANEL | No direct replacement |
| 8440-1287 | MFR2S15B/PSVA | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1323 | MFR2S45B/PSVA | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1335 | MFR2S45B/PSV+A2I3SB | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1407 | MFR2S45B/PSV+A2K06MMBQUSFXXC | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1409 | MFR2S45B/A2CD06D09HI1I4JK24MMB | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1428 | MFR2S45B/PSV+A2I3SB | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1431 | MFR2S15B/PSV+MMBQFSB | Similar item 8440-1936: EASYGEN-3500-5/P2 & 8445-1046: ESEPRO |
| 8440-1448 | MFR1545B/SYN-I | Similar item 8440-1936: EASYGEN-3500-5/P2 + |

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| | | LSG (8444-1074 & 8444-1075) |
| 8440-1510 | LS415B/K12 | Similar item 8440-2072: LS-521-5/P1-K12 |
| 8440-1528 | MFR2S15B/PSV+A2I3SB | Similar item 8440-1936: EASYGEN-3500-5/P2 & 8445-1046: ESEPRO |
| 8440-1542 | MFR2S41B/PSV+A2I3SB | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1546 | MFR2S45B/A2CDD06D09HI1I4JK24MM | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1617 | MFR2S41B/PSV+A2I3SB | Similar item 8440-1937: EASYGEN-3500-1/P2 & 8445-1046: ESEPRO |
| 8440-1631 | MFR31S15B/PSVX+Q | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1632 | MFR31S45B/PSVX+Q | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1633 | MFR32S15B/PSVX+Q | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1634 | MFR32S45B/PSVX+Q | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1650 | MFR31S11B/PSV+K14ZS | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1651 | MFR31S45B/PSV+K14ZS | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1665 | MFR2S11B/PSV+A2I3SB | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1681 | MFR2S11B/PSV+A2I3SB | Similar item 8440-1937: EASYGEN-3500-1/P2 & 8445-1046: ESEPRO |
| 8440-1694 | MFR2S11B/PSVT+A2I3SB | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1695 | MFR2S15B/PSV+A2I3SB | Similar item 8440-1936: EASYGEN-3500-5/P2 & 8445-1046: ESEPRO |
| 8440-1733 | MFR2S15B/PSVA | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1735 | MFR2S45B/PSVA | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1744 | MFR2S11B/PSVT+A2I3SB | Similar item 8440-1936: EASYGEN-3500-5/P2 & 8445-1046: ESEPRO |

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| 8440-1765 | MFR2S11B/PSV+A2I3SB | Similar item 8440-1937: EASYGEN-3500-1/P2 & 8445-1046: ESEPRO |
| 8440-1815 | MFR2S11B/A2CD06D09HI1I4JK24MMB | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-1829 | MFR2S45B/PSV+A2I3SB | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1836 | MFR2S45B/PSV+A2I3SB | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1846 | MFR31S15B/PSV+K14ZS | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| 8440-1849 | MFR1515B/BCIZMPMPSSBSB01UUSU07 | Similar item 8440-1936: EASYGEN-3500-5/P2 + LSG (8444-1074 & 8444-1075) |
| 8440-1852 | MFR2S11B/A2CDD06D09HI1I4JK24MM | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| 8440-2094 | MFR2S41B/PSV+A2D06MMBQUSB | Similar item 8440-1937: EASYGEN-3500-1/P2 & 8445-1046: ESEPRO |
| 8440-2099 | MFR2S45B/PSV+D06QFQUSB | Similar item 8440-1936: EASYGEN-3500-5/P2 & 8445-1046: ESEPRO |
| 8440-2102 | MFR2S11B/PSV+A2G01MMBSB | Similar item 8440-1937: EASYGEN-3500-1/P2 & 8445-1046: ESEPRO |
| 8440-2104 | MFR2S41B/PSV+A2G01MMBSB | Similar item 8440-1937: EASYGEN-3500-1/P2 & 8445-1046: ESEPRO |
| 8441-1003 | MFR1110B/VDEW | Similar item MRU4 |
| 8441-1004 | MFR1110B/G59N | Similar item MRN3 |
| 8441-1005 | MFR1110B/SC | Similar item 8440-1952: LS-521-1/P1 |
| 8441-1006 | MFR1215B/51V | Similar item MRA4 or MCDGV4 |
| 8441-1008 | MFR1205B/50-51GN | Similar item MRI4 or MCDGV4 |
| 8441-1009 | MFR1315B/GPX-I | Similar item MCDGV4 |
| 8441-1023 | MFR1140B/MP | Similar item 8441-1160: easYprotec-1410-1 or 8441-1161: easYprotec-1410-7 |

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| 8441-1027 | MFR1140B/NU | Similar item MRN3 or XUF2 |
| 8441-1033 | MFR1345B/GPX | Similar item MRG3 or MCDGV4 |
| 8441-1049 | MFR1140B/VDEW | Similar item MRU4 |
| 8441-1075 | MFR1311B/GPX-I | Similar item MCDGV4 |
| 8441-1082 | MFR1211B/51V | Similar item MRA4 or MCDGV4 |
| 8441-1083 | MFR1311B/GPX | Similar item MRG3 or MCDGV4 |
| 8441-1086 | MFR1315B/GPY-I | Similar item MCDGV4 |
| 8441-1087 | MFR1315B/K08 | Similar item MCDGV4 |
| 8441-1092 | MFR1315B/GPY-I-N | Similar item MCDGV4 |
| 8441-1095 | MFR1345B/GPY-I | Similar item MCDGV4 |
| 8441-1097 | MFR1140B/SC | Similar item 8440-1952: LS-521-1/P1 |
| 8441-1099 | MFR1345B/K08 | Similar item MCDGV4 |
| 8441-1103 | MFR1140B/G59N | Similar item MRN3 or MRU4 |
| 8441-1104 | MFR1345B/GPX-I | Similar item MCDGV4 |
| 8441-1106 | MFR1201B/CP | Similar item MRI3 or MRI4 |
| 8441-1108 | MFR1341B/GPX | Similar item MRG3 |
| 8441-1110 | MFR1110B/SC+N | Similar item MCDGV4 or LS-5 with aux. power supply |
| 8441-1111 | MFR1140B/SC+N | Similar item MCDGV4 or LS-5 with aux. power supply |
| 8441-1114 | MFR1341B/GP | Similar item MRG3 |
| 8441-1132 | MFR1201B/50-51GN | Similar item MRI4 or MCDGV4 |
| LR20406 | MFR1140B/G59 | Similar item MRU4 |

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| LR20610 | MFR1110B/NU | Similar item MRU4 or XUF2 |
| LR20685 | MFR2S45B/PSV | Similar item 8440-2050: EASYGEN-3200-5/P1 |
| LR20710 | MFR2S45B/EVC1 | No easygen replacement due to ring operation |
| LR20988 | MFR2S45B/PSV+QUSB | Similar item 8440-2050: EASYGEN-3200-5/P1 |
| LR20995 | MFR32S11B/CDHI1I3I4JR1SFT7VZE | Similar item 8440-1937: EASYGEN-3500-1/P2 |
| LR21035 | MFR1345B/GP | Similar item MRG3 |
| LR21121 | MFR2S15B/PSVT+A2I3SB | Similar item 8440-1936: EASYGEN-3500-5/P2 |
| LR21305 | MFR2S15B/PSV+A2I3SB | Similar item 8440-1936: EASYGEN-3500-5/P2 |

Synchronizer: SPM-D11

| Item Number | Item Description | Comments |
|-------------|------------------|---|
| 8440-1666 | SPM-D1145B/LSXR | Similar item 8440-2080: EASYGEN-2300-5/P1 |
| 8440-1705 | SPM-D1111B/LSXR | Similar item 8440-2122: EASYGEN-2300-1/P1 |
| 8440-1706 | SPM-D1115B/LSXR | Similar item 8440-2080: EASYGEN-2300-5/P1 |

Communication Units: GW4

| Item Number | Item Description | Comments |
|-------------|-----------------------|----------------------------------|
| 5448-895 | GW4B/RS232+MOD | Similar item GCP-MG from ProconX |
| 5448-901 | GW4B/RS485+MOD | Similar item GCP-MG from ProconX |
| 5448-902 | GW4B/PROFIBUS+DPSLAVE | Similar item 8445-1046: ESEPRO |
| 5448-910 | GW4B/RS232+LDP | No replacement |
| 8445-1001 | GW4M/CAN+MTU4000 | No replacement |

Transducers: UMT1

| Item Number | Item Description | Comments |
|-------------|------------------|--|
| 8444-1002 | UMT115B/A3SU | No AO replacement, MFR-300 (8444-1090) can be used for CANOpen or ModBus RTU signals |
| 8444-1009 | UMT145B/A3SU | No AO replacement, MFR-300 (8444-1090) can be used for CANOpen or ModBus RTU signals |
| 8444-1019 | UMT115B/A6 | No AO replacement, MFR-300 (8444-1090) can be used for CANOpen or ModBus RTU signals |
| 8444-1022 | UMT111B/A3SU | No AO replacement, MFR-300 (8444-1090) can be used for CANOpen or ModBus RTU signals |
| 8444-1057 | UMT145B/A6 | No AO replacement, MFR-300 (8444-1090) can be used for CANOpen or ModBus RTU signals |
| 8444-1084 | UMT171B/A3 | No AO replacement, MFR-300 (8444-1090) can be used for CANOpen or ModBus RTU signals |
| LR20949 | UMT145B/A3 | No AO replacement, MFR-300 (8444-1090) can be used for CANOpen or ModBus RTU signals |
| LR21159 | UMT141B/A6 | No AO replacement, MFR-300 (8444-1090) can be used for CANOpen or ModBus RTU signals |
| LR21296 | UMT111B/A6 | No AO replacement, MFR-300 (8444-1090) can be used for CANOpen or ModBus RTU signals |

Protection Relay: ESDR4

| Item Number | Item Description | Comments |
|-------------|------------------|------------------------------|
| 5448-897 | ESDR405TB | Similar item MRDT4 |
| 8441-1010 | ESDR405B | Similar item MRDT4 or MCDGV4 |
| 8441-1047 | ESDR405TM | Similar item MRDT4 |

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| 8441-1105 | ESDR401M | Similar item MRDT4 |
| LR20021 | ESDR401TB | Similar item MRDT4 |
| LR20459 | ESDR401B | Similar item MRDT4 or MCDGV4 |
| LR20590 | ESDR405M | Similar item MRDT4 or MCDGV4 |
| LR20616 | ESDR401TM | Similar item MRDT4 |

Please note that some customers have already been issued a dedicated support statement. In these cases, the support plan as mentioned in your dedicated support statement applies.

Best regards

Woodward GmbH



Randhir Kumar

Product Line Manager, Power Generation Controls